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# Conversation as a window into metarepresentational (dis)abilities in people with schizophrenia: A Relevance Theoretic perspective

## **Caroline Jagoe**

A dissertation submitted to the University of Dublin, Trinity College for the degree of Doctor of Philosophy TRINITY COLLEGE
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Caroline Jagoe

November 2012

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## Summary

Schizophrenia, as a "uniquely human disorder", is one of the major mental illnesses (Williamson, 2006, p. 3). It is a complex and heterogeneous condition characterised by a range of psychiatric symptoms which have their onset in early adulthood. Impairments in language and communication are considered one of the central features of the disorder. Disturbances in pragmatic performance are particularly prominent in many people with schizophrenia, yet our understanding of these difficulties is underdeveloped.

One influential theory of schizophrenia suggests that the symptoms of schizophrenia can be explained by a single underlying disturbance - an abnormality in metarepresentation. Frith (1992) suggests that an impairment in how people with schizophrenia are able to represent their own goals and intentions, and monitor the intentions of others, is responsible for the symptoms seen, including the pragmatic disturbances. Such an explanation draws on the notion of an impaired 'Theory of Mind' (or mentalizing ability), that is, an impairment in the ability to attribute mental states (such as beliefs and intentions) to other people. Although experimental evidence has demonstrated an associated between impairments in mentalizing and disturbances in performance on pragmatic tasks, there has been limited consideration of conversational data in this regard. If abnormalities in metarepresentational abilities do indeed underlie the communicative disturbances seen in the condition, then these abnormalities should be visible in the conversational discourse of people with the disorder. Frith's model is an influential theory, able to account for the range of symptoms seen in people with schizophrenia, but, it is argued, it lacks the explanatory power and rigour required to apply these notions to the specific pragmatic realm of conversational interaction. Inferential pragmatics and the cognitive science perspective of Relevance Theory (Sperber & Wilson, 1986/1995) can provide the microscope under which conversations can be considered in the context in which they occur, in order to establish if (and how) the participants deploy metarepresentational abilities in producing and interpreting utterances in communication.

Relevance Theory (RT) is an inferential approach to pragmatics which attempts to account for how hearers arrive at their interpretation and how speakers choose to make their utterance 'optimally relevant'. RT not only allows for the analysis to take into account how the interlocutors consider their partner's 'perspective' in the communication process, but also how communicators deal with complex cases of linguistic metarepresentation. This level of detail in pragmatic analysis, I will argue, affords the study an opportunity to explore the level at which metarepresentational disturbances are evident or impaired in the conversational discourse of the participants. This evidence can then be tested against the predications made by Frith's model of schizophrenia. Where Frith's model tells us what to

expect from the responses, RT may be able to explain *why*, from a cognitive pragmatic perspective. These two theories then are seen as inherently complementary and powerful in the quest for an explanatory theory of conversational function in individuals with schizophrenia.

Twenty three participants with schizophrenia participated in this study and data from two sources was analysed, including the participants' performance in (1) a task requiring the implicit attribution of mental states, and (2) conversational data. The ability to engage in the implicit attribution of mental states was explored through the application of a novel analytic approach to a narrative task. The conversational data was analysed from a RT perspective, with particular attention paid to the metarepresentational abilities as they emerged in the interactions. The use of reported speech and thought, echoic use and echo questions were explored, from the perspective of the person with schizophrenia as 'speaker'. The ability of participants to interpret questions, as inherently metarepresentational structures in an RT model, was also explored, considering the participant with schizophrenia as 'hearer'. Delusional talk, as potentially problematic with regards to the communicators having access to mutually manifest assumptions, was also explored. A RT approach was again applied, exploring the participant' ability to tailor their utterances to account for their hearers' perspective and also to explore how meaning was collaboratively negotiated. Profiles of psychiatric symptomatology were considered in the analysis, enabling investigation of whether performance in the mentalizing task and in conversation, was associated with specific symptom profiles.

The findings revealed that while participants demonstrated difficulties in the task requiring the implicit attribution of mental states, this performance underestimated their metarepresentational abilities as revealed in interaction. In conversation the participants' use of linguistic metarepresentation indicated mentalizing and metarepresentational abilities beyond what was predicted by Frith's model. However, some instances of difficulty did emerge and suggested that the ability to deploy metarepresentational skills was challenged in certain conditions. The patterns of performance in conversation did not reveal any clear or distinctive association with either the profile of psychiatric symptomatology with which the participants presented, nor a clear association with performance with regards to the implicit attribution of mental states. Tentative hypotheses around the implications of these findings for the modular conceptualisation of metarepresentational abilities may provide some support for the existence of multiple metarepresentational abilities, as suggested by recent developments in RT. The theoretical and clinical implications for these findings are explored.

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## **SECTION I**

## **Chapter One**

Schizophrenia: The disorder

Schizophrenia is a severe mental illness which affects approximately 1% of the population (Williamson, 2006), with similar rates and presentations across cultures (Jablensky et al., 1992). The disorder is characterised by remarkable diversity in symptom presentation (Frith & Johnstone, 2003; McKenna, 2007) and its diagnostic complexity has led to it being described as "an elusive entity" (Crow, 1997, p. 128). The symptoms, which have their onset in early adulthood, can be conceptualised in different ways. A common approach to the disorder is to conceptualise the symptoms as clustering into two groups - a positive symptom cluster and a negative cluster. Positive symptoms reflect an excess of normal function and encompass, specifically, the psychotic symptoms which reflect a 'losing touch with reality'. This group of symptoms comprises the experience of abnormal ideas (delusions) and abnormal perception (hallucinations) (Frith & Johnstone, 2003). The negative symptom cluster reflects a reduction or paucity in aspects of normal function (Daubenton & van Rensburg, 2001), such as a poverty of speech or movement, avolition and social withdrawal (Frith, 1992). Individuals may present with different combinations of symptoms, and frequently have a preponderance of symptoms from one symptom cluster. Problems in social function and communication are one of the hallmark features of the disorder and have a significant social impact for those individuals presenting with such difficulties. As in the case of psychiatric symptoms, the presentation in terms of language and communication functioning is very variable (Covington et al., 2005), with impairments at the level of language use or pragmatics arguably the most prominent (e.g. Frith, 1992; Langdon, Davies, & Coltheart, 2002; Meilijson, Kasher, & Elizur, 2004).

This chapter will briefly discuss the nature of schizophrenia as a severe mental illness. It will serve as a backdrop against which more specific discussion will emerge in subsequent chapters in relation to the particular focus on this thesis. Section 1.1 of this chapter will discuss the symptoms of schizophrenia, introducing the complexity related to the heterogeneity of presentation, and will further explore the positive-negative symptom distinction and clustering. Section 1.2 will briefly explore the course of schizophrenia. Finally, section 1.3 will provide an overview of the language and communication disturbances seen in the disorder. The communication disturbances seen in many people

with schizophrenia will be re-visited in more detail in Chapter Two, where they will be considered in relation to a theoretical framework of symptomatology.

## 1.1 Schizophrenia: Symptoms and presentation

The identification of the disorder of schizophrenia is attributed to Kraeplin who delineated the concept in the nineteenth century (Kraepelin, 1896). Kraepelin called the disorder dementia praecox because of its onset in early adulthood and the deteriorating course which was a common presentation (Pull, 2002). It was Bleuler who gave the disorder its present name and extended the early study of schizophrenia, focusing on the delineation of specific symptoms rather than the course and outcome of the condition (Frith & Johnstone, 2003; McKenna, 2007; Pull, 2002). The heterogeneity of presentation of schizophrenia was recognised at this time with Bleuler's (1911) use of the phrase "group of schizophrenias" in the title of his book. The extreme heterogeneity of presentation, along with the complexity of delineating schizophrenia from other diagnostic entities, has yielded a myriad of categorical and descriptive approaches to its classification and diagnosis (Jablensky, 2010). One important and still influential development in diagnostic considerations, was the delineation by Scheinder in the 1950s of "first rank symptoms" of the disorder (Crow, 1997; Jablensky, 2010; McKenna, 2007). While these symptoms were not thought to be a unitary construct they were recognised as being highly specific to schizophrenia and hence diagnostically invaluable (Andreasen & Carpenter, 1993; McKenna, 2007). These "first rank symptoms" include:

audible thoughts; voices arguing about, or discussing, the patient; voices commenting on the patient's actions; experiences of influences on the body; thought withdrawal and other interference with thought; thought broadcast (diffusion of thought); delusional perception; and other experiences involving "made" impulses and feelings experienced as caused by an outside agency (Jablensky, 2010, p. 274).

These first rank symptoms have been incorporated in part, into the sets of diagnostic criteria which are used clinically today (Jablensky, 2010). The *Diagnostic and Statistical Manual of Mental Disorders (4<sup>th</sup> edition)* (DSM-IV-TR) (American Psychological Association (APA), 2000) and the *International Classification of Diseases and Related Health Problems* (ICD-10) (World Health Organisation (WHO), 1992) are perhaps the most commonly used diagnostic criteria. These classification systems draw on descriptive features of the disorder, as well as features of the onset, duration and course of the symptoms experienced or signs observed (see Figures 1.1 and 1.2 respectively).

#### Diagnostic criteria for schizophrenia

A. *Characteristic symptoms:* Two (or more) of the following, each present for a significant portion of time during a 1-month period (or less if successfully treated):

- (1) delusions
- (2) hallucinations
- (3) disorganized speech (e.g., frequent derailment or incoherence)
- (4) grossly disorganized or catatonic behaviour
- (5) negative symptoms, i.e., affective flattening, alogia, or avolition

Note: Only one Criterion A symptom is required if delusions are bizarre or hallucinations consist of a voice keeping up a running commentary on the person's behaviour or thoughts, or two or more voices conversing with each other.

- B. Social/occupational dysfunction: For a significant portion of the time since the onset of the disturbance, one or more major areas of functioning such as work, interpersonal relations, or self-care are markedly below the level achieved prior to the onset (or when the onset is in childhood or adolescence, failure to achieve expected level of interpersonal, academic, or occupational achievement).
- C. *Duration:* Continuous signs of the disturbance persist for at least 6 months. This 6-month period must include at least 1 month of symptoms (or less if successfully treated) that meet Criterion A (i.e., active-phase symptoms) and may include periods of prodromal or residual symptoms. During these prodromal or residual periods, the signs of the disturbance may be manifested by only negative symptoms or two or more symptoms listed in Criterion A present in an attenuated form (e.g., odd beliefs, unusual perceptual experiences).
- D. Schizoaffective and Mood Disorder exclusion: Schizoaffective disorder and mood disorder with psychotic features have been ruled out because either (1) no manic, or mixed episodes have occurred concurrently with the active-phase symptoms; or (2) if mood episodes have occurred during active-phase symptoms, their total duration has been brief relative to the duration of the active and residual periods.
- E. Substance/general medical condition exclusion: The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.
- F. Relationship to a Pervasive Developmental Disorder: If there is a history of autistic disorder or another pervasive developmental disorder, the additional diagnosis of schizophrenia is made only if prominent delusions or hallucinations are also present for at least a month (or less if successfully treated).

FIGURE 1.1. DSM IV TR CRITERIA FOR SCHIZOPHRENIA (APA, 2000)

#### F20 Schizophrenia

- G1. Either at least one of the syndromes, symptoms and signs listed below under (1), or at least two of the symptoms and signs listed under (2), should be present for most of the time during an episode of psychotic illness lasting for at least one month (or at some time during most of the days).
  - (1) At least one of the following:
    - a) Thought echo, thought insertion or withdrawal, or thought broadcasting.
    - b) Delusions of control, influence or passivity, clearly referred-to body or limb movements or specific thoughts, actions, or sensations; delusional perception.
    - c) Hallucinatory voices giving a running commentary on the patient's behaviour, or discussing him between themselves, or other types of hallucinatory voices coming from some part of the body.
    - d) Persistent delusions of other kinds that are culturally inappropriate and completely impossible (e.g. being able to control the weather, or being in communication with aliens from another world).

## (2) or at least two of the following:

- e) Persistent hallucinations in any modality, when occurring every day for at least one month, when accompanied by delusions (which may be fleeting or half-formed) without clear affective content, or when accompanied by persistent over-valued ideas.
- f) Neologisms, breaks or interpolations in the train of thought, resulting in incoherence or irrelevant speech.
- g) Catatonic behaviour, such as excitement, posturing or waxy flexibility, negativism, mutism and stupor.
- h) Negative symptoms such as marked apathy, paucity of speech, and blunting or incongruity of emotional responses (it must be clear that these are not due to depression or to neuroleptic medication).
- G2. Most commonly used exclusion criteria: If the patient also meets criteria for manic episode (F30) or depressive episode (F32), the criteria listed under G1.1 and G1.2 above must have been met before the disturbance of mood developed.
- G3. The disorder is not attributable to organic brain disease (in the sense of F0), or to alcohol- or drug-related intoxication, dependence or withdrawal.

FIGURE 1.2. ICD-10 CRITERIA FOR SCHIZOPHRENIA (WHO, 1992)

#### 1.1.1 The positive-negative dimensions of symptom presentation

While first-rank symptoms and diagnostic criteria are of crucial clinical importance, they have done little to address the heterogeneity of the symptoms seen in schizophrenia or to contribute to a classificatory system of the disorder. In response to the heterogeneity of presentation, various subtypes of schizophrenia were delineated early in the identification of the disorder (Jablensky, 2010; McKenna, 2007; Pull, 2002). However, these subtypes did

not provide a strong framework for investigation into the complexities of the disorder and thus other approaches arose (Birchwood & Jackson, 2001; McKenna, 2007). One such approach is to "divide schizophrenia into groups of symptoms rather than groups of patients" (McKenna, 2007, p. 54). Crow (1980) is usually credited with the distinction between 'positive' and 'negative' symptoms, alluded to in the introduction of this chapter. However, several researchers point out that this classificatory dichotomy emerged much earlier, and initial formal distinctions were drawn up by Wing and Brown in 1970, in which they grouped symptoms into two main categories (McKenna, 2007; McKenna & Oh, 2005). Subsequent work by Strauss in 1974 resulted in the classificatory distinction that is accepted today (McKenna, 2007): positive symptoms are those which represent the presence of abnormal phenomenon (such as delusions and hallucinations) and negative symptoms are those which reflect a paucity of normal function (such as social withdrawal and lack of volition) (Frith & Johnstone, 2003). Crow (1980) proposed that the dichotomy of positive and negative symptoms reflected two parallel processes and different underlying pathology. This model responded to the puzzling observation that some symptoms of schizophrenia appeared to fluctuate, showing responsiveness to medication and patterns of relapse and remission (in the case of the positive symptoms), whereas other symptoms were more stable and appeared to be markers of chronicity (in the case of the negative symptoms). The broad characteristics of these two 'syndromes' are presented in Table 1.1.

TABLE 1.1 CHARACTERISTICS OF THE TWO-SYNDROME CONCEPT

	Positive Syndrome	Negative Syndrome
Characteristic Symptoms	Delusions	Poverty of speech
	Hallucinations	Flattening of affect
	Thought Disorder	Lack of volition
Response to neuroleptics	Good	Poor
(i.e. antipsychotic medication)		
Intellectual impairment	Absent	Sometimes present
Phase of Illness	Acute	Chronic
Outcome	Potentially reversible (pattern	Possibly irreversible in some
	of relapse and remission)	cases

Adapted from Crow (1985, p. 481); McKenna and Oh (2005)

The distinction between positive and negative symptoms applies to how individual symptoms are classified. The heterogeneity of the disorder means that an individual with schizophrenia may present with a combination of both positive and negative symptoms (Frith, 1992). Depending on the nature of the presentation an individual may be considered to present with predominantly positive symptoms, predominantly negative symptoms or a

mixed symptom profile. The positive-negative classification has become commonly used model to conceptualise the symptoms of schizophrenia (Andreasen, 1987; Birchwood & Jackson, 2001). Other models cluster the symptoms differently, yielding different clusters of symptoms based on statistical methods of cluster analysis (McKenna, 2007). However, given that most of the research generated in the field of social cognition and pragmatic performance draws on the positive-negative dimensions of symptom presentation, that will be the approach taken in this study and the focus of this discussion.

## Thought disorder: Spanning the positive-negative divide

Before discussing the dimensions of positive and negative symptoms, the construct of 'thought disorder' deserves some attention as it encompasses symptoms which are categorised as positive symptoms as well as features which are considered negative symptoms. The term 'thought disorder' is used to describe the disturbance in thought form of individuals with schizophrenia, that is, "its structure, organization and coherence – which manifest themselves in a loss of intelligibility of speech; the listener becomes unable to follow what is being said" (McKenna, 2007, p. 12).

TABLE 1.2 SOME DIMENSIONS OF ANDREASEN'S TLC (ANDREASEN, 1986) SCALE

Dimension	Description
Poverty of Speech	Reduction in the amount of language output, resulting in anything from
	slight reluctance to engage in talk, to lack of conversational initiation, to
	near mutism (McKenna, 2007).
Poverty of Content of	Production of utterances which are of "adequate length but supply little
Speech	information" (Frith, 1992, p. 96).
Pressure of Speech	An increase in the amount of language production and rate of speech.
Distractible Speech	Changes in topics, driven by distractions by environmental stimuli.
Tangentiality	Responds to questions in an "oblique, tangential or even irrelevant
	manner" (Andreasen, 1986, p. 476).
Derailment	Spontaneous speech moves from one idea to another "obliquely related
	[] or completely unrelated". Characterised by a lack of cohesion and poor
	pronominal reference (Andreasen, 1986, p. 476).
Incoherence	Incomprehensible due to semantic choices, abnormality in cohesion and
	similar language output to that seen in Wernicke's aphasia.
Illogicality	Illogical connections between ideas and utterances.
Clanging	Words are chosen on the basis of sound rather than meaning – often based
	on rhyming or punning.
Neologisms	New, 'non-real' word usage, unrecognisable in terms of derivation from
	real words.
Word Approximations	Words are used in an unconventional way.

Against a backdrop of various attempts to describe the disturbed thought processes presumed to occur in people with schizophrenia, Andreasen (Andreasen, 1979; Andreasen & Grove, 1986) championed the importance of defining and describing the observable disturbances in language and communication on which the evaluations of thought disorder were based. The resulting *Thought, Language and Communication Scale* (TLC) (Andreasen, 1986) became widely adopted and used in the study of thought disorder (McKenna & Oh, 2005). Some of the dimensions of thought disorder recognised in the TLC are presented in Table 1.2. Thought disorder thus encompasses a broad range of symptoms associated with language and communication performance. Several of these are clearly instances of 'excess' in functioning (for example, pressure of speech, tangentiality, derailment) and hence classified as positive symptoms (discussed next). In other instances, there is clearly a paucity of typical behaviour (for example, in the case of poverty of speech and poverty of content of speech) and thus those specific symptoms are grouped with the negative cluster, as will be discussed.

## **Positive symptoms**

The positive cluster of symptoms encompasses the psychotic symptoms, or those related to 'losing touch with reality'. In essence, this group of symptoms encompasses the experience of abnormal perception and abnormal ideas (Frith & Johnstone, 2003). Hallucinations are abnormal perceptions (sensory-perceptual distortions, such as hearing or seeing phenomenon that are not present in reality) (APA, 2000), that form part of the positive cluster of symptoms. Auditory hallucinations are the experience of hearing noises, usually taking the form of voices, when no objective source of the sound exists (Frith & Johnstone, 2003). Personal accounts of hallucinations show how disturbing this symptom can be for a person with schizophrenia. Cahill and Frith (1996, p. 272) cite a description from a woman talking about the voices she hears: "It starts singing inside me. Usually it sings choruses from the church [...] And I say I don't want to sing. I don't feel like singing. So I try and stop it". Despite their intrusion, some people with schizophrenia describe how the voices become integrated into life:

It is also worth saying that a mentally ill person may have a need to protect the voices. Despite how uncomfortable they can make daily living, voices can become part of a person's whole world. They may seem flighty and bothersome to a professional, but voices of God are not flighty or bothersome to your average person. Similarly, voices of the devil are not easily shrugged off or made light of (Anonymous, 1997, p. 164).

Abnormal ideas refer to delusions, which are fixed false beliefs (APA, 2000). Birchwood and Jackson (2001, p. 2) define delusions further as "beliefs which are not shared by the individuals cultural peer group". This distinction is important in settings of cultural diversity

where a wide range of beliefs may be accepted and 'normal' and need to be distinguished from true delusions. Delusions are often identified through the content of the person's speech, in which these abnormal ideas and fixed false beliefs are expressed (Baumann, 2001). Different types of delusions are recognised and are outlined in Table 1.3.

TABLE 1.3 DIFFERENT TYPES OF DELUSIONS

Type of delusion	Description
Delusions of persecution	Individual believes that someone or some organisation or power
	is trying to harm him (McKenna, 2007).
Delusions of reference	The phenomenon by which normal events are interpreted as
	referring to the patient personally or having special significance
	(McKenna, 2007).
Delusion of control (passivity	A 'first rank symptom' in which the person experiences a feeling
phenomena)	of being controlled by an external force that is movements and
	acts are experienced as occurring outside the individuals control
	(McKenna, 2007).
<b>Grandiose Delusions</b>	Individual believes that they have extraordinary ability, or that
	they are famous, or entitled (grandiose identity) (McKenna,
	2007).
Religiose Delusions	Delusions related to religious content, such as that they are
	saints, prophets or even God. A subtype of grandiose delusions
	(McKenna, 2007).
Hypochondriacal Delusions	Individual believes that "his body is unhealthy, diseased or
	rotten" including "bizarre complaints of bodily change"
	(McKenna, 2007, p. 4).

The impact of delusions on the person is captured in the following first person account of the experience:

In psychosis, nothing is what it seems. Everything exists to be understood beneath the surface. A bench remained a bench but who sat there became critical. Like irony, the casual exchange of words between a stranger or a friend meant something more than was being said (Weiner, 2003, p. 877).

Finally, with regard to the positive symptom cluster, most models of schizophrenia drawing on the positive-negative dichotomy, recognise specific aspects of thought disorder as a manifestation of positive symptoms. These elements were presented in Table 1.2 and include derailment, the use of neologisms and word approximations (McKenna & Oh, 2005). These are specific signs of 'disorganisation' in the language output of patients (McKenna, 2007).

## **Negative symptoms**

The negative symptom cluster reflects a reduction in aspects of normal function (Daubenton & Van Rensburg, 2001) and includes a number of specific symptoms. Of these alogia (linked to 'thought disorder') encompasses those features specifically involving language output: poverty of speech, poverty of content of speech and blocking. Poverty of speech and poverty of content of speech form part of Andreasen's (1986) TLC scale and are presented in Table 1.2. The symptom of blocking refers to the experience of being interrupted 'mid-thought', and subsequent reporting by the patient of not being able to recall what they wanted to say (McKenna & Oh, 2005). An individual may experience the feeling of thought blocking mid-sentence and report on it: "ooh, I can't tell you any more. Brain freeze. [...] Brain freeze. Just wait for a couple of seconds" (reported during assessment by a participant in the current study). Further negative symptoms include a 'paucity of expressive gesture' and lack of vocal inflection, like poverty of speech (Liddle, 1987), and can be seen as linked to communicative function. Unchanging facial expression and the related restriction or flattening in emotional responses may also be seen, and are classed as negative symptoms (McKenna, 2007). A deterioration in social behaviour and a related social withdrawal are other negative signs which may be manifest (Daubenton & Van Rensburg, 2001; Frith, 1992). The negative symptoms frequently have a detrimental effect on social functioning. As one person with schizophrenia explained, "I used to sit by myself and would hardly say anything to anyone" (Birchwood & Jackson, 2001, p. 1).

## 1.1.2 Signs or symptoms?

In the preceding discussion I have used the terminology of 'signs' and symptoms' interchangeably. While the distinction is not fundamental to this discussion, it does emerge in the model of schizophrenia which is advanced by Frith (1992) and presented in Chapter Two. Frith points out that 'symptoms' are those features which are experienced by a patient, and evaluated based on self-report. Delusions and hallucinations, and even blocking, would, therefore, be termed symptoms, as they rely on the individual reporting their beliefs or experiences. Other features of schizophrenia may be better seen as 'signs', including poverty of speech, incoherence, and social withdrawal, for example (Frith, 1992). In this instance, the 'abnormality' is inferred based on observation of the individual's behaviour. Behavioural 'signs' can be noted to cross the positive-negative divide. For instance, both poverty of speech (from the negative cluster of 'symptoms') and tangentiality (from the positive cluster) are examples of observable behavioural signs. While I will continue to use the terminology of 'positive symptoms' to encompass all of those features relating to an 'excess' in typical function, and 'negative symptoms' to encompass

all the features relating to a paucity of function, the sign-symptom distinction will be drawn on in elucidating Frith's (1992) model (Chapter Two).

# 1.2 The nature of language and communication functioning in people with schizophrenia

Consideration of language functioning in schizophrenia is as old as the identification of the disorder itself, forming part of the original descriptions of both Kraepelin and Bleuler (Dollfus et al., 2008; McKenna & Oh, 2005; Stephane, Pellizzer, Fletcher, & McClannahan, 2007). In recent years, there has been a surge of research interest in the area of language ability and performance in people with schizophrenia (e.g. Condray, Steinhauer, van Kammen, & Kasparek, 1996; Covington et al., 2005; King, Fraser, Thomas, & Kendell, 1990) with a renewed focus on pragmatic function (e.g. Binz & Brüne, 2010; Linscott, 2005; Meilijson et al., 2004; Mitchell & Crow, 2005).

Difficulties in communication are a key feature of schizophrenia and individuals with the disorder report that these difficulties play a role in the social consequences they experience (Brophy, 2007). One individual reported:

I don't really have anyone to talk to. I feel like my social development is about 15 years behind. I want to learn how to have a conversation, know what to say (Brophy, 2007, p. 5).

The impact of communication disturbances reverberates beyond the individual themselves, impacting on their communication partners too, as captured in the following description:

My daughter, Cindy, and I get together every 2 weeks for lunch—something we can now both enjoy. Our conversation is rather disjointed, as Cindy has difficulty understanding my words most of the time. [...] Now, after 17 years, we sometimes exchange two or three sentences which actually have the give and take of real conversation. [...] Coping with the world and understanding it is still too great a task for Cindy and most of her conversation is irrelevant or incomprehensible (Smith, 1991, pp. 689-690)

In trying to describe the communication of people with schizophrenia, much work has been done in considering specific aspects of language function. The approach to investigating language and communication abilities in people with schizophrenia has largely been tackled from an experimental paradigm with little consideration of performance in interaction or in tasks in which the context is less specified. Research has described impaired semantic function (Chaika, 1974; Sumiyoshi et al., 2005); reductions in syntactic complexity (Covington et al., 2005; P. Thomas et al., 1996); and impairments in language comprehension (Bagner, Melinder, & Barch, 2003; Condray & Steinhauer, 2003; Condray et al., 1996; Ruchsow, Trippel, Groen, Spitzer, & Kiefer, 2003; Tavano et al., 2008). In some

cases, these disturbances in language have been linked to cognitive decline often associated with negative symptomatology and chronicity of the condition. Other research has suggested that, in fact, the language disturbances are associated with specific profiles of psychiatric presentation. The findings are equivocal, and sometimes contradictory. However, what is agreed is that disturbances in communication are one of the central features of the disorder in many people with the diagnosis. The disturbances in 'lower level' linguistic components may be explained by disturbances in pragmatic processes. Indeed, Frith (1992 p. 98) suggests that "the highest level of language processes are impaired in schizophrenia". In fact, this recognition of the centrality of pragmatic function in schizophrenia was apparent from the earliest descriptions of the disorder, with Bleuler stating: "The abnormality does not lie in language itself but rather in its context" (1911/1950, p.147). These pragmatic disturbances will be explored in greater detail in Chapter Two, within the context of an explanatory theory of schizophrenia.

## 1.3 Course of schizophrenia

As in symptom presentation the natural history or course of the condition is characterised by significant heterogeneity (Birchwood & Jackson 2001) and McKenna (2007) urges that simplistic descriptions of a progressive course on the one hand or complete recovery on the other should be avoided. While some people with schizophrenia may make a substantial improvement or recovery of function in all areas (Birchwood & Jackson, 2001), most display a level of deterioration in the condition. This deterioration may reach a point at which the psychiatric symptoms become stable or it may be characterised by further deterioration or periods of remission with intermittent episodes of acute symptoms (Jones & Buckley, 2003; McKenna, 2007).

The concept of acute and chronic schizophrenia is linked to the description of the course of the disorder. The presentation of new symptoms, or worsening of symptoms already present, has come to be associated with acute schizophrenia. The definition of acute and chronic schizophrenia was operationalised in the International Pilot Study of Schizophrenia (WHO, 1973), in which recent onset (in the last 5 years), persistence of symptoms (less than 3 years) and extent of hospitalisation (less than 2 years) were the criteria by which acute schizophrenia was identified. Chronic schizophrenia is defined as the presence of symptoms that persist over years with little distinction between episodes (WHO, 1992). DSM-IV (APA, 2000) and ICD-10 (WHO, 1992) allow for the identification of 'episodes' within a chronic course of the condition, in which characteristic criteria, such as psychotic symptoms, are present (criterion A in DSM-IV and criterion 1 in ICD-10 as illustrated in Figures 1.1 and 1.2 respectively).

## 1.4 Approaches to intervention

Despite the fact that pharmacological intervention is considered the mainstay of treatment (McKenna, 2007), medication is rarely used alone. The need for a holistic and comprehensive treatment package is therefore recognised as necessary to "reduce a patients suffering from symptoms, to offer the best chance at rehabilitation and to help those who are close to the patient" (Schulz, 1995, p. 987). Psychosocial intervention would include the use of family therapy, supportive therapy, cognitive-behavioural therapy and even psychotherapy. 'Psycho-education' involves information giving about "the etiology, treatment and prognosis of schizophrenia..." (Daubenton & Van Rensburg, 2001, p. 102) and is considered to be an essential part of treatment. These 'talking therapies' directly involve communication. The processes involve talking about the symptoms and coping strategies (such as in cognitive-behavioural therapy), exploring relationships (for example, family therapy) or addressing current needs (as would occur in supportive therapy) (Birchwood & Spencer, 2001). Skills teaching and vocational rehabilitation are also considered to be central components of psychosocial rehabilitation. Social skills training is frequently a central component in these interventions – aimed at directly addressing social functioning (Birchwood & Spencer, 2001). Language re-socialization (the improvement in the use of language in social contexts) is a key aim in social skills programs (Walsh, 2008a). There is evidence to suggest that these programs are successful in teaching skills which are generalised to social contexts (Bellack, 2004; Kurtz & Mueser, 2008). This emphasis on social skills functioning within a group setting again recognises the centrality of communication and interaction in the presentation of the disorder. Speech-language therapy (SLT) has been provided in some mental health care settings for a number of years. Although a relative newcomer to the multidisciplinary team in this context, this area of practice has been growing and services are now provided in a range of different contexts across several countries (e.g. Brophy, 2008; Clegg, Brumfitt, Parks, & Woodruff, 2007; C. Jagoe, 2007; Walsh, 2007a). These interventions may focus on discrete linguistic or communicative functions assessed to be impaired in a particular individual (e.g. Clegg et al., 2007) or may focus on communication skills acquired in a group or conversational context (e.g. Brophy, 2008; Walsh, 2007a, 2008a).

## 1.5 Conclusion

Schizophrenia is a complex and heterogeneous mental illness which has pervasive and devastating consequences. The symptoms are vast and disparate, but may be understood as presenting in two main clusters — a positive symptom cluster and a negative symptoms cluster. An individual may display symptoms from both of these clusters and their

presentation may therefore be characterised as a predominantly positive, a predominantly negative or a mixed symptom profile. In keeping with the heterogeneity in symptoms, the course of the disorder is also variable across individuals. One of the central features of schizophrenia is its impact on communication function. While disturbances have been described in all components of linguistic function, it is those in the domain of pragmatics which appear more robust and are of interest in the context of this study.

Given the heterogeneity of not only the psychiatric symptoms, but also the language and communication function of people with schizophrenia, scholars pursuing explanatory accounts of the disorder face the challenge of integrating this disparate range of symptoms. In addition, clinicians face challenges in addressing the pragmatic performance of individuals. If we are to understand the complex heterogeneity of the disorder, we must pursue, as Frith (1992) suggests, theories which can unify our understanding of the disparate presentations seen in the condition. Such an understanding may assist in better approaches to support and intervention with regards to the communication disturbances experienced by people with schizophrenia. Understanding the communication difficulties in schizophrenia requires, then, theories and models which can explain language performance in its 'messiest' form — not single sentences within a controlled environment, but utterances within a discourse and social context — communicative interaction.

# **Chapter Two**

# Schizophrenia, 'theory of mind' and pragmatics: Exploring the predictions of the metarepresentational model

The disturbances in pragmatic performance noted in people with schizophrenia have been recognised since the conceptualisation of the disorder, and continue to be seen as a hallmark feature. Explaining these difficulties in social communication has been a challenge and many have concluded that people with schizophrenia have difficulty in taking the 'perspective' of another person (e.g. Frith, 1992; Langdon, 2010). The ability to attribute intentions, thoughts and beliefs (all types of 'mental states') to others has been called 'theory of mind' (ToM), mentalizing, and even 'mind-reading' and it is this ability which has interested scholars and clinicians, initially in relation to autism and more recently with reference to schizophrenia. This chapter will focus on ToM, with a significant proportion of the discussion dedicated to presenting one of the most developed theories of ToM in the disorder – Frith's (1992) metarepresentational model of schizophrenia.

The chapter will begin with a discussion of the concept of ToM, how it is typically assessed and explanatory models of this ability. Section 2.2 will focus on the relationship between mentalizing and communication, presenting some of the models and controversies in the area. Section 2.3 will present the metarepresentational model of schizophrenia, discussing how Frith envisages the theory to explain the diversity of symptoms in the disorder, and what predictions the model makes regarding communication. The chapter is concluded in section 2.4.

### 2.1 'Theory of mind' accounts of schizophrenia

The term 'theory of mind' was coined in 1978 in a seminal article by Premack and Woodruff who defined it as the individual's ability to "impute[...] mental states to himself and others" (p. 515). Investigation of the developmental aspects of these abilities (e.g. Doherty, 2009; Frith & Frith, 2003; Goldman, 2009; Wellman, Cross, & Watson, 2001), as well as their impairment, particularly in the disorder of autism (Baron-Cohen, Leslie, & Frith, 1985; U. Frith, 1994; Happè, 1993), has generated an expanse of literature on the topic. A growing body of research on schizophrenia has yielded support for the notion that people with this disorder present with impairments in ToM, or mentalizing (e.g. Corcoran, Mercer, & Frith, 1995; Doody et al., 1998; Drury, Robinson, & Birchwood, 1998; Pickup & Frith, 2001). Before this research is presented and critiqued in section 2.1.4, the construct of 'ToM', its assessment and explanatory theories, will be discussed.

### 2.1.1 The construct of 'theory of mind'

While there are debates about the nature of 'theory of mind', most scholars agree that as humans we are able to predict the behaviour of others based on attribution of mental states. In fact, we appear to do so effortlessly and automatically. We observe a scene and, in spite of the possibility of interpreting it in purely physical terms, we tend to interpret it in mentalistic or intentional terms. If the following example, taken from Carston (2002, p. 42), is considered, the "intentional stance" (Dennett, 1987) is clear:

Imagine observing a scene in which a man slowly lowers himself, head and arms first, down into a hole in the ground while another man holds on to his legs. Very few observers will represent this scene to themselves as I have just described it and leave it at that; most of us will look for some plausible beliefs, desires and/or intentions that we can attribute to these two men, some set of mental states which will explain their behaviour.

It seems that humans are constantly engaged in attribution. We do not only attribute mental states based on observed behaviour (as in the example above), we also predict behaviour based on attributed mental states (Sperber, 2000b). For example, you may recognise that a companion is angry, and predict that they will abruptly leave the interaction you are observing. In this case, your attribution of a mental state has allowed the prediction of an associated behaviour. There is a final sequence of attribution and prediction which is possible through a ToM ability and that is the ability to draw inferences from one mental state to another (Sperber, 2000b). Consider again the example of your companion. The following sequence of attribution and inference may be possible for observing the scene:

(a) John *knows* that he has been overcharged and Therefore John is *angry*.

In the above example, the attributed knowledge (a mental state) is used to predict a related mental state – in this case, that of anger. These examples illustrate the various kinds of inferences that the metapsychological ability of ToM can draw: (1) attribute mental states based on observed behaviour, (2), predict behaviour based on attributed mental states, and (3) infer mental states based on attributed mental states (Sperber, 2000b).

The ability to engage in such attribution is thought to have a developmental trajectory, and its emergence is generally associated with being able to pass the 'false belief task'.

### 2.1.2 Theory of mind and the 'false belief task'

The 'false belief task' has become the cornerstone for investigating ToM. This task stems from the notion, put forward by Dennett in 1978, that the ability to predict behaviour of an

agent based on attributing them with a false belief would indicate the presence of ToM (Dennett, 1987; Frith & Frith, 2003). The false belief task, devised by Wimmer and Perner (1983), classically involves the participant predicting where a character will look for an object, based on their false belief:

Maxi has some chocolate and puts it into a blue cupboard. Maxi goes out. Now his mother comes in and moves the chocolate to a green cupboard. Maxi comes back to get his chocolate. Where will Maxi look for the chocolate? The answer is of course: Maxi will look in the blue cupboard, because this is where he falsely believes the chocolate to be (Frith & Frith, 2003, p. 459).

If the participant is able to attribute Maxi with a belief different from his own - a false belief - he will be able to predict that Maxi will look for the chocolate in the blue cupboard. This response indicates first-order 'ToM' abilities - the ability to distinguish mental states from the state of affairs that exits in reality (Leiser & Bonshtein, 2003). If the researcher was then to ask where a character observing the scene thinks Maxi will look for the chocolate, this question would tap second-order 'ToM' ability - the ability to reflect on beliefs about beliefs (Leiser & Bonshtein, 2003). Research has suggested that children begin to be able to pass this particular task at the age of four (for review see Wellman et al., 2001), and that this pattern of performance is consistent in other cultures (Avis & Harris, 1991; Scholl & Leslie, 1999). False belief understanding in typically developing children has been shown to be related to aspects of real-world social functioning (Astington, 2003), and its impairment in children with autism is seen as contributing to the social difficulties experienced by these individuals (U. Frith, 1994). Impaired performance on typical false belief tasks has been demonstrated in people with schizophrenia (Drury et al., 1998; Frith & Corcoran, 1996), and as a result of such findings impaired 'mentalizing' has been the focus of much research. Although false belief tasks have been at the centre of a large body of literature investigating the implications of the implied developmental trajectory, they have been increasingly criticised along various lines.

The first line of criticism stems from an appraisal of the exercise in relation to the task demands. Critics have pointed out the complex task demands inherent in the classic 'false-belief' task: the individual participating in the task must keep track of two proponents in the story, remember where the object was at the beginning of the task, where it has moved to, where it was when the second character was in the room, and understand the question posed by the examiner (Bloom & German, 2000; McCabe, 2009). These critics question whether ToM deficits are primary, or secondary to processing overload, attentional deficits, or related to working memory and executive function disturbances. In fact, when the task is modified (such as simplifying the questions, increasing pragmatic

naturalness or reducing attentional and memory demands) younger children are able to pass this task (Bloom & German, 2000). People with schizophrenia too seem to benefit from modifications which support the basic task demands. By asking questions of the participants as each new piece of information was added in a ToM task, Pickup (1997) found less severe difficulties than those described in other studies.

Despite some studies demonstrating an association between performance on ToM tasks and social functioning (e.g. U. Frith, 1994; Roncone et al., 2002), people with disorders affecting social function do not always display difficulty with false belief tasks (Boucher, 1996). There is growing evidence that individuals unable to pass false belief tasks (such as young children and adults with learning disabilities) still engage in behaviour which is clearly based on attributing mental states to those around them (Astington, 2003; Bloom & German, 2000; Boucher, 1996; Happè & Loth, 2002). One such study was conducted by O'Neill (1996) who investigated how 2-year old children asked for a toy which had been put on a high shelf by the investigator while the child observed. When requesting the toy from a parent, the children formulated different requests based on whether the parent had been present or absent during the placement of the toy (O'Neill, 1996). This type of performance signals a sensitivity to the parent's perspective, despite the fact that the children were 2 years old, an age at which children are unable to pass the false belief task. These type of findings seem to support Astington's (2003, p. 13) assertion that false-belief understanding is "sometimes necessary [but] never sufficient" for the range of behaviours making up 'social competence'. Mentalizing appears to involve more than the ability to reason about false beliefs (Bloom & German, 2000).

ToM tasks are criticised for lacking ecological validity (e.g. Antaki, 2004; Reddy & Morris, 2004). In the experimental tasks used to probe mentalizing, the interactional supports of typical social engagement are absent and hence the performance on such tasks cannot be considered to emulate the natural processes of dealing with belief and intention that they purport to measure. In natural interaction, scaffolding may support social functioning in a manner not seen in the assessment construct of false-belief tasks (Astington, 2003). Indeed, in a hallmark study by McCabe and colleagues, ToM was investigated within the conversational discourse of people with schizophrenia (McCabe, Leudar, & Antaki, 2004). No evidence was found to support the notion of ToM deficits. In a subsequent paper, McCabe (2009, p. 116) reflects that the individuals were noted to use mental state terms and were able to "successfully express beliefs about others' states of mind as well as about their own".

Finally, false belief tasks may also draw on the ability to judge a representation as true or false. Mascaro and Sperber (Mascaro & Sperber, 2009; Sperber et al., 2010) have demonstrated that children pass these tasks at around the time that they demonstrate "the capacity to process the epistemic status of representations" (Mascaro & Sperber, 2009, p. 377). False belief tasks may then mask existing abilities with regards to representing beliefs and intentions, and instead manifest as a result of impairments in judging the epistemic status of propositions.

False belief tasks have very clear limitations and the necessity of translating these hypotheses into ecologically valid data is compelling. Despite the clear problems with ToM tasks *per se*, I am persuaded that human communication is dependent to some degree on 'mentalizing' abilities. The evidence for this argument, from a pragmatic perspective, will be examined in subsequent sections and from a Relevance Theory perspective in Chapter Three.

### 2.1.3 Models of theory of mind

While ToM, and false belief tasks, have not remained without their critics (e.g. Antaki, 2004; Bloom & German, 2000; McCabe, 2009), the body of literature on the topic has generated a number of models to explain ToM. Each of these models represents an attempt to explain how people are able to attribute beliefs, desires and intentions to others and how these abilities might interact with other cognitive processes. Two main schools of thought have emerged as to how people are able to attribute mental states to others.

#### The theory 'theory of mind': The rationalisation model

In the theory ToM model, mentalizing is seen as akin to theorising. In this approach the observer engages in belief-desire reasoning, based on causal relationships between mental states and between mental states and behaviour (Doherty, 2009). For most proponents of the 'theory-theory' (or 'rationalisation account'), this is essentially 'folk psychology', in which the reasoning process is akin to theorising (Gopnik & Meltzoff, 1997) and, in some accounts, modular (e.g. Scholl & Leslie, 1999). In these rationalisation models, the individual draws on logical relationships to attribute mental states or predict behaviour. Take, for example, the two sequences below, adapted from Sperber (1994, pp. 187-188):

- (b) A man shoots an arrow and kills a deer.
- (c) A man shoots an arrow and the arrow comes close to hitting a deer.

Within this model the inferential procedure is as follows: "first decide what effect of the action the agent could have both predicted and desired; second, assume this was the effect the agent intended to achieve" (Sperber & Wilson, 2002, p. 10). Drawing on the example

above, the rationalisation account would work on the procedure of observing the actual action in (a) and assuming it to be the desired outcome would assume this "was the effect the agent intended to achieve" (*ibid*). In the case of (b) the observer would draw on inferences of what the agent could have expected to achieve (i.e. hit the deer) and take this to be the intended outcome. This more complex pattern relies, in a rationalisation account, on seeing "as intentional not the actual desirable effect of a behaviour but an effect that the agent may have seen as desirable and as made more probable by his behaviour" (Sperber, 1994, p. 188). The rationalisation (or 'theory theory') account is perhaps the most criticised (Reddy & Morris, 2004) and its inability to adequately account for communication will be explored in Chapter Three.

### The simulation model of theory of mind

The second school of thought proposes that people use simulation to understand the perspective (beliefs, desires, intentions) of others. From this perspective, ToM is seen as "an ability to project ourselves imaginatively into another person's perspective, simulating their mental activity with our own" (Carruthers & Smith, 1996, p. 3; italics in original). Different variations of this theory exist but all essentially involve imaginatively entertaining the action being produced by another person and simulating what intention might be behind that action, should we have produced that same action. Thus, according to this model we assume that all minds essentially work in a similar manner and we use our own as a "working model" to predict others' actions and infer intentions behind actions (Doherty, 2009, p. 44). These models suggest that how we perceive others is supported by the same or similar representations that allow for the primary or first person perception of that experience. This process may initially seem like a cumbersome endeavour - imagining how one might feel, respond, or what one might believe and then projecting these representations on to another person. In fact, it seems like a risky strategy, as the other person may have very different experiences, perceptions, expectations. However, there is increasing neurological evidence which may be in support of the simulation theory. The existence of "mirror neurons" - neurons which fire both when an intentional action is performed and when an intention action is observed - have been described in the last decade (Rizzolatti et al., 1996). While these neurons have only been directly observed in non-human subjects, imaging evidence appears to support the existence of a similar system in humans (Ochsner, 2008). The proposal by scientists working in the field is that the newly discovered 'mirror neurons' may play a role in mentalizing by providing the biological substrate by which simulation is possible (Gallese & Goldman, 1998; Rizzolatti & Fabbri-Destro, 2010). Ochsner (2008) expresses the link between the existence of such mirror neurons and the simulation theory of social cognition as follows:

These "mirror neurons" were interesting because they seemed to encode the intention behind an action regardless of who performed it, and it was hypothesized that their activation could provide the basis for understanding the intentions behind the actions of another person (p. 51).

Simulation may then play some role in supporting aspects of the process of understanding the experience of another person.

An 'alternative' model of mentalizing which links closely to the simulation model is that proposed by Corcoran (2000). This model suggests that when faced with the requirement to infer another's mental state, a person first invokes autobiographical memory in an attempt to search for relevant information or experience which might inform the mentalizing process. Although aligned with the simulation model, Corcoran's proposal also appears to appeal to aspects of the logical reasoning processes put forward by the 'theory theories':

Reasoning processes will work upon this memory to render a solution suitable to the current situation by considering the relevant conditional or situational variables at play (Corcoran & Frith, 2005, p. 3).

Findings of an association between impairment in autobiographical memory retrieval and mentalizing, as well as an association between inductive reasoning and mentalizing, appear to support this model (Corcoran, 2003), which appears to draw aspects from both 'theory theories' and the simulation school of thought. Although this model is situated by Corcoran (2003) and Corcoran and Frith (2005) within an overarching mentalizing model of the disorder, it does invoke a significant contextual reasoning component and may perhaps align with the ability to reason about the epistemic status of propositions. As mentioned earlier, this ability may be linked to the ability to pass false-belief tasks (Mascaro & Sperber, 2009).

While both the 'Theory ToM' and the Simulation Model may be able to explain, in different ways, how people attribute mental states to behaviour, behaviour to mental states and relate mental states to each other, they face considerable challenges in explaining communicative behaviour (Cummings, 2009). In fact, as will be discussed in Chapter Three, neither of these approaches appears sufficient to explain how hearers come to interpret the communicative action of a speaker's utterance (Sperber & Wilson, 2002).

### 2.1.4 Theory of mind in schizophrenia

The majority of studies investigating ToM in people with schizophrenia report a degree of impairment in the ability of participants to attribute mental states to others, particularly with regards to performance in second-order ToM abilities. Two review studies (Brüne, 2005; Harrington, Siegert, & McClure, 2005) and two meta-analyses (Bora, Yucel, & Pantelis,

2009; Sprong, Schothorst, Vos, Hox, & Van Engeland, 2007) have all concluded that ToM is impaired in schizophrenia. Research has demonstrated impairment in ToM across a range of tasks. Many involve verbal stimuli or responses, or infer ToM impairments based on difficulties in interpreting certain kinds of utterances, such as hints (Corcoran & Frith, 2005). However, several paradigms using non-verbal stimuli have also demonstrated impairments in participants' ability to attribute mental states to others. For example, when performance on comprehension of different types of visually presented jokes are compared, people with schizophrenia display more difficulties with mentalistic jokes (in which the joke relies on inference of mental states) than they did on physical or behaviourally-based jokes (Corcoran, Cahill, & Frith, 1997; Marjoram et al., 2005). Differences in how participants with schizophrenia, as apposed to control subjects, attribute intentions to simple animations of geometric shapes, when describing the animation, has further underscored the disturbance ToM functioning in this clinical population (S. Blakemore, Sarfati, Bazin, & Decety, 2003; Horan et al., 2009).

Some researchers have suggested that the impairments in ToM are a result of a more general cognitive impairment, such as impairments in working memory or IQ (Brüne, 2003), with some suggestions that IQ contributes most specifically to the ToM difficulties seen in patients in remission (Bora et al., 2009). However, a number of studies have controlled for IQ and cognitive function and concluded that people with schizophrenia present with a specific impairment in ToM, unrelated to executive function or IQ (Doody et al., 1998; Harrington, Siegert et al., 2005; Janssen, Krabbendam, Jolles, & van Os, 2003; Langdon, Davies et al., 2002; Pickup & Frith, 2001).

Many of the difficulties reported in the literature on ToM function in people with schizophrenia have been investigated from the standpoint that distinct patterns of performance are predicted, based on symptom profiles. Much of this research has been driven by the influential model of schizophrenia proposed by Frith (1992), presented in section 2.3. While the different methods of subgrouping patients have been critiqued along methodological lines (e.g. Harrington, Siegert et al., 2005), some associations between ToM performance and symptom profiles have emerged. Using sign/symptom grouping criteria, researchers such as Corcoran, Frith and their colleagues have demonstrated a number of relatively robust associations between patterns of performance on ToM tasks and specific symptomatology (Corcoran, 2000). A fairly consistent finding across studies has been that individuals with prominent behavioural signs (encompassing the negative 'symptoms' as well as disorganised verbal and motoric behaviour) display the most significant impairments in mentalizing (Corcoran, 2000; Corcoran et al., 1997; Corcoran & Frith, 1996; Corcoran et

al., 1995). Individuals with paranoid delusions (specifically persecutory delusions) have also been shown to have difficulty with tasks involving mentalizing, although these are different, or less severe, that those described in individuals with behavioural signs (Corcoran et al., 1997; Corcoran et al., 1995; Drury et al., 1998). Blakemore and colleagues (2003), for example, demonstrated that those individuals with schizophrenia presenting with paranoid delusions of persecution engaged in over-attribution of intention and causes when presented with sequences of simple animations. Over-attribution of intention is likely to cause errors on ToM tasks and is predicted to interfere with behaviour and communication, as will be further explored in section 2.3. The difficulties displayed by individuals with paranoid symptoms have been less consistently demonstrated across studies and the findings are equivocal (Brüne, 2005).

Investigations into ToM have not only considered the associated symptom profiles, but also whether the impairment, so frequently described, is a state or trait feature. In other words, whether the impairment is associated with the presence of the disorder - a trait of schizophrenia itself – or is related to the psychiatric state of the individual (that is, whether the individual is acutely psychotic, or in remission, for example). While some studies suggest that ToM impairments are state-related (Corcoran & Frith, 1996; Drury et al., 1998; Pickup & Frith, 2001), others have found evidence of disturbance even in those individuals in remission from the disorder (Herold et al., 2002; Janssen et al., 2003). There has been some suggestion that impairments in ToM are related to illness chronicity (Harrington, Langdon, Siegert, & McClure, 2005; Langdon, Coltheart, Ward, & Catts, 2002; Langdon et al., 1997; Sarfati, Hardy-Bayle, Nadel, Chevalier, & Widlocher, 1997). However, the fact that a degree of ToM disturbance is found in individuals at high risk of developing the disorder (e.g. Yu Sun, Kang, Na Young, So Young, & Jun Soo, 2008), those in the prodromal stage (e.g. Green et al., 2011), as well as in relatives (e.g. Janssen et al., 2003), suggests that it is, in fact, a marker of the disorder, rather than related to chronicity of the illness. In a recent study by Green and colleagues (Green et al., 2011), the impairment in ToM was shown to be evident across the prodromal, acute and chronic phases of the illness. This finding led the researchers to conclude that impairment in ToM is a "vulnerability indicator, as opposed to an indicator of severity or chronicity" (Green et al., 2011, p. 7), supporting the notion that disturbances in social cognition are present in advance of the onset of overt symptoms and a central feature throughout the course of the illness. A meta-analysis of the literature has supported the notion that ToM impairments are a central feature of the disorder and hence trait-related (Sprong et al., 2007).

The literature on ToM in people with schizophrenia is vast and challenging to interpret due to differences in assessment modalities, methodologies, selection criteria and grouping methods. However, in summary, the research appears to unequivocally support impairments in ToM when participants are assessed in experimental paradigms, on structured tasks with verbal demands, and without such demands. Although there is still some controversy, the review and meta-analyses generally appear to support the notion that the impairment is specific rather than related to general cognitive impairments. The symptom-based performance with regard to ToM tasks is also somewhat contradictory, but in general those with negative symptoms appear to have the most significant impairments in ToM performance, while the findings with regard to participants displaying paranoid delusions are equivocal. Finally, the evidence supports the notion that the impairment in mentalizing is a central feature – a trait-related impairment – of schizophrenia.

While an impairment in ToM seems to emerge strongly in experimental paradigms investigating this ability in people with schizophrenia, not all studies support the existence of such difficulties. In a landmark study exploring conversational performance of individuals with schizophrenia, McCabe and colleagues (McCabe et al., 2004) revealed evidence of intact ToM abilities brought to bear during clinical interactions. In a neuroimaging study, researchers also found surprising evidence of ToM engagement when participants with schizophrenia were asked to "imagine and describe the mental state of another person" (Andreasen, Calage, & O'Leary, 2008). These authors make the important point that, "in fact, the closer the TOM task is to 'real life' in a particular study, the more likely the patients' functioning will be normal" (Andreasen et al., 2008, p. 712). Such an indication may reflect the discrepancy between the experimental tasks and the social phenomena they purport to explain. These findings underscore the importance of investigating 'on-line' processes (as apposed to 'off-line', decontextualised tasks) and conversational data with reference to mentalizing abilities.

## 2.2 Human communication and mentalizing

The ToM disturbances described in schizophrenia are thought to impact on social communication and pragmatic processes. Before these predictions are explored in the context of a 'mentalizing model' of the disorder, it is necessary to explore at a theoretic level what mentalizing requirements, if any, are demanded by verbal communication.

### 2.2.1 Communication and inference

Grice is credited with the first detailed account of communication as an essentially inferential endeavour (Grice, 1957, 1967). His inferential account of pragmatics marked a

move away from the classic conceptualisation of communication which was the 'transmission' of a 'message' through a shared 'code'. The classic model thus treated communication as an exercise in encoding and decoding information transmitted between the speaker and hearer. Grice's seminal works (reprinted in Grice, 1989) demonstrated how this model had significant limitations when it came to explaining communication in context. Much communication relies on utterances which have a less than straightforward relationship between message and signal, utterances which may have nuances of interpretation in different settings. In other words, the same sentence can have different intended meanings by the speaker, depending on when and where and to whom it is uttered. The examples below, adapted from Sperber and Wilson (1986/1995, p. 34), illustrate this point:

- (d) A: Would you like some coffee?

  B: Coffee would keep me awake.
- (e) A: You look tired.B: Coffee would keep me awake.

In the first of these examples, 'Would you like coffee?' uttered late at night after a long day at work, may be intended to imply 'No' to the offer. In contrast, if the interlocutor had just stated, 'You look tired' (as in the second example), the same response may be taken to imply that the speaker is requesting coffee. In the first instance, the sentence (with the same logical form and semantic representations) is interpreted as declining an offer of coffee, and in the second scenario it is interpreted as a request for coffee. The inferential processes required to interpret 'what is implied' were expounded by Grice (1967), who called these implied meanings 'implicatures'. While Grice saw implicatures as strongly relying on inferential capacity, more recent approaches to pragmatics have demonstrated how 'what is said' is also a function of inference (discussed in Chapter Three).

There is recognition then, that although language encodes phonemic and semantic representations of the sentences uttered, there is a gap between the representation of the sentence and the message communicated. Clearly, communication of this message relies on strongly inferential processes to identify the speaker's intended meaning. If communication inherently relies on inference, as the above discussion suggests, then what role does mentalizing or mind-reading play in these pragmatic processes? Intuitively, if one is having to infer what a speaker intends to communicate, this process must involve reference to a speaker's intentions and, hence, a level of mentalizing. It is this notion which is foundational in Gricean and post-Gricean pragmatic theories and which will be explored briefly here.

### 2.2.2 Intention-based pragmatics and the role of mentalizing in communication

Central to Grice's account of pragmatics, then, is the expression and recognition of intentions (Grice, 1957, 1967, 1989). According to the inferential model, the hearer must recognise that the communicator intends to inform them of something and must subsequently infer what that intended meaning is. As a corollary, the speaker must attempt to maximize the prospect that their utterance will be accurately interpreted by their audience (Sperber & Wilson, 1986/1995). Intentions, as mental representations, can only be inferred, or attributed, on the basis of observable behaviours or public 'acts' (Sperber & Wilson, 1986/1995). An inferential model of communication then, with the centrality of interpreting intentions on the basis of verbal evidence, inherently asserts the role of 'mentalizing' in the process of communication. Communication, it would seem, involves processes akin to 'mindreading' – inferring what a speaker means and inferring what a hearer expects in the context of the communicative exchange (Wilson, 2000). Indeed, Wilson (2000, p. 412) asserts that this relationship between mentalizing and communication "has been relatively uncontroversial in pragmatics for more than thirty years".

Neuroimaging studies seem to provide some support for such a relationship. Mentalizing is strongly associated with the Medial Prefrontal Cortex (MPFC) (Frith & Frith, 2003). Importantly, the few studies which exist on neuroimaging and pragmatic function implicate the same cortical region. The MPFC has also been implicated in a communication-based study using imaging to investigate ostensive signals, defined as signals in which an intention to communicate was conveyed<sup>1</sup>, such as calling one's name or intent eye gaze (Kampe, Frith, & Frith, 2003), again suggesting an interaction between communication (in this case signals of communicative intent) and mentalizing. These and other imaging studies have been interpreted to demonstrate that "the relationship between communicative and mentalizing functions is remarkably close" (Frith & Frith, 2003, p. 469).

The centrality of intentions – both the fulfilment and the interpretation of communicative intentions – has had a profound influence on pragmatics and is embraced by the theories which Haugh (2008) labels as cognitive-philosophical, including Gricean and neo-Gricean theories, Relevance Theory and Speech Act Theory. Intentions, however, are not accepted as central to communication by all pragmatists. While theorists within the cognitive-pragmatic approach construct intentions as central to pragmatic processes, sociocultural-interactional approaches place less emphasis on intention. Haugh (2008) summarises the differences as follows:

<sup>&</sup>lt;sup>1</sup> This thesis will apply the Relevance Theory definition of 'ostensive', defined as those signals which make "an overt demand on the hearer's attention" (Carston, 1997, p. 4).

While Cognitive-Philosophical approaches to pragmatics tend to view intention as an a priori mental state of speakers, in Sociocultural-Interactional pragmatics intention has for the most part been conceptualized as a post facto participant resource that emerges through interaction (p. 104).

Scholars working within sociological-interactional frameworks see utterances as conversational moves, and their interpretation linked to the notion that the individual is "doing something" (Antaki, 2004, p. 667), "working out" (*ibid*, p. 680) what is being displayed by another person. In such interactional terms, reference to 'the mind' and to invisible intentions and mental states are avoided, and instead what is seen as allowing communication to occur is the process of working out what is displayed by public actions. The argument that intention is achieved in the interactional space intentionally undermines the role of mentalizing in the communication process. The role of inference in communication is, however, undeniable, and is recognised at some level even by opponents of mentalistic approaches:

[...] no-one [...] is denying that sometimes, in our interactions with others, we resort to inference, simulation and perhaps occasionally even something resembling theorizing. But people relate to other people in a diversity of ways, and only some of these are of a specifically linguistic or propositional kind (Leudar & Costall, 2009, pp. 13-14).

This thesis, and my own approach, is firmly situated within the cognitive-pragmatic framework, embracing both the inferential pragmatic account and the role of mentalizing in communication. However, I would like to acknowledge the importance of the critiques of the current approaches to investigation of mentalizing and communication. The divorcing of 'on-line' communication from the processes hypothesised to support conversation must be addressed. Experiments do have an important role in the development of theory. However, the investigation of conversation 'in vivo', must be used to test and challenge the theories which emerge (Leudar & Costall, 2009; McCabe, 2009). Given the cognitive-communicative focus of this study, the cognitive-pragmatic view of intention in communication will be adopted and further explored, from a Relevance Theory perspective, in Chapter Three.

# 2.3 The 'metarepresentational model' of schizophrenia

Frith's (1992) essay on the cognitive neuropsychology of schizophrenia hypothesises that an abnormality in mentalizing can account for communicative (and other) behaviour of people with schizophrenia. This model is an attempt to develop a unified account to explain the vast range of symptoms seen in the disorder of schizophrenia and their heterogeneous presentation. Frith's account presents a model of typical function showing how disturbances in these cognitive processes may result in the myriad of behavioural

presentations of schizophrenia. The model is based on the notion that the range of "signs and symptoms of schizophrenia reflect underlying cognitive deficits within a system which enables the recognition and monitoring of one's own willed intentions as well as the attribution of intentions, thoughts and beliefs to others" (Corcoran, 2000, p. 392). In other words, Frith's (1992) model predicts that a disturbance in the individual's capacity to represent mental states - both their own (for self-monitoring purposes) and those of others - is responsible for the symptoms which are seen in the disorder. Representing mental states (which are, themselves, representations) is, therefore, a metarepresentational ability. Frith's influential 'metarepresentational model' of schizophrenia is a strong 'mentalizing model' of the disorder, in which the mentalizing deficits are seen as central to the nature of the condition itself (Frith, 1992). These mentalizing impairments are not hypothesised to be uniform across all people with schizophrenia but have been shown to present in specific ways according to the signs and symptoms of the condition (as discussed earlier). There is a growing body of evidence which supports, to a greater or lesser extent, the sign/symptom specificity of deficits in mentalizing (e.g. Corcoran & Frith, 1996; Corcoran et al., 1995; Pickup & Frith, 2001).

Key to Frith's (1992) model of schizophrenia proposal is his argument that individuals with schizophrenia have generally experienced 'typical mentalizing' until the onset of the disorder. It is this differing stage of onset which separates the presentation of people with schizophrenia from those with autism (Frith, 1992), who are also thought to have impairments in mentalizing (see Baron-Cohen, 2000 for review). There is growing and significant evidence that schizophrenia may be neurodevelopmental and that people with the disorder may have had language disturbances and poor social functioning in childhood (e.g. Nicolson et al., 2000; Schenkel, Spaulding, & Silverstein, 2005). Indeed, as discussed above, a degree of impairment in ToM is found in those vulnerable to developing the disorder. However, Frith argues that this does not negate the fact that as children and young adults these individuals engaged in a level of social behaviour which required them to mentalize (Frith, 1992). People with schizophrenia would have had the experience of attributing intention and belief before symptom onset:

The schizophrenic knows well that other people have minds, but has lost the ability to infer the contents of those minds: their beliefs and intentions. They may even lose the ability to reflect on the contents of their own mind. However, they will still have available ritual and behavioural routines for interacting with people, which do not require inferences about mental states (Frith, 1992, p. 121).

In the discussion which follows, I will present the basic tenets of Frith's (1992) model, illustrating its unifying account of the symptoms of schizophrenia and examining the predictions it makes about communication.

# 2.3.1 The metarepresentational model: An explanatory account of signs and symptoms in people with schizophrenia

A unifying model of schizophrenia is attractive in the face of the extreme heterogeneity of the condition and, in this context, Frith's model has been widely recognised and significantly influential in the field (Gallagher, 2004). How does this unifying theory – an impairment in a single 'cognitive mechanism' – account for the heterogeneous and extremely variable signs and symptoms of the disorder? Frith (1992) proposes three cognitive processes which are disturbed as a result of an underlying difficulty with metarepresentation. These three disturbances are (1) a disorder of self-monitoring, (2) a disorder of willed intention (or disorder of willed action), and (3) a disorder in monitoring the intentions of others (Frith, 1992, p. 113).

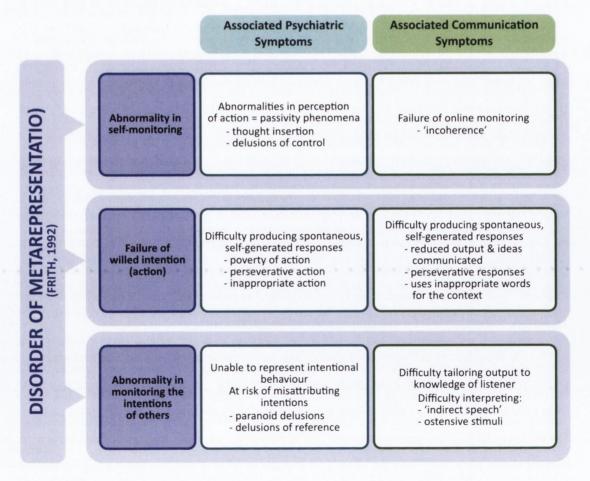


FIGURE 2.1 THE COMPONENTS OF FRITH'S (1992) MODEL AND EXAMPLES OF SYMPTOMS IT EXPLAINS

These disturbances are linked, according to Frith's model, to the range of delusional, hallucinatory and behavioural symptoms of individuals with the disorder. While the current

study is focused on the communication and interaction of people with schizophrenia from a cognitive-pragmatic perspective (and, therefore, most related to the final of the three disturbances predicted by Frith), the theory can be best understood by first examining these three abnormalities and the symptoms they explain (Figure 2.1). In the discussion which follows, each abnormality proposed by Frith's model will be described, along with a brief synopsis of relevant research. The focus, however, will be on how that particular abnormality may manifest in the communication behaviour of an individual with schizophrenia.

### A disorder of self-monitoring

This abnormality is seen as essentially a disturbance in the ability of the person with schizophrenia to metarepresent their own intentions and, as such, they will be unable to engage in high level self-monitoring and will experience abnormalities in their perception of action. Research suggests that some people with schizophrenia are unable to monitor their own actions and as a result misattribute self-generated actions (such as movement) to an external agent or source (S. Blakemore & Frith, 2003; S. Blakemore, Wolpert, & Frith, 2002; Frith, Blakemore, & Wolpert, 2000). Symptoms of passivity phenomena, such as the experience of thought insertion, where the individual believes that thoughts or ideas have been inserted into their mind from an external source, could be the result of being unable to attribute mental 'content' to their own thought processes. Delusions of control, in which an individual perceives that an external force is controlling their actions, is another relevant example of passivity phenomena which could be explained by a disorder of self-monitoring (Frith, 1992). Frith relates these symptoms (both the hallucinatory experiences of hearing voices talking about one's actions and the delusion experiences of passivity phenomena) to an impairment in the mechanism which allows us to compare intentions and outcome. It is this mechanism which is hypothesised to be impaired in schizophrenia, due to an underlying abnormality in metarepresentation. If the individual is unaware of the intention to produce an action, the action will be experienced as 'other-controlled'.

A disorder of self-monitoring also has potential implications for communication. Frith's model suggests that individuals with schizophrenia "have difficulty monitoring their own intentions", and thus may produce language which is incoherent (Frith, 1992, p. 105). These individuals may then recognise the inadequacy of their output (and attempt to correct them 'post hoc'), but are unable to engage in on-line self-monitoring, which should allow them to "'edit out' these bad responses before they had said them" (Frith, 1992, p. 105). There is some suggestion that with peripheral feedback (i.e. hearing their own output) self-correction is unimpaired. This hypothesis would mean that individuals with

schizophrenia may attempt self-repair sequences (e.g. Leudar, Thomas, & Johnston, 1994) based on 'external monitoring' of their output. Failing to engage in on-line monitoring would be predicted, however, to lead to attempts at self-repair that in themselves may be faulty (i.e., not helpful in improving the communication).

#### A disorder of willed action

In Chapter One, behavioural signs of schizophrenia were presented as distinct from symptoms, in that they are the features of the disorders which can be 'objectively observed'. Thus, where delusions and hallucinations rely on the individual with schizophrenia to articulate their beliefs or perceptual experiences, signs such as avolition or disorganised behaviour are observed and thus best considered 'signs' (Frith 1992). Those signs which form part of the negative symptomatology included poverty of action and poverty of speech. Positive signs include incoherence of speech ('disorganisation'), incongruity of affect and stereotypies or repetitive movements.

Behavioural signs are essentially abnormalities of action — either a paucity of action, or action inappropriate to the current situation. Frith (1992) proposes two routes to action in typical behaviours. Essentially, the model proposes action as either stimulus-elicited responses or goal-directed action (Frith, 1992). In the first instance, action occurs in response to an environmental stimulus. Where an individual is engaged in purposeful behaviour, they must be able to exert inhibitory control to suppress a stimulus-elicited response and maintain 'appropriate' goal-directed behaviour. The second route to action is seemingly spontaneous or self-initiated action, coming about without external cues. These routes to action are presented in Figure 2.2.

Schizophrenia is hypothesised to impact on the process of response selection and action formation in different ways, resulting in different types of behavioural abnormalities. There are three possible outcomes if an individual is unable to produce a spontaneous self-generated action: (1) the individual may produce no action, (2) they may repeat a previous action which is no longer relevant or valid, or (3) they may respond to an environmental stimulus which is irrelevant to the task or goal at hand. This model suggests that in order to carry out a 'willed action' (an intentionally produced action, based on a goal), an individual requires metarepresentation of their goals, intentions and the desired outcome of the action. If an individual's ability to metarepresent their goals, intentions and the desired outcome of the action is impaired, the result may be a failure to select appropriate actions and monitor them. Therefore, if metarepresentation is impaired, a failure of willed action could be one result. This term is used to describe the difficulties that people with schizophrenia may have in generating a response which is "spontaneous and self-initiated"

(Frith, 1992, p. 43). In contrast, individuals with schizophrenia may perform far better on responses specified by the environment (Frith, 1997). Each of the three outcomes outlined above will now be examined.



FIGURE 2.2 FRITH'S (1992) MODEL OF FAILURE OF WILLED ACTION (ADAPTED FROM FRITH, 1992, P. 46)

The first type of behaviour which may result from a failure of willed action is (1) the individual may have difficulty producing spontaneous action, in the face of showing action when elicited by external cues. In other words, the individual has trouble generating a new spontaneous action but acts when a response is specifically elicited by environmental stimuli. Poverty of action and poverty of speech, for example, are a result of this reduced action, in which the individual can produce responses or actions specified by the environment, but have difficulty with spontaneous action or spontaneous speech when 'self-generated' action is required. Reduction in the amount of content communicated is seen as a result of reduced action because of the disorder of willed action (Frith, 1992). This may manifest in testing as reduced verbal fluency but may also be seen in spontaneous communication as a poverty of content of such and even reduced syntactic complexity. Lack of facial expression and impaired use of prosody, common in individuals with schizophrenia (e.g. Chung, Mathews, & Barch, 2010; Cutting & Murphy, 1990; Jane Edwards, Pattison, Jackson, & Wales, 2001), are also related to reduced action in this model (Frith, 1992).

The second type of behaviour, (2), is that the individual may repeat recent actions which are no longer appropriate to the current stimulus or situation (that is, produce actions which are perseverative). Perseveration of action, perseveration of thought or speech content will result (Frith, 1992). Perseveration of action can be noted in the language output of people with schizophrenia, either as strikingly perseverative responses or as subtle repetitions in the words used.

Finally, (3), the individual may respond (or produce action) to irrelevant external stimuli, making their response inappropriate at that point. In this instance, Frith suggests that the individual is unable to suppress responses to environmental stimuli in order to maintain goal-directed behaviour. The result would be incoherent disorganised speech and behaviour (Frith, 1992). Incoherence of speech relates to the selection of 'inappropriate action' in this model, and is characterised by the use of unlikely words in assessment and spontaneous speech. The processes of selecting between competing response options with regard to willed action is a "metarepresentational capacity" (Proust, 2006, p. 91).

Frith and other scholars investigating the metarepresentational account of schizophrenia see the failure of willed action as a central consideration of social function. "Poverty of will (and disorganization) result from a failure to generate actions that are appropriate in the social context" (Frith, 2006, p. 243). The three specific outcomes of a failure of willed action (poverty of action, perseveration and inappropriate action) are all predicted in Frith's model to impact on communication, as described.

#### A disorder in monitoring the mental state of others

The third type of impairment, in Frith's model, which may arise from an abnormality in metarepresentation, is a disturbance in the ability to metarepresent the intentions of others and "abnormalities in the awareness of others" (Frith, 1992, p. 106). An abnormality in this system puts the individual at risk of misinterpreting intentions, which Frith suggests may explain two prominent psychotic symptoms: paranoid delusions and delusions of reference. People with schizophrenia presenting with paranoid delusions mistakenly believe that others intend to harm them – the potential result of misinterpreting the intentions of others due to difficulties in correctly inferring and metarepresenting these intentions (Frith, 1992). Similarly, Frith (1992) argues that people with delusions of reference (falsely believing that stimuli have specific personal reference) have an underlying difficulty in accurately monitoring and inferring the intentions of those around them.

Difficulties in monitoring the intentions of others would also predictably impact on communication, given the reliance of communication on processes of inference and the recognition of intentions. Three main predictions emerge in relation to communication on

the back of an impairment in the ability to monitor the intentions of others. The first two relate to the ability to interpret certain signals, and certain types of utterances. The third is a more pervasive prediction relating to an impairment in the ability to take account of the listener's 'perspective'.

Firstly, then, Frith's (1992) metarepresentational model predicts that people with schizophrenia may have difficulty in accurately identifying ostensive acts (either inferring them to exist where no intention to communicate has been made manifest, or not taking account of ostensive stimuli):

I propose that abnormalities in the recognition of ostensive stimuli can explain two typical features of schizophrenia. If the patient fails to respond to ostensive signals then we observe social withdrawal. In contrast, some patients see ostensive stimuli where none are intended. Such patients falsely believe that many people are tying to communicate with them (Frith, 1992, p. 100).

Secondly, the model suggests that difficulty would be experienced where interpreting an utterance rests heavily on understanding the intention behind that utterance. This concept will be further explored from an RT perspective in Chapter Three, but on a traditional Gricean reading such instances would include utterances in which the intended meaning is carried by the implicature. Indeed, studies have suggested that individuals with schizophrenia have significant difficulty with interpreting 'indirect speech' when asked to elucidate what a character in a story meant by a specific hint at the end of a narrative (Corcoran & Frith, 2005; Corcoran et al., 1995). The most notable difficulties in this task were in those participants with negative symptoms, with the authors proposing a role for impaired mentalizing, inferencing and memory (Corcoran et al., 1995). Difficulties with 'figurative language' are well documented, with research demonstrating an association between impaired mentalizing and impairment in the ability to interpret proverbs and idioms (e.g. Brüne & Bodenstein, 2005), metaphors (e.g. Drury et al., 1998; Langdon, Davies et al., 2002; Tavano et al., 2008) and irony (e.g. Herold et al., 2002; Langdon, Davies et al., 2002; Mitchley, Barber, Gray, Brooks, & Livingston, 1998; Rapp, Hensler, Markert, Lengsfeld, & Bartels, 2008).

In addition to difficulties in interpreting specific types of utterances, impairment in the ability to monitor the intentions and awareness of others may result in the person "fail[ing] to take account of the knowledge of the listener when constructing their utterances" (Frith, 1992, p. 106). Communication relies, in a traditional pragmatic sense, on a level of 'shared knowledge' between communicators (this concept will be further explored in Chapter Three). If an individual is unable to infer the information available to the hearer, they may fail to provide the information to allow their audience to comprehend

what they are communicating. This difficulty would lead to specific kinds of difficulty in communication. The metarepresentational model would, therefore, predict that this inability to "separate their listener's knowledge state from their own" (Corcoran et al., 1995, p. 6) would result in a disturbance in the individual's interactional engagement. Individuals with the disorder have been shown to have difficulty adhering to Grice's conversational maxims in tasks purportedly tapping this pragmatic dimension: story completion tasks (Corcoran & Frith, 1996) and cartoon descriptions (Binz & Brüne, 2010). These difficulties with conversational maxims were associated with poor performance in mentalizing (Binz & Brüne, 2010), or psychiatric symptoms which would pre-suppose poor ToM (Corcoran & Frith, 1996). The story completion task of Corcoran and Frith (1996), for example, involved stories requiring responses which obeyed one of the four Gricean maxims (quality, quantity, relation and manner). A second component of the study tapped the participants' ability to provide a 'tactful' response to a story which sketched a situation in which a politeness convention was required (Corcoran & Frith, 1996). Notable difficulties were displayed by individuals with negative features across all aspects of these tasks, leading the authors to conclude that the individuals had a lack of knowledge of conversational maxims (Corcoran & Frith, 1996), suggesting "widespread socio-cognitive difficulties including [impairment in] theory of mind" (Corcoran, 2000, p. 396). The individuals with paranoid symptoms, in contrast to those with negative symptoms, appeared to have intact knowledge of conversational rules but difficulty in applying these appropriately (Corcoran & Frith, 1996).

# 2.3.2 Summary: The metarepresentational model of schizophrenia and its predictions related to communication

As has been illustrated, Frith's model is an attempt to unify the signs and symptoms of the heterogeneous disorder of schizophrenia with his explanatory theory resting on an hypothesised common abnormality in metarepresentation. This abnormality is clearly not uniform across people with schizophrenia and its nuanced pattern of disturbance is said to be associated with the particular signs and symptoms experienced by specific individuals with the disorder. Disorders in monitoring their own intentions, the intentions of others and in generating willed actions are all related to this underlying abnormality in metarepresentation.

Research has supported the hypothesis that ToM is impaired in people with schizophrenia (Corcoran et al., 1995; Corcoran & Frith, 1996; Langdon, et al., 2002a, Langdon et al., 2002b; Pickup & Frith, 2001; Brune & Bodenstein, 2005). People with schizophrenia have been shown to have specific and fairly consistent difficulties in

comprehending second-order ToM tasks (Doody et al., 1998). Some studies have demonstrated more marked difficulties with even basic ToM tasks in people with prominent negative symptomatology (e.g. Corcoran et al., 1995). The metarepresentational model of schizophrenia makes specific predictions about communication difficulties in schizophrenia – predictions which have been supported for the most part in structured experimental tasks.

The abnormality in metarepresentation is predicted to have specific consequences for communication, as presented in the preceding discussion. In summary, the disturbance in self-monitoring is predicted to result in incoherence and unsuccessful (post hoc) attempts at repair. The disturbance in monitoring one's own intentions is predicted to result in three types of errors: poverty of speech, perseverative responses and 'inappropriate' responses. Finally, the disturbance in the ability to monitor the intentions of others has been proposed, in Frith's (1992) model, to underlie a range of symptoms in schizophrenia. Importantly, in the context of this thesis, this particular disturbance has specific predictions with regards to communication. Disturbances in the interpretation of ostensive stimuli, the interpretation of nonliteral or 'figurative' utterances, and a difficulty in taking the hearer's 'perspective' or failing to take account of the knowledge of the hearer, would all have a significant impact on the pragmatic performance of individuals.

### 2.4 Conclusion: Schizophrenia, metarepresentation and communication

The disorder of schizophrenia has a profound impact on social cognition, an impact which ripples into the social functioning of people with the disorder. There is a substantial body of work describing and exploring the impairments of ToM or mentalizing in the disorder with strong versions of the 'ToM hypothesis' suggesting that these impairments underlie all the disparate signs of symptoms of the disorder. Frith's (1992) metarepresentational model of schizophrenia is perhaps the most well developed of these theories and predicts specific deficits in the communication of people with the condition. From a cognitive-pragmatic perspective much of social communication depends on having an understanding of other people's intentions and 'perspective'. Any difficulties in the awareness of others' beliefs, intentions and feelings will, therefore, have a negative impact on social interaction (Frith, 1992). The experimental literature has supported the hypotheses put forward by the mentalizing models of the disorder – demonstrating links between pragmatic phenomena in structured tasks and performance on ToM tasks. However, there is a limited body of work which is beginning to suggest that when communicative or mentalizing performance is considered in more 'real-world' tasks, participants demonstrate intact ToM abilities (Andreasen et al., 2008; McCabe et al., 2004). While some description and elucidation of how these mentalizing disturbances relate to communication in people with schizophrenia have been undertaken, there remain questions as to how these disturbances manifest in the conversations of people with the disorder.

Despite the increasing literature on mentalizing deficits in clinical populations there is still limited research on how these impairments interact with acquired disorders of pragmatic language (Cummings, 2009). Cognitive theories can be criticized, in part, for not being "pragmatically plausible", but equally pragmatic theories may not be "cognitively plausible" (Cummings, 2009, p. 140). The challenge is to pursue explanatory theories which satisfy both the cognitive and pragmatic presentations of this complex disorder. From a cognitive-pragmatic perspective, if mentalizing impairments exist in people with schizophrenia, then the implications should be manifest in the conversations of such individuals. Understanding the communication of those with schizophrenia requires a theory which is able to cope with language in its 'messiest' form – not single sentences within a controlled environment, but utterances within a discourse and social context – communicative interaction. In Chapter Three, I will propose that Relevance Theory, with its cognitive science basis and inferential pragmatic approach, is well placed to investigate metarepresentational abilities as shown in conversation.

# **Chapter Three**

# Relevance Theory: A cognitive-pragmatic perspective on communication and metarepresentation

As explored in Chapters One and Two, communication disturbances are frequently a central feature of the disorder of schizophrenia. Frith's (1992) metarepresentational model argues that the mentalizing difficulties, which are described along a continuum of impairment, result in the range of signs and symptoms of the disorder, including the communication disturbances. Indeed, Frith asserts that individuals with schizophrenia would be restricted to "available ritual and behavioural routines for interacting with people, which do not require inferences about mental states" (Frith, 1992, p. 121). Although experimental evidence has demonstrated an association between impairments in mentalizing and disturbances in performance on pragmatic tasks, there has been limited consideration of conversational data in this regard. If abnormalities in metarepresentational abilities do indeed underlie the communicative disturbances seen in the condition, then these abnormalities should be visible in the conversational discourse of people with the disorder. I will argue in this thesis that, given the extent to which communication rests on inferential abilities and the recognition of intentions (mental states), such a restriction to "ritual and behavioural routines" (ibid) would be expected to be vividly manifest in the conversations of individuals with schizophrenia.

Given the particular focus of the study - the manifestation of metarepresentational disturbances in the conversations of people with schizophrenia - an approach which can address both the cognitive underpinnings of conversational function as well as the complexities of interactional data is essential. This thesis takes a cognitive-pragmatic approach, situating itself within a school of thought which sees communication function as inextricably linked to cognitive function and, in particular, mentalizing. As I intend to propose Relevance Theory (RT) (Sperber & Wilson, 1986/1995) as a suitable model to explore metarepresentational abilities in conversation, I will focus in this chapter on presenting the basic tenets of RT, paying particular attention to those aspects which relate to metarepresentational abilities. Section 3.1 will explore the notion of 'Relevance' and the core principles of RT with specific emphasis on the implications for verbal communication. Section 3.2 will address the notion of context, presenting the RT notions of cognitive environment and mutual manifestness. Section 3.3 will discuss the relevance theoretic intentions, with section 3.4 discussing the concept of 'interpretive use' in which the utterance itself has a metarepresentational element. I will then briefly examine, in section 3.5, the RT perspective on pragmatics, mentalizing and modularity. Before concluding the

chapter I will survey the current state of relevance theoretic applications in the domain of clinical pragmatics.

## 3.1 Relevance Theory: Inferential pragmatics and 'relevance'

Relevance Theory (RT) is an account of how the gap between sentence meaning and speaker meaning is bridged – how a hearer comes to comprehend a speaker's meaning from their utterance. RT is, therefore, an inferential approach to pragmatics, but one which situates itself within cognitive science. Although RT has its roots in Grice's (1967) cooperative principle, it differs from Gricean pragmatic theory in fundamental respects. The most significant departure is in relation to the maxims proposed by Grice. RT sees 'Relevance' as superseding all of these maxims (Sperber & Wilson, 1986/1995), a feature which will be explored below.

### 3.1.1 'Relevance' and human cognition

The claims of RT are embedded within claims about the nature of human cognition (Carston, 2002). 'Relevance' is seen as a property of human cognition, allowing us to attend to stimuli which are 'worthwhile'. In other words, rather than expending cognitive effort on inputs which are not worth processing, human cognition is aimed at processing information that is potentially pertinent and will 'benefit' the person involved. These 'benefits' are called, in RT terms, cognitive effects, in recognition that a stimulus is only relevant if it results in some "worthwhile difference to the individual's representation of the world" (Wilson & Sperber, 2004, p. 608). The greater the cognitive effects, the greater the relevance. Achieving these cognitive effects, however, involves the processing of an input and this processing comes at a cost. The higher the processing cost, the less relevant that particular input will be. Relevance, therefore, is a property of these two variables – the cognitive effects of the input balanced against the processing costs to achieve that cognitive effect (Sperber & Wilson, 1986/1995).

Any input to the cognitive processes of an individual is potentially relevant – where inputs can be either external (such as perceptual stimuli) or internal (such as assumptions or the output of inference, imagination, stimulus processing) (Sperber & Wilson, 1986/1995). An input (such as an utterance in the case of verbal communication) will be processed in the context of assumptions already held by the individual, and the effect will be to allow the individual to 'update' their representation of the world either through strengthening existing assumptions, discarding assumptions which emerge as erroneous or irrelevant, or interacting with existing assumptions to yield "contextual implications" (Sperber & Wilson, 1986/1995, p. 107). The RT Cognitive Principle of Relevance states that "Human cognition

tends to be geared to the maximization of relevance" (Sperber & Wilson, 1986/1995, p. 260). RT further asserts that verbal communication capitalises on this fundamental search for relevance, exploiting the regularities of linguistic stimuli (Sperber & Wilson, 2002).

### 3.1.2 Relevance Theory and verbal communication

Verbal comprehension involves a linguistic utterance as evidence from which the speaker's meaning can be inferred within a particular context:

The central claim of relevance theory is that the expectations of relevance raised by an utterance are precise enough, and predictable enough, to guide the hearer towards the speaker's meaning (Wilson & Sperber, 2004, p. 607).

Utterances are linguistic stimuli which have characteristics that make them unique as inputs to the cognitive system. The first characteristic of such a linguistic stimulus is that an utterance employs a coded element which acts to direct the hearer's processing and constrains the possible interpretations of the stimulus. This coded element itself demands inferential processing as it falls short of fully encoding the speaker's meaning (Carston, 1997). The RT approach to recognising 'what is said' will be briefly addressed in section 3.1.4. The second characteristic of utterances as stimuli is that they are ostensive (i.e. they place "an overt demand on the hearer's attention"), and therefore place a direct demand on processing, and in so doing create an expectation of their own relevance (Carston, 1997, p. 4). An utterance, therefore, carries with it a tacit guarantee from the speaker that it will be relevant enough to be worth the processing effort on the part of the hearer (Sperber & Wilson, 1986/1995).

Human communication rests on the general cognitive principle of relevance and is an inferential process governed by the *Communicative Principle of Relevance*: "Every act of overt communication conveys a presumption of its own optimal relevance" (Sperber & Wilson, 1986/1995, p. 260). A hearer is entitled to exploit the expectation of optimal relevance, in guiding their interpretation of an utterance. Hearers are thus entitled to "follow a path of least effort in computing cognitive effects"— this amounts to the relevance-theoretic comprehension procedure (Wilson, 2000, p. 420):

- (1) Consider interpretations in order of accessibility.
- (2) Stop when your expectation of relevance is satisfied.

This cognitive drive for relevance has far-reaching implications for explaining how communication occurs, that is, how hearers infer speaker meaning from linguistic utterances. However, expectations of optimal relevance have implications, not only for the hearer of an utterance, but also for the speaker:

It also follows from this [RT] view of communication that a speaker/writer should formulate her utterance [...] in such a way that her intended meaning can be grasped with a minimal expenditure of effort by her audience (Carston, 2006, p. 3).

The speaker themselves must ensure that they assert their intention in such a way that it can be inferred by their audience, a process which intuitively depends on the communicator taking the audience's perspective into account. In an experimental study to investigate how speakers adjust their utterance in consideration of the needs of their hearers, van der Henst, Carles, & Sperber (2002) demonstrated that, when asked for the time, individuals spontaneously adjusted their responses to optimise relevance for the hearer. This adjustment of accuracy (either rounding the precise time up or down, or providing a completely accurate time) occurred despite the extra processing effort required on the part of the speaker. Speakers in the experiment were clearly taking into account what was relevant from the hearer's 'point of view'. This understanding of the speaker's role in optimizing relevance has potential importance for considering the performance of people with schizophrenia, as speakers, given the demand that they consider the 'perspective' of a hearer – a process which implicates mentalizing abilities.

Despite speakers generally attempting to maximize relevance for their hearers, the notion of optimal relevance recognises that speakers may not always produce the utterance which carries the lowest possible processing costs and highest possible cognitive effects. The utterance produced will be a function of the speaker's own "abilities and preferences" (Sperber & Wilson, 1986/1995, p. 270). Given the presumption of optimal relevance, therefore, the hearer is entitled to expect that the speaker has produced the most relevant utterance that they are *willing* and *capable* of producing at that time and in that context. It is the presumption of optimal relevance which guides both how communicators produce utterances and the process which hearers undertake in interpreting these communicative events.

### 3.1.3 Strategies for utterance interpretation

Thus far the discussion has presumed that in the search for a relevant interpretation, the speaker can be presumed to be both highly 'competent' in their ability to formulate relevant utterances and honest in their communication. Clearly these assumptions are not always true. Speakers are not always able to formulate an utterance which represents the most efficient communication of their message, or may change their message midutterance. Speakers may assume information to be relevant to a person when it is not for example, pointing out information unaware that the hearer is already aware of the facts communicated. Indeed, it is also clearly the case that some speaker's try to deceive their

hearers as to their true intentions in communicating a certain message. Given that speakers will not consistently achieve relevance, or may knowingly deceive hearers, this expectation of relevance seems naïve. How then can an RT comprehension procedure, based on expectations of *optimal* relevance, account for the communicator's ability to interpret utterances, even when the message is not the most relevant at that time? How can it account for the ability to 'see through' deception?

Sperber (1994) proposes three strategies available to communicators when interpreting utterances: 'Naïve Optimism', 'Cautious Optimism' and 'Sophisticated Understanding' (Sperber, 1994, pp. 189-194). Each of these strategies involves an additional 'layer' of metarepresentation and, following Sperber (1994), I will use tiered presentation in the examples which follow to illustrate the degree of metarepresentation involved.

A naively optimistic hearer presumes that the speaker is both competent and benevolent and therefore able to produce utterance of maximal relevance and avoid misunderstanding (Sperber, 1994, p. 189). A naively optimistic hearer, therefore, takes the first acceptable interpretation as the intended one, but otherwise pays no further consideration to the speaker's thoughts. This is a strategy requiring minimal metarepresentation (although note at a basic level, that it still requires the necessary consideration of what the speaker intends to convey: the informative intention as discussed later). The example below will be used by way of illustration.

(a) David: It's late. Simon said I could have the bike.

If it is presumed that David produces this utterance early in the morning, at the time he usually leaves for work, then it may be interpreted by his hearer that he is rushing to work and taking the bike. Such an interpretation may be the intended utterance and the most easily accessible in the context. Presume though that Jenny has been thinking about the appointment she made for David to meet the bank manager. In this case, what is most accessible to her may be the assumptions surrounding this meeting. Forgetting that David does not yet know of the meeting, she may incorrectly interpret David's utterance to mean that he has borrowed the bike to get to the meeting on time. In this instance, interpreting the utterance from a strategy of naïve optimism would lead to the hearer arriving at an interpretation not intended by the speaker (an error called 'accidental relevance' (Wilson, 2000) and discussed below).

A cautiously optimistic hearer considers the speaker benevolent but not necessarily competent (Sperber, 1994, p. 192). Using the example above, if Jenny considers that she has not yet informed David of the meeting, she will not stop at the first relevant interpretation. Instead, she will need to consider, and therefore come to the conclusion, that:

he does not know that

I am concerned about

whether we will be on time for the meeting

Given that speakers can only really aim at optimal relevance, this is an appropriate assumption and involves considering "what interpretation the speaker might have thought [...] was relevant enough" (Wilson, 2000, p.421). This strategy involves an extra layer of metarepresentation and would allow Jenny to reach the interpretation that "he intends to inform me that he is rushing to work on the borrowed bike".

A strategy of *sophisticated understanding* can also be adopted and will allow the hearer to consider that the speaker may not be benevolent that is, that they may intend to inform the hearer of something false (Sperber, 1994). This strategy allows hearers to deal with deceit, something which typical hearers are clearly able to consider. Using another variation of the example above, a scenario can be imagined in which David intends Jenny to think that he is rushing to work, when in fact he is rushing to watch the Grand Prix with a friend. If, in this scenario, Jenny has come to know about the Grand Prix plans, she will be able to interpret the utterance by considering:

he intends

me to believe that

he is saying that he intends to go to work

This strategy involves the hearer asking "what interpretation [the speaker] *might have thought [I the hearer] would think* [...] was relevant enough" (Wilson, 2000, p. 422). Again, there is an additional layer of metarepresentation involved.

These strategies are useful to theorise about how humans might deal with the complex process of communication given that hearers are not always 'competent' or benevolent. Indeed, from these strategies predications can be made as to specific characteristic mistakes which may befall hearers operating within particular strategies. Wilson (2000) predicts that hearers operating in Naïve Optimism will show two specific types of error. The first is that of "accidental relevance" (p. 421) where the interpretation taken by the hearer is not the intended one (as in the example in which Jenny assumes David to be referring to the meeting which she is currently wondering about). The second type of error is "accidental irrelevance", which arises when a speaker says something which is already known by the hearer. Evidence of these errors in the conversational data of people with schizophrenia would signal the adoption of naïve optimism, rather than engaging in the more metarepresentationally demanding strategies of cautious optimism and sophisticated understanding. Indeed, given that these are "three increasingly sophisticated strategies, each requiring an extra layer of metarepresentation, which might

correspond to stages in pragmatic development" (Wilson, 2000, p. 421), they may also elucidate patterns of pragmatic difficulties in people with schizophrenia.

# 3.1.4 Understanding 'what is meant': Relevance Theory and the pragmatic processes involved in 'what is implied' and 'what is said'

Linguistic meaning underdetermines speaker meaning in a variety of ways, all of which require that inferential processes be brought to bear on the task of interpretation (Sperber & Wilson, 2002). While Gricean pragmatics has emphasised the role of inference in interpreting what is implied by a speaker's utterance, 'what is said' (that is, the explicit content) was generally seen as minimally inferential (Sperber & Wilson, 1986/1995). In fact, the explicit content is usually approached as relying on processes of decoding, rather than reference to the speaker's intentions. RT departs from this view by suggesting that this explicit content cannot itself be interpreted through decoding processes, but is equally dependant on inference (Carston, 2002; Sperber & Wilson, 1986/1995). RT draws a parallel between the processes involved in identifying what is implied (or the implicature) and acknowledges similar inferential process in identifying the explicit content of an utterance (what RT calls 'the explicature').

The existence of these inferential processes in identifying the explicature is not to deny that the sentence itself impacts significantly on utterance interpretation – clearly the words of the sentence place some constraint on its interpretation. An inferential approach acknowledges the role of encoding and decoding in utterance production and interpretation but sees them as "just ancillary components in what is essentially a creative inferential process" (Sperber, 1994, p. 182). The logical form of an utterance (the semantic representations and the relationships between them encoded in the syntax) provides an input to an inferential module. There are frequently indeterminacies in logical forms which need to be 'fleshed out' if the hearer is to infer the intended meaning (Carston, 2002). RT asserts that inferential pragmatic processes are intimately involved with development of the logical form and, therefore, processes including (a) concept adjustment, (b) reference assignment and (c) disambiguation.

#### **Concept Adjustment**

Concept adjustment (Carston, 2001) involves 'filling in the gaps' left in a logical form by identifying the intended scope of meaning of a specific lexical item (Blakemore, 1992, p. 61). *Ad hoc* concepts are particularly important in the account of concept adjustment. This term refers to, as put by Carston (2002):

concepts that are constructed pragmatically by a hearer in the process of utterance comprehension. [... the term] reflects the act that they are not linguistically given, but constructed online (on the fly) in response to specific expectations of relevance raised in specific contexts (p. 322).

Two broad groups of concept adjustment processes can be identified: those of concept narrowing (or enrichment) and those of concept broadening (or 'loose use'). Enrichment is the process by which semantically incomplete or vague terms are 'added to' to arrive at an interpretation which yields a more complete logical form. The direction and nature of this enrichment process is itself driven by relevance. Consider the use of "late" in the example below:

(b) David: I'm late. Simon said I could have the bike.

The intended meaning of the word "late" will be different in different contexts. At midnight it may refer to the time but also imply that it is time to go to bed. In the context of leaving for work, the word may be intended to be enriched to specifically mean "late for work", or "late to be leaving for work". Similarly, "have" in this example would be narrowed to mean "borrow", rather than incorporating any change in ownership. This example illustrates how enrichment (or concept narrowing) "targets a particular lexical item and strengthens the concept it encodes" (Carston, 2002, p. 324). The process is thus aimed at strengthening or narrowing the specific meaning carried by a lexical item.

Concept broadening can be seen as a complementary and symmetrical process, also operating at the level of explicature. In this process, the encoded sense is "relaxed" (Carston, 2002, p. 329). Concept broadening is required when the encoded meaning is "overdeterminate" or restrictive in its linguistic meaning. Examples cited would include referring to one's new cat as a "flatmate" – a word which would not have non-humans within its encoded sense (Carston, 2002, p. 330). Such instances of 'loose use' reflect the way in which the linguistic system is able to cope with "clues or pointers" to meaning.

Loose use is a pervasive phenomenon and, given our highly developed 'mind-reading' communicative capacity, with the role of the linguistic system being merely to provide clues or pointers, it is not a particularly surprising phenomenon (Carston, 2002, p. 330).

Thus, if a hearer is able to metarepresent a speaker's informative intention, they will be able to use even hints or pointers to meaning to derive the intended concept, albeit a broader version than the meaning encoded in the lexical item produced. Lexical items should only be used 'loosely' when the speaker assumes that the hearer will have access to the assumptions allowing for its broad interpretation.

RT goes a step further, proposing that metaphor makes use of this process of concept adjustment. In this approach, metaphor is a case of 'loose use' in which the utterance involves using a semantic representation 'loosely' or more broadly. Such an utterance requires the hearer to base interpretation on some of the logical and encyclopaedic entries of the concept – specifically those which are most accessible given the principle of relevance. If Jenny's response in the example referred to the weather as "a killer", this encoded concept would have to be interpreted more broadly, taking just some of the logical and encyclopaedic entries of the notion (such as 'to be avoided', 'unpleasant').

(c) David:

It's late. Simon said I could have the bike.

Jenny:

Apparently the rain is going to be a killer today.

Metaphor in this account is thus not a 'special case' but interpreted using the same comprehension procedure used for utterances considered 'literal' in Gricean accounts.

### **Reference Assignment**

The use of referring expressions, such as pronominal reference, require pragmatic processing to yield the intended referent. Again, the process of assigning reference is seen as driven by consideration of relevance and, therefore, an inferential process (Sperber & Wilson, 1986/1995). For example, interpreting Jenny's utterance in the scenario below requires assigning reference to "it".

(d) David:

It's late. Simon said I could have the bike.

Jenny:

It's in the conservatory.

The intended referent of the referring expression, "it" by David has no immediately accessible referent and thus would be interpreted (on this basis of the Communicative Principle of relevance) as a syntactic filler, not referring to a referent (as shown by a similar example by Sperber, 1994). Jenny's use of the referent of "it" may be indicating the bike as a referent. However imagine that David spends some time each morning searching for his helmet. In this case, the most accessible referent may be "your helmet".

It is not just pronominal reference which relies on inference. The use of definite descriptions is also referential and therefore similarly inferential. Suppose there are two 'bikes' — a bicycle and a motorbike. If David usually takes his own bicycle to work, his utterance declaring himself late may cause the hearer to disambiguate 'bike' to refer to the motorbike. If, on the other hand, the context is one in which David usually walks to work (and perhaps is holding a bicycle helmet), 'bicycle' may be the most accessible interpretation. The process of reference assignment will be driven by the Communicative Principle of Relevance.

### Disambiguation

Disambiguation involves choosing from possible meanings of the encoded concept, the sense intended by the speaker (Carston, 2001). Utterances may be produced in which a word or phrase is used that has two or more encoded meanings stored within the semantic system. In some cases, the choice between these encoded senses is guided by the syntax, where only one of the meanings is syntactically plausible. Frequently, however, this process of choosing the intended sense of the word (or phrase) is recognised as being guided by the context. Disambiguation then "cannot be achieved independently of considerations of speaker intentions" (Carston, 2001, p. 7). Disambiguation, therefore, relies similarly on inferential processes in which the intended meaning may not be linguistically coded in the stimulus. To illustrate this process, the example below will be used. Again, imagine that David is rushing off, as he regularly does, to watch the Grand Prix:

(e) David:

I'm late. Simon said I could have the bike.

Jenny:

It's always about your race.

The word "race" would need to be disambiguated in the context between a Grand Prix race, a competition between David and his colleagues, a general 'race' or rush to get somewhere on time, and the sense related to one's ethnicity. Again, the process of disambiguation can be seen to rest strongly on inferential processes and, therefore, context.

Given that the speaker must consider how their utterance will achieve optimal relevance for the hearer, it is assumed that they will construct a logical form in which the processing effort is kept to a minimum. Thus, the use of lexical items requiring concept adjustment should occur within a context in which the hearer can be presumed to have access to the assumptions which will guide such adjustment; similarly with the use of referring expression or disambiguation requirements. As the above discussion shows, 'context' is of considerable importance in how utterances are interpreted. The speaker and hearer must, it would seem, be able to draw on the same contextual assumptions in order to ensure that they achieve a 'common understanding'.

# 3.2 The context of communication: Mutual manifestness and the cognitive environment

# 3.2.1 Defining context

While the notion of context has always been an important one for pragmatics it has also been a problematic one, largely to do with the difficulty in defining it and, perhaps most significantly with what Givón refers to as its "maddening elasticity" (Givón, 2005, p. 1). The

notion of context, as it relates to communication, can be invoked to refer to the narrow linguistic context (such as the preceding utterance in a discourse sequence), or can invoke the broader domain, extending to the physical, social and epistemic aspects in play (Cummings, 2005). It would appear counter-intuitive to engage 'context' in the narrowest sense of immediately preceding linguistic or discourse context, given the extent of the inferential capacity of pragmatic processes outlined by RT. In other words, while utterances do occur in a physical context and are embedded within a broader linguistic (or discourse) context, their interpretation would appear to rely on drawing information from memories, general cultural assumptions, knowledge about the world, beliefs and expectations, and assumptions about the mental state of the speaker (Sperber & Wilson, 1986/1995). However, Clark and Carlson (1981, p. 313) have argued that "[i]f it [context] includes any information a listener can make available to himself, then it loses much of its power to explain". Such a criticism alludes to the issue that context is often ill-defined, acting as a 'waste-basket' or 'garbage can' (Akman, 2000, p. 744) of all that seems to impinge on communication but is too 'messy' to incorporate into theory. While a broad delineation of 'context' makes it a potentially unwieldy construct, it is more in keeping with our intuitions as communicators, and, indeed, with the theoretical perspective of RT which is the focus of the current discussion. There is, however, a clear need for the concept of 'context' to be elucidated in a way which both recognises its extent, but also the constraints on its 'use'.

Sperber and Wilson (1986/1995) define context as "the set of premises used in interpreting an utterance" and "a subset of the hearer's assumptions about the world" (Sperber & Wilson, 1986/1995, p. 15). These mentally represented assumptions may arise through perception (i.e. be stimuli within the physical environment) or arise from assumptions which one holds in memory or which one derives from cognitive processes. This definition then takes into account the physical and social context of an individual, as well as their world knowledge and ability to make inferences or draw assumptions from information. The amount of information available to communicators at any one time is vast, but clearly not all pertinent for the interpretation of an utterance. In addition, assumptions about the world are not consistent across people, even members of the same cultural group, given the individual differences in experience, memories and world knowledge. However, the RT definition realises the need for constraining the notion of 'context' to the specific assumptions brought to bear on that instance of utterance interpretation. The challenge for the theory is, then, to explain how communicators are able to find the appropriate set of assumptions, the appropriate context to interpret a given utterance and, crucially, 'share' this context.

#### 3.2.2 A 'shared context': The basis for communication?

Communication, it has been argued, relies on some level of 'common ground' or 'shared knowledge' between the communicators (Clark & Carlson, 1981). Without this shared knowledge, or context, misunderstandings will almost certainly arise. In response to what is seen as a requirement of a 'shared context', theorists have formulated models to allow for mutual knowledge. In these models, misunderstandings would be avoided if the communicators were sure that they shared all aspects of the context, confining themselves to those assumptions which they shared. This prospect entails that communicators know what assumptions they share. Sperber and Wilson (1986/1995) point out the infinitely regressive nature of this argument, as in order to identify shared assumptions, the communicators must make assumptions about what assumptions are shared. But these second order assumptions (about the shared assumptions) must also be shared, hence demanding third order assumptions, and so on. It is obviously not psychologically plausible that communicators go through this process of ensuring that they are mutually aware of the shared assumptions on which they can base their communication. RT asserts that mutual knowledge is not only implausible but also unnecessary. In fact, misunderstandings are embraced as a typical occurrence and communication is recognised as being governed by "mechanisms [which] at best make successful communication probable, but do not guarantee it" (Sperber & Wilson, 1986/1995, p. 17).

Communication must, however, rely on some type of mutuality of context, that much is recognised by RT:

A speaker who intends an utterance to be interpreted in a particular way must also expect the hearer to be able to supply a context which allows that interpretation to be recovered. A mismatch between the context envisaged by the speaker and the one actually used by the hearer may result in a misunderstanding (Sperber & Wilson, 1986/1995, p. 16).

How is it that communicators are able to achieve this 'mutuality of context' when the potential contexts are vast and highly individual, and there are significant barriers in achieving a psychologically plausible account? The RT approach invokes the concept of cognitive environments and mutual manifestness to address the challenges of 'context'.

# 3.2.3 Cognitive environments and mutual manifestness

RT conceptualises an individual as having a cognitive environment – a set of assumptions which he is capable of mentally representing at a given time (Sperber & Wilson, 1986/1995). The cognitive environment of an individual would, then, be a function of the physical environment (from which facts or assumptions can be perceived through the

senses) and cognitive abilities (which may generate assumptions from memory or inference, for example). Any assumption which an individual is capable of perceiving or representing is said to be manifest to him (Sperber & Wilson, 1986/1995). The facts and assumptions which are manifest to the individual are both those which are known (e.g., previously attained knowledge) and those which have the potential to become known. The total cognitive environment of an individual "is the set of all the facts he can perceive or infer" (Sperber & Wilson, 1986/1995, p. 39). All assumptions are not equally manifest - the degree to which an assumption is manifest (or potentially accessible) to an individual may change and assumptions can thus become 'more manifest' in certain conditions. Assumptions are treated as 'facts' in this model, as assumptions, whether true or false, are part of cognitive life and may be well evidenced to a specific individual. This point is particularly pertinent in the light of the current study in which individuals with schizophrenia may hold delusions or 'fixed false beliefs'. Since these beliefs are held as true by the individual, they must be treated as assumptions, manifest in the individual's cognitive environment. Given that "an assumption...is manifest in a cognitive environment if the environment provides sufficient evidence for its adoption" (Sperber & Wilson, 1986/1995, p. 39), the relevance of such an approach to delusions becomes more obvious. An individual experiencing delusions may, in their environment, given their reasoning biases, find "sufficient evidence for adoption" (ibid) of that delusional belief.

Individuals each have distinct cognitive environments, and come to the communicative interaction with different world knowledge, different perceptions and different inferential abilities. Even in face-to-face communication where the physical environment is the same, one person may be overtly aware of a ticking clock, while another may not be attending to that aspect of the physical environment, although it is manifest to him (in that it is potentially perceptible, even if not in the immediate focus of attention). How does the notion of cognitive environments and manifestness of assumptions explain how it is possible for people to arrive at a level of mutuality required to communicate? RT asserts that the cognitive environments of individuals overlap to varying degrees. Certain communities may hold specific beliefs, friends share more assumptions than strangers. A 'special case' of overlap of cognitive environments is that of a "mutual cognitive environment". A mutual cognitive environment is one in which assumptions are manifest to both communicators and it is manifest to both parties that they share these assumptions:

In a mutual cognitive environment, for every manifest assumption, the fact that it is manifest to the people who share this environment is itself manifest. In other words, in a mutual cognitive environment, every manifest assumption is ... mutually manifest (Sperber & Wilson, 1986/1995, pp. 41-42).

Returning to the issue of delusions, it could then be hypothesised that delusional assumptions, not being based in reality, are unlikely to be manifest to the non-delusional conversation partner and are thus not part of the mutual cognitive environment. If the person with schizophrenia overtly communicates these assumptions, the cognitive environment of the hearer is changed (the resultant change may be the formation of the assumption that the person is delusional). In this case, the hearer becomes aware of the delusional assumption; it becomes accessible, or manifest.

Crucially, mutual manifestness is seen as central to communication:

Mutual manifestness may be of little cognitive importance, but it is of crucial social importance. A change in the mutual cognitive environment of two people is a change in their possibilities of interaction (and in particular, their possibilities of further communication) (Sperber & Wilson, 1986/1995, pp. 60-61).

It is mutual manifestness and the existence of a mutual cognitive environment which allows the communicators to 'align' and engage in conversation and create the communicative environment in which further interaction may occur.

### 3.2.4 Context selection and the dynamic nature of conversation

Utterances are produced and interpreted within a context, which thus far has been presented as a relatively static notion based on what an individual is capable of perceiving or mentally representing. Context is far from static, however. While a mutual cognitive environment is necessary for communication, communication itself influences that very thing, bringing about change in the cognitive environments of the communicators and enhancing the mutual cognitive environment (Sperber & Wilson, 1986/1995). The mutual cognitive environment is in a continual state of flux during communication. Each utterance adds to the available context, not only directly as a component of the discourse, but also indirectly through the assumptions it makes manifest through association or inferential processes. Essentially, this process then implies an infinite context, expanding exponentially as the interaction precedes. Clearly, the context for utterance interpretation must be 'chosen' by the hearer, from the massive amount of contextual information which could potentially be brought to bear. The context for utterance interpretation is neither given nor pre-selected before the comprehension process (Carston, 2002). In other words, the hearer must actively select the context for utterance interpretation, and that selection is part of the comprehension process, driven by the Principle of Relevance.

Many definitions of 'context' within the neurosciences envisage the construct as the information brought to bear in a top-down process, influencing task-orientated behaviour:

By contextual information, we mean the background or surrounding circumstances that can mediate a response to a target event, except the information conveyed by the target event itself (Bazin, Perruchet, Hardy-Bayle, & Feline, 2000, p. 94).

The notion that context mediates behaviour is reflected in related definitions. For example, context may be considered as "information that must be actively held in mind in such a form that it can be used to mediate task appropriate behavior" (Cohen, Barch, Carter, & Servan-Schreiber, 1999, p. 120). These approaches to context, however, fail to address the idea that context must be actively selected on the basis of its 'relevance' to the stimulus at hand. The notion of 'integrative context' – first proposed by Baddeley (1982) as a distinct type of context processing – reflects an interaction between the stimulus and the context (Bazin et al., 2000). Phillips and Silverstein (2003) also advocate a holistic model in which stimulus-driven information interacts with top-down processes to account for the construct of 'context'. These more integrative approaches resonate with the RT approach to context:

that subset of mentally represented assumptions which interacts with newly impinging information (whether received via perception or communication) to give rise to 'contextual effects'. In ostensive communication, this set is not pre-given but is selected by the hearer on the basis of he utterance and his bid for an interpretation consistent with the second [communicative] principle of relevance (Carston, 2002, p. 376).

Selecting the context in which to interpret an utterance would, therefore, involve consideration of what intentions the speaker has in producing the utterance. This consideration would guide a search for the intended meaning.

## 3.3 Communication and Relevance-Theoretic intentions

According to the inferential approaches to pragmatics, the audience must recognise, or metarepresent, the communicator's intention to inform them of something (Wilson, 2000). RT has reformulated the concept of intentions in relation to communication, identifying two "layers of information" conveyed in overt or ostensive acts of communication:

first, there is the information which has been, so to speak, pointed out; second, there is the information that the first layer of information has been intentionally pointed out (Sperber & Wilson, 1986/1995, p. 50).

These two "layers of information" correspond to the two hierarchically related RT intentions operating in communication — the informative and the communicative intentions. A communicator has an *informative intention* which is the intention "to make manifest or more manifest to the audience a set of assumptions" (Sperber & Wilson, 1986/1995, p. 58). This intention is, therefore, essentially the intention to inform the hearer of some piece of information and, in doing so, increasing the likelihood that the hearer will

adopt a specific assumption or modify their current assumptions. The communicative intention is the intention to inform the hearer of the informative intention, or the intention "to make it mutually manifest to audience and communicator that the communicator has this informative intention" (Sperber & Wilson, 1986/1995, p. 61). Having the communicative intention mutually manifest has implications in terms of relevance. If information has been deliberately communicated (i.e., ostensively communicated) it has a significantly higher chance of being relevant than information which is available in the environment. The communicative intention, therefore, is the tacit guarantee of relevance. It assures the audience that 'I intend you to know [communicative intention] that I am deliberately communicating this information to you [informative intention]'. The informative intention cannot be construed as an intention to transmit a thought to the hearer, since this is clearly psychologically implausible as a speaker has little or no control over an addressee's actual thoughts. What a speaker does have some influence over, however, is the cognitive environment of the hearer. The informative intention is best considered then, as an intention to directly modify the cognitive environment of the addressee (Sperber & Wilson, 1986/1995).

Thus far, the focus has been on utterances which communicate a thought held by the speaker. There are, however, additional metarepresentational considerations in which the utterance itself contains a metarepresentational element (such as a 'quote' attributed to another person, for example). It is this aspect of 'linguistic metarepresentation' which will be considered next.

### 3.4 'Interpretive use' and linguistic metarepresentation

Human communication rests on metarepresentational abilities. The preceding sections have highlighted the metarepresentational demands of verbal communication, in which the speaker must take into account the assumptions available to their hearer, and the hearer must engage in inferential processes related to the communicative and informative intentions of the speaker. There is also another type of metarepresentational ability embedded within communication and that is the case in which the utterance itself "contains a metarepresentational element, which is intended to be recognized as such" (Noh, 2000, p. 4). A metarepresentation is defined to be "a representation of a representation: a higher-order representation with a lower-order representation embedded within it" (Wilson, 2000, p. 411). Humans are able to construct and process different types of representations, namely mental, public and abstract.

# 3.4.1 Types of metarepresentation

The higher order representation of a metarepresentation is generally an utterance or a thought which metarepresents the content of a specific lower order representation, such as the thought entertained by David on observing Simon picking up an umbrella:

(f) David <sub>THOUGHT</sub>: Simon *believes* that it's going to rain.

In entertaining this thought, the observer is metarepresenting a thought attributed to Simon. The observer's own thought metarepresents the lower order representation of the mental state attributed to another person – a processing of mentalizing. What is of interest here is that cognitive systems are able to represent different types of lower order representations – specifically mental representations, public representations and abstract representations (Sperber, 2000a, 2000b; Wilson, 2000). In the following example, the thought entertained by David metarepresents an attributed belief (hence a mental representation of a mental representation):

(g) David THOUGHT: Jenny believes that I am going to work today.

However, this is not the only type of content which humans have the capacity to metarepresent. Public representations, such as utterances, can also be metarepresented as in the *thought* (in this case giving rise to a mental representation of a public representation):

(h) Jenny <sub>THOUGHT</sub>: David *said* that he was going to work.

It is also possible to have a public representation of a mental representation as in *utterance* (i), or a public representation of a public representation, as in *utterance* (j):

(i) David (to Simon): Jenny *believes* that I am going to work today.

(j) Jenny (to Sue): David *said* that he was going to work today.

Finally, although not of particular interest in the current discussion, lower order representation can also be of an abstract nature, that is linguistic, logical or conceptual (Wilson, 2000). The following examples from Wilson (2000, p. 413) illustrate these representational possibilities:

- (k) 'Shut up' is rude [the abstract linguistic component 'shut' up' is metarepresented]
- (I) Roses and daises are flowers entails that roses are flowers [the abstract logical statement is metarepresented]

Humans not only have the ability to entertain different types of lower order representations, but are also able to entertain complex multi-layered metarepresentations. Thus, it is no strange achievement to be able to entertain the thought: David *thinks* that I *believe* that he was at work today. If, in fact, Jenny knows in this case that David was at a rugby match, she is able to metarepresent his beliefs as distinct from her own. This thought can be presented in a tiered fashion to illustrate the second-order nature of the metarepresentation required (following Sperber, 1994):

(m) Jenny  $_{\text{THOUGHT}}$ : David thinks that I believe that he was at work today.

The ability to entertain complex metarepresentations goes even further, as the following example is also clearly a possible thought which Jenny could entertain, one which involves third order metarepresentation:

(n) Jenny  $_{\text{THOUGHT}}$ : David wants me to believe that he intends to go to work today.

This type of metarepresentation is clearly part of everyday life and seems to rely on a sophisticated ability to attribute goals, beliefs and intentions to other people (and oneself). Of interest in this study are mental and public representations (of varying complexity), which will thus be the focus for the rest of the discussion.

### 3.4.2 Descriptive and interpretive use

All utterances are considered to be representations within an RT framework. Utterances can represent the thought held by the speaker – the thought or message to be communicated which in itself is a representation of a state of affairs in the world. An utterance can also represent another representation, such as another thought or utterance (Noh, 2000; Sperber & Wilson, 1986/1995). One of the foundational distinctions introduced by RT is the distinction between descriptive use and interpretative use in language. Where the thought represents a state of affairs that utterance is used descriptively, such as in the utterance:

"it is raining"

used by an individual commenting on the weather. In this example, the thought is a description of a state of affairs and that thought is represented by an utterance. The representation of such a thought is an instance of descriptive use and a first order metarepresentation (Sperber & Wilson, 1986/1995). An utterance can also represent another thought or utterance (that itself has a propositional form) – representing a thought or utterance attributed to another person. This type of utterance adds an extra layer of

metarepresentation (Wilson, 2000). If Jenny produces the utterance, "Simon says that it is raining", she is representing Simon's utterance, which itself is a representation of her thought representing a state of affairs in the world, specifically that 'it is raining'.

(o) Jenny UTTERANCE: "Simon says that it is raining"

Utterances used in such a way amount to what Sperber and Wilson (1986/1995) call interpretive use. In this case, Jenny's utterance metarepresents the utterance she is attributing to Simon: "[Simon says that] it is raining". This utterance is, therefore, a representation of a representation – hence a metarepresentation.

In interpretive use, the metarepresentation need not be identical to the original, but must share the implications of the original to fulfil an expectation of relevance (Sperber & Wilson, 1986/1995). In other words, if a speaker uses an utterance to report a statement made by another person, the speaker need not quote the original utterance exactly. Continuing from the examples used above, consider the dialogue below:

(p) Jenny: I'm not sure what to wear for the trip, did Simon say

anything about the weather in Cambridge?

David: It's a wet day, apparently [reported speech]

David's response would achieve optimal relevance despite being non-identical to Simon's original utterance. It achieves relevance as it yields cognitive effects for Jenny at minimal processing cost. The resemblance in this case lies in the 'faithfulness' of the contextual and logical implications of the metarepresentation to the original – giving it optimal relevance (Sperber & Wilson, 1986/1995). This type of resemblance, in which the utterance remains faithful to the original in its propositional form, is known in RT as interpretive resemblance.

Linguistic metarepresentation encompasses different verbal behaviours, as illustrated by the examples above. Three specific types of linguistic metarepresentation will be of interest here: reported speech or thought, echoic use and interrogatives. Reported speech or thought, is one such instance of linguistic metarepresentation in which a thought or utterance is attributed to another person (or to the speaker at another time). Echoic use involves the additional dimension of conveying an attitude towards the attributed thought or utterance, and this 'group' includes irony and denials. Interrogatives are seen, in RT, as inherently metarepresentational, as will be discussed. Regular and echo questions are both seen as metarepresentational, with echo questions being instances in which there is an additional element of attribution of a thought or utterance. Each of these types will be discussed in further detail.

# 3.4.3 Reported speech and thought

Reported speech and thought is defined, in RT, as an utterance which reports on the speech or thought of another person (or the speaker at another time). The use of such utterances entails the metarepresentation of attributed thoughts or utterances and, hence, is of specific interest in this study. Frith (1992) predicts specific difficulty in the attribution of thoughts to others and this impairment would be predicted to cause specific difficulty with the use of reported thought. However, the overarching impairment in metarepresentational ability, proposed by Frith's (1992) model, may, in fact, result in an impairment of both reported speech and thought which inherently require metarepresentational and attributive abilities.

Reported speech and thought may be overtly marked as such (using parentheticals such as 'she said', or hearsay words such as 'supposedly' or 'apparently') or may not be marked overtly in this manner (Noh, 2000; Sperber & Wilson, 1986/1995; Wilson, 2000). In the latter case, the hearer must infer that the speaker's utterance is attributive and that words or thoughts are being reported (Noh, 2000). Clearly, the ability to produce instances of reported speech or thought involves the ability to attribute a thought or utterance to another and then metarepresent it by using an utterance which resembles the content or its implications, as in the dialogue repeated from (p):

(p') Jenny: I'm not sure what to wear for the trip, did Simon say anything about the weather in Cambridge?

David: It's a wet day, apparently. [reported speech]

In producing his response, David as a speaker must be able to mentally represent the original utterance and attribute it to Simon. He must then produce his own representation of the utterance which bears sufficient resemblance to carry the relevant logical and contextual implications for Jenny to derive the desired cognitive effect (with the least possible processing effort). Jenny, in interpreting David's response, must infer that his utterance resembles Simon's (and hence is metarepresentational) in a way in that is optimally relevant for her. The use and accurate interpretation of reported speech and thought is thus inherently dependant on metarepresentational abilities.

When an attributed thought or utterance is represented, it need not be identical to the original. The Communicative Principle of Relevance (Sperber & Wilson, 1986/1995) suggests that the utterance must resemble the original to the extent that it will achieve optimal relevance, in that context, at that time. The definition of resemblance is that the metarepresented content shares logical or contextual implications with the original. Thus, the notion of interpretive resemblance suggests that the metarepresentation can merely

resemble the original (in content or form) as long as the hearer can derive cognitive effects and interpret the utterance as being intended as an attribution of a prior (or possible) thought or utterance. Speakers may use reportive utterances and expectations of faithfulness to deceive their hearers. For instance, a person who lies about an attributed utterance is still engaged in the use of reported speech, but is using it deceitfully, as in the following hypothetical scenario:

(q) Jenny has been asked by a friend if her and her partner David would like to attend a fundraiser. Deciding she doesn't want to attend, she calls the organiser and says:
 "David says that he has a meeting that evening, so unfortunately we won't be available". [reported speech]

Jenny uses reported speech to attribute an utterance to David, and, therefore, engages in metarepresentation (specifically attributive metarepresentation) despite the fact that the utterance was not in fact uttered by David. The 'misattribution' (or deceitful attribution' in this case) does not negate the fact that an attribution was made and that the process of using such a reportive utterance entailed metarepresentational abilities.

#### 3.4.4 Echoic use

Echoic use is defined as the use of an utterance which is used to attribute a thought or utterance to another person (or to the speaker at another time) and to convey an attitude towards the attributed content (Carston, 2002). Echoic use crucially involves the conveying of attitude towards an attributed thought or utterance. This attitude is conveyed by the utterance itself. The utterances achieve relevance by conveying the speaker's attitude towards the attributed content and, as a result, involve an "extra layer of metarepresentation" (Wilson, 2000, p. 148). The example below illustrates that an utterance may report an attributed statement as a simple metarepresentation deployed in the service of reported speech. However, where an attitude is also conveyed (such as disagreement, sarcasm), an additional layer of metarepresentation is involved, as illustrated in example  $(r_2)$ .

- (r) David: He said that

  we should bring our own towels [reported speech]
- A2: [I am incredulous that]

  He said that

  We should bring our own towels! [echoic use]

Given that echoic utterances are, like reported speech and thought, metarepresentational and attributive, their use by individuals with schizophrenia is of interest. The extra

metarepresentational element of echoic utterances means, specifically, that they may be more challenging for individuals with abnormalities in metarepresentational ability.

A speaker may convey a range of attitudes, from endorsing an opinion to expressing disapproval. Denials are echoic by this definition, in that they function to convey rejection of an attributed thought or utterance. Again, using the example as illustration, imagine that Simon overhears the assertion made by David and denies it:

(r) David: I'm late. Simon said I could have the bike.

Simon: I did not say you could have the bike, I said perhaps you

should invest in a bike. [echoic use: denial]

In this example, Simon's response is a report of David's utterance (a case of reported speech), rejecting the attributed content, and hence conveying an attitude towards the attributed utterance. Denials in this model achieve relevance by recognition of their echoic nature and the rejecting attitude conveyed. Like reported speech and thought, the representation being attributed to another person, need not be identical to the original. It need only convey the same implications in order to achieve relevance. Such echoic resemblance would still have the same metarepresentational and attributive properties discussed.

Irony also fits this framework and is considered a case of echoic use, in which the dissociative attitude is on a continuum with other instances of rejecting-type attitudes (Sperber & Wilson, 1986/1995). The following example, (w), illustrates an instance of irony:

(s) David: I'm late. Simon said I could have the bike.

Jenny [sarcastically]: I'll wake up in time, indeed! [echoic use: irony]

Jenny's utterance is ironical by virtue of the disapproving or rejecting attitude expressed towards an utterance which is attributed to David at an earlier time. On this account of irony, there is no need for the hearer to interpret the utterance as implicating the opposite of what is said (which is required on traditional Gricean accounts of irony). Instead, the hearer is expected to follow the same comprehension principles, that is, considering how the utterance achieves relevance given its echoic nature.

### 3.4.5 Questions and metarepresentation: Regular and echo forms

## **Regular Questions**

Within a RT framework, interrogatives are treated as inherently metarepresentational. Wilson (2000) summarises how such regular questions achieve relevance:

Someone who utters an interrogative is thinking about a thought (or an item of information), which she regards as desirable from someone's point of

view. Since information can be desirable only because it is relevant, this amounts to claiming that interrogatives represent relevant answers (p. 154).

Given that questions, then, represent relevant answers and the answer itself is a representation, the ability to produce successful and relevant questions rests, therefore, on a metarepresentational ability.

Yes-no questions represent complete propositions, thus metarepresenting a confirmation or disconfirmation as a relevant answer. Wh- questions, by contrast, represent a specific variable as relevant to complete the proposition expressed.

(t) David: I'm late. Simon said I could take the bike.

(t1)Jenny:Does he need it later?[regular question](t2)Jenny:What time does he need it?[regular question]

In  $(t_1)$ , a *yes-no question*, Jenny expresses a complete proposition (Simon needs the bike later) and metarepresents the desirable answer as a confirmation or disconfirmation of this proposition. A *wh*- question by contrast metarepresents a relevant answer as the response which would complete the incomplete proposition expressed a specific variable as relevant to complete the proposition (Blakemore, 1992) (in the case of  $(t_2)$ , the relevant answer being metarepresented is the aspect of time). Notably, there may also be an implicit question communicated (particularly in the case of *yes-no questions*), in which the question, in the context, implies that further information would be relevant (Carston, 2002). The example below will be used to illustrate this point:

(u) David and Jenny are sitting on a park bench. A woman jogs past smiling at them.

Jenny:

Do you know her?

David:

Yes, she's one of the statisticians at work

\*Yes. No!

In this example, the question implicit in Jenny's yes-no question is 'how do you know her?' or perhaps, 'if yes, how do you know her?' In just responding in the affirmative, there is a sense of incompletion. Responding with a disconfirmation also appears to require additional information (in this case carried by the intonation signalling surprise). Yes-no questions do not always require an elaborated response, as they do not always carry an implicit question. Indeed, in typical conversation, there are instances in which a simple yes or no may fully satisfy the question. For example, in responding to Jenny's question in (t<sub>1</sub>) ("does he need it later?"), it may be manifest to David that what is relevant to Jenny is not just whether Simon needs the bicycle (a simple confirmation or disconfirmation) but what time he will return. In this case, David will, in "anticipating [the] question" (Carston, 2002, p. 146), respond by providing the information represented as relevant. However, it is clearly

plausible, and acceptable in certain contexts, that David could merely reply in the affirmative or negative to the question. Thus, although not all regular yes-no questions require the hearer to elaborate on their response, this practice of "anticipating questions" may be of particular interest in the current study. While questions themselves are inherently metarepresentational, the practice of anticipating questions rests on the additional ability to predict where relevance lies for the hearer, beyond what is metarepresented by the question form itself.

Although regular questions are inherently metarepresentational as discussed, they are not attributive in the same way that reported speech and thought or echoic use involve attribution of thought and utterances to other individuals. Regular questions are metarepresentational but non-attributive. Their counterpart, echo questions, are both metarepresentational and attributive.

#### **Echo Questions**

Echo questions are defined, in RT, as utterances which function as questions and are echoic, in the RT sense, in that they echo and question some aspect of an attributed thought or utterance. By using these utterances "the speaker echoes and questions some aspect of the form or content of an attributed utterance [or thought]" (Wilson, 2000:152). Echo questions thus share properties of echoic use, as well as properties of questions in general. Like echoic utterances, echo questions contain an attributed representation and convey an attitude towards the attributed content. They may be distinguished from echoic use more generally by their pragmatic function of 'questioning' and the specific attitude communicated which, according to Noh (1995), is one of "wondering about" the attributed representation. Echo questions differ from regular questions in that they are inherently attributive (and hence metarepresentational) and in respect of their function: "the attitude in echo questions is 'wondering about a prior utterance or thought'", in contrast to regular questions which function as "'wondering whether, wondering what, etc.' about the state-of-affairs itself" (Noh, 1995, p. 133). The central feature of echo questions as involving an attributed thought or utterance adds an addition metarepresentational element than occurs within regular questions (Noh, 2000). In this way, they are metarepresentational in the same way as regular questions - representing desirable information, but they are representing desirable information about an attributed utterance or thought which is being echoed either partially or fully.

Traditionally echo questions have been defined as questions which echo a prior utterance in the preceding discourse. RT departs from this narrow conceptualisation, by arguing that such a constrained definition misses an important generalisation (Noh, 2000).

On a RT definition, an echo question does not necessarily have to echo an immediately preceding utterance but may, in some cases, echo a thought attributed to another person, or an utterance attributed to the person at some point in the past (Noh, 2000; Wilson, 2000). In the example below, taken from Wilson (2000, p. 152), Mary uses an echo question to question a thought (or intention) which she attributes to Peter.

Mary: [seeing Peter walk towards the door]:

Just a minute. You're going shopping? [echo question]

In this example, there is no immediately preceding utterance, however, on a RT definition, the question is about an attributed thought (or intention).

Echo questions represent desirable information about the thought or utterance which is attributed to another (or to the speaker at another time). They are thus metarepresentational in the same sense as regular questions, but have an additional attributive element. Echo questions are distinguished by their declarative structure and rising intonation (Wilson, 2000). Echo questions "can be analysed as asking questions about metarepresented illocutionary acts" (Noh, 2000 p.163): saying, telling and asking.

(v) David: I'm late. Simon said I could take the bike.

(v<sub>1</sub>) Simon: I said you could use my bike? [echo question]

([Are you saying that] I said you could use my bike?)

(v<sub>2</sub>) Simon: I said what? [echo question]

([what are you saying that] I said?)

When paraphrased it can be demonstrated that the type of echo questions illustrated in  $(v_1)$  and  $(v_2)$  metarepresent the higher order speech act of 'saying'. In  $(v_1)$  the question, when paraphrased, can be seen to resemble a *yes-no question* about an attributed thought or utterance. In contrast, the echo question in  $(v_2)$  (still with declarative syntax and rising intonation), is a *wh*-question, metarepresenting a specific piece of information as desirable.

The existence of two groups of questions, both requiring metarepresentational skills for their use and interpretation, but separated by the feature of attribution, is potentially useful in investigation of subtle pragmatic difficulties. Attributing a thought to another implies the ability to represent the other's mental state as distinct from your own and, hence, would appear to rest on an ability to mentalize. A distinction in the performance on regular versus echoic questions would be expected in individuals with difficulties with second-order ToM tasks which rely inherently on attribution of thoughts to others (Wilson, 2000).

### 3.4.6 Summary: Linguistic metarepresentation

Linguistic metarepresentation it seems can offer a specific window on how attribution of thoughts and utterances occurs (or is interpreted) in discourse. Through the lens of RT, it is

possible to analyse these pragmatic behaviours and shed light on the ability of individuals in this regard. This feature is of particular interest in examining the discourse of people with schizophrenia who are understood to have disturbances in mentalizing (and hence in attributing thoughts to other people). All the processes discussed thus far seem to rely on processes akin to mentalizing. The question raised is whether these sophisticated pragmatic processes are underscored by the general mind-reading ability explored in Chapter Two, or whether communication is served by specific metacommunicative processes.

## 3.5 Mentalizing and pragmatics: Questions of modularity

The increasingly dominant view within cognitive sciences is that the architecture of the mind is extensively modular. Fodor's (1983) influential work, The modularity of the mind asserted that there is not a seamless interface between cognitive processes, challenging the idea that information could flow freely between perceptual and conceptual processes. While asserting modularity of cognitive processes, Fodor was against the view that all cognitive processes were necessarily (or even plausibly) modular and the Fodorian view of the mind can be described as "partly modular and partly non-modular (Carston, 1997, p. 1). In this account, modules have specific characteristics, with two of the essential features being their domain specificity and informational encapsulation. Domain specificity refers to the fact that modules in a Fodorian sense are activated by specific stimuli, and function only within this narrow domain (Carston, 1997), with language processing an example. Information encapsulation refers to the notion that modules are unable to take into account information from other sources, or other modules, during the rigid processing of stimuli, even where this information may be relevant. Fodor proposed that the 'peripheral' and perceptual processes are inherently modular, functioning as rigid, automatic and domain-specific mechanisms. Conceptual processes, or 'the central systems' are those higher order cognitive processes,

broadly characterized as involved in belief fixation (including keeping as accurate and up-to-date a representation of the world as possible, making decisions and plans, speculative and imaginative thinking) (Carston, 1997, p. 2).

Central systems, in a Fodorian view, are therefore seen as required to integrate information from different sources and are thus domain-neutral, necessarily unencapsulated, and therefore non-modular. ToM, as a metapsychological ability, would clearer fit within Fodor's conceptualisation of central systems, being reliant on drawing information from a range of sources and contributing to processing stimuli from different domains. However, at the same time it appears to have features of modularity. While it is beyond the scope of this chapter to consider all the related arguments, the focus in this section will be on arguments

pertinent to the potential interface between pragmatics and ToM. It would seem that ToM is a candidate as a cognitive module (Scholl & Leslie, 1999), but whether this general metapsychological ability is sufficient to subserve verbal communication and the associated 'mind-reading' requirements (discussed below) is a topic of renewed debate.

The inferential processes which RT articulates as being at the heart of human communication seem akin to processes described as ToM or 'mentalizing' in the psychology literature (Wilson, 2000). In essence, both seem to involve a process of representing what another person 'has in mind'. While early writings in RT saw the pragmatic processes as underscored by a general mentalizing ability, recent work by Sperber and Wilson (Sperber & Wilson, 2002; Wilson, 2005) has revisited this position. Instead, they propose a "metacommunicative module" which is seen as a "specialization of a more general mindreading module" (Sperber & Wilson, 2002, p. 5). This dedicated module is able to process verbal communication which "presents special challenges, and exhibits certain regularities, not found in other domains" (Wilson, 2005, p. 1132). RT argues that neither of the dominant theories of ToM, that is, the rationalisation theory nor the simulation theory (presented in Chapter two), can adequately explain the processes involved in inferring speaker meaning from utterances.

Sperber (2000b, p. 130) systematically examines the models of ToM to show that the "standard patterns of inference" on which the metapsychological processes depend "are not readily available" to communicators. On the rationalization account, as explored in the previous chapter, the observer must decide what "effect of the action the agent could have both predicted and desired; [and then] assume that this was the effect the agent intended to achieve" (Sperber & Wilson, 2002, p. 10). In other words, the hearer must identify the desired effect of the utterance before they are able to infer the speaker's intention. However, the identification of the intended effect is, in itself, communication. The argument thus becomes circular within a rationalisation theory of mind-reading (Sperber, 2000b). The simulation account is differently flawed in terms of its ability to explain pragmatic processes. In this account, verbal communication must involve the hearer imaginatively simulating the utterance for interpretation to uncover the speaker's meaning. This process would not only involve inferring and simulating an extensive amount of intended context, but also that the hearer has some idea of what the speaker might mean. Again, if the desired effect is that the hearer retrieves speaker meaning, and thus if interpretation relies on this desired effect to initiate the process, the simulation theory is clearly also inadequate to account for communicative behaviour (Sperber, 2000b).

From a theoretical perspective then, it seems implausible that communication is subserved by the same general mentalizing ability that underlies the metapsychological attribution of mental states or predication of mental states from behaviour. There are a number of lines of evidence to support the theory that there is a dedicated metacommunicative module whose function is to process communicative stimuli. Pragmatic processing is "fast and automatic, activated by specific types of stimuli and engages in particular processing strategies and routines" (Carston, 2002, p. 132). This feature makes the metacommunicative abilities likely to be modularised. In addition, from a developmental perspective, studies have consistently shown that while young children may fail standard false-beliefs tasks (and by extension, therefore, have not fully developed their ToM abilities), they are able to engage in complex communication tasks requiring metarepresentation (Happè & Loth, 2002; O'Neill, 1996). This evidence suggests that the metacommunicative demands are being met by cognitive processes other than ToM, a cognitive process which is more advanced in its developmental progress. Investigations within clinical pragmatics would appear to have the potential to reveal fractionations along the lines proposed by Sperber and Wilson, if, in fact, this modularity thesis is correct.

# 3.6 Applications of Relevance Theory to clinical populations: A survey

Using a variety of methodological approaches, RT has been applied to understanding the performance of individuals with different types of clinical diagnoses. An early and influential application of the theory to a clinical population was Happè's (1993, 1995) work on autism. Since then applications in the realm of Right Hemisphere Disorder (RHD), schizophrenia, Asperger's Syndrome (AS), High Functioning Autism (HFA), Traumatic Brain Injury (TBI), Pragmatic Language Impairment (PLI) and Specific Language Impairment (SLI), have begun to demonstrate the potential usefulness of RT to clinical concerns, as well as the potential for clinical investigations to shed light on some of the theoretical constructs of RT.

The distinction between descriptive and interpretive use has been particularly fruitful, with researchers using the distinction to design studies on the processing of metaphor, irony and sarcasm in clinical populations while allowing them to explore the link between ToM and utterance processing (Happè, 1993, 1995; Langdon, Coltheart, Ward, & Catts, 2002; Langdon, Davies, & Coltheart, 2002; McDonald & Pearce, 1996). In some of the early and significantly influential applications of RT to a clinical group, Happè (Happè, 1993, 1995) found that individuals with autism presented with difficulties in interpreting metaphorical speech and irony that correlated with their ability to pass first and second order false belief tasks, respectively. The results were interpreted to support the echoic theory of irony advanced by RT. Langdon and colleagues (Langdon, Coltheart et al., 2002;

Langdon, Davies et al., 2002) have also shown a dissociable performance between metaphor and irony processing in people with schizophrenia, a finding which has been reported by others (e.g. Herold et al., 2002). Such findings support the RT distinction between metaphor and irony. Despite some contradictory evidence (e.g. Drury et al., 1998; Loukusa, Leinonen, Kuusikko et al., 2007; McDonald, 1999; McDonald & Pearce, 1996; Wearing, 2010), the distinction between descriptive and interpretive use has not only been largely supported by clinical pragmatic research but has proved useful in developing accounts of specific pragmatic disorders. Such theoretically grounded research has helped to further the understanding, and provided clear evidence, of the important link between social understanding (specifically social cognition) and communicative ability.

Moving away from a focus on the descriptive-interpretive distinction, RT has also been applied to the study of inference abilities. In the first description of communication disturbances in individuals with RHD, Myers (1979) noted how these individuals produced irrelevant responses and appeared to have difficulty in "extracting critical information [...] or drawing inferences" (p. 39). The reasons underlying this type of presentation are debated. Dipper, Bryan and Tyson (1997) used RT as the basis for their experimental design of an inference task to assess individuals with RHD with the aim of explaining the cause of such disturbances. The findings demonstrate how context sensitivity is a complex construct and that the individuals with RHD had specific difficulty in activating inference processes under certain conditions. Such application of a pragmatic theory not only allowed for a clearer explanation of inference in people with RHD but also provided support for distinctions drawn in RT.

Leinonen and colleagues have applied relevance theory to research with children with a range of pragmatic impairments. The focus of much of this work has been on investigating how children with these disorders utilise contextual information in pragmatic processing (Leinonen & Kerbel, 1999; Loukusa, Leinonen, Jussila et al., 2007; Ryder, Leinonen, & Schulz, 2008). In applying RT to conversational data of children with SLI and PLI, Leinonen and Kerbel (1999) argue that RT is useful in delimiting component processes which may go awry in communication disorders. While questions remain, the research demonstrates how RT may be applied to clinical populations and, importantly, in the case of the Leinonen and Kerbel (1999) study, to conversational data.

The relatively recent history of the application of RT to clinical pragmatics has demonstrated the potential of both domains to benefit from such application. The studies applying RT to clinical populations have (with the exception of Leinonen and Kerbel (1999) who applied the theory to spontaneous conversation of the children in the study) largely

confined themselves to using the theory to explain performance on specific cognitive and tightly controlled pragmatic tasks. Such studies have important implications and drive the field forward in developing explanatory accounts. At the same time, the complexity of online, truly pragmatic processes cannot be ignored. Despite the growing body of research, there has been very limited systematic application of RT to conversational data in the clinical domain. Indeed, application to recorded conversation has been limited in general and, thus, I will argue that not only does the domain of clinical pragmatics stand to significantly benefit from the cognitive pragmatic approach of RT, but RT itself stands to benefit from the type of approach taken in this study. While the analysis of conversational data does not allow for strict control of variables and has, therefore, limited possibilities for robust associations and correlations to be drawn, the contextualisation of models and hypotheses within 'real life' communication is essential.

# 3.7 Conclusion: The metarepresentational demands of communication from a Relevance-Theoretic perspective

The ability to entertain complex metarepresentations is arguably unique to humans and central to understanding human, and particularly communicative, behaviour (Sperber, 2000b). Utterance interpretation is an inherently inferential process relying on the hearer being able to attribute intentions to the speaker - a process of 'mentalizing' reliant on metarepresentational abilities. More specifically, interpreting utterances where the speaker may be less than maximally relevant, or even deceptive, requires additional layers of metarepresentation and intention attribution. As speakers too, metarepresentation is key to successful communication, requiring at least third-order metarepresentation of communicative intentions (Sperber, 1994). The realisation of communicative and informative intentions and the recognition of these intentions on the part of the hearer does not occur within a vacuum. Rather, the context in which the communication takes place is crucial to the process of communication and to particular considerations of how an utterance achieves relevance. The general success of communication then relies on the communicators being aware of the information manifest (or potentially perceptible) to the other - a process which itself would seem to rest on mentalizing. Utterances themselves can contain metarepresentational elements. Linguistic metarepresentation, in which the utterance itself contains a representational element or is used to attribute a thought or utterance to another person (or to the speaker at another time), has yet to be explored in the conversations of people with schizophrenia.

If verbal communication depends so heavily on metarepresentational abilities, do the metarepresentational abnormalities described in people with schizophrenia manifest in

their communication? If so, does this evidence suggest a disproportionate difficulty with certain types of metarepresentations (and, hence, perhaps implicate specific metarepresentational abilities)? Might this evidence be explained by a modular conceptualisation of metarepresentational abilities? While Frith's (1992) well-developed cognitive neuropsychological theory of schizophrenia (see Chapter Two) has yielded evidence for an underlying deficit in metarepresentation, a recent study of discourse revealed evidence of mentalizing in the conversations of individuals with the disorder (McCabe et al., 2004). Clearly the model proposed by Frith, which has generated significant interest, must be applied within conversational data to further investigate the predictions of the model in on-line communication. To yield this type of evidence, a sensitive, theory-driven analysis of conversational data is required. RT seems particularly well placed as a theoretical approach and tool to explore conversation for evidence of how people with schizophrenia deal with metarepresentational demands, both as hearers and speakers in interaction.

# **Chapter Four**

# Towards a cognitive-pragmatic account of conversational discourse in people with schizophrenia

There has been a call to begin investigating acquired pragmatic disorders from a theory-driven perspective, with theories of pragmatic phenomena and cognitive substrates made central in clinical pragmatic research. Cummings (2007b, p. 107) suggests that what is required is that "the study of acquired pragmatics disorders, one that is guided in its particular direction by models and theories of pragmatic phenomena, represents our best hope for moving forward in a productive manner". Chapters Two and Three have presented the premises of Frith's (Frith, 1992) metarepresentational model of schizophrenia and the tenets of Relevance Theory (RT) (Sperber & Wilson, 1986/1995), respectively. This chapter will serve to contextualise the thesis by briefly considering the influence of my own clinical perspective and personal interest in the field. I will then review the potential interface between the metarepresentational model of schizophrenia and RT, as it has emerged from the preceding discussion, before concluding this short chapter by introducing the specific aims of the study.

# 4.1 Contextualising the thesis: Personal and professional reflections

This thesis is born in part from a clinical need for direction in terms of intervention with people with schizophrenia and arises from my own frustration, as a clinician, with intervention programmes based only upon surface features of the communication of people with the disorder, and equally cursory treatment plans. The significant social impact of communication disturbances described by some of the individuals with whom I have worked, and their desire to tackle these difficulties, has played a profound role in my desire to have 'something more to offer'. In part, too, the thesis is a result of my own intrigue about the relationship between 'thought' and 'language', 'cognition' and 'communication', and a pull towards working with those with schizophrenia who appeared to have difficulties at the boundary between these categories. This piece of work represents a search for an explanatory account of communication in people with schizophrenia, that is, one which addresses the (dis)abilities in communication, without losing the complexity of the range of work in the area and one which recognises that any compelling theory of communication in this area must not only describe the language performance, but also go a way to explaining the cognitive underpinnings of these processes. An explanatory theory must, then, be able to bridge the divide between the linguistic and social features of talk, and the cognitive processes which allow this complex behaviour to occur. Finally, an explanatory theory is one

which is able to deal satisfactorily with the complexity of conversation – the 'natural habitat' of language and the domain in which disturbances are most apparent in this population.

# 4.2 Metarepresentation: Mentalizing and beyond

Frith's (1992) model of schizophrenia asserts that the disorder is fundamentally a disturbance in metarepresentation. Communication is inherently metarepresentational. Sperber (1994), based on the premises of RT, asserts that:

Fully fledged communicative competence involves, for the speaker, being capable of having at least third-order metarepresentational communicative intentions and, for the hearer, being capable of making at least fourth order metarepresentational attributions of such communicative intentions (p. 197).

If communication relies so heavily on metarepresentation, indeed is in essence an exercise in metarepresentation, then disorders which affect 'mindreading' or mentalizing would be expected to have a significant impact on communicative abilities. Indeed, the metarepresentational model predicts specific communicative consequences of such an impairment. These consequences, such as difficulty in inferring the intentions of a speaker, or difficulties in tailoring an utterance for a listener, should be visible within conversation. Frith, in proposing an abnormality in metarepresentation, concentrates his account on the ability to mentally represent *mental representations*. However, metarepresentation extends beyond mentalizing, and this broadening of the discussion may have important implications for how ToM and metarepresentation are approached in the study of schizophrenia.

Although the concept of 'ToM' has dominated the psychological literature on metarepresentation, it has been proposed that humans have more than one metarepresentational capacity (Sperber, 2000b). Metarepresentations may contain lower order representations about our own or others' mental states "enabl[ing] us to be aware of our goals, our intentions, and the intentions of others" (Frith, 1992, p. 134). It is this type of metarepresentation which relates to the mentalizing or ToM ability. ToM, or mentalizing, is interested in the ability to mentally represent or metarepresent the *mental states* of ourselves and others, an ability that is just one of the possibilities which human metarepresentational abilities permit. In widening the scope of the metarepresentational discussion, it may be possible to further explore the (dis)abilities manifest by those with schizophrenia. The ability to publicly represent (through utterances) mental or public representations (the thoughts or utterances of others), is a related, but underexplored, facet of metarepresentational abilities. RT, it has been argued, provides the tools with

which the performance of people with schizophrenia, with regards to the different types of metarepresentational devices, may be considered.

It is argued by Sperber and others that a general mindreading would not be able to serve the complex process of communication (an argument reviewed in Chapter Three). As such a "comprehension module" (Sperber, 2000b, p. 129) or what might be considered the metacommunicative equivalent of the metapsychological ability of mentalizing has been proposed. This ability is proposed by Sperber to subserve the domain-specific processes of utterance interpretation and may be a sub-module of the more general 'ToM' module. Finally, a logical module, subserving a logico-argumentative metarepresentational capacity has been proposed (Sperber, 2000b). This particular ability is proposed to explain the human ability to tend to logical relationships and abstract representations. Each of these metarepresentational capabilities may be conceptualised as specialising in the processes of specific domains of representations. In other words, they deal with a subset of metarepresentational materials - metapsychological dealing with the processing of mental states; metacommunicative abilities with the processing of public representations (which themselves can encompass mental or public representations); and metalogical abilities with the processing of abstract representations and epistemic information. By examining how individuals with schizophrenia deal with the different metarepresentational demands of verbal communication, aspects of this modularity thesis may be explored.

I propose that our understanding of the communication disturbances experienced by people with schizophrenia stands to benefit greatly from such a cognitive pragmatic investigation. At the same time, a clinical application of RT stands to benefit the development of the theory.

# 4.3 Conclusion: Towards a Relevance Theory account

A cognitive-pragmatic account of communication, paired with a theory of breakdown in a disorder, affords us the opportunity to investigate an explanatory account of communication behaviour in schizophrenia, rather than merely a descriptive one. This may go a long way to informing intervention. If we have an idea (even a well-based theoretical idea) of why communication in social situations may be challenging we can offer far more directed intervention than merely considering the superficial features of the presenting difficulties. It is proposed that taking a Relevance Theoretic perspective this study can begin to explore some of the unanswered questions in relation to metarepresentational abilities in the disorder and performance within the 'natural' context of conversation.

# **SECTION II**

# **Chapter Five**

# Methodology

# 5.1 Aims of the study

This study aims to explore metarepresentational (dis)abilities of people with schizophrenia as manifest in conversational discourse. Evidence of disturbances in 'mentalizing' or theory of mind (ToM) in this population has accumulated, and experimental studies have demonstrated associations between these disturbances and communication performance (Corcoran & Frith, 1996; Langdon, Coltheart et al., 2002). However, the predictions of these models remain to be empirically demonstrated in conversation and in fact recent research has suggested that mentalizing is intact in conversation (McCabe et al., 2004). In this study, I aim to explore the predictions of Frith's (1992) metarepresentational model of schizophrenia with regards to communication from the perspective of Relevance Theory (RT) (Sperber & Wilson, 1986/1995) applied to conversational data. In addition, this study aims to demonstrate the utility of a cognitive science approach to clinical pragmatics, and specifically to conversational data, which is frequently outside the remit of such investigation. In this light, the study aims to answer the following questions:

- (1) Is there evidence in conversational data of metarepresentational (dis)abilities of people with schizophrenia, when viewed from a cognitive-pragmatic perspective?
  - (a) Does performance in 'off-line' mentalizing tasks differ from performance in conversational interaction with regards to metarepresentational abilities displayed?
  - (b) Is there evidence that the participants with schizophrenia have difficulty with the use of utterances which contain instances of reported speech and thought, echoic use and echo questions?
  - (c) Is there evidence that participants with schizophrenia have difficulty interpreting regular or echoic questions in conversation?
  - (d) Do participants account for the knowledge of their interlocutor during delusional talk and how is this managed within conversation?
- (2) How does the engagement in metarepresentational features of talk differ between symptom groups of participants with schizophrenia?
- (3) Can RT shed light on conversational data for the purposes of investigating clinical pragmatics?

### 5.2 Orientation to the data and outline of the chapter

The data of interest in this study are recorded conversational data which occurred between the researcher (REA) and the participants with schizophrenia. The conversations occurred around language assessment tasks and during refreshment breaks from these tasks. The interactions took place within several wards of a psychiatric hospital in South Africa. In addition to the conversational data, the performance of participants on a task requiring implicit attribution of mental states is of interest, as well as their profiles of psychiatric symptomatology which were obtained by psychiatrists through the use of a published psychiatric rating scale. This chapter will begin with a discussion of the study design, in section 5.3. The research method and rationale for the choice of method is addressed in section 5.4. The ethical considerations are discussed in section 5.5. Section 5.6 will focus on participant sampling processes and selection criteria, as well as the characteristics of the participants enrolled. A discussion of data collection and data analysis processes will be undertaken in sections 5.7 and 5.8, respectively. Reflections on data collection and analysis will be undertaken in section 5.9, which includes a consideration of methodological challenges anticipated. The chapter is concluded in section 5.10.

# 5.3 Study design

### 5.3.1 The emergence of the research questions

This study began with the broad aim of exploring the language and communication performance of people with schizophrenia, through the use of formal and informal assessment measures, with reference to their profile of psychiatric symptomatology. The components of the data collection included, at the outset, a set of formal language assessment measures, the Fable Task, and conversational interaction (specifically around the assessment tasks and within refreshment breaks). In keeping with the practice of qualitative research, the study was characterised by the emergence of concepts or hypotheses through the research process (Flick, 2007). The relative contribution and focus on the components of the data shifted accordingly as the research progressed, as is the expected pattern in qualitative research. The discourse data, from both the Fable Task and the conversational interaction, became the primary data sources, with performance on language assessment tasks providing a backdrop to this more pragmatic focus. During the initial pilot of the data collection procedure, it became clear that the conversation around the formal language tasks, and particularly during the refreshment break, would constitute a large body of rich interactional data. At this stage, it was envisioned that the conversational data would be an interesting adjunct to the language assessment data,

rather than the focus of the study itself. It was during data transcription that a sense of conversational flow and apparent competence became salient. Given the body of literature documenting and assessing pragmatic disability in this population, it became apparent that the conversational data was a potentially important opportunity to explore this pragmatic perspective on the disorder, particularly as the initial impression of the transcripts suggested greater competence that would be predicted. The sense of conversational cooperation and negotiation prompted the search for a paradigm in which the cognitive-communicative dimensions of conversation could be explored. Theory and data collection informed each other in this process, in keeping with the principles of qualitative research design (Flick, 2007; Lewis, 2003) and the hypothesis was "developed and refined in the process" (Flick, 2007, p. ix).

Frith's (1992) cognitive neuropsychological model of schizophrenia provided a framework which made specific predictions around pragmatic ability and communication. Its central tenet is the notion of an abnormality of metarepresentation and the decision to focus on pragmatic (dis)ability as predicted by this model, necessitated a conceptual framework from which to tackle the conversational data. The notion of metarepresentation as crucial for communication resonated with RT and it was hypothesised that RT could, therefore, provide the tools with which to investigate metarepresentational abilities in a pragmatic context. The three research questions, outlined above, emerged through the process of interaction between the data, Frith's (1992) metarepresentational model of schizophrenia and RT. The phases of the research process, including the reiterative process between the emergence of the research questions and data analysis, are illustrated in Figure 5.4 in section 5.7.

# 5.3.2 Description of the qualitative approach taken

This study adopts a qualitative approach to the analysis of conversation, applying RT, grounded in cognitive science, to recorded conversational data. While qualitative research is generally considered inductive, this study set out to test an existing hypothesis in a new 'context' — that of conversation. Such an approach is more in line with a deductive perspective. While the initial analysis was approached as a case series, the individuals were subsequently 'grouped' for comparative purposes into three categories: (1) those participants with predominantly negative symptomatology (pNS), (2) those with predominantly positive symptomatology (pPS), and (3) those with mixed symptomatology (MS). Comparative analysis and 'between group designs' are strongly associated with quantitative analysis. However comparisons can be built into qualitative designs to achieve particular aims around understanding, rather than measuring, difference (Lewis, 2003).

There is significant debate in the field about drawing comparisons within qualitative research (e.g. Bryman, 2001). This study, however, utilised such comparison to allow for adequate exploration of the hypothesis which emerges from previous research: that individuals with particular psychiatric profiles will present with particular deficits in mentalizing and, therefore, particular pragmatic impairments. Building a comparative analysis into the research design allowed the study to explore whether the ability to deploy metarepresentational abilities in talk differed between symptom groups.

The conversational data, which forms the bulk of the data analysed, comprises recorded interactions between myself, as researcher, and the participants with schizophrenia. The research is, therefore, situated within the qualitative research approach of 'participant observation' and draws from a number of the key elements of participant observation, which will be explored in section 5.9.1.

# 5.3.3 Clinical pragmatics 'in vivo': Rationalising a qualitative approach to conversational data in the domain of clinical pragmatics

As indicated in the introductory chapters, a growing body of experimental data exists with regards to ToM, mentalizing and pragmatics in the disorder of schizophrenia (e.g. Corcoran & Frith, 1996; Corcoran, Mercer, & Frith, 1995; Gavilán & García-Albea, 2011; Langdon, Coltheart et al., 2002; Langdon, Davies, & Coltheart, 2002). These types of studies have certainly played a significant role in shaping psychiatric theory and even clinical practice. However, it is argued that despite these important contributions, controlled experimental tasks of 'pragmatics', required for quantitative analysis, may not be a true indication of how metarepresentational capabilities are deployed in conversation or how difficulties in this domain manifest in interaction. As such, this study takes on a role of qualitative research as "verification" or testing the validity of claims (Peshkin, 1993), specifically of the mentalizing models of schizophrenia within the realm of conversational performance. The 'natural habitat' of conversation has been relatively unexplored with regard to the cognitive models of schizophrenia. The richness of a qualitative design, specifically discourse analysis, would appear to offer this opportunity.

While SLTs have increasingly embraced conversational data within assessment and intervention practices, there remains a reliance on decontextualised tasks for investigation of specific phenomena, such as implicatures, figurative language and contextual processing. Cummings (2007b) cautions against reliance on these types of tasks:

It is unlikely that studies that attempt to examine conversational implicatures by presenting subjects with question and answer vignettes or by encouraging subjects to select a final piece of speech for one of the

characters in a story are testing any of the pragmatic skills that are used in the recovery of implicatures in everyday communicative situations. If anything, these rather contrived situations are more likely to be testing a range of other language and cognitive skills that are unrelated to pragmatics as such. It is an irony that the discipline which emphasises speakers' use of language must now control its own impulse to extract notions such as implicature from the communicative situations that are their natural home (p. 107).

The use of decontextualised tasks to investigate pragmatic function is particularly rife within research on communication in people with schizophrenia, and has dominated the investigations of the relationship between ToM and communication. While there is clearly an important role for such research in shaping theory, I would argue that there is a need, even a responsibility, to balance such quantitative decontextualised measures with qualitative investigations 'in vivo'. The communication of people with schizophrenia has been described as being disrupted at the "highest level of language processes" (Frith, 1992, p. 98) and yet it is here – at the level of conversational discourse – that impairments in mentalizing have been least investigated. The gap between 'real-life situations' and vignette-based tasks is recognised by key players in the field:

In real life ToM situations we are not prompted for our comprehension of each added piece of information. It is in this appreciation of context and context-change (on-line mentalising) that Corcoran and Frith argue paranoid patients fail (Corcoran, 2000, p. 399).

Despite this recognition, the study by McCabe and colleagues stands alone in investigating mentalizing abilities within the 'real-life situation' of clinical conversations. McCabe and colleagues (2004), using a conversation analysis (CA) approach to recorded data of clinical interactions, revealed evidence of intact ToM in conversational encounters with people with schizophrenia. The participants in their study demonstrated clear competence in representing the mental states of themselves and others and using this information appropriately in talk. These findings are in clear contrast to the predictions of the mentalizing models of schizophrenia and the current theories of the disorder. I agree with McCabe in her assertion that the cognitive models of schizophrenia must be supported by empirical evidence from conversational data. Qualitative approaches to conversational data are able to offer a richness of analysis not achievable through a quantitative approach.

#### 5.4 Research Method

The research method deployed in this study was one of discourse analysis, applied to both the discourse data yielded by the Fable Task, and the conversational data. Alba-Juez notes that "it would not be unreasonable to say that there are as many approaches to discourse as there are researchers devoted to the field, for each of them proposes new forms of

analysis or new concepts that somehow transform or broaden previous modes of analysis" (Alba-Juez, 2009). Given the breadth of this methodology, and the relatively novel approach taken in this thesis, the terms 'discourse' and 'discourse analysis' require some exploration and contextualisation. The definition of discourse provided by Schiffrin (1994) resonates with the perspective taken in this study. She proposes a balanced approach to discourse, suggesting that "discourse can best be thought of as:

"utterances", i.e. "units of linguistic production (whether spoken or written) which are inherently contextualized" (1994: 41).

While many of the definitions of discourse go on to invoke structuralist definitions (proposes or presupposing that discourse in inherently structured), I will use the parameters of "utterances" and "inherently contexualised" as the boundaries defining discourse in this thesis. Based on her definition (above), Schiffrin acknowledges that there are a variety of possible goals of discourse analysis, including sequential goals (related to investigating whether there are principles which determine the structure and sequencing of utterances), as well as semantic and pragmatic goals. The goals of RT are pragmatic in nature, however, in contrast to many of the specific approaches to discourse analysis, RT is not interested in discourse as "an externalised object characterized by its organizational or structural properties", but rather is interested in discourse from the perspective of the "cognitive processes involved in understanding" (Blakemore, 2002 p. 155). While considerations of discourse are frequently viewed as incompatible with cognitive considerations, the acknowledgment of a cognitive dimension to discourse can be found even within the writing of one of the eminent discourse analysts, van Dijk:

[...] discourse analysis for me is essentially multidisciplinary, and involves linguistics, poetics, semiotics, psychology, sociology, anthropology, history, and communication research. What I find crucial though is that precisely because of its multi-faceted nature, this multidisciplinary research should be integrated. We should devise theories that are complex and account both for the textual, the cognitive, the social, the political and the historical dimension of discourse (2004, online autobiography, emphasis mine).

It is precisely this multidisciplinary aspect of discourse analysis which I have embraced in the research method applied in this thesis. Indeed, researchers within the field of clinical pragmatics have similarly called for integration of perspectives (Cummings, 2009). One of the reasons for pursuing this particular approach to the data was to engage in this area of development – the application of theoretical pragmatics to the domain of clinical data (discussed further below).

Within the overarching method of discourse analysis using RT, I also drew on specific aspects of more established methodologies within discourse analysis, particularly

with regards to the incorporation of context into the analysis of the conversational data. Conversation Analysis (CA) (Atkinson & Heritage, 1984; Sacks, 1995; Schegloff, 2007) provided direction in terms of how context could be analysed through the transcribed data available. Two solutions to the challenge of context have been employed by conversation analysts and were used within the broad discourse analysis method adopted. These solutions are discussed in depth in section 5.9.3, but include the analysis of the response of a conversation partner to analyse the interpretation of an utterance. The second CA 'technique' drawn on was the use of ethnographic information available to the analyst. This information included objectively verifiable information available to the researcher, which would shed light on the broader contextual and situational variables at play in the interaction. The applications of insights from CA within essentially Relevance Theoretic research in itself has some precedence. In his investigation of interpreter-mediated communication, Mason (2006) weaves together the RT analysis with the insights of CA in relation to evidence available in transcribed discourse about context. Pattemore (2006) similarly draws on CA notions of context in his analysis of radio talk show engagement.

## 5.4.1 The rationale for the application of Relevance Theory

The investigation of conversational abilities in people with schizophrenia is arguably an essential component of a holistic investigation of the disorder. Conversational data in this population has perhaps been most frequently approached from a sociolinguistic rather than a cognitive pragmatic perspective. There are numerous approaches within the sociolinguistic paradigm, including different types of discourse analysis and the specific approach of CA. Such approaches have yielded rich accounts of conversational phenomena in schizophrenia, most notably the exploration of clinical interactions (McCabe, Heath, Burns, & Priebe, 2002; Walsh, 2007b, 2008b), and also the investigation of ToM skills in conversation (McCabe et al., 2004). The emergence of the research questions drove the choice of the method and perspective adopted. Although Conversation Analysis (CA) was considered as a possible method for analysing the data, my research questions required a framework which could offer an explanatory account on cognitive grounds. While CA would have provided a rich descriptive account of the data, which could have been examined in the light of Frith's (1992) model, this approach would not have yielded the specifically cognitive focus required by the specific research questions. CA had already been applied to similar questions by McCabe and colleagues (2004) and had yielded important findings. A cognitive-pragmatic approach promised to add to this landmark development in the field of pragmatics and schizophrenia by providing a cognitive-pragmatic perspective. This study attempts to apply a cognitive-pragmatic framework to the analysis of conversational data,

departing from the more established sociolinguistic focus. The cognitive nature of the mentalizing accounts of schizophrenia suggest that a cognitive-pragmatic theory of communication may be well placed to investigate the phenomenon of interest – particularly the question of whether the hypothesised impairments in mentalizing manifest in interaction, and if so, how?

In deciding to pursue a cognitive-pragmatic approach, I was again faced with a number of possibilities. RT is just one theory or approach which falls under the umbrella of 'cognitive-pragmatic theories'. I explored the possibility of applying Kasher's (1991) Modular Pragmatics theory. This theory postulate the existence of a pragmatic module, a pragmatic component of the mind's central systems and an interface between these two components. While this theory addresses issues at the interface of cognition and pragmatics, it lacks the explanatory power to address issues of metarepresentation which are at the heart of Frith's predictions about communication in schizophrenia. 'Cognitive Pragmatics Theory' (Airenti, Bara, & Columbetti, 1993; Bara & Tirassa, 2000), was also considered. This theory rests on the notion of 'behaviour games' which guide the individuals interpretation of utterances. While this theory has received support from developmental and neuropsychological research, it remains largely descriptive.

Given the cognitive nature of Frith's (1992) model which this study has set out to test in conversational data, RT, based in cognitive science, would seem to be a good methodological 'fit'. In addition, RT, and the work on metarepresentation and the modularity of the mind (e.g. Sperber, 1994, 2000b; Sperber & Wilson, 2002), extends the application of the concept of metarepresentation, a key consideration in the mentalizing models of schizophrenia. The cognitive account and metarepresentational component arguably gives RT potential methodological power. Although clearly RT cannot "tell the whole story without giving further consideration to sociocultural matters" (Jary, 1998, p. 167), it is a model which is clearly able to incorporate such considerations. The nature of the metarepresentational model of schizophrenia lends itself to cognitive accounts of function, while the nature of conversation is inherently social. The RT analysis used in this study is focused on the cognitive aspects, but the approach appears to offer the scope to incorporate considerations of a social or cultural nature. It is hypothesised that the cognitive-pragmatic approach of RT may provide the tools to explore the complexity of metarepresentational abilities to reveal profiles of strength and weakness, and in this way test the mentalist accounts of the disorder of schizophrenia.

In addition to the resonance between the research questions and the framework of RT, the choice of RT was driven by the current developments in clinical pragmatics. The field

of clinical pragmatics has been criticised for not engaging with mainstream pragmatics theories to the extent that may be possible (Cummings, 2007a, 2007b; Davis, 2007). While CA would have been a possible method to approach the data, using RT as the conceptual framework within this discourse analytic study, allowed for the exploration of a recognised and highly topical pragmatic theory within the realm of clinical pragmatics. These considerations — both driven by the research question, and by the current state of development within clinical pragmatics itself — drove me to select RT as the conceptual framework for this study, and the methodological tool for analysis of the discourse data.

# 5.4.2 The intersection between discourse analysis and Relevance Theory

The use of RT to investigate discourse has a precedent both in translation studies, and in studies of discourse and interaction more broadly (e.g. Cameron & Williams, 1997; Moeschler, 1993; Pattemore, 2006; Unger, 2002b; Zhu, 2010). In this sense, the application of RT to discourse data is accepted and widely implemented by pragmatists working within this paradigm. The Principle of Relevance is seen as a human cognitive capacity which is universal and pervades behaviour, including social and communicative behaviour (Sperber & Wilson, 1986/1995). However, we do know that power relations in clinical settings (e.g. Walsh, 2007b) and cross-cultural clinical encounters (e.g. Cameron & Williams, 1997) have specific (sometimes challenging) characteristics. Is RT able to incorporate these essentially social concerns within its scope of explanation? From an RT approach this context-related information will certainly feature in the set of assumptions and encyclopaedic knowledge available to the communicators within the constantly evolving process of conversation. Thus, the processes of communication as outlined by RT still hold true, and the context selected and used for utterance interpretation is influenced by the specific assumptions within that cultural, physical and social environment. It is acknowledged that this approach to social considerations is perhaps the mirror image of the approach taken by traditional approaches to discourse analysis. In many of these approaches the social features of interest (such as power relations or intercultural meaning negotiation) are relevant in so far as they are manifest in the talk and made visible through the analysis. In RT, conversation is not 'special' in the sense that it conforms to the same principles that drive human cognition more generally. This approach is a substantial divergence from structural approaches to discourse analysis:

Relevance theory, as I understand it, says nothing specific about conversation, that is, about its structure, its progression, the rules participants should obey when interacting, etc. [...] What relevance theory predicts about conversation is that, as one communicative device among others, it should not behave differently in terms of relevance. One of the

important predictions that relevance theory makes about conversation is that no specific sequencing or interpretive principles should be necessary to explain conversational data. We can go a little further and say that, if human cognition is relevance-oriented, the conversational behaviour of participants should not escape the general relevance-orientation of cognition: utterances in conversation should be relevance-oriented (Moeschler, 1993, p. 151).

Given the apparent distance between RT and traditional approaches to discourse analysis, I will address the precedence for the use of RT in this context and, in so doing, address the criticism of RT as "asocial" (J. O'Neill, 1988, p. 243). Critics assert that cognitive approaches to pragmatics are ill-equipped to deal with the social nature of interaction (e.g. Mey & Talbot, 1988; J. O'Neill, 1988; Talbot, 1993), with the implication, by extension, that these approaches are inappropriate for the purposes of analysing conversational data. RT in particular has been criticised in this way, a criticism levelled against the theory as focused on 'cognitivist' aspects of communication and suggesting that RT is unable to accommodate socio-pragmatic concerns (Jary, 1998).

Any criticism levelled against a theory of pragmatics – that it cannot handle issues of social import – is clearly serious as communication is essentially a social endeavour. Although I will situate my own approach, and that taken within the current study, firmly within the realm of a cognitive-pragmatic account, I hope to address the fact that any such account can also be socially plausible. Indeed, Sperber and Wilson (1997, p. 147) themselves recognise the intrinsically social nature of communication: "[I]f human communication is of the inferential type, it presupposes and exploits an awareness of self and others. Inferential communication is intrinsically social". From an RT perspective, it appears that the *process* of producing an optimally relevant utterance and that of utterance interpretation should be universal as a human ability. However, this ability is put to work in achieving social ends and itself exploits social information available in the cognitive environment of the communicator. The driving force is that of 'Relevance', as it accomplishes the social work of conversational engagement.

Despite its 'cognitivist' face, RT has been successfully applied to areas of discourse analysis generally considered as 'sociopragmatic' rather than 'cognitive', providing evidence for its utility within discourse analysis. RT has been applied to cross-linguistic discourse by Cameron and Williams (1997), investigating instances of miscommunication in interactions between a non-native English speaker (a student nurse) and a native English speaking patient. These researchers investigate how the "pursuit of relevance" might account for the "achievement of mutual comprehension" and the "selection of contextually adequate schema" (p. 417). Such a focus is in keeping with the pragmatic goals of discourse analysis and is adequately addressed by the RT approach to the discourse data. Conversations on

radio talk-shows have been subjected to RT analysis supplemented by methods drawn from CA (Pattemore, 2006). Interpretation and translation studies have also successfully applied RT to discourse data, ranging from interpreter-mediated communication (e.g. Mason, 2006) to the analysis of translated conversations and narrations in film and literature (e.g. Buckland, 1992; Piskorska, in press; Zhu, 2010). Relevance Theoretic approaches to politeness in discourse have been met with interest (Christie, 2007) and success (Escandell-Vidal, 1996, 1998; Jary, 1998). Other features of interest to discourse analysts more broadly have also bee subjected to RT analysis, including discourse coherence and cohesion (Unger, 2002b), the exploration of genre within written discourse (e.g. Blakemore, 2002; Unger, 2002a) and applied to communication used to maintain and strengthen social relationships (Jary, 1998). These examples demonstrate a 'track-record' of Relevance Theoretic application to discourse data, and within a broadly defined discourse analytic framework. While the precedent within applied linguistics has been set, specific application to discourse data from clinical populations has received less attention within RT research (as discussed in section 3.6 of Chapter Three). While the application of RT to discourse of a clinical population is relatively novel, and the use of RT to 'test' an existing cognitive theory of pragmatic disturbance in people with schizophrenia is, to my knowledge, wholly novel, the practices established in these other domains establish the utility of a RT approach to discourse data.

#### 5.5 Ethical considerations

The study received ethics clearance from the Faculty Research Ethics Group — Faculty of Health Sciences at Trinity College Dublin (Ireland), as well as from the University of the Witwatersrand Human Research Ethics Committee (South Africa), overseeing research at the hospital at which the study was conducted (Approval letters appear in Appendix A).

# 5.5.1 Informed consent procedures

Given their status as belonging to a 'vulnerable group' by virtue of their mental health disorder, special precautions were necessary to ensure that the ethical principles of research were upheld. The capacity to consent to research is seen as resting on cognitive and communicative competence (Iphofen, 2009). The issue of informed consent to research by people with schizophrenia has thus justifiably dominated the work on research ethics in psychiatry. While the potential vulnerability of this population warrants careful procedures to protect their rights, there has been a renewed call to avoid excluding all individuals with this vulnerability. Indeed, Applebaum (1998, p. 1487) cautions that what is unfortunate in psychiatric research

is the failure to recognize that even substantially impaired understanding does not mean that a person with schizophrenia cannot comprehend information about a research project; rather, it means that he or she has a harder time grasping the content of a disclosure than a person who is not ill. Instead of writing off the possibility of such people making their own decisions about research and either excluding them from studies that may advance knowledge of their disorder or turning to surrogate decision makers to consent on their behalf, we ought to be focusing on improving their understanding, appreciation, and even reasoning abilities so that they can make decisions for themselves.

Crucially, the current study falls within the type of research involving the description of symptoms and cognitive testing which "involves few risks or discomforts beyond diminution of privacy and loss of time" (Appelbaum, 1998, p. 1486). Thus, the central points with regard to informed consent in this case are perhaps less related to the risks of participation and more related to the voluntary nature of participation, right to withdraw and the non-therapeutic nature of the interaction. These features were emphasised in the informed consent process, described below. Several principles which have emerged from this body of literature were followed to ensure that true informed consent was obtained before participants were enrolled in the study, and are described in the discussion which follows.

Following the sampling procedure (described in section 5.6.1), individuals were listed as potential participants. The consultant psychiatrist overseeing each individual's psychiatric care was then approached to discuss the appropriateness of the patient's enrolment, and permission was requested to approach the patient for informed consent. This process was required in order to safeguard the participants as the consultant was responsible for each hospitalised patient. Where a consultant psychiatrist was uncomfortable with a patient being approached for informed consent, that patient was removed from the list of potential participants. Informed consent was sought from each potential participant. Participant information was provided through a careful explanation of the nature of the study, what would be involved and the voluntary nature of participation. Verbal explanation of the information was supported with written information leaflets (Appendix B) and visual aids where necessary. At the end of each informed consent session, the potential participant was asked to explain their understanding of the process. Where this explanation revealed misunderstandings about the nature of the process (e.g., where participation in the research process was incorporated into delusional beliefs<sup>2</sup>), the

<sup>&</sup>lt;sup>2</sup> Participants were *not* excluded by virtue of engaging in delusional talk, but only in instances in which their participation the research process became incorporated into delusional beliefs. In these instances their consent could no longer be deemed true informed consent and they were thanked for considering participation in the study, but were excluded. Participants who engaged in delusional talk which was unconnected to the research were included in the study.

information was clarified again, following a process of repeated disclosure shown to be helpful in assisting people with schizophrenia to comprehend and retain information about research participation (Wirshing, Wirshing, Marder, Liberman, & Mintz, 1998). Where misunderstandings persisted, the person was thanked for considering the study but was not enrolled. Where the person demonstrated understanding of the principles of research participation, written informed consent was sought. Separate consent was sought for audio recording of the session (also included in Appendix B). Given the potential for variability in the mental state of individuals, the time between information giving and seeking written consent was limited to a maximum of one day. Data collection was then carried out and completed within two days of written consent being given. In all cases, the study was reexplained to the participant immediately preceding data collection and verbal consent confirmed at this time.

### 5.5.2 Confidentiality and data protection

Confidentiality was maintained through limiting the number of people aware of the participants' involvement in the study. The consultant psychiatrist and psychiatric registrar were informed of the participants' consent to involvement in the study. Where necessary and with the participants' permission, the charge nurse was also informed. Data was anonymised at the time of collection, with each participant being assigned a number and a three-letter code which was then consistently used in all data collection sheets as well as in the transcripts of recording and the naming of electronic files. All names used within the conversation, including place names, have been changed to maintain anonymity. Hard copy data is being kept in a secure location and accessed only by the researcher, while electronic data is secured on a password-protected computer. As agreed in the ethics applications, original data will be kept for a period of five years following the completion of the study at which point it will be destroyed.

#### 5.6 Participants

Twenty-nine patients with a DSM IV (APA, 2000) diagnosis of schizophrenia who fulfilled the inclusionary criteria (Figure 5.1) were initially enrolled in the study. Of the 29 individuals, the data collected from 23 (10 females, 13 males) was available for analysis, with three participants withdrawing from the study before or during data collection, and a further three participants excluded due to the length of time between the communication component of the study and psychiatric evaluation. The conversational data from all 23 participants was the focus of the qualitative analysis on the use of metarepresentational abilities in interaction. Of the set of 23 participants, 7 engaged in delusional talk during

interaction. A further exploration, focused on the conversations of those presenting with delusional talk, was also undertaken. The participant characteristics appear in Tables 5.1 and 5.2.

### 5.6.1 Sampling process

Convenience sampling was used, with potential participants identified by the researcher through a process of weekly review of ward files of all patients in the relevant wards of the hospital. All individuals fulfilling the inclusion criteria (section 5.6.2) were listed as potential participants. Ward psychiatrists were also made aware of the inclusionary and exclusionary criteria and suggested potential participants on this basis.

#### 5.6.2 Inclusion criteria

Potential participants were identified on the basis of strict inclusionary criteria. In order to be included in the study, potential participants needed to have a clinical diagnosis of schizophrenia, made independently of the study and according to the DSM-IV criteria. Patients were only considered if they were over the age of eighteen and under the age of sixty. This upper limit was invoked in order to eliminate any language and communication differences associated with the normal ageing process (Burke & Shafto, 2004). Patients needed to be free of a history of stroke, traumatic brain injury or epilepsy on the grounds of confounding language problems which would possibly be introduced by the history of these particular neurological insults. In addition, participants needed to have a minimum of eight years of formal education.

#### **Inclusion Criteria**

- 1. DSM IV diagnosis of schizophrenia
- 2. No history of neurological diagnosis (stroke, traumatic brain injury or epilepsy)
- 3. Age >18 years <60 years
- 4. Minimum of 8 years of formal education
- Early multilingual, with either Afrikaans or any Nguni language as languages additional to English

FIGURE 5.1 INCLUSION CRITERIA

Language history was a central inclusionary criterion, given the multilingual nature of the South African context in which the data was collected. Due to the extreme diversity of language landscape in South Africa<sup>3</sup>, it was necessary to recruit people from diverse backgrounds. All participants were multilingual, but the selection of participants was carried

<sup>&</sup>lt;sup>3</sup> South Africa is characterized by enormous linguistic diversity, with eleven official languages recognized by the Constitution and English recognized as the *lingua franca* (Henrard, 2001).

out in such a way as to limit the variability in language background and, therefore, maintain comparability.

## 5.6.3 Participant characteristics

#### **Demographics**

All participants had a clinical diagnosis of schizophrenia, according to the DSM-IV criteria, made independently of the study by the psychiatric registrar working on the ward. The participants' ages ranged from 22.2 to 58.6 years, with an average of 36.8 years. Age of onset of symptoms was approximated from history obtained from the file. The majority of participants (65%) had an index episode<sup>4</sup> before the age of 30 years, while 26% had the index episode in their thirties and the remaining two participants had a late onset after 40 years of age. All patients had a minimum of 8 years of formal education, with the average education being 11 years. The Mini Mental State Examination (MMSE) (Folstein, Folstein, & McHugh, 1975) was administered by the psychiatrists involved in each case, as a brief screen of cognitive function. Scores below 25 (low 'normal') indicate cognitive deficits (Braekhus, Laake, & Engedal, 1995). Of the participants, three had MMSE (Folstein et al., 1975) scores below 25. In each of these cases, the psychiatrist felt that, on further probing, these results were due to distractibility (difficulty focusing on the task at hand), incoherence (speech which is incomprehensible at times) or poverty of speech (monosyllabic or hesitant in speech), rather than a frank cognitive impairment, and subsequently deemed the individuals suitable for inclusion.

In terms of language history, all participants were multilinguals. Of the total number of participants (n=23), 12 were English-Afrikaans speaking individuals. These participants presented with simultaneous or early successive multilingualism, with the exception of SPG, who reported later exposure to Afrikaans and limited fluency in the language. The other 11 participants came from an Nguni-speaking<sup>5</sup> language background, and were also early multilinguals who had learnt English later as an additional language. These individuals were only enrolled where they perceived themselves as fluent in English and had been consistently exposed to English from the age of 10 years or earlier. Those participants with an Nguni-English background had been exposed to English in the school environment, through friends and entertainment sources. A number of the participants spoke more than two languages, including additional African languages (e.g., Sotho in the case of MPT),

<sup>&</sup>lt;sup>4</sup> Defined here as the first episode of reported symptoms.

<sup>&</sup>lt;sup>5</sup> The Nguni languages are a family of mutually intelligible and closely related languages, including Zulu, Xhosa, Ndebele and Swati (Spiegler, van der Spuy, & Flach, 2010).

Greek (in the case of SPG) and Hindi (in the case of FNJ). All participants were, however, speakers of South African English (SAE).

TABLE 5.1 PARTICIPANT DEMOGRAPHICS

Participant	Age	Age at onset	Sex	No. Years Education	MMSE*	Language History
ANJ	38.5	30	М	12	30	English-Afrikaans
IPF	22.3	21	F	8	30	English-Afrikaans
тмн	37.1	33	F	16	30	English-Afrikaans
UMB	28	18	M	13	29	English-Afrikaans
BND	46.1	37	М	8	20	Nguni-English
JPZ	39.8	25	F	10	27	Nguni-English
CNJ	29.2	22	М	12	27	English-Afrikaans
KPS	54.7	42	F	13	30	English-Afrikaans
LPC	30.7	22	F	13	30	Nguni-English
MPT	29.1	18	М	11	30	Nguni-English
DNV	33.11	18	M	12	27	Nguni-English
END	22.2	18	M	9	28	Nguni-English
FNJ	28.1	21	M	10	27	Nguni-English
VMD	51.4	38	F	13	28	Nguni-English
NPH	37.11	34	F	13	30	English-Afrikaans
ОРН	53.3	38	M	8	30	English-Afrikaans
WML	24.4	22	F	13	28	Nguni-English
GNS	36.1	19	M	8	28	English-Afrikaans
PPG	58.6	44	М	8	29	English-Afrikaans
RPD	31	21	F	12	20	English-Afrikaans
SPG	29.2	22	М	12	28	English-Afrikaans
<b>ҮМВ</b>	51.5	20	F	8	28	English-Afrikaans
HNT	36.6	21	М	12	26	Nguni-English

<sup>\*</sup> MMSE: Mini Mental State Examination

SAE is not homogenous and different varieties exist. Those with English-Afrikaans backgrounds were speakers of White South African English (WSAE), with those with Nguni-English-speaking backgrounds, speakers of Black South African English (BSAE)<sup>6</sup>. Where

<sup>6</sup> The terms Black South African English (BSAE) and White South African English (WSAE) are used consistently in the literature, despite the criticism that they perpetuate apartheid categorization is recognized (Coetzee-Van Rooy & Van Rooy, 2005). There is consensus however, that despite the potentially unsavory flavor of these terms, due to the sociohistorical context of South Africa, they reflect the fact that the varieties of SAE exist as "ethnolects" (Mesthrie & McCormick, 1992, p. 34). For this reason, and to ensure consistency of terminology, these terms are used in the thesis.

applicable the features which differentiate these varieties from 'Standard English' will be noted in the analysis, in order to provide the reader with a sense of whether a 'non-standard' utterance is typical or not.

#### Participant profiles by symptom grouping

Frith and his colleagues have been at the forefront of advocating that studies looking at functioning in people with schizophrenia consider their specific profiles of psychiatric symptomatology.

By classifying schizophrenic patients in terms of their symptoms, making predictions based upon the nature of these symptoms and devising tests which examine the cognitive function suspected of being deficient, progress into the nature of this perplexing condition is more likely to occur (Corcoran et al., 1995, p. 5).

As noted in the description of the study design, comparisons were built into the study. This design allowed for exploration of the prediction that individuals presenting with specific profiles of psychiatric symptomatology would have particular difficulty the metarepresentation requirements for verbal communication. Symptom groupings were based on the data collected by the psychiatrists through administration of an established psychiatric rating scale: the Positive and Negative Syndrome Scale (PANSS) (Kay, Fiszbein, & Opler, 1987). The following discussion will outline the procedure undertaken to allow for the grouping of participants.

Each participant was interviewed by a consultant psychiatrist with extensive experience in schizophrenia to assess and evaluate psychiatric symptoms. Four psychiatrists were involved in the study. The scoring of the PANSS is based on a semi-structured interview conducted by a psychiatrist and reflects functioning on three subscales - seven items exploring positive symptoms of the disorder (e.g., perceptual distortions like hallucinations), seven items related to negative symptoms (e.g., difficulty in abstract thinking) and fourteen items which consider general psychiatric symptoms (e.g., anxiety, depression). The interview by the psychiatrist was conducted either before or after the language and communication assessment. The time between the session of language testing and conversational engagement and the psychiatric evaluation was no longer than 5 days, to ensure that communication performance and language assessment results were reflective of psychiatric variables as measured. Any data collection separated by more than 5 days was discarded and the average length between language assessment and psychiatric evaluation was 1.7 days. The raw scores obtained from the PANSS (Kay et al., 1987) were used to generate clusters of scores for analysis. The Standard Model of scoring (Kay, Opler, & Fiszbein, 2006) was used to yield the Positive Scale Score, the Negative Scale Score, the Composite Index, and the Paranoid/Belligerence Scale. The Positive and Negative Scale reflect the scores relating to those dimensions of symptomatology, with the Total Score reflecting the overall severity of the symptoms. The Paranoid Belligerence Scale includes items of the PANSS which relate to paranoia. It was included as literature suggests that individuals displaying paranoia are likely to show sometimes equivocal deficits on ToM tasks, as discussed in Chapter Two.

The grouping of participants was based on the *Composite Score*, which represents relative preponderance of negative-positive symptomatology. It is calculated by subtracting the score of the negative scale from that of the positive scale (Kay et al., 2006). Positive scores on this subscale thus suggest a prominence of positive symptoms, while a negative score suggests more prominent negative symptomatology. Following one of the possible inclusionary systems for symptom typology (outlined by Kay et al., 2006) participants were grouped using the established percentile ranks based on the composite scores. Reflecting the heterogeneity of the symptom profiles, I will refer to the types as 'predominantly positive symptomatology' (pPS), 'predominantly negative symptomatology' (pNS) and 'mixed symptomatology' (MS). The participant characteristics of each group are presented in Table 5.2, with the procedure for grouping participants described below.

TABLE 5.2 PARTICIPANT CHARACTERISTICS BY SYMPTOM GROUP (N=23)

	Predominantly Negative Symptomatology	Predominantly Positive Symptomatology	Mixed Symptomatology
Male : Female	8:0	4:6	1:4
English-Afrikaans : Nguni-English	3:5	7:3	3:2
Mean Age	33.7	38.6	38.5
Mean Age at Onset	23.3	28.7	26.2
Mean Number of Years Education	10.4	10.8	12.6
Mean MMSE Score	26.3	28.4	28.2

Participants falling above the 75<sup>th</sup> percentile or below the 25<sup>th</sup> percentile were considered as pPS and pNS respectively. Participants falling between these two percentile ranks were classified as the MS group. The percentile ranks equate to a Composite Score of 3 or more for a classification as pPS, and a score of -7 or less for a classification of pNS. The profile of scores across participants is displayed in Table 5.3.

TABLE 5.3 PANSS SCORES ACROSS PARTICIPANTS

Participants		Positive Score	Negative Score	Total Score	Composite Score	Paranoid Belligerence
Predominantly Negative Symptomatology	ANJ	11	21	61	-10	6
	BND*	10	22	67	-12	4
	CNJ*	11	19	56	-8	3
	DNV	7	15	44	-8	3
	END	8	26	62	-18	3
dom Sym	FNJ	9	18	48	-9	3
Pre	GNS	7	22	57	-15	3
	HNT*	15	28	72	-13	3
÷	ТМН	11	12	54	-1	7
pton y	UMB	7	8	31	-1	3
Mixed Symptom- atology	VMD	11	9	39	2	4
	WML	8	12	49	-4	4
	YMB	14	13	53	1	5
	IPF*	22	13	67	9	8
	JPZ	21	12	61	9	6
Predominantly Positive Symptomatology	KPS*	24	16	81	8	3
	LPC	34	30	122	4	18
	MPT	12	9	39	3	3
	NPH	14	8	56	6	4
	ОРН	18	9	51	9	4
	PPG	17	10	54	7	5
	RPD*	18	12	61	6	6
	SPG*	21	11	68	10	5
	Mean	14.35	15.43	58.83	-1.09	4.91
	Range	7 - 34	8 - 30	31 - 122	-18 - 10	3 - 18

<sup>\*</sup>Participants presenting with delusional talk during conversational interaction

The clinical relevance of the PANSS scores in terms of severity of illness needs consideration for comparisons to be drawn between this and other studies. Based on the PANSS scores, many of the participants were below the scores which relate to 'mildly ill' (scores less than 58) (n=13) (Leucht et al., 2005). Using these criteria (Leucht et al., 2005) there were a number in the 'mildly ill' category (scores between 58 and 75) (n=8), one in the 'moderately ill' category (scores between 75 and 93) (n=1) and one in the 'severely ill' category (scores above 115) (n=1). Although some of the scores indicate very low levels of symptom severity, the once-off nature of the assessment as well as the clinical context must

be considered. Given the still hospitalised status of the patients, in a secure setting they were clearly not yet clinically deemed stable nor in remission. Other factors may play a role in hospitalisation, such as practical issues, for example. However, as a central referral centre, the acute nature of the wards in which these individuals were admitted (with the exception of UMB and WML) makes it likely that they were not considered clinically stable. UMB and WML present with some of the lower PANSS scores and these two participants were admitted to a less restrictive environment within the hospital setting.

As alluded to in the opening of section 5.1, part of the analysis of the conversational data is focused specifically on those participants presenting with delusional talk. These seven participants are marked in Table 5.3. In order to orientate the reader to the nature of the talk in each case, a synopsis of their delusional content is presented in Table 5.4.

TABLE 5.4 PARTICIPANT CHARACTERISTICS: DELUSIONAL TALK SUBGROUP (N=7)

Participant	Symptom Group	Nature of Delusional Content			
BND	pNS	Believes his father is in a famous local soccer team, delusions around historical figures (emerges in interaction).			
CNJ	pNS	Believes he is Brad Pitt (documented in file), believes Brad Pitt is hiding something from him (emerges in interaction).			
HNT	pNS	Religiose delusions and persecutory delusions (documented in file).			
IPF	pPS	Grandiose delusions related to awards for dance, delusions about the role of her tattoo (emerges in interaction), delusions related to having samurai ancestry, hypochondriachal delusions related to her health (both documented in the file and emerge in interaction).			
KPS	pPS	Persecutory delusions related to a previous hospital admission, delusions about her daughter living in utopia as well as religiose content (emerge in interaction).			
RPD	pPS	Grandiose delusions about her drawings (documented in file and emerges in interaction).			
SPG	pPS	Delusions about a national nutritional scheme he purports to be involved in (documented in file and emerges in interaction).			

The three-letter codes used within the thesis conform to a pattern which allows the reader to distinguish between participants and, at the same time, tell at a glance to which symptom group the participant belongs. The first letter indicates the participant's position in the series (for example A is the first participant while E is the fifth participant). The middle letter indicates symptom grouping. ('N' indicating predominantly negative symptomatology; 'P' indicating predominantly positive symptomatology; 'M' indicating

mixed symptomatology). The third letter is the unique identifier. The figure below demonstrates the composition of the participant codes, using CNJ as an example.

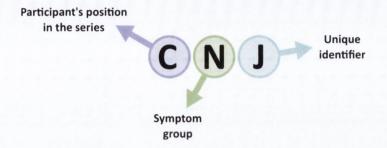


FIGURE 5.2. PARTICIPANT CODING SYSTEM

#### Language assessment profiles: A backdrop to the pragmatic performance

The original scope of this qualitative study set out to explore the language and communication functioning of the group of participants with schizophrenia. As such, data was collected related to the participants' language performance on a battery of language assessment tasks. As has been outlined, the qualitative process of the current study led to an increasingly specific focus on metarepresentational abilities and their manifestation in conversational data. While the summarised data on these assessments in presented in Appendix C, as a backdrop to the pragmatic performance of participants, it is beyond the scope of the more focused research questions of this study to present or analyse the results of the language tests in any great detail. A number of factors preclude this data from being useful within the current study of metarepresentational abilities, including the lack of dedicated language assessment measures for people with schizophrenia; the complexities surrounding interpreting the performance of multilinguals on existing Speech and Language Therapy (SLT) assessment measures; and the interaction between language, multilingualism and ToM. These complexities will be briefly considered in the discussion which follows.

Formal language and communication assessment measures are typically developed for a specific clinical populations, being tailored for their needs and evaluated in relevant trials. Such dedicated measures do not yet exist in the domain of SLT practice in adult mental health. The assessment measures administered in this study were therefore drawn from measures frequently used in other clinical SLT domains, making robust interpretation inadequate, or limited at best. A second significant challenge in undertaking a simple analysis of the assessment data, is the multilingual nature of the participants. The lack of normative data on multilingual populations, as well as limited information with regard to the validity to traditional language assessment measures in linguistically and culturally diverse populations is recognised in other domains of SLT (e.g. Kohnert, Hernandez, & Bates, 1998; Muñoz & Marquardt, 2003). Given that the normative data for the test

batteries administered in this study are based on monolingual British and American individuals, straightforward interpretation of performance of multilinguals is likely to be unreliable and inappropriate. This challenge does not make the task of analysis insurmountable and the initial proposal involved careful error pattern analysis with consideration of the influence of the participants' first language(s). The nature of the data and the multilingual context of its collection would necessitate a comprehensive qualitative analysis of performance and error patterns which, while within the scope of the original study, would be incompatible with a detailed analysis of conversational performance and its implications for mentalizing, as has been undertaken here. Finally, the complex relationship between language ability, multilingualism and ToM makes interpretation of performance on assessment measures challenging. While language abilities are seen by some as central to the development of ToM (e.g. Astington & Jenkins, 1999), some clinical populations with language impairment show little disturbance in ToM (e.g. Colle, Baron-Cohen, & Hill, 2007; Varley, Siegal, & Want, 2001), suggesting that ToM is a dissociable module. A related consideration in the context of the current study would be that any language impairment (which may or may not have negative consequences for ToM performance) must be offset, for the current study population, against their multilingualism, a feature which may afford them an advantage in cognitive tasks such as ToM performance. It is recognised that greater "metalinguistic awareness may afford multilinguals with a way into an understanding of metarepresentation, that one object can be represented differently by different people" (Goetz, 2003, p. 12). When superimposed on the issue of multilingualism, the relationship between language and ToM becomes exponentially more complex. The interpretation of any relationship between cognition and multilingualism is a challenge as the direction of the relationship is not clear. Edwards (2004, p. 17) states that "these and other difficulties mean that strong conclusions about bilingualism and cognition are not warranted".

The necessary depth of analysis required for language assessment data in this population, with the added complexity of multilingualism, would entail a reduction in the analysis of conversational data and the pragmatic focus of the study. The number of variables involved means that it would not be possible to robustly link the language assessment data of any one individual to specific patterns in discourse performance. The literature highlights the centrality of this pragmatic component of the disorder. When considered in conjunction with the emergence of more salient research questions, as well as the opportunity to test a widely-accepted model of schizophrenia, the language assessment data can be seen to provide a less central role in understanding the cognitive-communicative performance of individuals with schizophrenia. Summaries of the

performance of participants across language assessments appear in Appendix C, as a backdrop to their conversational performance. These profiles will be alluded to where relevant, drawing the readers attention to any basic associations, or lack thereof, between the conversational performance and assessment profiles.

#### 5.7 Data collection

Two sources of data inform the analysis in this study. The first informs the analysis of the participants' ability to engage in attribution of mental states. This was assessed through the Fable Task, and is discussed in section 5.7.1. The second and most significant body of data in the study is that of the recorded conversations. The relevant issues surrounding the collection of this data are presented in section 5.7.2. The procedures leading up to data collection, the components of the data collection process and the subsequent transcription and analysis of data are visually presented in Figure 5.3.

# 5.7.1 The Fable Task: A structured discourse task requiring implicit attribution of mental states

The Fable Task (Ulatowska & Chapman, 1994; Ulatowska, Sadowska, Kordys, & Kadzielawa, 1993) involves the telling of a Fable, usually drawn from classic Aesop's Fables and then requiring various language operations to be performed by the individual. These language operations include story retelling, providing a summary, providing the gist of the story, identifying the main character, providing a moral for the story and generating a title. Fables are reported to be a measure sensitive to deficits in depth of language processing and are also seen as cross-culturally applicable (Penn & Jones, 1999). The Fable Task has been used in a variety of clinical populations to reveal how cognitive and linguistic impairments manifest in the macrostructure of discourse (Ulatowska & Chapman, 1994; Williams-Hubbard, 2006). This measure was used successfully in studies of the language processing of individuals with aphasia (Chapman, Highley, & Thompson, 1998; Ulatowska, Olness, & Williams-Hubbard, 2005; Ulatowska et al., 1993; Ulatowska, Wertz, Chapman, Hill, & et al., 2001), dementia (Chapman et al., 1998), closed head injury (Penn & Jones, 1999), and schizophrenia (Jagoe & Penn, 2006).

The fable chosen for the Task was *The Old Woman and the Doctor*, which appears in Figure 5.3. Understanding the Fable is inherently dependent on the participants' ability to metarepresent attributed beliefs, desires and intentions to the characters. Given that the narrative evolves around deceit, beliefs and desires, this fable was considered appropriate to investigate the ability to implicitly attribute such mental states.

A certain old woman suffered from a disease of the eyes. She called the doctor. The doctor came every day and rubbed some ointment on her eyes. When the old woman had her eyes closed, the doctor secretly carried all her belongings out of the house. When he finished his treatment, he demanded a payment. The old woman refused. The doctor took her to court. In court, the old woman said that her vision was worse because before the treatment she saw all of her belongings. But after the treatment, she could not see any of them. That is why she refused to pay.

FIGURE 5.3 TEXT OF THE FABLE THE OLD WOMAN AND THE DOCTOR

A written copy of the fable (Arial, size 16 font) was presented and read aloud to the participant before being removed from view. It was read once, and repetition of the story was allowed on request. Following the presentation of the fable, the participant was asked to generate each of the responses (including retell, summary, gist, identification of the main character, generation of a 'moral' and title generation) using probe questions (Appendix D). The analysis of performance on The Fable Task was adapted to reflect the participants' sensitivity to the mental states, beliefs, desires and intentions of the characters, rather than the macrostructure of the narrative itself. The analysis process is discussed in section 5.8.1.

#### 5.7.2 Conversational discourse

#### Recording of conversational data

All conversational data was audio-recorded using a *Griffin iTalk Pro* attached to an iPod, with the small size of the device allowing for unobtrusive recording during the interactions. Data collection occurred in a private therapy room housed within the ward in which the participant was admitted. Where this room was not available, data collection occurred in the unoccupied dining room of the ward. The conversational data, which forms the bulk of data in this study, occurred around formal language assessment tasks and during refreshment breaks from these tasks. Conversation leading up to the administration of formal tests as well as conversation occurring around formal assessment tasks was recorded, with the bulk of conversation occurring during refreshment breaks. Up to two of these breaks occurred for each participant, depending on attention and motivational factors. The entire interaction was audio recorded, but the bulk of the transcription and analysis for each participant is centred on the talk during breaks, thus ensuring consistency in terms of conversational variables such as opportunity to 'warm up' to being recorded.

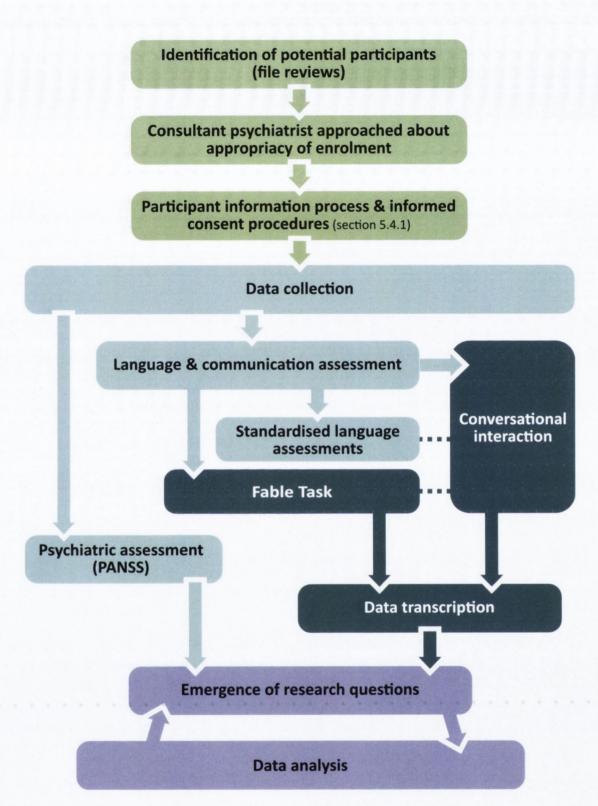


FIGURE 5.4. PHASES OF THE RESEARCH PROCESS FROM PARTICIPANT IDENTIFICATION TO DATA ANALYSIS

#### 'Facilitation' of conversation

Although there was no agenda to elicit certain types of talk (such as delusional talk or talk demonstrating linguistic metarepresentation), the researcher did attempt to 'keep the conversation going'. Several factors were considered in facilitating the interaction. The first principle was that the conversation occurred in a naturalistic way as far as possible, with the researcher engaging in the conversation as a participant. Secondly, the participants' conversational and topic lead was followed wherever possible and situationally appropriate<sup>7</sup>. The final consideration was that of topic introduction. Where the participant did not naturally introduce a topic, the researcher would use a question related to a closed set of topics related to the setting and experiences of the participant (for example, occupational therapy attendance, relationships within the ward, activities or work outside the hospital or comments on environmental stimuli).

### 5.8 Data analysis

The analytic methods used in relation to the two data sources (the Fable Task and the recorded conversations) will be presented in the discussion which follows.

# 5.8.1 The Fable Task: Analysis of metarepresentational ability in elicited discourse data

The responses on the Fable Task (Ulatowska & Chapman, 1994; Ulatowska et al., 1993), including retell, summary, gist, identification of main character, moral provision and title generation were transcribed. A novel analytic approach based on the understanding of metarepresentation within RT, was developed and implemented to reflect the centrality of mental state attribution to the interpretation of the fable. It is this analytic approach which is discussed here.

The fable chosen for use in this study (Figure 5.3) is inherently dependant on the participants' ability to attribute beliefs, desires and intentions to the characters and metarepresent these attributed mental states. In order to understand the fable, the participants must engage in specific metarepresentations of varying complexity an analysis of the fable in this light allows for scoring to be based on the participants' ability to implicitly attribute mental states. Three central intentions or beliefs were identified as central to the comprehension of the fable. Firstly, the doctor's deceit must be metarepresented as an intentional stance, unknown to the old woman. Following Sperber

<sup>&</sup>lt;sup>7</sup> Appropriateness was determined situationally – overt sexual or racial topics or aggression were all deemed inappropriate and the topics terminated.

(1994), the levels of metarepresentation will be presented visually using indentation. Thus, in order to interpret the doctor's actions as deceitful, the participant must mentally represent the following:

The doctor intended
the woman to believe that
he intended
to help her

Understanding the doctor's intention as deceitful therefore necessarily involves a third order metarepresentation. Representing the old woman's belief is less complex – a second order metarepresentation:

The woman believed that the doctor intended to help her

Finally, the participant must be able to consider the old woman's beliefs/intentions at the close of the fable. This aspect of the interpretation has two possible metarepresentations, both plausible within the story. The first is a less complex second order metarepresentation (or even first order, if the person fails to conceptualise the reason for the woman's belief):

The woman believed (said) that

her vision was worse (because she did not know that

her belongings were gone)

The second possibility is to metarepresent the woman's statement as intentionally manipulative (or deceitful in itself), a third order metarepresentation:

The woman intended
the court to believe that
she believed that
her vision was worse

The woman said that

her vision was worse (because she intended that the court believe that the doctor had damaged her sight)

Using this analytic method, the Fable Task involves a number of metarepresentational demands of varying complexity. It is argued that in order to have understood the fable, the participants must metarepresent these mental states and therefore will, in their responses, use utterances which indicate this understanding. For example, the use of the word 'trick' suggests that the person has metarepresented the doctor's intention as hidden from the woman and deceptive in nature — an understanding which is inherently dependent on a third order metarepresentation as demonstrated above.

Analysis of the Fable Task involved coding the transcript for evidence of such metarepresentation. The transcriptions of the Fable Task responses were systematically examined for the use of any lexical items suggesting that the participant had engaged in metarepresentational process during interpretation. All instances were listed and tabulated according to the nature of the attributed mental state. Analysis explored the level and nature of the metarepresentation. This analysis is undertaken in Chapter Seven, and the transcripts of responses to the Fable Task appear in Appendix E.

#### 5.8.2 Conversational discourse

#### Transcription of conversational data

For this study, transcription was done using the Codes for the Human Analysis of Transcripts (CHAT) transcription format within the Computerized Language Analysis (CLAN) program. CLAN and its transcription format CHAT were designed as a set of computational tools to increase the reliability of transcription and automate the process of data analysis (MacWhinney, 2000). Originally conceptualised as tools for analysing talk within the CHILDES (Child Language Data Exchange System) project, these tools have shown their usefulness in the "study of second language learning, adult conversational interactions, sociological content analysis, and language recovery in aphasia" (MacWhinney, 2000, p. 5). CHAT supports Conversation Analysis transcription conventions, and the CA font and transcription format were enabled during the transcription process. Transcription of overlaps in talk and a broad transcription of the pauses within the interactions were performed. The transcription conventions used appear in Appendix F. The use of this program allowed for the audio to be 'linked' to the transcription for access to the original data during analysis and thus ensure transparency of the data transcribed and analysed. The linking of the audio and the transcription enabled the researcher to consistently listen to individual utterances and sequences of talk during the process of analysis. Talk during the opening phases of the interaction was transcribed, as were the interactions between units of formal assessment. The main portion of transcription and analysis is however focused on the 15 to 30 minutes of interactional sample occurring in the middle of the data collection and recording, during 'breaks' from formal assessment, described above. The length of the conversations varied between participants, ranging from approximately 15 minutes to 1 hour, amounting to 190 pages of transcript. The transcriptions of each interaction appear in Appendix G.

#### Coding of transcripts and selection of extracts for analysis

All transcripts were then coded, with reference to the pragmatic processes identified in the RT paradigm as throwing particular light on metarepresentation. Having decided to focus

specifically on the metarepresentational demands of verbal communication, and having reviewed the work of Wilson (Wilson, 2000, 2009; Wilson & Sperber, 1998) and Noh (Noh, 1998, 2000) in particular, certain salient features of linguistic metarepresentation were identified. The output of the individuals with schizophrenia (n=23) was coded for instances of these types of linguistic metarepresentation including: (1) reported speech and thought, (2) echoic use (including irony and denial), (3) echo questions. The output of the researcher was coded for instances of question usage demanding the hearer with schizophrenia to engage in either: (1) interpretation of regular questions or (2) interpretation of echo questions. Given that the success of these pragmatic processes is visible through the response of the conversational partner, where the response did not yield evidence for the process these examples were not coded. This procedure is not in an attempt to avoid cases, but to present only those which are able to be analysed as being either successful, or demonstrating communication difficulty.

Seven participants presented with active delusional talk, and these transcripts were further analysed in respect to how the participants handled the demands on 'mentalizing' in the communication process. Delusional talk is, by definition, talk in which the content is not based in reality. Delusional talk may pose predictable challenges to the hearer in identifying what the speaker intended to communicate, particularly if the speaker presumes the hearer to have access to assumptions based on delusional content. Given the hypothesised challenges related to delusional talk and the mutual cognitive environment, the conversations of those participants engaging in such talk was explored for evidence of such difficulties.

Although a frequent approach to this type of expansive data, particularly in clinical pragmatics, is to consider instances of communicative difficulty — failure or misunderstanding (Cummings, 2009) — this approach was avoided in the analysis process. There is a theoretical and clinical argument for avoiding such a misunderstanding-driven approach. As discussed in Chapter Three, ostensive-inferential communication is not a failsafe procedure and miscommunication does occur in typical conversation (Sperber & Wilson, 1986/1995). Indeed Sperber and Wilson suggest that from a theoretical point of view what is required is exploration into how communication is so successful. This success is possibly even more enlightening in the conversations of people with schizophrenia, who would be expected to have profound and even pervasive communicative difficulties, given the cognitive and social cognition difficulties noted. There is also a risk with clinical populations to over-emphasise and pathologise instances of conversational difficulty (Cummings, 2007a, 2009), which may occur in typical conversation. For these reasons,

rather than just investigating sequences of difficulty or 'misunderstanding', the analysis was approached in such a way that the specific pragmatic processes coded (as outlined above) were investigated in a systematic fashion, considering both 'successful' and 'unsuccessful' sequences.

### Systematicity of conversational data selection and analysis

Given the comparative component built into the research design (see section 5.3.2) it was essential to ensure that the selection and analysis of data was systematic, to allow for appropriate comparisons to be made between the symptom groupings. The coding of extracts was driven by the phenomena of interest and the transcripts were combed for every instance of utterances demonstrating either the use or interpretation of the utterances requiring metarepresentational abilities (as defined within RT). The full interaction of each participant was coded and analysed in this way. The pragmatic focus of the thesis and the principles of RT dictated that the data was analysed within its discourse and situational context and thus utterances were analysed and presented within extended sequences of talk. Sequences displaying the phenomena of interest were grouped for the purposes of analysis and the analysis was pursued in an iterative manner, ensuring that the full range of participant's performance was taken into account. Similarly, the analysis of participants' engagement within delusional talk, and REA's engagement in collaborative meaning-making, was systematically approached for coding and analysis purposes. All instances of delusional talk were identified and utterances involving delusional content were systematically analysed according to whether or not they achieved relevance for the interlocutor within the conversational sequence. The focus of the systematic approach to the data analysis was on exploring whether an RT approach can shed light on the metarepresentational (dis)abilities of these individuals with schizophrenia, and, perhaps more importantly, whether there is an explanatory account which emerges from the exploration of performance in this way.

#### 5.9 Reflections on data collection and analysis

# 5.9.1 Researcher as conversationalist: Considerations of the observer's paradox and participant-observation

All of the conversations took place between myself, the researcher (REA) – a Speech-Language Therapist (SLT) working within the psychiatric hospital – and participants with schizophrenia. My active participation within the conversations warrants consideration of the observer's paradox. The observer's paradox, a term coined by Labov (1972, p. 209), refers to the paradox that in attempting to investigate "how people talk when they are not

being systematically observed", the researcher must engage in systematic observation which in itself influences the participants' behaviour. There are, however, several features of the methodology of the study which arguably mitigate the impact of the observer's paradox and the potential impact of the nature of the interaction on the data. Firstly, the focus of the interactions during data collection was explicitly on the formal assessment components (for both the participant and researcher at that point). While the participants had been made aware that all conversation would also be recorded and had consented for such recording (see section 5.5.1), much of the conversation occurred during 'refreshment breaks' from language assessment tasks. Such breaks might be considered a variant of Labov's (1972) approach to eliciting talk, which was to engage the participants in talk such that they 'forgot' that they were being observed. With regard to the nature of the conversation and the tacit assumptions surrounding roles within the institutional environment, the RT approach allowed me to subsume these cultural and institutional practices into the assumptions brought to bear on utterances interpretation. It is not merely the observer's paradox which impacts on the nature of the data, but also the nature of the SLT as 'participant observer' and the implicit roles of the conversationalists as 'professional' and 'patient'. Clinical encounters frequently bring with them asymmetries in power in which "the rights to talk are determined by the more powerful professional who is vested with institutional authority" (Walsh, 2007b, p. 26). In the institutional context of a psychiatric ward such power differential is likely to impact on interaction patterns and practices. The question which will be addressed in section 5.9.1 is whether RT is able to handle such concerns of a socio-interactional nature.

While the observer's paradox brings possible challenges with regards to the nature of the data collected, the researcher as participant also brings considerations around the process of analysis. Although this study is not a true ethnography, it draws on some of the concepts central to that methodology, and particularly on the considerations of participant observation. The concept of participant observation recognises that the researcher plays multiple roles and involves "both detachment and personal involvement" (Bruyn, 1966, p. 14). This process requires being both "involved enough to understand what is going on and yet remain detached enough to be able to reflect on the phenomenon under investigation" (Willig, 2008, p. 27). In the current study, the notion of participant observation becomes most pertinent in relation to data analysis. As the researcher, I was a participant in the sense of being a conversation partner and would have been an observer during the conversations in the sense that I was aware that data analysis would follow. Having the researcher as a participant brings a distinct advantage when it comes to the analysis of the conversational data. Much analysis on pragmatic grounds requires consideration of context

and, from an RT perspective, considerations of the assumptions brought to bear on the process of utterance interpretation. As a participant observer, I had access to many of these assumptions available only to an 'insider' of the institution and sociocultural context. As a clinician, I had worked in the hospital environment for over a year before data collection commenced, and as such was familiar with the hospital 'culture'. In addition, although I had not been involved in intervention with any of the participants prior to the commencement of the study, I was a 'familiar face' on the wards, and was thus accepted as a member of the clinical team. In this role, I participated in a number of the routine activities such as ward rounds and ward meetings with patients and care teams. From my involvement in the everyday life of the hospital and ward, I was afforded both explicit information (i.e., that information recorded in patient files or considered in ward rounds) and tacit information, that is, knowledge gleaned of the 'culture' and practices of the hospital which may "not be easily articulated or recorded but that can be mobilized in subsequent analysis" (DeWalt & DeWalt, 2002, p. 4).

In the process of data collection, the conversation was a process of responsive interaction on the part of myself, as researcher. The process of detachment and reflexivity followed during data transcription and analysis as the research questions were refined. Reflexivity is the reflection on the way in which the "person of the researcher" has shaped the research process (Willig, 2008, p. 18). This reflexivity allows for a richness and transparency of analysis and through the identification of possible biases, while recognising the influence that the researcher has on the data itself (Willig, 2008). The specific assumptions of the researcher and the sociocultural context will be further addressed in section 5.9.3 of this chapter.

# 5.9.2 The 'conversational product' of interaction between researcher and participant as data: Considerations of 'naturalness'

There is a clear case for pursuing studies of pragmatic phenomena as manifest in conversational data, a case which will be further discussed in section 5.9. Collecting conversational data involves decisions around different data collection formats undertaken in pragmatics research. The three most common are: authentic interaction, elicited conversation and role-plays (Kasper, 2000). While this study clearly does not utilise the third, I will argue that it falls between the first and second categories, not being truly authentic discourse, but also not conforming completely to the features of elicited conversation. The main difference between authentic discourse and elicited discourse is conceptualised to be in the realm of the reason for the conversation – whether driven by the participant or "brought into being for research purposes" (Kasper, 2000, p. 317). These

conversations clearly occurred as part of a research process and would not have come about but for the research engagement. At the same time, the nature of the conversations were such that there were both opportunity and uptake of participant-driven segments. Elicited conversation, although not representative of the full range of 'natural conversations' maintains the feature of on-line interaction with an opportunity to analyse both comprehension and production within the conversation (Kasper, 2000). As highlighted earlier, although the conversations occurred in an overt research context, these were not conversations which were the focus of the research at the time that they took place. At the time of data collection, the analysis as one of a reflection on metarepresentational abilities was not decided, and thus no specific agenda in terms of manipulating the conversation existed. The agenda was to engage in conversational interaction. The conversations thus were elicited in the sense that they would not have occurred had it not been for the data collection process of language assessment. The conversations, as I have argued, do not fall squarely within the definition of 'elicited conversations'. Despite being part of the research process, the conversations were 'naturally occurring' in the sense that it was unscripted interaction which occurred as an 'aside' during a series of tasks which were themselves the explicit focus for both parties at that point in the data collection process. These interactions were not 'conversation tasks' in the sense of interaction specified around a certain topic or instructed conversation. As such, the interactions had features of 'authentic discourse' occurring over a refreshment break and representing a continuum of researcher-driven and participant-driven segments of interaction, depending on the participant. The researcher as interlocutor, however, is a role of participant observer and as such the assumptions, agendas and expectations brought to the conversations must be considered. These specific assumptions and the nature of the conversations will be discussed in more depth in the section which follows.

While I recognise that these conversations occur within an un-natural environment, in the midst of testing, they represent 'natural' communication in a specific environment; that is, as discussed earlier, the conversations were unplanned, occurring around necessary breaks from testing. Thus although socially less than ideal, cognitively they represent a communicative situation in which the constraints and contexts are truly evolving in real-time. The constraints are not task-bound but evolving in the same way that they would in the range of different conversations in which these participants would engage naturally. RT must be able to cope with this 'messy' interactional data if it is to be a theory robust enough to explain not only typical communication at the level of the utterance, but also impaired communication in the context of conversation – the level at which social consequences of impairments are felt.

### 5.9.3 Applying Relevance Theory to conversational data: Challenges anticipated

While there is a precedent for the application of RT to conversational data, the cognitive underpinnings of the theory pose specific challenges with regards to application, and particularly with regards to the application of the theory to complex clinical data. Two main challenges exist. The first challenge relates to how 'relevance' is operationalised within conversational data where reference to the cognitive state of the interlocutors is only possible based on the indirect evidence available in talk. The criteria for assessing relevance and how this is available to the analyst will be discussed in the first part of this section. A related issue is how the analyst establishes evidence that the communicator has been successful in taking the listener into account. The second challenge is one which is common across the discipline of pragmatics, and that is how 'context' is operationalised within the analysis. This issue will be addressed in the final part of this discussion.

# Criteria of 'relevance' and 'taking the listener into account': Establishing evidence in conversational data

The criteria for assessing 'relevance', and hence the related issue of whether the speaker has taken account of the listener's 'perspective' poses some challenges with regards to the analysis of conversational data. Relevance, as defined in RT, is a cognitive 'algorithm', and as such is not directly available to the analyst. Despite these challenges, the interaction itself gives an indication of how an utterance achieved relevance and, therefore, the assumptions which may have been selected by that participant in its interpretation or its use at that point in the conversation. Establishing whether an utterance has achieved relevance is, it is argued, indirectly available to the analyst through examination of the utterance and subsequent responses within the context of the conversation. Signals that optimal relevance has not been achieved may include extended sequences of meaning negotiation, for example. Extended sequences of meaning negotiation may suggest that the interlocutor is in some way searching for the 'intended meaning' of a potentially problematic utterance. These sequences can thus be argued to provide indirect evidence for the speaker not having taken the needs of the hearer into account. Equally, by drawing on ethnographic information, from REA's 'insider' perspective, the availability of assumptions required to interpret an utterance can be brought to bear on the analysis. It is clear that in analysis what is available to me as an 'insider' are the sociocultural assumptions grounded in the sociocultural and sociohistorical context. There are clearly assumptions that are either idiosyncratic to the participant or specific to their own cultural group (given the multicultural nature of SA and the inevitable impact on the participant group). I am not claiming access to these assumptions during analysis, but instead am able

to access the range of common assumptions which we can presume to be mutually manifest, as well as the assumptions available to myself at the time and those made manifest by the participants during the conversations. These factors have been referenced, discussed and explored throughout the analysis where relevant. These two features, of discourse context and the 'insider perspective' will be used within the analysis to distinguish between participants' achievement of relevance and instances of utterances which are less successful in achieving relevance. RT clearly acknowledges that failures to achieve relevance occur within typical conversation, and thus analysis will occur against a backdrop of the understanding that pragmatics, in this approach, is itself a fallible mechanism.

## Accounting for the invisible: 'Context' and assumptions at play in the data

It is recognised in most approaches to discourse and conversational study that context is a thorny issue in the analysis process: "The evanescence of context [...] and its general unavailability for analysis – other than via the analyst's intuition – are notorious" (Mason, 2006, p. 364). However, ignoring context cannot yield a satisfactory account, given the nature of pragmatic processing and interaction, which are inherently context-dependant, as explored in Chapter Three. Given that a huge amount of research is generated in 'Western' countries, the context of multilingual and multicultural settings may seem even more complex, when in fact the inferential processes driving communication are the same. Conversation Analysis (CA) has been one of the forerunning approaches to tackle how context can be incorporated into a robust and transparent analysis of conversational data. The theoretical underpinnings of an RT approach have been integrated with the procedural approaches advocated by a CA. The approach that I am advocating with RT relies on invoking the socially-related information into the analysis, as assumptions manifest to the communicators, while remaining true to the principle of relevance which is argued to underlie communicative behaviour. As an 'insider' and a participant observer the social and contextual assumptions are largely available to me as analyst.

RT clearly sees communication as occurring in context – it is not a process of transmission and decoding within a sterile system, as explored in detail in Chapter Three. The RT notion that context is actively chosen, rather than given, at every point in discourse, has been explored in earlier chapters:

At each point in a discourse, the hearer has in the forefront of his attention a different set of assumptions, which he may never have processed before and may never process together again (Sperber & Wilson, 1986/1995, p. 118).

These assumptions are actively selected, within an RT model, and are selected from the information available to the individual. Delineating the specific assumptions brought to bear is a challenge in analysis of conversational data, however.

The first solution, offered by CA approaches, and the one predominantly used in the analysis, has been alluded to above and involves using the response of the conversation partner to elucidate how the previous utterance has been interpreted:

the solution is a matter of consulting how the participants in an ongoing sequence of dialogue respond to and make use of prior utterances. This is not so much a matter of interpretation as it is of recognizing standard lines of action. For professional analysts and participants alike the sense and pragmatic implications of an utterance are made evident by the way they are treated by participants in the unfolding conversation (Lynch, 2000, p. 524).

Analysis, therefore, relied on consideration of the response of the interlocutor, particularly in exploring the interpretation of questions by individuals with schizophrenia. The use of a response as evidence for interpretation presents some challenges for a cognitive pragmatic account. Such evidence is 'indirect' evidence of pragmatic processes and may be confounded if the individual has an expressive language difficulty, or presents with poverty of speech, for example. The second solution to incorporating context, embraced by some CA scholars, allows for considerations of 'broader' contextual factors and involves consideration of objectively verifiable ethnographic information. Such information, such as information pertaining to the setting, to cultural beliefs or practices, to the social status of individuals within the interaction, all inform the conversation at a more local level. The use of such ethnographic information is an approach which has been adopted by some working from an RT perspective (Mason, 2006). In this study, I used my own knowledge of the social practices and cultural beliefs in the analysis. In addition, the use of language informants was used to shed light on idiosyncratic word usage and elements of the conversation which referred to specific cultural phenomenon or used culturally bound phrases or slang.

This broad cultural and social knowledge is a type of encyclopaedic knowledge in RT – assumptions, or even assumption schema or scripts. The analysis process relied on access to these assumptions or schema, social and cultural information which was available, at least to a certain extent, to me, as a local and a staff member within the hospital. Of course, given my role as 'participant observer', those assumptions manifest to me are more readily available than those manifest to the participants with schizophrenia during analysis. It would, of course, be impossible to list all the assumptions which are possibly brought to bear by participants within this setting. In addition, precisely what assumptions are held or accessed by each individual is impossible to elucidate, unless made manifest through behaviour.

While it is clear that members of the same linguistic community converge on the same language, and plausible that they converge on the same inferential abilities, the same is not true about their assumptions about the world. True, all humans are constrained by their species-specific cognitive abilities in developing their representation of the world, and all members of the same cultural group share a number of experiences, teachings and views. However, beyond this common framework, individuals tend to be highly idiosyncratic (Sperber & Wilson, 1986/1995, p. 16).

In the discussion which follows, some consideration will be given to the specific assumptions which may be invoked by virtue of the environment and my professional capacity as a clinician.

As an SLT, I would bring certain assumptions and general aims to interaction, based on clinical knowledge and beliefs. This is an essential aspect to consider as potentially impacting on the conversations and perhaps resulting in conversations which are qualitatively different to those which might occur between the individual with schizophrenia and other health care professionals or people in the community. These would include an assumption that the person with schizophrenia has 'something to say'. An SLT working in such an environment would be adept at facilitating conversation with individuals with sometimes significant communication disturbances. The overriding aim would, therefore, be one of facilitating maximal engagement within a communicative situation. As a clinical SLT, I had been working in the hospital for just over a year when the data collection process began. This experience, in addition to previous research conducted in the same hospital, provided me with the knowledge of the cultural environment of the hospital setting. I thus had access to information about the ward systems, and the practices within the hospital. In addition to my knowledge of the hospital environment, I would also have had access to certain assumptions about the individuals who participated in the study. Being on the ward, involved in wardrounds and in multidisciplinary discussion, I was exposed to diagnostic information, therapeutic concerns and general talk about the individuals involved. Access to the hospital files for the purpose of research would also have impacted on the assumptions available to me during the conversations and in the analysis process. The participants in the study would be aware of my 'status' as a staff member in the hospital. They would have been exposed to her presence in the ward environment and ward rounds, for example, and thus would have assumptions around her professional role within the institution.

The physical context of a secure psychiatric hospital has the obvious impact of forefronting the roles of clinician-patient and potentially the feature of power relations between the conversation partners. Such power relations are present within clinical encounters and have been described in research on clinical discourse with SLT practice

(Cortazzi & Jin, 2004; Walsh, 2007, 2008). The South African context has, perhaps, an additional layer of complexity related to historical and cultural factors. It is acknowledged that this context has sets of assumptions associated with it, which would be available to both conversation partners as locals and would be brought to bear on communication. Of course in cross-cultural interactions participants may have different assumptions, and in some cases this fact is mutually manifest. The individual assumptions around these issues would be available to each conversationalist and may be accessed during interaction.

Instead of relegating all the complex social and situational factors to 'context' and leaving the analysis at that, RT allows us to consider how the communicator selects specific sets of assumptions from their expansive cognitive environment, to serve as the relevant context for the interpretation of a specific utterance. Those assumptions which are most easily accessible in a given environment with a given stimulus will be selected. Thus, assumptions that the person is delusional would be maximally accessible in a psychiatric hospital, but not necessarily at the pub with a friend. Similarly, assumptions that the person is misunderstanding on cultural grounds would be maximally accessible (and relevant) when the person is manifestly from a different culture. Other assumptions may also be brought to bear in this instance, such as information that Nguni-speaking individuals have difficulties with English pronouns<sup>8</sup>, for example. These assumptions have been referenced throughout the analysis, as relevant. RT seems, therefore, able to directly address issues of context and even cultural assumptions within its conceptualisation of how utterances achieve relevance. It is, therefore, argued that on this account an appropriate balance between unearthing cognitive issues in communication while situating conversation within a broader social context is possible. RT would seem to satisfy both sides of this potentially difficult theoretical chasm.

#### 5.10 Conclusion: Methodological considerations

This chapter has presented the theoretical background, ethical considerations and practical procedures related to the methodology of this study. The qualitative study has used RT as its theoretical base from which to explore issues of metarepresentational abilities in the conversations of individuals with schizophrenia. The design has allowed for comparative analysis to be built into the study in order to address questions of symptom presentation and pragmatic ability across people with the disorder. Twenty-three participants with

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<sup>&</sup>lt;sup>8</sup> Pronouns may also be used in a variable way in BSAE, with 'he' and 'she' and 'his' and 'hers' used interchangeably. This is related to the fact that Nguni languages, and Bantu languages in general, do not mark gender (Mesthrie, 2004).

schizophrenia were involved in the study. Two sources of data are the focus of the analysis: (1) the participants performance with regard to implicit attribution of mental states on the Fable Task; and (2) their performance within conversation with the researcher. Additional and more specific consideration is given to the seven individuals presenting with delusional talk. RT arguably provides the tools to explore the cognitive-communicative issues of metarepresentational ability in conversation, while at the same time being able to accommodate the social nature of interaction.

## **SECTION III**

# Overview of the findings section

There is a growing body of work on metarepresentation ('theory of mind' (ToM) or 'mentalizing') in schizophrenia, with a preponderance of experimental data supporting the 'mentalizing models' of the disorder. Frith's (1992) model, as one of the best developed of these models, predicts that an abnormality in metarepresentation and its cognitive consequences are what underlie the signs and symptoms of people with schizophrenia, including their communicative functioning. The metarepresentational model of the disorder makes specific predictions about communicative difficulties in interaction and some of these 'pragmatic failings' have been demonstrated in structured experimental tasks. Research has begun considering natural conversational function and how behaviour in conversation can shed light on metarepresentational ability (e.g. McCabe et al., 2004). The conversation analysis (CA) study of McCabe and her colleagues demonstrated clear evidence of intact ToM skills among people with schizophrenia in clinical encounters. It has been argued in the preceding chapters that a cognitive pragmatic perspective on conversational data may be useful, particularly given the different levels of metarepresentation, and the suggestion that it is not a unitary construct but rather a complex cognitive process potentially driven by various submodules (Sperber, 2000). This type of analysis would provide robust evidence of the presence and nature of any abnormality in metarepresentation by describing it in cognitive-pragmatic terms. It is argued that Relevance Theory (RT) (Sperber & Wilson, 1986/1995) provides the tools with which the complexity of metarepresentation requirements in conversation can be more finely dissected, while maintaining an 'in-vivo' analysis within the interactional context of conversation.

The findings section of this thesis is presented in five chapters. The first of the findings chapters, Chapter Six, presents participants' performance with regard to the implicit attribution of mental states in the context of the adapted analytic method undertaken in relation to Ulatowska and Chapman's Fable Task (Ulatowska & Chapman, 1994; Ulatowska et al., 1993). The performance of participants is examined in the light of the symptom-based predictions of Frith's (1992) metarepresentational model of schizophrenia.

Chapters Seven and Eight focus on the analysis of the production and interpretation of inherently metarepresentational utterances – instances of interpretive use. In Chapter Seven the focus is on how attributive metarepresentation is deployed in conversation by

the participants with schizophrenia in the role of 'speaker'. To explore these abilities, I present a detailed analysis of the participants' use of linguistic metarepresentation in the form of reported speech and thought, echoic use and echo questions. Attention is then given in Chapter Eight to how the person with schizophrenia, in the role of the 'hearer', responds to the varying levels of demand placed on him or her by questions involving different degrees of metarepresentation. The performance with regards to the interpretation of both regular and echoic questions is explored.

Chapter Nine focuses on the seven participants who presented with delusional talk within the interactions recorded. This chapter considers the nature of the utterances produced and whether they provide evidence for the speakers with schizophrenia giving consideration to the 'perspective' of the hearer or the mutual manifestness of relevant assumptions. Instances of delusional talk are potentially problematic stretches of talk in that they present perhaps the greatest likelihood of a lack of mutual cognitive environment and the potential communication failure as a result. The presence of delusional talk may, therefore, impact on the metarepresentational requirements of verbal communication and should provide fertile ground to explore such issues.

Chapter Ten, as the final chapter in the findings section, focuses again on those individuals who engaged in delusional talk to consider how these potentially problematic sequences are handled in the dyadic context of interaction. Focus is on how relevance is collaboratively created or sought in negotiation of meaning in delusional talk.

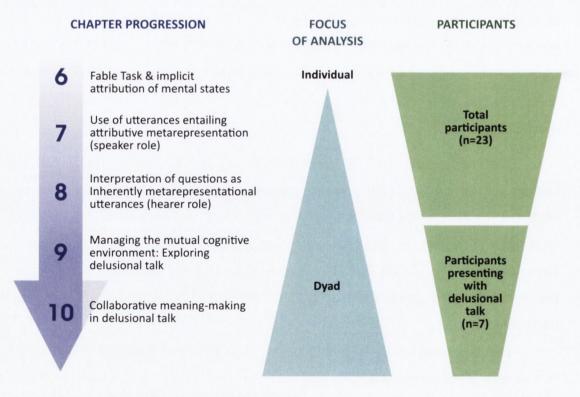


FIGURE III. CHAPTER PROGRESSION AND TRAJECTORY

The organisation of the chapters (Illustrated in Figure III) reflects a trajectory which moves from a narrow focus on participant performance on structured tasks, through a consideration of each individual in conversation as speaker and as hearer, to dyadic considerations of meaning negotiation. At the same time, the data of concern becomes increasingly more focused, from initial consideration of all 23 participants, to a focus on the 7 participants presenting with delusional talk.

In the chapters that follow I hope to demonstrate that the use of an RT approach to the discourse data presented, allows for a fine-grained analysis of how metarepresentation (dis)abilities manifest in the conversations of individuals with schizophrenia.

# **Chapter Six**

# Implicit attribution of mental states: Performance of participants on the Fable Task

The Fable Task (Ulatowska & Chapman, 1994; Ulatowska et al., 1993), described in Chapter Five, was used as a structured language task at the level of discourse, requiring the participants to interpret meaning across a stretch of text involving interaction and communication between two characters. There is a richness of data across the responses which could be analysed from various perspectives. Given the cognitive-pragmatic and metarepresentational focus of this thesis, the specific focus will be on how participants engaged in the implicit attribution of mental states required to comprehend the fable. Such an analysis will enable an exploration of how participants engage in mental state attribution on a reflectively structured 'off-line' task. This performance will then be contrasted, in later chapters, to the performance in relation to the metarepresentational demands of conversation. As such, this chapter aims to provide an analysis which will allow for the comparison to be made between 'off-line' and conversation performance, thus addressing the first research question outlined in section 5.1 of Chapter Five: (1) Is there evidence in conversational data of metarepresentational (dis)abilities of people with schizophrenia, when viewed from a cognitive-pragmatic perspective? Specifically part (a) of this question is addressed: Does performance in 'off-line' mentalizing tasks differ from performance in conversational interaction with regards to metarepresentational abilities displayed?

Based on research linking symptom profiles and Theory of Mind (ToM) performance (e.g. Corcoran et al., 1995; Frith & Corcoran, 1996; Pickup & Frith, 2001) (presented in Chapter Two), it was predicted that: (1) the individuals displaying the most prominent negative symptomatology on the PANSS would be those with the most significant difficulties in attributive metarepresentation on the Fable Task; (2) those with high scores for Paranoid Belligerence would be predicted to show some difficulties with higher order metarepresentation, which should be reflected specifically in 'over-mentalizing' on the Task; and finally, (3) those with the least severe symptoms of schizophrenia (i.e. lowest total PANSS score) should display relatively little difficulty even with the more complex attributive metarepresentations.

This chapter is organised as follows: section 6.1 reviews the Fable Task in light of metarepresentational demands presented in Chapter Five. The performance of the participants with regards to the implicit attribution of mental states will be explored in section 6.2. Finally, in section 6.3 the association between the performance on the Fable Task and the PANSS scores will be explored, before the chapter is concluded. Throughout

the thesis reference will then be made to the profiles of the participants to elucidate whether the predictions of the metarepresentational model of the disorder are supported.

#### 6.1 The Fable Task and metarepresentation

In the context of this study, the Fable Task (Ulatowska & Chapman, 1994; Ulatowska et al., 1993) is of interest, not in relation to its traditional focus with regard to narrative structure, but in relation to the participants' ability to engage in implicit attribution of mental states. The fable that was chosen for use in this task is inherently dependent on the participants' ability to metarepresent attributed beliefs, desires and intentions to the characters. In fact, the novel analysis I have presented (Chapter Five) suggests that comprehending the fable rests significantly on the ability to attribute mental states to the characters depicted. The Fable Task involved a number of 'language operations' on the part of participants, including story retell, generation of a summary, provision of the gist of the story, identification of the main character in the fable, generation of a moral for the story and finally generation of a title. The fable is presented in Figure 6.1.

A certain old woman suffered from a disease of the eyes. She called the doctor. The doctor came every day and rubbed some ointment on her eyes. When the old woman had her eyes closed, the doctor secretly carried all her belongings out of the house. When he finished his treatment, he demanded a payment. The old woman refused. The doctor took her to court. In court, the old woman said that her vision was worse because before the treatment she saw all of her belongings. But after the treatment, she could not see any of them. That is why she refused to pay.

FIGURE 6.1 TEXT OF THE FABLE THE OLD WOMAN AND THE DOCTOR

I have presented an analysis in which there are multiple levels of intention to be mentally represented in order to accurately interpret the story. The intentions and beliefs (and their metareresentational complexity) required by the fable were presented in Cahpter Five in a tiered format and are tabulated in Table 6.1.

Being able to perform the different language operations of the Fable Task involves a comprehension of, and ability to manipulate, the macrostructure of the narrative. However, without these attributed metarepresentations an audience could not interpret the 'sense' of the story to allow them to respond adequately to the probes. The 'scheme' for interpreting the participants' responses in light of the metarepresentational demands of the task is shown in Table 6.1 along with the potential lexical items or encoded concepts which may be used to communicate these attributions. This scheme is not specific to any particular question or trigger in the Fable Task (such as the recall of the fable, or the generation of a title), and evidence of attributing mental states or reporting utterances may

appear across responses. In other words, a participant may refer to the doctor as deceitful in providing a summary to the fable, or indeed in generating a title. It is argued that the use of these encoded concepts (such as 'deceit', 'lie' or 'trick' for example) strongly implies that the participant has mentally represented the doctor's intention and has produced an appropriate logical form in keeping with the requirements of optimal relevance to communicate the interpreted intention.

TABLE 6.1 THE ATTRIBUTION OF INTENTION AND BELIEF REQUIRED TO INTERPRET THE FABLE

Description of tributed intention belief / utterance	l of sentation	ice of	nale
Description of attributed intention / belief / utterance	Level of metarepresentation	Evidence of attribution	Rationale
Attributed intention of deceit: the doctor intends the woman to believe that he is intends to help her	3 <sup>rd</sup> order	'deceit' 'trick' 'betray' 'dishonest'	Concepts inherently imply intentional manipulation of the woman's belief
Attributed belief: the woman believes that the doctor intends to help her (is trustworthy)	2 <sup>nd</sup> order	'trust'	Inherently implies a belief or expectation of intention
Attributed belief: the woman (mistakenly) believed that her vision was worse OR the woman held this	1 <sup>st</sup> order	'the woman said' The woman thought'	Metarepresents state of 'belief' or an utterance rather than interpreting it as 'reality' (i.e. recognises interpretive use)
belief because she didn't know that her belongings had been removed	2 <sup>nd</sup> order	'the woman didn't know'	
Attributed intention: the woman intended to avoid payment by causing the court to believe that she believed her vision was worse	3 <sup>rd</sup> order	'the woman made an excuse' 'the woman tried' 'because she wanted'	Attributing intention to an attributed utterance
Attributed utterance: the woman said that	1 <sup>st</sup> order	'the woman said' 'the woman explained' 'the woman claimed'	Indications of reported speech which functions to attribute an utterance to another person

### 6.2 Performance of participants

The discussion which follows will explore how the participants with schizophrenia performed in relation to the metarepresentational demands of the Fable Task. A summary of participants performance across the demands of the Fable Task are presented first, in Table 6.2, to orientate the reader to the data that will follow. The symptom grouping of the

participants will be indicated as either predominantly negative symptomatology (pNS), predominantly positive symptomatology (pPS), or mixed symptomatology (MS). The transcripts of the performance of the participants across the various language operations required in the Fable Task appear in Appendix E. Extracts from these responses are presented in the detailed analysis that follows.

TABLE 6.2 SUMMARY OF PERFORMANCE ACROSS METAREPRESENTATIONAL DEMANDS

			Doctor's deceit		Woman's belief post- treatment	Woman's intention: trick the court	Woman saying – reported speech	
							Faithful	Not faithful
Participant	P.B. **	Symptom group*	3 <sup>rd</sup> order	2 <sup>nd</sup> order	1 <sup>st</sup> / 2 <sup>nd</sup> order	3 <sup>rd</sup> order	1 <sup>st</sup> o	rder
*BND	4	pNS						
END	3	pNS						
GNS	3	pNS						
*HNT	3	pNS						
YMB	5	MS						
ANJ	6	pNS			Charles and Annual State of St			V
LPC	18	pPS						٧
FNJ	3	pNS					٧	
JPZ	6	pPS					٧	
OPH	4	pPS			√ (1 <sup>st</sup> )			
*RPD	6	pPS		V				
*SPG	5	pPS		٧				
*KPS	3	pPS		٧			٧	
TMH	7	MS		٧			٧	
VMD	4	MS		٧			٧	
NPH	4	pPS		٧	√ (2 <sup>nd</sup> )			
PPG	5	pPS	٧					
*CNJ	3	pNS	٧				٧	
DNV	3	pNS	٧	٧			- Transie	٧
WML <50	4	MS	٧	٧				٧
*IPF	8	pPS	٧	٧			٧	
MPT	3	pPS	٧	٧		٧		
UMB	3	MS	٧	٧		٧	٧	

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

## 6.2.1 Using a strategy of sophisticated understanding: Metarepresenting the doctor's intentions

As discussed, in order to fully understand the story, the participant must be able to attribute intention to the doctor. Specifically, the participant must infer from the fact that he puts ointment on the woman's eyes before stealing her belongings that he has conveyed to the woman that he intends to address her visual problem (and also has the effect of rendering her unaware of the real goings-on, as discussed below). Evidence for this level of

<sup>\*\*</sup> Paranoid Belligerence (P.B.) score as measured on the Positive and Negative Syndrome Scale (PANSS).

metarepresentation being successfully deployed would be in the use of encoded concepts such as 'trick', or 'deceit' which inherently convey intentional manipulation and 'strategic deception'. Of the 23 participants, 7 produced elements in their responses which indicate the ability to metarepresent the doctor's intentions as deceitful. The words or phrases which indicate a participant's metarepresentation of attributed intentions are presented in bold text in Table 6.3. The column to the right indicates the language operations from which the response is taken.

TABLE 6.3 INTERPRETING THE DOCTOR'S INTENTIONS AS DECEITFUL

	Symptom group*	Extracts from responses	Response type**
CNJ	pNS	It's kinda trying to tell us that that people are so <b>devious</b> (pause) sometimes, [] they get back at you because they think that they still like um, like <b>betray</b> you and stuff like	Moral
		Manipulation.	Title
DNV	pNS	It's to trick a woman.	Gist
IPF	pPS	The medication didn't work and he used the medication for [excuse me], he used the medication just so he could rob the old lady.	Summary
MPT	pPS	It's like to tell you about a <b>trick</b> , when you trick somebody. It was just to explain that.	Gist
PPG	pPS	Um, the doctor cheated the old woman. He had a plan to uh uh take her belongings away from her. And his intention was to rub ointment in her eyes so that she couldn't see uh what he was up to. He had all intentions of taking her belongings away from her so he he knew he couldn't do anything to better her eyes, he wanted her not to see what he was going to do with her belongings.	Summary
UMB	MS	The main idea might be about honesty and trust. Might be that um in general if someone is a doctor we find them trustworthy but many things are <b>lies</b> and important decisions and stuff they have to make for us. So it's best we	Gist
		don't believe they should <b>betray</b> us. Concerning our belongings.	
WML	MS	Uh, the story is about (pause) a <b>dishonest</b> (diapparent) doctor who was <b>not honest</b> to the patient.	Gist
		A dishonest doctor.	Title

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

Participants UMB and CNJ both use the word "betray", suggesting that they have interpreted the logical forms of the narrative to yield information about the deceitful intent of the doctor. UMB's intended meaning is not completely clear within his utterance; however, the use of this encoded concept (not present in the original text) is suggestive of his interpretation that the doctor intended to engender trust in the woman which runs

<sup>\*\*</sup>For the probe questions used to elicit the language responses see Appendix D.

contrary to his intention to steal her belongings. CNJ also refers to the idea of people being "devious", an encoded concept which strongly supports the notion that CNJ has metarepresented the doctor's intentions as deceitful. As appropriate to the 'style' of a moral, CNJ is not referring directly to the characters but drawing the 'lessons' into a set of principles. The use of "manipulation" as the title for the narrative also supports the analysis that CNJ has interpreted the doctor as being intentionally and strategically deceitful. The encoded concept "trick" implies that the agent has manipulated the expectation of the other, in order to allow them to carry out a planned scheme and its use by MPT and DNV also suggests an ability to metarepresent the deceitful intention of the doctor. IPF suggests that the doctor has used the medication "just so he could rob the old lady", an interpretation which seems to suggest her ability to metarepresent the doctor's true intentions as conflicting with his communicated intentions. WML represents the doctor as "dishonest", again implying a recognition that the doctor was presenting "falsity masquerading as truth" (Reboul, 2001, p. 58). PPG refers directly to the doctor's intentions, indicating that the doctor intended to deceive the woman.

Several participants, representing each 'symptom grouping' are clearly able to metarepresent the doctor as having a deceitful intention. The Strategy of Sophisticated Understanding required to interpret deceit (Sperber, 1994) suggests that a high level of metarepresentational skill is deployed by these participants in comprehension of this aspect of the narrative.

## 6.2.2 Metarepresenting the woman's expectations, beliefs and utterances

### Interpreting the woman's expectations or beliefs about the doctor's intentions

As noted above, the participant must be able to metarepresent the woman's expectations and beliefs about the doctor's intentions. The woman's belief that the doctor is going to help her is a key aspect of mental representation as it is what allows the crime to occur in the narrative. Essentially, it is the complementary metarepresentation to that of the doctor's deceitful intent and is another example of interpretation and an accurate response relying on the mental representation of a mental representation (in this case the woman's expectation or belief). Deceit could not have occurred without the woman's trust. Thus, reference to 'trust', and particularly to misplaced trust, are seen as evidence for the ability to attribute this mental representation of 'the woman believed that the doctor intended to help her'. As seen below, many of the participants refer to trust, or generate a moral to the story involving the idea of 'don't trust everyone'. This 'abstraction' is performed by a number of participants which appears to yield a potential mental representation of 'people often believe that others intend to act with honesty'. These responses are taken as

evidence for an ability to represent the woman's misplaced belief in the honest intentions of the doctor, as illustrated in (1) or in the abstraction of this metarepresentation illustrated in (2):

- (1) The woman believed that the doctor intended to help her
- (2) People expect (or believe) that doctors intend to help them (i.e. are trustworthy)

## Metarepresenting discrepancies in mental states: Issues of 'trust'

Of the 23 participants, 11 made reference to 'trust' in their responses, predominantly within the language operation of 'provision of a moral', as illustrated in Table 6.4 on the following page. Some of these participants draw fairly sweeping lessons from the story akin to 'never trust doctors', 'not to trust anybody'. The responses of MPT, VMD, SPG and WML demonstrate the participants' recognition that not everybody should be trusted. TMH appears to give a purposefully humorous interpretation of the moral of the story, saying, "don't trust eye doctors" before laughing. Although this is superficially similar to the definite lessons of the other participants mentioned, the use of humour suggests that it was not an inaccurate interpretation. The possible misinterpretation or reason given by RPD for being cautious to trust doctors will be discussed in section 6.2.4. A participant able to generate a moral involving cautious trust has arguably deployed metarepresentational abilities, allowing them to process the mismatch between the woman's expectations and the doctor's intention.

Some of the participants reflect on the expectations of the woman in the fable or a patient under a doctor's care. A number of these responses involve not merely an attribution of expectation to a character (or a potential group of individuals in the case of a moral), but also a complex attribution of reasons for these expectations. These particular participants appear to reflect on the idea that the expectations held by the woman (or broader society) are raised by virtue of an agent being a doctor (see Table 6.4). DNV alludes to the disparate expectations which the narrative draws on – the expectation of doctor's "healing rather than stealing". Although not a response which is definitively metarepresentational, this participant seems to have reflected on the expectation that the woman would have regarding the doctor. IPF's use of the idiom, "Don't judge, don't judge a book by it's cover" appears to be a reflection on the expectation raised by virtue of the character being a doctor. This response would require the participant to metarepresent the woman's expectations (mental representations) as discrepant from the reality of a dishonest doctor. NPH states, in generating the gist of the story, "Unfortunately for her she

didn't count on the doctor taking all her belongings away". This response signals an awareness of the woman's expectations, entailing the ability to metarepresent the woman as holding a false belief of the doctor's intentions.

TABLE 6.4 INTERPRETING THE WOMAN'S BELIEFS ABOUT THE DOCTOR'S INTENTIONS

	Symptom group*	Extracts from responses	Response type**
DNV	pNS	In fact, a doctor (0.5) it was <b>not supposed to steal</b> it was supposed to heal a woman but instead of healing a woman he <b>stealing</b> .	Retell
IPF	pPS	Don't judge, don't judge a book by it's cover. [] And make sure that whilst being treated you are acknowledging of all your surroundings.	Moral
KPS	pPS	It is that the woman was um suffering from her eyes. And it's, it's better to <b>not trust</b> somebody.	Gist
		Well <b>not to trust</b> anybody in your property.	Moral
MPT	pPS	Yes. Um, try to be careful, <b>don't trust</b> too much you know, just watch yourself, be on the alert	Moral
NPH	pPS	[] this old woman had poor eyesight and she decided to get a doctor. Unfortunately for her she didn't count on the doctor taking all her belongings away	Retell
		Don't trust what you see.	Moral
RPD	pPS	You can learn to <b>never trust</b> the doctor. Because doctors (are really uncivilized) because sometimes doesn't like the patient and then they gave them just drugs to drink and other drugs to drink.	Moral
SPG	pPS	The moral is you <b>shouldn't trust</b> everybody and and make sure that when you do trust people that you you dealing with the correct people	Moral
ТМН	MS	Don't trust eye doctors (laughs).	Moral
UMB	MS	The main idea might be about <b>honesty and trust</b> . Might be that um in general if someone is a doctor we find them <b>trustworthy</b> but many things are lies and important decisions and stuff they have to make for us.	Gist
VMD	MS	The main idea of the story is <b>not just to trust</b> . [] Maybe the gist of the story is that <b>you are supposed to trust your doctor but then this doctor was a different doctor</b> all together, he was a <b>thief</b> of a doctor.	Gist
	••	The lesson is that don't just trust anyone that you meet. [] Because when you see a doctor you think that the doctor's going to heal you, you take him to granted. I've come to the doctor and whatever I tell the doctor it's going to happen. And the next thing it doesn't happen the way you think.	Moral
WML	MS	Ja, we learn that some people can also- you mustn't trust everybody. Even if they are doctors. There can be doctors who are bad. As this doctor was bad to the old woman.	Moral

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

<sup>\*\*</sup>For the probe questions used to elicit the language responses see Appendix D.

VMD reflects on issues of trust raised by the narrative and then indicates that the gist of the story lies beyond purely issues of 'trust' and her response indicates that she has also considered the 'expectations' of individuals as patients. VMD seems to reflect on the idea that we 'take for granted' that a doctor is trustworthy, as seen in her 'moral' response in Table 6.4. WML also reflects on the discrepancy between what one might expect from a member of the medical profession and what might be the case in reality. Her use of the phrase "even if they are doctors" is testament to her recognition that this title may engender certain expectations in individuals.

## Interpreting the woman's beliefs, utterances and associated intentions following the 'treatment'

This section examines how the participants' responses reflect an understanding of the woman's beliefs about her eyesight following the treatment and her intentions during the court case. This discussion will separate interpretations about the woman's belief regarding her vision (a mental representation), and what the woman says she believes about her vision (a public representation). The participants' responses represented in Table 6.5 make either direct or indirect mention of the woman's belief about her eyesight or belongings following the treatment.

TABLE 6.5 INTERPRETING THAT THE WOMAN BELIEVES THAT HER VISION IS WORSE

	Symptom group*	Extracts from responses	Response type **
NPH	pPS	Unfortunately for her she didn't count on the doctor taking all her belongings away and later found out that she couldn't really see anything because <b>she didn't know that</b> the doctor had taken her belongings away. And that's the end of the story. And he asked for payment and there wasn't any.	Retell
ОРН	pPS	Ah. Ja well this woman she she said well strange actually, she had her eyes tested but after testing her eyes she couldn't see she had a blurred vision of what was around her so with the result is she decided not to pay the doctor because <b>she felt that that</b> since she went to doctor for help, doctor had actually made her eyes worse <b>which was actually not true</b> . But the point is she was looking it from a different direction, from a different angle. The same way as I was watching you as you'were reading I noticed that you added whole words a now and then, you know. So I can't say that your eyes are bad it's because that paper was upside down, you were looking at it from a different angle to the way I was looking at it. []And uh that's the reason why she didn't want to pay the doctor because <b>she felt that</b> her eyes were blurred and she was worse off before the treatment.	Retell

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

<sup>\*\*</sup>For the probe questions used to elicit the language responses see Appendix D.

The original fable made no mention of what the woman actually believed, stating only what she had 'said' in court. As noted earlier, the narrative does not make it clear whether the woman believes that her eyesight is worse and, therefore, refuses to pay for a treatment which she believes has caused harm, or whether she herself is engaging in deception to 'get back at the doctor'. Given the nature of fables, and the idea of ironic outcome, the correct interpretation would appear to be the latter. However, both interpretations involve a level of metarepresentation as they both involve the attribution of beliefs and intentions to the character. Some of the participants represent her belief as 'she believes her vision is worse' and are able to metarepresent this as a thought which she holds because of being unaware that her belongings have been stolen.

Only two participants (NPH and OPH) produce responses which recognise the woman's belief that her vision is worse is based on the fact that she does not know that her belongings have been stolen. This metarepresentation could be presented as such:

(3) The woman believed that

her vision was worse (because she did not know that

her belongings have been stolen)

NPH seems to have metarepresented the woman's belief as such from her response, that the woman "later found out that she couldn't really see anything because she didn't know that the doctor had taken her belongings away". Her response includes both the woman's belief and her state of knowledge (ignorance that her belongings have been removed) and is thus a second-order metarepresentation (involving the believe tier and the know tier of (3) above). OPH also asserts that the woman believes that her vision is worse, but that this is not, in fact, the case: "she felt that that since she went to doctor for help, doctor had actually made her eyes worse which was actually not true". OPH appears to be referring to the idea that it was not true that her vision was worse, although arguably could be suggesting that it was not true that the woman believed her vision was worse. His response is a simple first-order metarepresentation, involving only the believe tier of (3).

#### Metarepresenting the woman's utterance: Faithful resemblance

In referring to the woman's testimony in their responses, the participants are using reported speech and thus representing a public representation, rather than a mental representation as in the cases analysed in the preceding sections. Some participants seem to recognise the complex 'twist' in the narrative, that the woman does not in fact believe that her vision is worse, but is merely saying so, perhaps to influence the outcome of the court case (as indicated in the bracketed component in (4) below). In this case the metarepresentation can be illustrated as such:

## (4) The woman said that

her vision is worse (because she intended that the court believe that the doctor has damaged her sight)

All the instances of reported speech are presented in Tables 6.6 (instances of faithful resemblance) and 6.7 (instances of less than faithful resemblance).

The original text contains reported speech in the form:

in court the old woman said that her vision was worse because before the treatment she could see all of her belongings but after the treatment she could not see any of them.

Many of the participants use the reported speech structure in their retelling of the story. In reporting what the woman said in her defence, the participants are engaging in interpretive use — producing an utterance which resembles the propositional form of the original. As outlined in Chapter Three, Relevance Theory does not require that these utterances be identical, they can merely resemble each other in terms of their propositional form. The use of reported speech structures is metarepresentational but the analysis of their interpretation of the woman's statement is assisted by considerations of the faithfulness (or adequacy) of the resemblance. The participants differed in who they represented as the woman's audience (or hearer), as well as the faithfulness of the content and metarepresentational complexity of the reported speech.

Several participants produce faithful interpretations of the woman's statement (Table 6.6) – involving the implications that her claim is that her vision is worse and the reason for this claim. All of these responses would seem to share the relevant implications of the original proposition and thus are not only attributive metarepresentations in the form of reported speech, but are faithful interpretations of the content of the original.

ANJ, IPF, KPS, TMH and VMD all provide a very similar structure to recounting the woman's utterance in that all four of these participants represent the woman as saying that (or explaining that) her vision is worse, and claiming the evidence as a change in what she can see within her home environment. The core implications from the original proposition are interpreted faithfully in these instances. CNJ too relies on attributive metarepresentation to retell the aspect of the narrative around the court appearance. He states "And when she had to pay she said that he didn't help much because she had, she, because her problem became worse, so she refused to pay". Here he does not elaborate on the woman's evidence for her assertion that her vision is worse. However, the response achieves optimal relevance by virtue of being faithful in its resemblance to the woman's defence. The implications – that she told the court her vision was worse and therefore tried

to avoid payment – are consistent with the original. JPZ's response includes logical forms which are far from complete but within the context of this assessment the core implications of the original proposition are shared by this attributed utterance. JPZ's use of the term 'pictures' appears to be used to refer to the woman's belongings. The pronoun use is irregular but this usage is consistent typical speakers of BSAE<sup>9</sup>). FNJ produces a response which seems to amalgamate the concepts in the narrative, stating that the woman claimed that the doctor stole her vision. This attributed utterance intuitively is a faithful resemblance. It carries the implications that the woman is claiming deteriorating vision as her reason for refusing to pay. At the same time, it includes a reference to the thieving nature of the doctor (whether an intentional sophisticated inclusion or an accidental intrusion of concepts).

A number of participants take this public representation of the woman's utterance one step further by attributing intention to the woman on the basis of the attributed utterance. In these cases the woman's intention must be represented as intending to mislead the court and therefore achieve justice or 'teach the doctor a lesson'. Below is a representation of the woman's intention, which arguably is an elaboration of the representation in (5):

(5) The woman intended
the court (or doctor) to believe that
she believed that
her vision is worse

UMB's response not only uses reported speech but also hints at an attributed intention — whether the woman is "hiding [...] attitude towards the court in trying to get back her belongings." He also states that she is "intelligently referring to reacquire belongings." These response's suggest that UMB is not only attributing an utterance to the woman but also reflecting on the intention which drive this utterance — the idea that the woman is using the utterance to influence the outcome of the court case.

MPT's response, although not produced as reported speech, appears to suggest this same level of metarepresentation. He appears to be suggesting that the woman knew she could see properly and was using her testimony of deteriorating vision as 'an excuse' to avoid payment. This participant was able to metarepresent the doctor's intentions as deceitful (see Table 6.3). In addition, he seems to interpret that the woman's true intention for refusing to pay is related to her stolen belonging, as indicated by his response in the summary task, "she's refusing to pay because of the things that are missing". Given this

<sup>&</sup>lt;sup>9</sup> Speakers of Black South African English may use pronouns in a variable way due to the fact that Nguni languages, and Bantu languages in general, do not mark gender (Mesthrie, 2004).

additional evidence, his reference to an 'excuse' seems in keeping with an ability to mentally construct the metarepresentation illustrated in (5).

TABLE 6.6 INTERPRETING THE WOMAN'S STATEMENT OF DEFENCE: FAITHFUL RESEMBLANCE

	Symptom group*	Extracts from responses	Response type**		
ANJ	pNS	And she she refused to pay the doctor because she couldn't see her stuff anymore. <b>She claimed that</b> she couldn't see her stuff after the doctors treatment, she could see less of her stuff so she didn't want to pay.			
CNJ	pNS	And when she had to pay <b>she said that</b> he didn't help much because she had, she, because her problem became worse, so she refused to pay.	Retell		
FNJ	pNS	Then the doctor take him to court then <b>the woman say</b> he he stealed his vision then he refused to pay.	Retell		
IPF	pPS	After which then the lady- the doctor took the lady to court because she refused to pay because <b>she said that</b> when- before the treatment the treatment she was well but after the treatment she couldn't see anything so the old lady refused to pay him, the doctor.	Retell		
JPZ	pPS	The woman doesn't give his money she she go with him- she open the court <b>the woman told them</b> that she see the pictures when when she she's not coming to her but now she's not seeing the pictures.	Retell		
KPS	pPS	She refused to pay him and he took her to court. In court <b>she said that</b> that before treatment she could see all her belongings but afterwards she couldn't see any of the belongings, her eyes were worse. So she refused to pay.	Retell		
MPT	pPS	She's refusing to pay because of the things that are missing.	Summary		
ТМН	MS	In court she told him that um she refused to pay him because her eyes were worse than when than what they were before he started rubbing ointment on her eyes. After his treatment there was [/] she couldn't see anything in her flat [/] anything in her house and um before the treatment she could still see things in her house.	Retell		
UMB	MS	So, and then in the end when her things are carried out or when she finds uh her things empty she only reveals in court that she couldn't see her belongings due to the doctors ointment or either whether her hiding f ferential attitude towards the court in trying to get back her belongings.	Retell		
		doctor old lady um eye problems. Um, belonging lost, uh, intelligently referring to reacquire belongings.			
VMD	MS	The woman refused to pay and he took her to court. She explained that before before she came to treat her eyes she had a better vision because she could see all of her belonging she could see her belongings. but when he finished treating her she could not see her belongings. That is why she refused to pay.	Retell		

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

<sup>\*\*</sup>For the probe questions used to elicit the language responses see Appendix D.

## Metarepresenting the woman's utterance: Less than faithful resemblance

Some of the participants, despite displaying skills in the use of attributive metarepresentation of reported speech, appear to have difficulties in the accuracy of the content of this reported speech (Table 6.7). These responses are intuitively inaccurate and within a RT analysis this seems due to the less than faithful resemblance between the reported speech and the implications communicated by the original.

TABLE 6.7 INTERPRETING THE WOMAN'S STATEMENT OF DEFENCE: LESS THAN FAITHFUL RESEMBLANCE

	Symptom group *	Extracts from responses	Response type**
DNV	pNS	Now in court <b>a woman tell a</b> magistrate that he that he's a thief, that the doctor is a thief. That's all.	Retell
LPC	pPS	<b>He told him</b> that my eyes don't go with that treatment and I stopped using it and then he* went blind.	Retell
WML	MS	And then the doctor stole from the older woman and then the older woman noticed that the doctor stole from from her, from him, from her and then the doctor came again to the old woman for money so that the old woman can pay him the money. And then the older woman told the doctor that she is aware that everything she had is gone so the doctor took the older woman to court because she doesn't want to pay the money.	Summary

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

WML's retell includes reported speech in which the woman asserts that she is aware of the doctor's deception: "And then the older woman told the doctor that she is aware that everything she had is gone so the doctor took the older woman to court because she doesn't want to pay the money". This utterance, although indicating that she perhaps holds a sophisticated understanding of the woman's true belief about her vision, is not a faithful interpretation of the woman's defence and missing a crucial implication of the narrative.

DNV's response also appears to lack the implication that the woman was merely implying about the doctor's thieving, and that her intention was to use her vision as a clever excuse to implicate the doctor in this way. His retell includes the utterance, "Now in court a woman tell a magistrate that he that he's a thief, that the doctor is a thief".

LPC's story retell includes the reported speech structure, "He<sup>10</sup> told him that my eyes don't go with that treatment and I stopped using it and then he went blind". This very

<sup>\*\*</sup>For the probe questions used to elicit the language responses see Appendix D.

<sup>&</sup>lt;sup>10</sup> Irregular pronoun usage common in typical speakers of Black South African English (BSAE), see previous footnote.

clearly shares none of the core implications of the original and is, therefore, not a faithful resemblance of the woman's defence.

## Summary: Metarepresenting the mental and public representations associated with 'the old woman'

Although many of the participants (13 of the 23) were able to attributively metarepresent the woman's beliefs, intentions and utterances, this was done with varying levels of accuracy. Metarepresenting the woman's belief as an actual belief that her vision is worse is a simple first-order metarepresentation and indicates the ability to attribute a mental state to a character, where that mental state is distinct from one's own knowledge as the audience. OPH displayed this ability. NPH entertained the same metarepresentation but at the level of a second-order metarepresentation by attributing not only a belief state but also a knowledge state to the character.

Considering the participants' representation of the woman's utterance is the one example in the Fable Task in which the representation of a public representation (rather than a mental representation) is possible. Of the 13 participants who used reported speech to represent this utterance, 10 produced a response of faithful resemblance to the original, in that it carried the same core implication as the original text. The other three, who engaged in reported speech, gave responses of less-than-faithful resemblance, making the interpretation inaccurate and not in keeping with the global intention of the narrative. Again, this performance suggests a potential ability to metarepresent mental representations but that the lower order representations are not accurate. Only two participants seemed able to metarepresent the woman's intentions behind her utterance in court. UMB and MPT both appeared to reflect on the possibility that the woman was attempting to mislead the court to try to 'get her own back' after the doctor's deceit.

These findings appear to suggest that in some cases the individuals with schizophrenia can engage in metarepresentation but that the lower-order representations may not always be accurate. Metarepresentation, at least for the individuals discussed in this section, seems intact as a process, but its content appears to vary in terms of accuracy.

### 6.2.3 Summary: Attributive metarepresentation in the Fable Task

The analysis above has explored how the participants have negotiated the attributive metarepresentational requirements of the Fable Task. The analysis reflects a systematic search through each participant's responses across language operations, for evidence of attributive metarepresentation. The result is a complex profile of varying degrees of how participants have deployed metarepresentational skills in interpreting the narrative. Table

6.2 presented these findings in summary form, representing each of the core metarepresentational demands and the participants who displayed evidence of meeting each demand. The summary table suggests that those with pNS are over-represented in group displaying no evidence of mental state attribution. Those with the lowest Total Score (TS) (indicated in the participant column as a  $TS_{<50}$ ) display evidence of most sophisticated attribution. No clear relationship is apparent between performance on the Fable Task and scores related to paranoid belligerence (P.B).

## 6.2.4 Misinterpretation of the character's intentions

Some participants displayed significant difficulties in interpreting the sense of the fable. These participants drew incorrect implicatures evident in their story retell, summary and in identifying the moral or gist of the story. More generally, they seemed to have difficulty even accurately retelling, summarising or generating an appropriate title which was in keeping with the global informative intention of the narrative. The extracts presented in the following tables demonstrate the responses which suggest that these participants have not interpreted the narrative as intended.

## Misinterpretation: 'Lessons about doctors'

A number of the participants who appeared to struggle with the Fable Task generated morals which reflected the 'lesson' that one should call a doctor when ill. These responses suggest that these participants have to be unable to interpret the complex interactions and intentions of the characters — an interpretation which relied on the search for optimal relevance and the ability to use skills of metarepresentation.

TABLE 6.8 ERRORS IN INTERPRETING ISSUES RELATED TO THE DOCTOR

	Symptom group*	Extracts from responses	Response type**
DNV	pNS	Is, hmm, don't call someone which is not good to help you.	Moral
FNJ	pNS	Yes, you can learn that if you are sick you must call the doctor.	Moral
END	pNS	We can learn that someone can call a doctor when she is not feeling good. [The lesson] Is that the woman refused to pay.	Moral
LPC	pPS	Ja, the old woman went to the doctor, If you've got a problem you're supposed to go to the doctor.	Moral

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

The morals generated by DNV, FNJ, END and LPC do not demonstrate an understanding of the fable, and appear specifically to lack reference to the intentions and beliefs of the characters involved, being based instead on superficial aspects of the narrative.

<sup>\*\*</sup>For the probe questions used to elicit the language responses see Appendix D.

### Misinterpretation: 'payment for the doctor'

A small number of participants produced responses suggesting difficulties in interpreting the complex issues around the woman refusing to pay the doctor and the doctor not getting paid for treatment which he asserted had been carried out. The three participants represented in Table 6.9 demonstrate difficulties in interpreting the causality between the woman's beliefs and her actions (GNS), the doctor's actions and his intentions (YMB) and the doctors intentions (OPH). In all three, the link between attributed mental states and actions appears to be faulty, leading to mis-interpretation of he fable.

TABLE 6.9 ERRORS IN INTERPRETING ISSUES RELATED TO PAYMENT FOR THE DOCTOR

	Symptom group*	Extracts from responses	Response type**
GNS	pNS	So the doctor took her to court for paying for his eyes for his eye job that he'd done and she couldn't pay cos her belonging is mos gone.	Retell
ОРН	pPS	Well I would say uh the old woman's is she's got a point but the doctor he uh he did what is best he could and he deserves to get his money.	Summary
YMB	MS	The doctor <b>stole</b> stole uh uh the the lady's clothes <b>for the payment</b> . That's what I think	Summary

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

## Misinterpretation: 'vision and treatment'

A number of participants appeared to have difficulty interpreting that despite the woman's statement in court, she did not truly have a deteriorating vision problem (whether or not she believed as such). These responses are presented in Table 6.10, on the following page.

Several of these individuals display difficulty interpreting issues around vision and treatment and appear to have interpreted the story as suggesting that treatment caused blindness in the woman. Clearly this type of interpretation has failed to attribute this belief to the woman exclusively, given that as the audience to the narrative, one knows that her experience of not seeing her belongings is due to their absence, rather than visual difficulties. As can be seen from the responses YMB, JPZ, WML and PPG all provide responses which seem based on an interpretation that the woman's vision was indeed impaired by the treatment. This interpretation difficulty is easily explainable in the case of YMB and JPZ where the summary chart indicates that neither of them appeared to metarepresent the doctor's deceit or woman's beliefs.

<sup>\*\*</sup>For the probe questions used to elicit the language responses see Appendix D.

Table 6.10 Errors in interpreting issues related to vision and treatment

	Symptom group*	Extracts from responses	Response type**
BND	pNS	We must obey the treatment, you must go with the treatment. That's why that's why the woman said he wish the doctor must come and visit him.	Moral
JPZ	pPS	[] We learn that if the doctors put a medicine to him to to to our eyes without checking them that that the medicine will be alright to the eyes I'll become blind because they put the medicine to me.	Moral
ОРН	pPS	I think the main idea of this story is to actually test a person's eyes as to whether this person can really see or not see and uh.	Summary
PPG	pPS	There's a lesson to be uh, that you cannot just let anybody uh just do things to you. Uh. You must first uh ask why. [] You must enquire. you can't just put ointment. Because ointment, the eyes are the most delicate function of one's body. Once you blind, I would say any ointment can blind you for the rest of your life.	Moral
RPD	pPS	You can learn to never trust the doctor. Because doctors (are really uncivilized) cos sometimes doesn't like the patient and then they gave them just drugs to drink and other drugs to drink. And if you are not careful as a person and look at the things what is going around you then you will never- if you smoke to much if drink too much you drink tablets. Obviously you are not going to have a future live. But at the end of the day you have to look at yourself. I said its not to trust doctors but doctors sometimes they're doing the wrong stuff at the wrong time.	Moral
VMD	MS	Summary of the story is that this woman asked for a doctor the doctor didn't do the work properly and the doctor actually made her made her vision worse and he he actually he actually was a thief in another sense []	Summary
WML	MS	before before the doctor rubbed the eyes of the old woman she could see everything but after the doctor rubbed her eyes she never saw all her belongings because the doctor maybe the old doctor blinded the old woman.	Retell
YMB	MS	She called her, called him and tried and uh she took the m- she took the doctor to court or the doctor took her to court or something and then uh she got blind afterwards.	Retell
		The doctor [] The main cause of that problem was that the doctor put ointment in her eyes that wasn't right	Main Character

<sup>\*</sup>Predominantly Negative Symptomatology (pNS), Predominantly Positive Symptomatology (pPS), Mixed Symptomatology (MS)

### Summary: Misinterpretation and metarepresentation

The sense of the fable *The Old Woman and the Doctor* appears to lie in the interpretation of the beliefs and intentions of the characters, as discussed. If participants interpret the narrative in an obviously inappropriate manner, this seems due, in many instances, to an

<sup>\*\*</sup>For the probe questions used to elicit the language responses see Appendix D.

inability to accurately metarepresent the characters' beliefs, intentions, and utterances. Indeed, those who produced wholly inaccurate interpretations on any of the language options were those participants who produced few or no phrases in any of their responses relating to the attribution of intentional or belief states.

## 6.3 Association between PANSS scores and performance on the Fable Task

Based on reported research linking symptom profiles and ToM performance (presented in Chapter Two), it was predicted that: (1) the individuals displaying the most prominent negative symptomatology on the PANSS would be those with the most significant difficulties in attributive metarepresentation on the Fable Task; (2) those with high scores for Paranoid Belligerence would be predicted to show some difficulties with higher order metarepresentation, which should be reflected specifically in 'over-mentalizing' on the Task; and finally, (3) those with the least severe symptoms of schizophrenia (i.e., lowest total PANSS score) should display relatively little difficulty even with the more complex attributive metarepresentations. Each of these predictions is systematically examined from the perspective of the performance as analysed qualitatively above.

The qualitative analysis of the responses demonstrated that five participants gave no indication in their responses that they had engaged in attributive metarepresentation. The participants were HNT, END, BND, GNS and YMB. The PANSS Scores indicating the highest presentation of negative symptoms equate almost precisely with the performance on attributive metarepresentation in the Fable Task. The individuals with the highest scores in terms of negative symptomatology included LPC, HNT, END, BND and GNS. YMB is the only one displaying extremely poor performance on the Fable Task who does not fit this same profile. She presents instead a negative symptom score below the mean of the group as a whole. However, the findings from the qualitative analysis overall seem to suggest that individuals with predominantly negative symptoms may have the most difficulty in attributive metarepresentation, specifically within a structured discourse task.

Frith (2004) suggests that individuals with paranoia would show errors in 'overmentalizing', by predicting behaviour on the basis of the wrong beliefs. He follows Blakemore and colleagues (2003) in predicting that, "The purest evidence for overmentalizing would be to show that paranoid patients ascribe intention to behaviour that the rest of us see as mechanical or random" (Frith, 2004, p. 386). Based on these descriptions certain responses made by RPD, KPS, JPZ, PPG and OPH appear to suggest processes of over-mentalizing. The first four of these participants produce responses suggesting that they have 'over-predicted' behaviour based on one example of dishonesty. OPH is the only one who seems to display a tendency to ascribe intention to what is, in reality, a mechanical

action – that of the researcher reading aloud the text of the fable. Despite these instances of possible 'over-mentalizing' the analysis does not appear to suggest that this feature occurs in those participants with higher scores on the Paranoid Belligerence Scale of the PANSS.

A number of participants displayed success in interpreting the narrative in line with the most complex of the metarepresentational requirements (the third-order metarepresentations required for uncovering deceit). UMB could perhaps be considered the most successful, interpreting not only the doctor's deceit but also acknowledging the possible deceit on the part of the woman during her testimony to the court. Indeed UMB made no interpretation errors across the language operations of the Fable Task. The other participants who managed to engage metarepresentational abilities at this level were CNJ, MPT, DNV, IPF, WML and PPG. Of these eight participants, four of them show total PANSS scores within the lowest range of the group, suggesting low level of symptoms of schizophrenia. These individuals would, therefore, be expected to perform well in this task. Although not a robust finding, it does suggest a trend towards the prediction that those with low levels of symptom presentation perform better in attributing mental states than those with more significant symptom severity.

No clear pattern emerged in terms of participants' general profile on language assessment and their performance on the Fable Task. However, the language-loaded nature of the this task is recognised. As with traditional false belief tasks, the exercise is verbal and draws heavily on language processing, with performance therefore being vulnerable to language impairment or language processing disturbances.

## 6.4 Conclusion: Participants' profiles in relation to psychiatric symptomatology and mental state attribution

As explored in Chapter Two, ToM difficulties have been extensively investigated in relation to schizophrenia. ToM difficulties, rather than being uniformly impaired across people with schizophrenia, have been associated with specific clusters of symptoms in schizophrenia. Those with negative symptoms, thought disorder and paranoia have been reported to display more difficulties in mentalizing tasks than seen in group studies of individuals with heterogeneous symptom profiles (Corcoran & Frith, 2005).

The Fable Task reveals subtle disturbances in the ability of some participants to accurately use metarepresentational skills in attributing expectation, beliefs, utterances and intentions to characters within a narrative. The expressed attribution of mental states or reported speech was noted across different 'language operations' of the Fable task and thus

signal the potential usefulness of open-ended probes in structured discourse tasks. Firstly, the results of this analysis support the predication that individuals with negative symptoms would present with significant difficulties in tasks requiring attributive metarepresentation. In the context of the Fable Task, this finding related to the individuals with pNS displaying the fewest responses entailing attributive metarepresentation, and the highest number of errors in interpretation. Secondly, the predicted relationship between higher scores on the Paranoid/Belligerence subscale and subtle difficulties in attribution was not supported by analysis of the Fable Task. No clear relationship emerged between performance on the Fable Task and scores relating to paranoia. Finally, the qualitative analysis seemed to only partially support the prediction that those with the lowest scores on the PANSS would display least difficulty with the attributive demands of the Fable Task.

Similar processes of attributing and reporting on the mental states and thoughts of others occur in typical conversation. The next chapter will examine the use of such 'attributive metarepresentation' in the conversational data of the participants.

## **Chapter Seven**

# Attributive metarepresentation: Interpretive use in the conversations of people with schizophrenia

Conversational performance provides a unique window into how individuals with schizophrenia might deploy metarepresentational abilities to convey their intended meaning in 'on-line' communication. Relevance Theory (RT) sees all utterances as representations, representing the speaker's thought, about a state of affairs, for example. However, there are utterances which are inherently metarepresentational, utterances which themselves contain within them metarepresentational elements which are "intended to be recognized as such" (Noh, 2000, p. 4). Such utterances are known as instances of interpretive use (discussed in detail in Chapter Three). The nature of the original representation may be mental (a thought), public (an utterance) or abstract (a conceptual representation, for example) (Wilson, 2000). Interpretive use can, therefore, be inherently attributive – relying on the ability to 'point' to another thought or utterance which is not held by the speaker at that moment:

Interpretive use involves second-order interpretation, where the speaker's thought is itself used to metarepresent another thought or utterance which it resembles in content: for example, a thought or utterance attributed to someone other than the speaker, or to the speaker herself at some other time (Noh, 2000:74).

The focus in the following analysis will be on the use of attributive metarepresentations, in which the utterance produced represents either a thought or an utterance attributed to another person, or to the speaker themselves at a different time. Attributive metarepresentation is of particular interest, as the ability to report on another's thoughts (a process of attribution) is considered to involve the cognitive process of mentalizing, hypothesised to be impaired in individuals with schizophrenia (discussed in Chapter Two).

Different forms of attributive metarepresentation exist and three categories will be explored in this analysis. Reported speech or thought is a form of linguistic metarepresentation which is attributive by nature (Noh, 2000), and this is the area considered first in the analysis which follows. Echoic utterances are similar to reported speech in that they represent an attributed thought or utterance, but echoic use also conveys the speaker's attitude towards this attributed thought or utterance (Noh, 2000; Wilson, 2000). Echo questions have the main function to clarify or express incredulity with regards to the content or form of a prior act, utterance or attributed thought (Noh, 2000) and achieve this by echoing and questioning an attributed thought or utterance. The performance of participants with regards to interpretive use may provide specific evidence

of metarepresentational ability or disturbance. The successful use of such utterances would signal not only the ability to engage in complex processes ('computations') of metarepresentation, but also demonstrate the capacity to attribute thoughts or utterances to others and convey an attitude to these representations in the case of echoic use and echo questions. As such, this chapter aims to shed light on two of the specific research questions outlined in section 5.1 of Chapter Five:

- (1) Is there evidence in conversational data of metarepresentational (dis)abilities of people with schizophrenia, when viewed from a cognitive-pragmatic perspective? Specifically this chapter will focus on part (b): Is there evidence that the participants with schizophrenia have difficulty with the use of utterances which contain instances of reported speech and thought, echoic use and echo questions?
- (2) How does the engagement in metarepresentational features of talk differ between symptom groups of participants with schizophrenia?

This chapter will be organised as follows: Section 7.1 will focus on how reported speech and thought is used by the participants with schizophrenia. The use of echoic utterances, including the few examples of irony and denial that exist in the data will then be presented in section 7.2. Finally, the use of echo questions by the participants will be analyzed before conclusions are drawn in section 7.3. Where several instances exist of the use of particular attributive metarepresentation by a single individual, the reader will be referred to extracts in the transcripts for further supporting evidence.

#### 7.1 Reported speech and thought

Reported speech and thought was defined, in Chapter Three, as the use of an utterance which reports on the speech or thought of another person (or themselves the speaker at another time). The use of reportive utterances is an indication of metarepresentational abilities as its use requires attribution of a thought or utterance and then representation of this representation in a form which can be identified as such by the hearer. The investigation of the use of reported speech and thought by the participants in this study provides, therefore, a window into one aspect of attributive metarepresentation. Given Frith's (1992) predictions that people with schizophrenia have an abnormality in metarepresentation and specific difficulty in attributing mental states to others, the use of such utterances by participants is of interest. While reported thought has been considered in schizophrenia, in the form of Theory of Mind (ToM) research, less work has been done on the use of reported speech in individuals with the disorder. The two can be seen as equivalent or parallel processes, entailing different 'materials' as the substrate of the

metarepresentation (a mental state in one case and an utterance in another). Investigating reported speech and thought as parallel processes provides the opportunity to analyse whether reported thought is differentially impaired, or whether the two processes are equally difficult (or equally used successfully in conversation).

Some of the examples below may raise the question of whether the reported utterance is a faithful resemblance of the original. For example, the reader may find themselves questioning, 'is it true that the doctor said ----?'. A participant may report an utterance which seems unlikely to be true or bears little or no objective resemblance to the original. The Communicative Principle of Relevance (Sperber & Wilson, 1986/1995) suggests that when an attributed thought or utterance is represented, it need not be identical to the original only it must resemble the original to the extent that it will achieve optimal relevance, in that context, at that time. It is argued, therefore, that even the misattribution of a thought or utterance is an instance of interpretive use, that is, reporting that "X said..." or "X believes...". If the individual has 'misinterpreted' the informative intention of the original communicator (in the case of reported speech), this does not appear to negate the fact that in using reported speech or thought the person is engaging in metarepresentation. In other words, if they have misinterpreted (or even purposely mis-represented) the original utterance, their reporting of it remains a case of interpretive use as the utterance resembles the logical or contextual implications which they inferred as hearers or which they assume are relevant to the current hearer. This notion of misattributing a thought or utterance is particularly pertinent in those participants presenting with delusional talk.

This discussion will focus on the analysis of utterances used by participants, containing reported speech and thought. The analysis will be presented according to the metarepresentational complexity of the utterances used. The analysis will first address instances of complex metarepresentational structures, where the utterance contains a metarepresentation of a primary representation which itself has been metarepresented. The analysis will then consider instances of simple, first order, metarepresentations employed in the service of reported speech or thought. In all cases, what is key to the analysis, is that the utterances analysed are inherently attributive and metarepresentational. The degree of metarepresentational complexity differs, but the use of such utterances indicates a metarepresentational ability which is not purely abstract but attributive in that it is reportive.

### 7.1.1 Complex metarepresentations in reported speech and thought

The extracts which are analysed below represent those instances in which participants have engaged with higher order metarepresentations in reporting on other's speech or thought.

The examples take one of the following forms, each 3 tiered and representing two orders of metarepresentation:

I thought that
You believed / said that
[lower order representation / proposition]

He thinks / believes / says that
I think / said that
[lower order representation / proposition]

His actions imply that

He thinks that

[lower order representation / proposition]

Several participants, across symptom groups, demonstrate the ability to use complex metarepresentational structures in reporting utterances of thoughts attributed to others (or themselves at an earlier time). Table 7.1 presents the summary of data demonstrating participants' use of higher order metarepresentation in reported speech and thought.

TABLE 7.1 INSTANCES OF REPORTED SPEECH	& THOUGHT (COMPLE	X METAREPRESENTATIONAL STRUCTURES)
--	-------------------	------------------------------------

Participant	Symptom Group	Line numbers demonstrating evidence of the use of complex metarepresentational structures **	Appendix
DNV	pNS	248	G <sub>4</sub>
*HNT	pNS	202	G <sub>8</sub>
OPH	pPS	(659)	G <sub>15</sub>
*RPD	pPS	260-262	G <sub>17</sub>
*SPG	pPS	341-342	G <sub>18</sub>
TMH	MS	442-445	G <sub>19</sub>
UMB	MS	378-379	G <sub>20</sub>
VMD	MS	(391-392)	G <sub>21</sub>

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction

The analysis which follows presents exemplars of participants' use of complex metarepresentation in reported speech and thought. The reader is referred to the transcript and line references in Table 7.1 for further exemplars.

The talk in extract (1) occurs between DNV and REA and refers to a patient who has interrupted the session: In line 248, DNV makes an observation about the man's actions and their meaning:

(1) 246 \*REA: is he your friend? •
247 \*DNV: he's not my friend, I met him here. •
→ 248 \*DNV: but he make as if he's my best best friend. •
249 \*DNV: he [seek too much. •

DNV appears to be interpreting the man's actions as communicating his intention to act as if "he's my best best friend". To 'make as though' something is the case is to represent a representation – in this case, DNV is suggesting that:

<sup>\*\*</sup> Bracketed data references are not discussed in the analysis which follows

the man's actions make as if  $^{11}$  (make as though) he believes that he is my best friend.

This interpretation would appear to signal an ability to attribute a mental state based on behaviour and metarepresent that attributed mental state in an utterance.

In challenging REA about her suggestion that he may not be allowed the refreshment, HNT produces a complex attribution, involving multi-level metarepresentation in line 203<sup>12</sup> of (2). The utterance in line 203 involves a complex metarepresentation in which HNT is reporting a thought attributed to himself at a different time. The utterance "I thought you say I should come and drink when..." might be represented as follows:

I thought that you said that

I should come and have a drink (during this work)

This is a higher order metarepresentation, involving an attributed thought of an attributed utterance and displays a high level of sophisticated linguistic metarepresentation.

```
*REA:
                    are you allowed coke? .
       198
(2)
       199
            *HNT:
                    coke. •
       200
             *REA:
                    aaah! •
       201
             *HNT:
                    hhh.
                    leave it here for a moment while I ask sister Janet #. .
       202
             *REA:
            *HNT:
                    mam, I thought you say I should come and drink when you xxx. .
     →203
            %com:
       204
                    raised voice
            *REA:
                    I know, (be)cause I didn't I didn't know you were diabetic. •
       205
       206
            *HNT:
                   you didn't know? .
            *REA:
       207
                    no. ·
            *HNT:
                    aah, you know madam since you come here. •
      1208
            *REA:
       209
                    ino I didn't know.
                    LI see that you examine me and then see # things about. •
       210
             *HNT:
                    ja, but I'm not the doctor so I don't know about diabetes. •
             *REA:
       211
       212
             *HNT:
                    mmhm.
```

HNT's assertion in line 208 is an instance of attribution of a mental state, this time a simple metarepresentation (recorded in Table 7.2), in which he appears to be asserting, "you knew [about my diabetes] since you've been here" 13.

SPG also uses complex metarepresentation within reported speech, as illustrated by extract (3). This extract is taken from discussion with SPG around confidentiality of the recording, and displays the use of reported speech for 'future attributed utterances'. In lines 341-342 of (3), SPG uses the imperative to represent a desirable state of affairs – one in which REA is conveying a message to the doctor.

<sup>&</sup>lt;sup>11</sup> An acceptable SAE construction equivalent to "make as though".

<sup>&</sup>lt;sup>12</sup> The use of the term "mam" (line 203) or "madam" (line 208) is a cultural feature linked to the sociohistorical context and the cross-cultural nature of this interaction (its use persisted despite REA's introduction with her first name).

 $<sup>^{13}</sup>$  HNT also uses a more simple metarepresentational structure to attribute a thought to himself at an earlier time, with reference to a delusional experience (see lines 356-357 in Appendix  $G_8$ ).

```
*REA:
       333
                     but remember this is meant to be confidential? .
(3)
             *SPG:
                     it can be and if I request for it if you could ask to give her
       334
                     something to her if you can ask for me for permission I'd
       335
       336
                     appreciate it so that she can hear those words because it's
       337
                     been difficult for me to communicate with her.
             *REA:
                     what I'll do is that I'll tell her that you've said that and
       338
       339
                     that I, that you've that we spoken about it while the tape
       340
                     recordings on and that she wants to hear then she can have it. .
       341
              *SPG:
                    ja, tell her tell her that I've requested if possible that she
       342
                     can listen to it as well please. •
```

It appears that what is metarepresented here is not only a desirable state of affairs (a descriptive use of language), but also an attributed potential utterance of 'telling'.

Tell her that

I've requested that she listen to the recording

In fact this appears to be a request – an imperative – in which the state of affairs desired by SPG is that of REA conveying ('saying') the utterance which he has metarepresented. Again the use of the structure signals an ability to engage with higher order metarepresentations.

In extract (4), RPD is talking about her drawings. As part of her delusional content, she reports an utterance attributed to the psychologist ('Rita') (line 260-261), and a mental state attributed to a figure related to "arts and culture" (line 261-262) and also an utterance which she attributes to herself at an earlier time (lines 265-266):

```
*REA:
(4)
        259
                      what do you mean by um Rita can express it to me? .
                      she has, she said she will would come and find somebody for
        260
              *RPD:
                      arts and culture and I think this man he is wanting me to to
        261
                      draw this sketches for him you understand me. •
        262
              *REA:
        263
                      okay. •
        264
              *RPD:
                      that's why I I I'm drawing it because I he wants me to see. .
       265
              *RPD:
                      so I doing it I went to her so I told her if I can draw the
    →[ <sub>266</sub>
                      sketches they can put in uh the horizon or whatever they can
        267
                      do maybe they can +/. •
        268
              *REA:
                      Lis the horizon a newspaper? .
              *RPD:
       269
                      the newspaper. •
```

RPD is able to represent the statement by the psychologist (whether or not it is an accurate interpretation of what was said), in a simple first order instance of reported speech. In the second part of line 261, into line 262, RPD engages in a complex case of reported thought, attributing a thought about a desire, saying, "I think this man he is wanting me to to draw this sketches for him [...]":

I think that

the mans wants (desires that)

I draw sketches for him

The attributed utterances appear to have been incorporated into her delusional content – utterances which lend weight to her belief that she is a well-known artist or that her drawings hold particular interest for the community at large.

TMH uses reported speech when talking about her experience of delusions and hallucinations. Extract (5) is not delusional talk as defined here (in that TMH is not engaged

in actively communicating her ideas related to a fixed false belief) but rather reporting a past experience of psychosis. In doing so, she uses reported speech in lines 442-445, to convey her experience of hearing others refer to her.

```
*TMH:
                                         imy whole psychosis is such a weird one. .
(5)
       435
                     I could have [/] what happened with me is, and it's very much
       436
             *TMH:
                     related to language, um with the things that +...
       437
                     how it all camce about is that I started hearing on tv
             *TMH:
       438
       439
                      (be) cause it doesn't happen much in ordinary language, oh
       440
                     actually it does it happens every now and then, not that often.
                     I started hearing what sounded like my name so in other words,
       441
             *TMH:
       442
                     like just take ninety four point seven highveld stereo I'd hear
       443
                     T four point seven highveld stereo. •
                     or um, the other one that I thought of was and his condition is
       444
             *TMH:
       445
                     permanant and I'd hear T's condition is permanant.
       446
             *TMH:
                     just because of the inflection fon the and the way that words,
       447
                     you know the way that language is used. .
       448
             *REA:
                                                     Lmmhm, mmhm.
                     and it got to the point where I became completely obsessed with
             *TMH:
       449
       450
                     it, which is part of my whole thing. .
                     but that is where it all started, it all starts off with the
             *TMH:
       451
       452
                     use of language that I'm perceiving in a certain way because
       453
                     of [/] okay apart from a distorted perception, it's
       454
                     nevertheless what I'm hearing. .
                     which is quite interesting, I thought. .
             *TMH:
       455
```

TMH uses reported speech in lines 442-443 to report the original utterance, "ninety four point seven Highveld stereo14" and then quotes her 'distorted perception' of that utterance, in which she experienced hearing her own name embedded within the well-known radio jingle. Similarly, in reporting a second example of her experience, TMH quotes the original utterance, "his condition is permanent" (lines 444-445) and then quotes what she perceived as being said, "T's condition is permanent" (line 445). This example of reported speech is of particular interest as the instances of quotations vary in their resemblance to the original. The initial report in each case resembles the original (the radio or television statement) most closely, while the second is a report of TMH's perception of that utterance - having close resemblance to her interpretation of the original, but not to the 'reality' of the attributed utterance. Her contrasting of the two 'versions' acts not merely to report an utterance and an interpretation but to comment on the faithfulness of resemblance with regards to her own interpretation. Although the surface structure of the utterances is apparently a simple case of quotation, her use of the two contrasting examples of reported speech (the radio jingle or person's utterance) and reported thought (her interpretation), signals a complex metarepresentation:

I thought that
they said that
'T's condition is permanent'

<sup>14</sup> A well-known radio station which uses a 'sting' or jingle with the words conveying the frequency (94.7 fm) and the name of the station (Highveld Stereo).

The extract below, (6), presents a reported conversation between UMB and the psychologist which was introduced earlier in the talk<sup>15</sup>, using both reported speech and thought. It is the instances of reported thought which are of specific interest here. UMB reports that John 'came around' to his point of view and expressed excitement about a realisation (line 362-364):

```
*UMB:
                     ija ja he sort of he sort of came round and ja he sort of was
       362
(6)
       363
                     like he found something whoohoo and he was a bit excited and I
      364
                     was no man, don't you know + . . .
       365
             *UMB: (be)cause something happened when I was a kid and it sort of
       366
                     evolved into something and and I didn't want him to sort of
       367
                     (be)cause when I was twenty-one I was diagnosed and I didn't
       368
                     want him to say this this and leads means that +/. .
             *REA:
                     you didn't want him to make an equation about your +/. .
       369
       370
             *UMB:
                     ja that my childhood has been screwed up and I've been sick or
       371
                     whatever since childhood. .
             *UMB:
       372
                     I just told him look you're not going to fuck with my childhood
       373
                     as well, there's just no way leave it out you know, leave it
       374
                     sort of out of the business. .
       375
             *REA:
                     mmhm.
      → 376
             *UMB:
                     and he understood why≈. •
       377
             *REA:
                     ≈mmhm≈.
      + 378
             *UMB:
                     ≈and he sort of saw my point of view concerning the whole
       379
                     stuff, all fof it, ja.
             *REA:
       380
                                 Lmmhm, mmhm.
```

UMB reports on his own thoughts at that time using first order metarepresentational structures — that he did not want the psychologist to make associations between "something [which] happened when I was a kid" (lines 365-368) and the subsequent diagnosis. He uses direct speech to report on his words to this effect in lines 372-374, "look, you're not going to fuck with my childhood as well, there's just no way leave it out you know, leave it sort of out of the business". UMB also reports an attributed thought in lines 376 and 378-379 — attributing an understanding to the psychologist (line 376) and change in the psychologist's mental state. These first order utterances are recorded in the summary data table 7.2). In claiming that John accepted UMB's "point of view concerning the whole stuff" (lines 378-379), UMB is attributing a belief ("he sort of saw") about a belief (UMB's belief which he alludes to in lines 372-374, that his childhood should be left out of the discussion):

He came to believe (accept)

my belief (that)

concerning the whole stuff (i.e. that my childhood is irrelevant)

Several participants across symptom groups engage in the use of complex metarepresentational structures to report on attributed utterances or thoughts. The data on the use of simple (first order) metarepresentational structures is more extensive and will be presented next.

148

<sup>&</sup>lt;sup>15</sup> See lines 333-358 of the transcript in Appendix G<sub>20</sub>.

## 7.1.2 Simple metarepresentations in reported speech and thought

The analysis which follows considers examples in which the attributed thought or utterance reported does not itself contain an attributed or metarepresentation element (and hence is first order). First order metarepresentation of reported speech and thought may, for example, occur in the following forms:

He / I thinks (believes) (wants) that [lower order proposition]

He / I said that

[lower order proposition]

In the first instance, the utterance would be a case of reported thought (an attribution of a mental state to another person or to the participant themselves at an earlier time). The second example above illustrates an attribution of an utterance (a case of reported speech).

The summary in Table 7.2 presents the data references pertaining to the use of simple metarepresentational structures used by participants in reporting speech and thought.

TABLE 7.2 INSTANCES OF REPORTED SPEECH & THOUGHT (FIRST ORDER METAREPRESENTATIONAL COMPLEXITY)

Participant	Symptom Group	Line numbers demonstrating evidence of the use of simple metarepresentational structures **			
		Reported thought Reported speech			
ANJ	pNS	(161); (199)	268	G <sub>1</sub>	
*BND	pNS	395		G <sub>2</sub>	
DNV	pNS	332-333; 342	251; 326	G <sub>4</sub>	
GNS	pNS	224; 226-227	320	G <sub>7</sub>	
*HNT	pNS		(208); 272-273; (356-357); 365-367; 374; (548-549); (555-558)	G <sub>8</sub>	
*IPF	pPS	179-181; 283-285	139-140	G <sub>9</sub>	
JPZ	pPS		39-40; 208-209;	G <sub>10</sub>	
*KPS	pPS		148-149; 291-292	G <sub>11</sub>	
MPT	pPS	(75-77); (81); (83-84)		G <sub>13</sub>	
ОРН	pPS	(207-208); (235-255); 673-675	194-204; (437-465); (490- 494); (522-524); (543-544); (586-590); (642-643); (656-657); (676)	G <sub>15</sub>	
PPG	pPS	(178); (186)	124-125; 130-133;	G <sub>16</sub>	
*RPD	pPS		265-266	G <sub>17</sub>	
*SPG	pPS	(415-416)	244-245	G <sub>18</sub>	
TMH	MS		220-223; (313-314)	G <sub>19</sub>	
UMB	MS		(210-213); (317-325); 339- 354; (365-368); (376)	G <sub>20</sub>	
VMD	MS		461-470; 476-477	G <sub>21</sub>	
WML	MS	288		G <sub>22</sub>	
YMB	MS	204; 344-345	317	G <sub>23</sub>	

<sup>\*</sup>Participants presenting with delusional talk during conversational interaction

Participants across the symptom groups demonstrate the ability to use first order reported speech and thought. Participants reported attributed utterances more frequently than

<sup>\*\*</sup>Bracketed data references are not discussed in the analysis which follows

attributed thoughts. Exemplars of the analysis of instances of use of reported thought are presented first, followed by exemplars of the analysis of reported speech. For further evidence of the use of these utterances, the reader is directed to appendices, with line references appearing in Table 7.2.

### Simple metarepresentations: Attribution of mental states

Extract (8) is an extract from IPF's delusional talk around her discovery of 'the Samurai Culture'.

```
279
             *REA:
                     how did you first find out about samurai culture? .
(7)
       280
             *IPF:
                     I've never. .
       281
             *IPF:
                     recently, there was that movie shanghai nights +/. .
       282
             *REA:
                     ia. ·
                     +, and I saw the stone and I went to my bedroom and I'm like
       283
       284
                     ja but that's the stone that was # on that, it was budda but
                     then there was an ashtray. •
```

In lines 283-285 of (8), IPF appears to be metarepresenting her thoughts on finding 'the stone'. Her use of the "I'm like..." appears to signal quotation in this instance, as it is reported to be used in typical talk (Blyth, Recktenwald, & Wang, 1990; Macaulay, 2001). The difficulty that REA may have in interpreting this utterance does not appear to stem from any indeterminacies in identifying this as reported thought, rather, the assumptions (or their logical relations) themselves are inaccessible to REA. In this way, the utterance can be identified as a report of an attributed thought but the lower order representation itself is less than optimally relevant. This potential impact of delusional talk will be explored in detail in Chapter Nine and Ten.

OPH too reports on metal states within his delusional talk. In extract (8), he is talking about a book which he reports to have written.

OPH expresses his certainty that the book is circulating in the hospital, reporting both on his own thought (line 673-676) and alluding to the mental state of the doctor, suggesting that "she was very impressed with it" 16. OPH appears to base his certainty and attribution in line 673 on a thought ("she was very impressed") and an utterance ("she said it was quite good") which he attributes to the doctor.

<sup>&</sup>lt;sup>16</sup> Earlier in the conversation, OPH reported how he had given the book to one of the doctors and asked her to make copies (lines 634-643 of the transcript in Appendix  $G_{15}$ ).

SPG, in talk over refreshments, uses reported speech to attribute a belief to an unnamed person or group, a feature seen in typical interaction (Sperber & Wilson, 1995).

```
(9) \rightarrow {415 *SPG: apparently rooibos tea is very very good for you it's full of antioxidants rand stuff. •
```

Using the hearsay adverb 'apparently', SPG produces the attributive utterance, thus metarepresenting the proposition that follows, as a 'known truth'.

In the extracts below, REA and YMB are talking about the nursing home in which she lives (extract (10) below) and the current ward context of the hospital (extract (11) which follows). In both extracts YMB uses reported thought to reflect on the perceptions or assumptions that others have of her.

```
199
               *REA:
                       ## how long have you been at Matthews for? .
(10)
               *YMB:
         200
                       thirty two years. .
               *REA:
                       # so it's really your home, hey? .
         201
               *YMB:
         202
                       mmhm.
               *YMB:
                       but the patients that are coming in now, I don't know. .
         203
      → 204
               *YMB:
                       they think they can grab hold of me. .
               *YMB:
                       people think I'm trying to be funny towards them when I'm
         344
(11)
         345
                       selfdrawn@n. •
         346
               *REA:
                       is that the same as withdrawn? .
               *YMB:
         347
                       ia. •
               *YMB:
                       it's withdrawn. .
```

YMB reflects in line 204 of (10) that the residents who are moving in "think [that] they can grab hold of me". She later reports that "people think [that] I'm trying to be funny toward them when I'm selfdrawn<sup>17</sup>" (lines 344-345). In this utterance, YMB reflects not only on a thought attributed to others but also acknowledges the role that her own behaviour has in generating such a response.

In the extracts which follow, the participants report of an attributed thought displays the ability not only to metarepresent a mental state but specifically to mark the attributed mental state as distinct from their own. These utterances are of first order metarepresentational complexity but are specifically highlighted as, in reporting on mental states in this manner, these participants arguably demonstrate sophisticated metarepresentational abilities, beyond what is generally attributed to people with schizophrenia by the dominant models of the disorder.

BND, in talking about why he has no money for tobacco, reports an attributed 'mental state' in line 395 of (12):

<sup>&</sup>lt;sup>17</sup> The neologism "selfdrawn" was introduced earlier in the conversation (see lines 320-324 of the transcript in Appendix  $G_{23}$ ).

```
*REA:
(12)
        394
                      your family, do they come to visit to bring you fbb?
      → 395
              *BND:
                      inot they they didn't know where I'm here.
        396
              *REA:
                      they don't know that you're here. •
                      mmhm, but I can give you phone number you can phone them. .
        397
        398
              *REA:
                      okay, does the sister have the phone number, the doctor? .
        399
              *BND:
                      ja, ja. •
```

BND is asserting that "My family don't know that I am here". Although this example is somewhat different to the others in that BND is not reporting an attributed thought but rather attributing a state of specific 'ignorance' to his parents, the process appears to be similarly metarepresentational and clearly attributive. Importantly, he is attributing a mental state clearly distinct from his own (as he is clearly aware that he is 'here' in the hospital and is distinguishing this from his parents' lack of awareness of his situation or location).

Several other participants also use reported thought to attribute to others a state of 'unawareness' or lack of knowledge of a particular state of affairs, as illustrated in extracts (13) and (14).

```
218
               *REA:
                      I'm sure it's difficult to be here without friends. •
(13)
        219
               *GNS:
                      ja #.
        220
               *GNS:
                      that's what make it so. .
        221
              *REA:
                      hmm? •
        222
               *GNS:
                      that's what make it so difficult for me. .
              *REA:
        223
                      mmhm.
       → 224
              *GNS:
                      cos I'm with with these friends and they don't know me +/. .
              *REA:
        225
                      mmhm.
        226
              *GNS:
                      +, they don't know what to talk with me and I also don't know
        227
                      what to talk with them. .
              *REA:
        228
                      mmhm. .
              *REA:
        229
                      ja, you don't know each other well enough yet, hey? •
              *GNS:
        230
                      I can't tell my whole secret to them you see. •
        231
              *REA:
                      mmhm #.
        332
              *DNV:
                      now this guy I don't know I'm not surprised he's sick, he
(14)
     →(333
                      doesn't see himself. .
              *REA:
        334
                      would you like to give him a biscuit, do you think you need to?
        335
              *DNV:
                      hhh. .
        336
              *REA:
                      how do you feel about it? .
        337
              *DNV:
                      I can give him uh. .
              *REA:
        338
                      # do you want to do it at the end when we're finished? .
        339
              *DNV:
                     uh, even I don't give him it's the same see. .
              *DNV:
        340
                      I give him, I don't him it's the same.
                    It doesn't bother you? .
        341
              *REA:
              *DNV:
        342
                      ja, because this guy he's sick man. •
      343
              *DNV:
                      he doesn't see what he's doing. .
              *REA:
        344
                      mmhm. .
        345
              *DNV:
                      ja. •
```

In extract (13), GNS reflects that his 'friends' in the ward do not know him (line 224). In lines 226-227 he reflects very specifically on the knowledge which is lacking for both parties. Similarly, in extract (14) DNV provides an interesting reflection on the mental state of a fellow patient, suggesting that the reason the person is "sick" is because he "doesn't see himself" (line 332-333) and "doesn't see what he is doing" (line 343). The use of the word "see" would appear, in this context, to refer to a state of awareness rather than physical sight and thus DNV appears to be suggesting that the individual in question lacks a level of self-awareness. Although neither of these examples utilise the classic quotation style of

reported thought the utterances reflect an ability to attribute a mental state to another and are metarepresentational – specifically reflecting on another's lack of awareness. GNS's utterance in particular appears to metarepresent the state of not knowing "what to talk with me<sup>18</sup>". This example is included in the analysis as it appears to represent a sensitivity not only to a mental state (not knowing), but also to its effect on the interaction or relationship between GNS and his fellow patients.

Extract (15) is taken from IPF's delusional talk about health concerns.

```
(15) 178 *IPF: LMy arm went numb for about two years at once and I never knew why. •

180 *IPF: I thought it was the arthritis and all of a sudden I had heart attacks and then I had the strokes. •
```

In (17), IPF initially attributes a state of 'ignorance to herself at an earlier time, stating in line 179, "I never knew why [my arm went numb]". Such an utterance is a reflection in a mental state – that of 'not knowing'. IPF also 'quotes' a thought which she attributes to herself at an earlier time (lines 180-181), reportedly a few months prior to the conversation. The component of the utterance "it was the arthritis" is a case of free indirect quotation, which IPF marks as an attributed thought (past tense marker of 'I thought'). By attributing this thought to herself at a previous time, she is able to distance herself from it in the report that follows – thus, the implicature is that it was not the arthritis (as she had thought) but something which she reports as more serious. Occurring within delusional talk, this example illustrates the ability to metarepresent her own mental representation at a previous time (and as different from her current belief), even within active delusional talk.

WML's utterance in line 288 of extract (16) is an instance of reported thought in which she reflects on her earlier perception that "it [the assessment task] was going to be difficult".

```
→ 288
               *WML:
                       #0_22 I thought it was going to be difficult. •
(16)
                      is it easy? .
               *REA:
         289
         290
               *WML:
                       yes hhh! .
               *REA:
                       much easier than you were thinking? .
         291
               *WML:
         292
                      yes.
                       good, I'm glad. .
               *REA:
         293
```

The analysis presented provides clear evidence of the ability of many of the participants to use inherently metarepresentational utterances. The majority of participants display the ability to engage in reported speech and/or thought. The use of such structures strongly suggests the ability to deploy the skills required to attribute mental states to others and to attribute specific utterance to others.

<sup>&</sup>lt;sup>18</sup> A phrase which would be recognised in some forms of SAE to mean "say to me".

### Simple metarepresentations: attribution of utterances

DNV uses reported speech to translate the utterances of a fellow patient who has interrupted the session, speaking in Zulu. After one such interruption, the researcher (REA) asks DNV what the man had said. In line 251 of extract (1'), repeated from (1), DNV uses reported speech to translate that the man has asked him for 'mageu', a traditional African drink. Later in the conversation another exchange happens out of the domain of the recording device. In (17) REA presumes that the man is again asking for 'mageu' (see line 323) and presents this interpretation to DNV in a question, to which DNV responds, in line 326, by translating the man's new request:

```
246
              *RFA .
                      is he your friend? .
(1')
        247
              *DNV:
                      he's not my friend, I met him here. .
        248
              *DNV:
                      but he make as if he's my best best friend. .
        249
              *DNV:
                      he seek too much.
        250
              *REA:
                         Lwhat was he asking you now in Zulu? •
              *DNV:
                     he ask me mageu. •
       →251
                      a traditional African non-alcoholic drink of fermented maize
        252
              %exp:
              *REA:
        323
                      is he asking you for the mageu? .
        324
              *DNV:
                       ja.
              *REA:
        325
                      okay. .
(17)
      → 326
              *DNV:
                      he's asking me now biscuits, hhh. •
```

DNV corrects REA's inference about the man's request by again reporting the man's words through translating them to English, "he's asking me now biscuits". Again, the report attributes an utterance to another person.

HNT, too, uses reported speech in lines 272-273 of extract (18). In this instance he uses reported speech to attribute an utterance to REA. The instance occurs in the context of a preceding discussion about whether HNT will smoke his cigarette "now" or "save it for later" (see lines 235-238 in Appendix  $G_8$ ).

```
266
               *REA:
                       so should we finish this and then you need to smoke? .
(18)
               *REA:
         267
                       is that what you're telling me? •
         268
               *HNT:
                       no. ·
                       hmm? .
               *REA:
         269
                       no, I save it for ##. •
         270
               *HNT:
               *REA:
                       for later.
         271
        272
               *HNT:
                       ja I want to save it later but if you say I should smoke # I
      →[ <sub>273</sub>
                       should smoke. .
         274
               *REA:
                       no I don't say you should smoke now. •
         275
               *REA:
                       I just thought you wanted to, cos you're holding it so tightly
               *HNT:
        276
                       yeah.
```

In this case, the free indirect quotation of an utterance "you should smoke", is (mis)attributed to REA, signalling a possible difficulty in interpreting the intended meaning of REA's utterance. However, the process of metarepresentation and attributive metarepresentation is demonstrated by HNT — he appears to have no difficulty in metarepresenting this (mis)interpreted implicature.

Within a delusional narrative, HNT reports the words which he attributes to the dove and to God in extract (19):

```
361
              *HNT:
                      so as I looked up I saw this dove, what can you [/] the bird? .
(19)
        362
                      pronouced to rhyme with mauve.
              %com:
        363
              *HNT:
                      this +/. •
        364
              *REA:
                      a dove. .
        365
              *HNT:
                      dove yeah, it clap its hands for me and say yes and then I hear
                      the word of God that say this is my one son with whom I'm
        366
        367
              *HNT:
        368
                      like as he say to Jesus. .
        369
              *REA:
                      mmhm. .
              *HNT:
        370
                      mmhm. .
                      so you saying it was like in the Bible where Jesus got
        371
              *REA:
        372
                      baptised? •
              *HNT:
        373
                      ja, yes mam. •
                      he say this is my one dear son with whom I'm +... ## •
      → 374
              *HNT:
```

HNT reports, in the direct quotation style, the utterances which he attributes to the dove ("yes" in line 365) and those which he attributes to God (lines 366-367 and line 374)<sup>19</sup>. The words HNT attributes to God are likely to be a learnt phrase, to which he was exposed in church. However, the use of reported speech is indicative of metarepresentational abilities being deployed in the utterance formulation. This example again illustrates that metarepresentational abilities (the cognitive process of metarepresentation) may be separated from the objective truthfulness of an utterance. Did the dove 'say yes'? Clearly not, but HNT attributed meaning to the dove's actions. Indeed, this case of reported speech may display a possible example of interpreting an act as ostensive (the movement of the dove's wings) when it is not intended as such, as predicted by Frith (1992).

Several participants use reported speech to report on their own utterances at an earlier time. In extract (20) GNS is recounting a story in which he was stabbed in his backyard. He uses reported speech in line 320 to report on his own utterance preceding the incident: "no give me a light<sup>20</sup>" GNS then goes on to describe the state of affairs which followed in which his friend "somer" [simply] stabbed him with a bottle. Similarly in extract (21) ANJ uses reported speech (line 268), quoting his own earlier utterance in order to repair the misunderstanding after REA appears to mishear him.

```
so one coloured friend was there and they did bring beers for
        316
              *GNS:
(20)
        317
                      I was just coming out of the house with the cigarette wanted
        318
              *GNS:
        319
                      to light.
              *GNS:
                      I ask him no give me a light, he somer bring the
       → 320
        321
                      bottle and stab me. .
                      he simply [or unexpectedly] brought the bottle and stabbed me
        322
              %eng:
        323
              *REA:
                      did you go to hospital?
                      no, the the doctors did come come there by the house. •
        324
              *GNS:
```

<sup>&</sup>lt;sup>19</sup> Further examples of HNT's use of reported speech are evident in lines 208; 356-357; 548-549 and 555-558 of the transcript (Appendix  $G_8$ ).

<sup>&</sup>lt;sup>20</sup> A request in SAE for matches or a lighter to light his cigarette.

```
(21)
         257
               *ANJ:
                                                II was working in the workshop. .
                       ## hmm. •
         258
               *REA:
         259
               *ANJ:
                      ## and then there's T3, you do tv and radio. •
               *ANJ:
         260
                      # and # that's it ja. •
         261
               *REA:
                      and CT # did you say? •
               *ANJ: say again? •
         262
         263
               *REA:
                      tv and? .
         264
               *ANJ:
                       tv and radio. •
         265
               *REA:
                       CT? ·
         266
               *ANJ:
                       CT? ·
                       maybe I misheard you, okay. .
         267
               *REA:
                       I said uh, T, T3 is tv and radio. •
               *ANJ:
      \rightarrow 268
         269
               *REA:
                       okay, okay. .
         270
               *REA:
                       that must be interesting. .
```

In both examples, the participants preface the reported speech with an overt signal of the self-quotation that is to follow ("I ask" in the case of GNS and "I said" in the case of ANJ).

The extract below is taken from talk about IPF's desire to see the doctor. She reports that she has had a CAT scan and displays the use of reported speech, as illustrated in line 139-140 of (22) below:

```
*IPF:
                       「Ja, I went for a cat scan #. •
        134
(22)
        135
               *REA:
                       II'll tell her. .
                       okay, then I'm sure she'll see you to tell you how the results
        136
               *REA:
        137
                       were. •
               *IPF:
        138
                       ja. •
               *IPF:
                       according to the sisters there is no cancer, there's no
        139
     →( <sub>140</sub>
                       nothing.
               *REA:
                       that's good news. •
        141
               *REA:
        142
                       # good. .
```

IPF's use of the hearsay participle "according" explicitly marks the utterance as an instance of reported speech. IPF attributes the propositional content of the lower-order representation "there is no cancer, there's no nothing" to the nursing staff. These need not be the exact words used by the nursing staff, and without 'collateral', it is not possible to know whether this message was intended at all by the nurses. However, by utilising reported speech, IPF achieves optimal relevance for the hearer who interprets her utterance as 'IPF is saying that the nursing sisters report that there is no cancer or abnormalities on the CAT scan'. The utterance is therefore an instance of attributive metarepresentation, even if the lower order representation in misattributed or inaccurate<sup>21</sup>.

During discussion about her language history in extract (23), JPZ reports being at an English-medium school which was in a Siswati<sup>22</sup> speaking area. In extract (24), JPZ is talking about her first trip to the ocean.

<sup>&</sup>lt;sup>21</sup> As discussed in Chapter Three, instances of deceit or mis-interpretation using quotation in typical conversation would still involve "saying that –". Therefore, even if a participant mis-attributes an utterance to another person, the use of reported speech signals engagement with metarepresentation.

<sup>&</sup>lt;sup>22</sup> One of the Nguni languages also spoken in Swaziland, the landlocked country within the borders of South Africa (JPZ's homeland).

```
33
               *REA:
                       # so at school were you [/] were the teachers teaching you in
(23)
        34
                       Siswati? •
              *JPZ:
        35
                       yes.
        36
               *JPZ:
                       in English.
        37
               *JPZ:
                       they were teaching in English. .
        38
               *REA:
                       in English.
        39
               *JPZ:
                       but if they say it is a time for learning Siswati then they are
       140
                       speaking Siswati. •
        41
               *REA:
                       okav. •
               *REA:
                       I have never been to Mozambique, I would love to go. .
         196
(24)
         197
               *REA:
                       apparently it's beautiful.
               *JPZ:
         198
                       ja. ·
         199
               *JPZ:
                       # I get inside the sea, the ocean there in Maputo. •
         200
               *JPZ:
                       with my child, with the se [/] first born, second born. •
               *REA:
         201
                       ah.
               *REA:
         202
                       was it fun? .
               *REA:
                       # it was right. .
         203
               *REA:
                       was the child scared of the sea or not? •
         204
         205
               *JPZ:
                       she doesn't scared. •
               *REA:
                       she wasn't scared.
         206
                       she was loving it? •
         207
               *REA:
         208
               *JPZ:
                       she goes first we there she she she came and told me she was
         209
                       at the sea. .
```

In lines 39-40 of (23) she uses reported speech to report on an interaction in a Siswati lesson. In extract (24) JPZ similarly uses reported speech to quote her daughter's response on their first visit to the ocean (line 208-209). In addition to demonstrating the ability to attribute utterance to other people, JPZ uses a conditional in lines 39-40 of (23), a further example of her ability to engage in complex linguistic metarepresentation.

In extract (25) below, KPS is concerned about ensuring that she is allowed a leave of absence from the hospital and is questioning REA's knowledge of the discussion in the earlier wardround. In line 148-149 she engages in reported speech to report the doctor's utterance. In extract (26) KPS is talking about her previous weekend leave of absence and engages in reported speech in lines 291-292, reporting on how she asked her son to come and fetch her from the hospital.

```
141
               *REA:
                       so you're wondering what they said about the leave in
(25)
        142
                       fwardround? •
        143
               *KPS:
                       Lyes, Tyes, yes. •
                             Laah, I wasn't here. •
        144
               *REA:
               *KPS:
                       I would love to hear hhh. .
        145
        146
               *REA:
                       mmhm. .
               *REA:
                       have you asked the sisters or the doctor? .
        147
                       no no it's just that the doctor said that I can go again for
        148
               *KPS:
      →[ 149
                       this weekend.
               *REA:
        150
                       that's a good sign I think. .
        151
               *KPS:
                       yes it is, hey? .
                       do you live far away, is that why they're giving you extra
         287
               *REA:
(26)
                       long weekend leave?
         288
               *KPS:
         289
                       no I just xxx it was naughty. .
               *KPS:
                       (be)cause I saw that there was four tablets in my in my packet
         290
                       so I took a chance, I said to my son come and fetch me on
         291
      →[
         292
                       thursday. •
         293
               *REA:
                       oh, (be)cause you thought you could have enough for [thursday
         294
                       friday saturday sunday.
               *KPS:
                                                                             Lyes yes
         295
                       Tyes yes.
         296
               *REA:
                       I four tablets. •
         297
                       were they cross with you? .
         298
               *REA:
               *KPS:
                       no, they weren't. .
         299
```

In (25) KPS states, "the doctor said that I can go again for this weekend' and demonstrates the ability to report a relevant utterance which she attributes to the doctor. KPS uses reported speech to report an utterance attributed to herself at an earlier time, in extract (26). In this example, KPS not only engages in reported speech but also reports on the decision-making or reasoning process behind her risky strategy of leaving the hospital before the leave period had officially begun.

OPH, in extract (27), is talking about his frustration with the official multilingual nature of South Africa. He describes what he perceives as the divisive consequences and appears to use a scenario of an interaction to illustrate his point. In series of successive utterances between lines 194-204 he uses reported speech to convey a hypothetical interaction between himself and a 'home affairs' official.

```
*0PH:
                      this country will never be united as long as there are eleven
        189
(27)
        190
                      official languages. .
               *0PH:
        191
                      how silly it is. .
               *0PH:
        192
                      silly. .
               *0PH:
                      it doesn't make sense to me. •
       193
                      imagine you go to home affairs and you tell them what your name
        194
               *0PH:
        195
                      is. ·
        196
               *0PH:
                      they say what nationality are you? .
        197
               *0PH:
                      you're confused, what the hell do you tell these people? .
        198
               *REA:
                      mmhm. .
        199
               *0PH:
                      what do I tell them? .
               *0PH:
        200
                      my name is S.
                      what do I tell them? .
        201
              *0PH:
              *0PH:
        202
                      that I'm a Portuguese? .
        203
               *0PH:
                      that I'm a German? .
               *0PH:
                      or a Puerto Rican, or a Mexican? .
        204
              *0PH:
        205
                      what do I tell these people? .
        206
              *REA:
                      mmhm. •
        207
              *0PH:
                      # do you have to see me in a picture to realize no this is just
        208
                      another guy that comes from South Africa. .
              *0PH:
        209
                      just a colored guy, or whatever, he's from a mixed race. •
              *REA:
        210
                      mmhm. .
        211
               *0PH:
                      do we have to bring that into the equation all the time? .
                      hmm, it's sad isn't it, that we're still doing it.
        212
              *REA:
```

OPH begins by quoting a potential utterance attributed to a home affairs official, "what nationality are you?" He then expresses his own confusion and in a series of echo questions (lines 188-190) he quotes the possible answers he could give (attributing them as potential utterances he could have produced in the situation). OPH also appears to use reported thought in attributing a potential realisation (a mental state) to an identified person, suggesting, in line 207-208, that seeing his picture should allow someone to reach the conclusion that, "this is just another guy that comes from South Africa"<sup>24</sup>.

In extract (28) PPG is talking about a crèche run by his mother. PPG uses reported speech to recount how he suggested that she take on extra help (line 124) and her response

<sup>&</sup>lt;sup>23</sup> The South African government department which deals with Identification Documents (ID) and passports.

<sup>&</sup>lt;sup>24</sup> Further examples of OPH's use of reported speech is evident in lines 337-465; 490-494; 522-524; 543-544; 586-590; 642-643 and 656-657 of the transcript (Appendix  $G_{15}$ ).

(line 125). Following the (odd) assertion that "she never hits the children", PPG uses reported speech to attribute an utterance to his mother in lines 130-132. He also uses direct speech to report on his response (line 133).

```
118
               *PPG:
                       a highly successful business she's run. •
(28)
               *PPG:
                       five years. •
        119
        120
               *REA:
                       wow! .
               *PPG:
                       she she has about ten calls a day, every day. •
        121
        122
               *REA:
                       hmm, she must have been very grateful for the work you put in.
               *PPG:
                       ja, but she worked hard you know. .
        123
               *PPG:
                       I said to her, mom you know, get somebody else to do the work.
        124
      →[ 125
               *PPG:
                       but she said no. .
        126
               *PPG:
                       and my mother never hits the children. .
        127
               *REA:
                       she never? •
        128
               *PPG:
                       she never hits the children. .
        129
               *REA:
                       mmhm. •
        130
               *PPG:
                       and when she did start to hit the children she said to me, S,
        131
                       I'm going to give up I'm hitting the children and that's not
        132
                       right. .
               *PPG:
        133
                       I said, no mom, that's not right don't hit the children. .
        134
               *REA:
                       mmhm. .
```

SPG also uses reported speech within the interaction, as illustrated by extract (29).

```
(29) \rightarrow (244 *SPG: she said the best way for the medication to work is to not be on the medication to be out of here. • 246 *SPG: which is ideal. •
```

In extract (23), he has been reporting on his progress in the ward and a conversation with the doctor. SPG uses reported speech to attribute (or possibly mis-attribute) a certain utterance to the doctor. He endorses this reported view in line 246 ("which is ideal"), adding an echoic dimension to the utterance.

In a discussion of 'high art' versus 'pop culture', TMH reports on a discussion she had with a music student (extract (30) below). She uses reported speech to attribute an utterance to herself at the time (line 220-223):

```
219
               *TMH:
                                                   LI once had an argument with a music
(30)
                       student and I said Meatloaf was um, Jim Stone's music was the
        220
        221
                       greatest thing since I think it was the eighties and the
        222
                       nineties I said in the last century Jim Stone, um Meatloaf was
                       the greatest musical event of the century. •
        223
               *TMH:
                       and they were horrified hhh. .
         224
         225
               *REA:
                       hhh. .
                       and I argued with them completely with adamant like
         226
               *TMH:
         227
                       determination that he was the best thing. •
               *TMH:
         228
                       I mean you know he's like a pop artist basically. •
         229
               *REA:
```

TMH not only reports her own argument using reported speech, she also reflects on the mental state of her audience; by acknowledging that "they were horrified" (line 224), she acknowledges their perspective on her reported argument<sup>25</sup>.

UMB uses reported speech to give an account of a specific conversation with the psychologist about his mental health. Extract (31) presents this reported discussion.

<sup>&</sup>lt;sup>25</sup> Further examples of TMH's use of reported speech occur in lines 313-314 of the transcript (Appendix  $G_{19}$ ).

(31)	333	*UMB:	I'm going to see him ja, I saw the ward doctors and stuff like
	334		that but their interest isn't as much as the psychologists
	335		anyway in all in all parts of stuff you know. •
	336	*UMB:	parts of things they have more [/] he had a lot of time from me
	337		cos I sort of took all of my phenomena and things I experienced
	338		I took it straight up to him and I asked him these questions
	× 339		and I was you know, what is this why do I have this # in my
	340		life and stuff like that and + •
	341	*UMB:	there was a part where he almost uh went about saying that
	342		ordinary stuff was sort of making me sick but then he quickly
	343		came to a realisation that you know its just sort of normal
	344		stuff. •
	345	*UMB:	he told me, no right he agrees that's not what's making me sick
	346		but uh we'll take it further and eventually, I don't I think
	347		subconsciously he sort of took a look at the silver lining, the
	348		good stuff, without knowing it and I tell him in the next
	349		session but you took you took a look at the positive side and
	350		he was like no I didn't do that! •
	351	*REA:	hhh.
	352	*UMB:	I said yes you did you did you you sort of kept my spirits up
	353		and stuff like that and so he was like no I don't do stuff like
	354		that and I was like ja you do you do man hhh. •
	355	*REA:	hhh.
	356	*REA:	so you're saying that he sort of came round to understand it
	357		from your point of [view. •
	₹ 358	*UMB:	ιja, 「ja.

UMB begins by using reported speech in lines 339-340, to report the content of the questions he asked the psychologist. The extract contains complex sequences, reporting both parts of the conversation, between lines 339 and 354. In this extract, UMB appears to report a number of 'turns' in a conversation between him and the psychologist, in which (on his interpretation), the psychologist comes to see things in a more positive light. Without data from the original conversation between the psychologist and UMB, it is impossible to tell whether this is an accurate report. However, the reported speech resembles UMB's interpretation of the psychologist's utterances (and attributed thoughts). UMB is clearly engaging in reported speech to convey a narrative to REA. UMB begins by signalling that he "took" questions up to the psychologist (lines 338-340). Using direct speech, he signals the report with "I was, you know," and he then quotes, "what is this, why do I have this in my life" (lines 339-340). The reported speech continues, with the use of free indirect speech to quote his interpretation of the psychologists assertion that "ordinary things" were making him sick. He also engages in attributed thought, reporting that the psychologist "came to the realization [...] that its just sort of normal stuff" (lines 343-344)<sup>26</sup>.

In the next extract, VMD, who had worked as a pharmacist until her admission, had been speaking about her job. REA reflects on the pressures and the amount of information she must have had to remember. VMD reports on an interaction with a doctor in which her knowledge was questioned and in an extended sequence of reportive utterances, conveyed the interaction between them.

<sup>26</sup> Further instances of UMB's use of reported speech are evident in lines 210-213, 317-325, 365-368 and 376 of the transcript (Appendix  $G_{20}$ ).

```
(32)
         448
               *REA:
                       quite a job hey. .
         449
               *VMD:
                       it is it is.
         450
               *REA:
                       you must have to remember. .
         451
               *REA:
                       and all those drugs, and all those names. •
         452
               *VMD:
                       yes , sometimes you don't even bother anymore. .
               *REA:
         453
                       oh hhh.
         454
               *VMD:
                       because sometimes I remember one time I was caught unaware. •
         455
               *VMD:
                       there was a drug in the scheme right you don't worry whether
         456
                       it's the the original and the generic, you just accept the
         457
                       generic without querying anything. •
         458
               *VMD:
                       so the physician phoned me one day, ask me the generic for this
                       drug so I just gave it to him just like we do at medscheme
         459
         460
                       without a thought. .
               *VMD:
                       so he says to me are you a hundred percent sure that that's the
         461
         462
                       drug I want? .
               *VMD:
                       so I said that's the only one that the medscheme actually
         463
         464
                       allows it, thats the only thing that they really substitute
         465
                       with. .
               *VMD:
         466
                       so he says are you a hundred percent sure its the same? .
                       so I said to him, I laughed and I said to him listen before I
         467
               *VMD:
         468
                       go any further let me take names and let me check for you
                       otherwise I'll be really making a fool of myself I'm not a
         469
       × 470
                       hundred percent sure what you're checking it.
         471
               *VMD:
                       when I looked at it when I looked at it was the the alcohol
         472
                       part.
               *VMD:
                       the other one is a <mey> [?] the other one is a <bey> [?]. •
         473
         474
               *VMD:
                       so I'm telling you hhh.
         475
               *REA:
                       hhh. •
                       I said I apologize absolutely, I'm so sorry (be)cause I it
         476
               *VMD:
        477
                       never occurred to me. .
```

In lines 461-462 VMD uses reported speech to attribute an utterance to the doctor, "are you a hundred percent sure it's the drug I want?" She goes on in lines 463-465 to report on her response. In line 466 she again uses direct speech to quote the doctor's question, "are you a hundred percent sure it's the same?" She continues to report on her subsequent 'turn' in the conversation in lines 467-470, and then finally her apology to the doctor in lines 476-477. The process of reporting on the conversation has required VMD to attribute utterances to herself at that time, as well as to the doctor, and metarepresent these to be recognised as such by her hearer.

In extract (33), REA is suggesting that the social worker may be best placed to address some of YMB's concerns regarding her admission. She uses an imperative in line 317, but metarepresents an utterance which she desires REA to convey to the social worker.

```
(33) 314 *REA: so how do you feel about this plan? • 315 *REA: that we finish up here and I go and find the social worker? • 316 *YMB: 「ja okay. • \rightarrow 317 *YMB: Land tell her Y wants to see her. •
```

Although imperatives are analysed as instances of descriptive use from an RT perspective, in this instance the 'desirable state of affairs' metarepresented is itself a potential utterance attributed to REA in a future time. As such it could be argued it represents a state of affairs in which REA produces the representation "W wants to see you".

#### 7.1.3 Summary: Reported Speech and Thought

Many of the participants display the ability to metarepresent both attributed utterances and thoughts. Table 7.3 presents the performance of participants in relation to the use of

both complex and simple metarepresentational structures involving either reported speech or thought. Despite an overall profile of 'ability' in this regard, a number of participants do not use any instances of reported speech or thought in the interactions transcribed, including CNJ, END, FNJ, LPC, and NPH. Three of these five participants present with pNS, while the other two have a profile of pPS. Although there is a trend towards those with pNS to have less evidence of successful use of reported speech and thought, it must be recognised that those with negative symptoms are likely to engage in less talk, resulting in less opportunity to observe and analyse their use of metarepresentational devices. The lack of a clear differentiation between those with positive and those with negative symptoms profiles may, therefore, suggest that the content of the conversation may not have provided an opportunity of need for such devices to be used, rather than a clear difficulty associated with psychiatric symptomatology.

TABLE 7.3 DEGREE OF COMPLEXITY IN THE USE OF REPORTED SPEECH AND THOUGHT BY PARTICIPANTS

Participant	Symptom Group	Complex metarepresentations	Simple metarepresentations
DNV	pNS	V	٧
*HNT	pNS	V	V
UMB	MS	V	V
OPH	pPS	٧	V
*RPD	pPS	V	<b>V</b>
*SPG	pPS	V	√
TMH	MS	√	V
VMD	MS	√	V
ANJ	pNS		V
*BND	pNS		V
GNS	pNS		V
*IPF	pPS		V
JPZ	pPS		V
*KPS	pPS		√
MPT	pPS		V
PPG	pPS		V
WML	MS		√
YMB	MS		<b>√</b>
*CNJ	pNS		
END	pNS		
FNJ	pNS		
LPC	pPS		COLUMN TO THE REAL PROPERTY OF THE PARTY OF
NPH	pPS		THE PERSON NAMED IN THE PE

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction

In reporting speech there are a number of instances in which the reported content does not appear to be an accurate quotation of the original and these instances have been considered in the analysis as instances of 'misattribution'. This feature is not interpreted to signal a deficit in the use of linguistic metarepresentation, given the principle of interpretive resemblance. In other words, the utterances maintain the attributive metarepresentational structure of reporting another as "saying that...". Some participants appear to be able to

metarepresent their interpretation of the original utterance (or its inferred logical and contextual implications). Thus, in some cases, it would appear that the person with schizophrenia has mis-interpreted or inferred erroneous implications from a statement (as happens in typical conversation too) and then reported on that utterance. Despite some of the clear instances of misattribution of meaning, REA appears to obtain sufficient cognitive effects from the participants' utterances, with few requiring any negotiation of meaning (discussed in Chapter Ten). In some cases, the cognitive effects obtained may be unintended by the participants (such as the assumption that the person is delusional).

Many of the metarepresentations in which thoughts (mental representations) are represented in utterances, are representations of the speaker's own thoughts at a time prior to the conversation. Although no overt difficulties were noted within reported thought, the bias towards metarepresenting their own thoughts at a previous time may be significant. This self-representing form of reported thought may perhaps have slightly different cognitive demands than the attribution of thoughts to others. The bias may have arisen, however, from the nature of the talk which occurred.

This data supports an analysis of successful use of attributive linguistic metarepresentation (in the form of reported speech and thought) by the majority of the research participants. Despite the hypothesis that inherently metarepresentational structures may be difficult for people with a proposed abnormality in metarepresentation, these individuals with schizophrenia (including those with active delusions) display the ability to use linguistic devices requiring at least metarepresentational ability. Of specific importance is that these instances of linguistic metarepresentation involve the attribution of utterances and thoughts to others (or themselves at an earlier time). Comparing performance in the use of reported speech and thought against the ability to engage in implicit attribution of mental states on the Fable Task reveals no clear pattern of associated performances. Similarly, no clear relationship exists between the use of reported speech and thought and language assessment profiles. A slight trend towards those with pNS displaying fewer instances of reported speech and thought emerged, and, although it should be interpreted with caution, this finding supports, in part, the prediction of symptom-based performance distinctions.

#### 7.2 Echoic Use

Echoic use was defined, in Chapter Three, as the use of an utterance which acts to attribute a thought or utterance to another person (or to the speaker at another time) and to convey an attitude towards the attributed content (Carston, 2002). While reported speech and thought achieve relevance by "informing the hearer about the content of the original"

(Wilson, 2000 p.148), echoic use conveys an attitude towards this attributed content (Sperber & Wilson, 1986/1995). Echoic use, therefore, also relates to attributed thoughts or utterances but achieves relevance by conveying the speaker's attitude towards the attributed representation, rather than by being merely reportive (Noh, 2000; Wilson, 2000). Thus, echoic use involves an "extra layer of metarepresentation [...] since not only the attributed content but also the speaker's attitude must be represented" (Wilson, 2000 p.148). Example A1 below illustrates that an utterance may report an attributed statement and be a simple first order metarepresentation, in this case a simple metarepresentation deployed in the service of reported speech. However, where an attitude is also conveyed, such as the dissociative attitude or irony or sarcasm, an additional layer of metarepresentation is involved, as illustrated in example A2.

A1: She said that this is the best room in the hotel.

A2: [I am incredulous that]
she said that
this is the best room in the hotel!

The analysis which follows is concerned with this second type of utterance which is one of echoic use and is of second order metarepresentational complexity.

A range of attitudes can be conveyed by an echoic utterance, "ranging from outright acceptance and endorsement to outright rejection and dissociation" (Sperber & Wilson, 1986/1995, p. 240). While echoing an utterance appears frequently in the data of the majority of participants, it appears to convey a non-specific attitude of endorsement or communicates that the participant is attending to the utterance of REA. Although communicative, the analysis of these types of endorsing utterances arguably adds little to understanding the metarepresentational abilities of the participants, and thus focus will be on the few instances in which more specific dissociative attitudes are communicated. Instances in which the echoic utterance communicates a dissociative attitude are of particular interest in this context as they signal the ability of the participant to separate their own attitude, belief or thought from the actions or attributed thought of another person. An attitude of dissociation or rejection is of interest, given that it would appear to involve a deliberate consideration of one's own beliefs in contrast to the expressed or attributed beliefs of another about an attributed representation. Irony and denial are specific instances of echoic use in which a dissociative or rejecting attitude is communicated and, thus, the use of such utterances will also be included here. RT does not view irony as a 'natural kind' but an instance of echoic use in which a dissociative attitude is tacitly communicated (as discussed in Chapter Three). Denials too, are viewed as echoic. Wilson

(2000, p. 150) states that "[...] denial (typically conveyed by use of negative sentences) is a speech act, whose function is to reject some aspect of an attributed utterance or thought" (Wilson, 2000 p.150). Table 7.5 presents the data references of those participants who demonstrated the use of echoic utterances in which the attitude communicated was dissociative.

TABLE 7.4 DISSOCIATIVE ECHOIC USE DISPLAYED BY PARTICIPANT

Participant	Symptom	Line numbers demonstratin	Appendix		
	Group	Dissociative attitude	Denial		
*CNJ	pNS		175	G <sub>3</sub>	
FNJ	pNS	200		G <sub>6</sub>	
*HNT	pNS	46	208	G <sub>8</sub>	
*IPF	pPS	108-109; 191-192	353	G <sub>9</sub>	
JPZ	pPS		399	G <sub>10</sub>	
NPH	pPS	573		G <sub>14</sub>	
OPH	pPS	202-204; 283		G <sub>15</sub>	
TMH	MS		140	G <sub>19</sub>	

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction

This discussion will present a range of instances in which participants engage in echoic use to convey a general dissociative or reproving type of attitude. Section 7.2.1 will present an analysis of the use of utterances which convey a generally dissociative attitude, as well as the single instance of irony evident in the data. Analysis of the instances of denials will be presented in 7.2.2.

## 7.2.1 Conveying a dissociative attitude towards an attributed utterance

Only a few participants echo an attributed utterance or thought and convey a dissociative or dismissive attitude towards the content of the attributed proposition. The analysis of these instances will be presented in the discussion that follows.

In extract (34), FNJ is reflecting on the purchasing habits of his customers, who buy rings with names engraved on them. Prior to this part of the conversation, FNJ had been telling REA that his customers do not buy rings bearing the name ANC<sup>27</sup> and he concludes that people do not support Thabo Mbeki, the president at the time and the leader of the ANC. FNJ reflects on the fact that they buy rings saying 'Tupac<sup>28</sup>'. In line 200 he appears to echo an attributed mental state and action (a state of 'not knowing' Tupac, but acting to 'support' him) and convey a dissociative attitude towards this attribution (supported by his overt dissociation in line 201).

<sup>&</sup>lt;sup>27</sup> The African National Congress - the ruling political party of South Africa.

<sup>&</sup>lt;sup>28</sup> An American rap artist.

```
(34)
        186
              *FNJ:
                      they don't support, they don't support Thabo Mbeki. .
        187
              *REA:
                      they don't?
              *FNJ:
                      they don't.
        188
              *FNJ:
                      and he's their father. .
        189
        190
              *FNJ:
                      giving them money for grants. .
        191
              *REA:
                      mmhm.
        192
              *FNJ:
                      yes.
        193
              *REA:
                      who will they support do you think? .
        194
              *FNJ:
                      sister? •
        195
              *REA:
                      who do they want to support if fthey don't support. .
        196
              *FNJ:
                                                      Ithey support Tupac hhh. .
                      hhh. .
        197
              *REA:
                      they don't know him hhh. .
        198
              *FNJ:
        199
              *REA:
                      but Tupac's not our president! .
       → 200
              *FNJ:
                      they don't know Tupac but they support Tupac. •
        201
              *FNJ:
                      they're stupid! .
```

Both HNT and NPH use echoic utterances to convey an attitude towards an utterance attributed to REA. HNT's utterance in line 46 of (35) is an echoic allusion to REA's utterance in line 42. HNT's echoing of the name and the laughter signals his attention to the utterance and his dissociative (specifically amused) attitude to the mistake made by REA. In extract (36), when REA asks NPH about lunch in the ward, NPH's response is one of echoic resemblence, marking it as a partial echo of REA's utterance (line 572) and overtly dissociating herself from the content. In doing so, NPH thereby conveys a distasteful attitude towards 'lunch' or the hospital food.

```
(35)
        39
               *REA:
                       you ready to do a bit more? .
        40
               *HNT:
                       I'm ready [/] let's do it. •
        41
               *REA:
                       let's do it, okay! .
        42
              *REA:
                       okay, Peter hhh, I nearly called you Peter, I don't know why. .
        43
               *HNT:
                       P? .
              *REA:
                       I don't know! .
        44
        45
              *REA:
                       Peter. .
      - 46
              *HNT:
                       oh, Peter, ja hhh. .
        572
              *REA:
                       ≈how is lunch here? •
(36)
                       oh my word, you don't want to ask about lunch≈. •
      → 573
               *NPH:
        574
               *REA:
                       ≈oh dear.
               *NPH:
        575
                       hhh, it's like lunch is too soon. .
```

NPH's dissociative attitude is conveyed by the use of the negative "don't" to negate the metarepresented higher order explicature of 'asking'. The implicature is clearly that 'lunch is awful', and NPH conveys this by disassociating herself from the question attributed to REA through echoic resemblence.

Extract (27') is repeated in part from (27) where it was discussed in relation to examples of reported speech. In lines 202-204, OPH arguably reports potential utterances which he attributes to himself in a hypothetical situation. Each utterance communicates not just the potential reported utterance but also his dissociative attitude towards them – as ridiculous perhaps, or wrongly-focused. Similarly, in (37), OPH, reflecting on his perception of the political problems in South Africa, reports that "they want to tell you about democracy".

```
*0PH:
                       imagine you go to home affairs and you tell them what your name
(27')
         194
         195
               *0PH:
         196
                       they say what nationality are you? .
         197
               *0PH:
                       you're confused, what the hell do you tell these people? .
         198
               *REA:
                       mmhm. .
               *0PH:
         199
                       what do I tell them? .
         200
               *0PH:
                       my name is S.
         201
               *0PH:
                       what do I tell them? .
         202
               *0PH:
                       that I'm a Portuguese? .
         203
               *0PH:
                       that I'm a German? .
                       or a Puerto Rican, or a Mexican? .
         204
               *0PH:
         205
               *0PH:
                       what do I tell these people? .
               *REA:
                       mmhm. .
         206
         207
               *0PH:
                       # do you have to see me in a picture to realize no this is just
                       another guy that comes from South Africa. •
         208
               *0PH:
                       just a colored guy, or whatever, he's from a mixed race. .
         209
               *0PH:
                       that is what make me so sick about this country. .
         281
(37)
               *REA:
         282
                       mmhm. .
         283
               *0PH:
                       then they want to tell you about democracy. •
                       what is democracy to these people, to me it looks like a
               *0PH:
         284
         285
                       mockery.
               *REA:
         286
                       mmhm.
                       it's a mockery, it's not democracy. .
         287
               *0PH:
```

In (27') OPH conveys his attitude of disdain or ridicule of the 'racial categorisation' system, through echoic use. OPH's dissociative attitude in (37) is towards the implicit message he attributes to 'them' – politicians or people in power perhaps. His dissociative attitude is evident from the discourse content which follows – suggesting that *democracy*, as presented by the politicians, does not exist in the country, in his view.

IPF engages in echoic use in lines 108-109 of (38), attributing reason for behaviour (a thought or utterance used to explain the behaviour) to another patient and conveying an attitude towards these attributions. The talk prompted by REA's question of whether she is friends with a particular lady in the ward.

```
*REA:
                       is C one of your friends in the ward? •
         98
(38)
         99
                       referring to patient who had just interupted
               %com:
               *IPF:
         100
                       not really, I'm trying to help her. .
               *REA:
                       okay, that's nice. .
         101
               *IPF:
                       speaking to her about window smashing, about suicide. •
         102
               *IPF:
                       she smashed a window in front of me.
         103
               *IPF:
         104
                       she started # +... •
               *REA:
         105
                       oh no #.
               *IPF:
         106
                       it's quite horrible to see it. •
         107
               *REA:
                       I'm sure it is.
      →( 108
109
                       just because your family doesn't arrive when # they # say
               *IPF:
                       they're going to. .
         110
               *REA:
                       is that what happened this time? .
               *IPF:
                       ja #. •
         111
         112
               *IPF:
                       she got angry. .
```

In this extract IPF attributes a thought (or perhaps an utterance) to a fellow patient. Her use of "just because" acts to support her communication of a dissociative attitude towards the attributed thought or utterance which she attributes to underlie the action of her fellow patient. The attribution could be analysed as taking the following form:

```
[I am incredulous that]
she thinks (says) that
```

her family not arriving for a visit is an excuse to smash the window

In the extract below, extended from extract (15), IPF engages in attribution (line 190) and echoic use which arguably contributes to the effect of irony (line 191-192):

```
180
               *IPF:
                       I thought it was the arthritis and all of a sudden I had heart
(39)
        181
                       attacks and then I had the strokes. .
              *REA:
        182
                      were you in hospital? .
               *IPF:
                       ja for a month. •
        183
        184
               *REA:
                      which hospital were you in? .
               *IPF:
        185
                      Pinewood. .
        186
               *REA:
                      where's Pinewood Hospital, I've never Theard of it. .
               *IPF:
        187
                                                              LValpark. •
        188
              *REA:
                      okay. .
              *REA:
        189
                      # okay, and what did they say there? .
        190
              *IPF:
                      nothing. .
        191
               *IPF:
                      they never even moved me to the i+c+u section for the # muscle
        192
                      spasm fits but it's okay! .
        193
              %com:
                      ironic tone of voice
```

IPF's use of reported speech in line 190 utilises interpretive resemblance, reporting to REA that "[they said] nothing [useful]". The second part of her utterance in line 192 ("but it's okay") is echoic and of interest here. In an interactional framework, such as that propsed by Jefferson (1985), this utterance, within the sequence of talk, may be analysed as resistance in the face of troubles telling. The ironic utterance may contribute to this resistance. Its ironic element is achieved, from a RT perspective, through echoic use, by attributing (or misattributing) a thought to the medical staff and dissociating herself from it. Its tacit communicating of a strongly dissociative attitude lends to an ironic reading (so clearly communicated that it is the single instance in which 'tone of voice' was marked during transcription).

Of those presenting with predominantly negative symptomatology, FNJ and HNT display instances of such echoic use. Of those presenting with predominantly positive symptom profiles, IPF, NPH and OPH display instances of conveying a dissociative attitude through echoic use. No participants from the group with mixed symptomatology displayed any clear instances of this type of echoic use.

#### 7.2.2 Use of denial by participants

Denial, echoic in nature, is used by four of the participants, again across the symptom groupings. The instances of its use will be discussed here.

CNJ responds to REA's assertion that the task is 'easy' for him, with a denial in line 175 of (40):

```
(40) 173 *REA: right, those are easy for you. •
174 %act: after successful four answers
175 *CNJ: no, not not really. •
176 *REA: well you're doing really well. •
```

In this example, CNJ is denying the immediately preceding utterance attributed to REA.

HNT produces a denial in line 208 of (2'), repeated in part from (2), in response to REA's assertion that she did not know he was diabetic:

```
(2') 205 *REA: I know, (be)cause I didn't I didn't know you were diabetic. • 206 *HNT: you didn't know? • 207 *REA: no. • →208 *HNT: aah, you know madam since you come here. •
```

The denial in line 208 is not in the form of a negative sentence as it is echoing and denying REA's utterance in line 210 (which itself is in the negative form). HNT is clearly denying an utterance attributed to REA, and specifically within this denial he is attributing a thought to her. Thus, this denial acts to echo and reject REA's utterance while attributing a thought to her at a previous time ('since you come here').

In the extract below, REA misunderstands JPZ, and JPZ uses a denial structure to echo REA's misinterpretation and correct it in line 399:

```
*JPZ:
                       LSO I want to go to town, I've got no money. .
(41)
         392
                       okay, to get your pension.
         393
               *REA:
               *JPZ:
                       yes, can I have a leave?
         394
               *REA:
         395
                       from me?
               *JPZ:
         396
                       ves.
         397
               *REA:
                       you need to talk to the doctor. .
                       I'll tell her that you want leave for the pension. •
               *REA:
         398
               *JPZ:
                       not leave, for for a lift. •
       + 399
                       oh for a lift.
         400
               *REA:
```

REA has interpreted JPZ's request in line 394 as a request for 'leave of absence' from the hospital. JPZ corrects this interpretation in line 399.

In the extract below, TMH and REA are talking about how literature is 'defined'. REA proposes a perspective (line 140) and in 136 TMH denies the utterance attributed to REA as the valid argument.

```
*TMH:
                      it's one of those books that you do just want to read. .
        132
(42)
        133
              *TMH:
                      but he writes like that. .
              *TMH:
                      he's got such a clear crisp um style that it's so easy to you
        134
        135
                      know just get involved in it. .
              *REA:
                      so why do you think he's not really considered as +/. •
        136
                      well he's The's he's.
        137
              *TMH:
              *REA:
                                L+, literature? •
        138
        139
              *REA:
                      is it because he churns out so much stuff? .
              *TMH:
      →140
                      no that isn't the argument. •
        141
              *TMH:
                      how does that argument go again? .
        142
              *TMH:
                      that literature versus pop fiction something +... •
        143
              *TMH:
                      um. .
        144
              *REA:
                      I don't know the argument. .
        145
              *TMH:
                      I don't know the argument either but there is there is an
                      argument for it.
        146
```

TMH's denial is based on metarepresenting an attributed utterance, and denying its validity.

IPF's denial in line 353 of (43) is analysed as echoic as IPF is clearly denying something – although in this case it appears to be the denial of 'mis-attributed implicatures':

```
*IPF:
        345
                      in two thousand and two I danced a competition in Johannesburg,
(43)
        346
                      in truth and I won.
              *REA:
        347
                      that's amazing. •
        348
              *REA:
                      what do you mean in truth, in the magazine? .
              *REA:
        349
                      or +/.
              *IPF:
        350
                      no no no truth truth the club ≈. .
              *IPF:
        351
                      ≈vou know e-tv? •
              *REA:
        352
                      yes. •
                      I'm not a liar but # there's f'E'. .
       →353
              *IPF:
              %act:
                      pointing at a small indistinct tattoo on her arm
        354
        355
              *REA:
```

IPF's response in line 353 seems to suggest that she interpreted REA's utterance (whether the one immediately preceding or, more generally, the preceding discourse) to be communicating some level of doubt about her truthfulness, and thus defends herself. IPF interprets REA's "yes" (or even an utterance preceding this) as carrying some unintended implicatures. These implicatures, which IPF can be said to be echoing and denying, are attributed thoughts which she has interpreted as communicated. This may be a communicative case of ascribing intention where none was intended, and appears to suggest the (mis)use of the strategy of Sophisticated Understanding.

### 7.2.3 Summary: Echoic use by participants with schizophrenia

Only a few participants engage in echoic use in which the attitude communicated is dissociative (such as seen in irony or denial), within the interactions transcribed CNJ, FNJ and HNT are amongst the participants with pNS who display instances of echoic use involving dissociative or reproving attitude. IPF, JPZ, NPH and OPH constitute those from the pPS grouping who convey dissociative attitudes through echoic use, with TMH the only participant from the MS grouping. IPF is the only participant noted to use irony in her delusional report of how a hospital responded to her reported health crisis (extract 46). The specific focus on dissociative attitude conveyance allowed for analysis of instances in which participants attribute a thought or utterance to another and then distance themselves from the representation. This process involves engaging in considering and 'reflecting' on the beliefs or communications of others — something which would be predicted to be significantly impaired for this group, but which is clearly within reach for a number of the participants.

#### 7.3 Echo questions and metarepresentation

Echo questions, from a RT perspective, were defined in Chapter Three as utterances which function as questions and are echoic in that they echo and question some aspect of an attributed thought or utterance. By using these utterances "the speaker echoes and questions some aspect of the form or content of an attributed utterance [or thought]" (Wilson, 2000:152). Within an RT framework, questions are treated as metarepresentational and are seen as representing a desirable answer, where the answer

itself is a representation (Sperber & Wilson, 1986/1995). The ability to produce successful and relevant questions rests, therefore, on a metarepresentational ability. Echo questions are metarepresentational in the sense of regular interrogatives but have an additional metarepresentational element in that they are attributive (Noh, 2000; Wilson, 2000). Echo questions may question the content of an attributed utterance, an attributed or inferred thought, and even an attributed implicature (Noh, 2000). The attributive nature of echo questions makes them particularly pertinent to the discussion of metarepresentational abilities in schizophrenia. The fact that echo questions are attributive mean that performance with regards to these structures in a pragmatic sense may be sensitive to disturbances in mentalizing abilities. For this reason, the focus in this analysis is on the use of echo questions specifically.

Noh (2000) sees echo questions as "asking questions about metarepresented illocutionary acts" (p.163). As such, within an RT framework where three broad types of speech act are recognised, the echo questions can metarepresent assertions ('saying'), requests ('telling') or questions ('asking'). Thus, the proposition "Jane is crying", can be embedded within a higher-level explicature, "I think that Jane is crying" and similarly the echo question "Jane is crying?" can be paraphrased as representing the question, "are you saying that Jane is crying?" Indeed, if they are paraphrased to represent these 'higher-level explicatures', echo questions can be seen to fulfil the function of yes-no or wh- questions specifically about attributed meaning. A formal feature of these utterances is their declarative syntax and rising intonation (Wilson, 2000).

This discussion will focus on the analysis of echo questions used by participants. The analysis will be presented according to the metarepresentational complexity of the questions used. Instances of complex metarepresentational structures will be addressed first, followed by the analysis of simple metarepresentations. The echo questions analysed encompass both echo questions about the accuracy of inferences and echo questions about 'saying'.

# 7.3.1 The participants' use of complex echo questions

In a number of instances, participants use echo questions to question aspects of what is implied by an utterance or whether their own inferences or attributions are accurate. The questions carried by these echo questions appear to be instances of the "more complex cases" referred to by Noh (2000, p.163) in which several layers of higher level explicatures are metarepresented in the echo question. Some of the complex echo questions noted in the transcripts appear to act as utterances checking the hearer's knowledge or awareness of a topic or construct. These echo questions appear to be checking inferences specifically

about the hearer's knowledge state — they are questions about 'knowing' and 'not knowing'. In this 'role', the utterances seem to be used to echo a possible thought attributable to REA, and question whether or not it is manifest to her. Following Noh (2000), these utterances could be paraphrased as taking attributed potential thoughts in their scope:

Am I correct in inferring that you are aware (know about) / want / think [lower order proposition]

Some of the examples use the words 'you know', and explicitly question whether the relevant representation (proposition or assumption) is held by REA. Their use seems to suggest a level of sensitivity to the fact that some of the specific assumptions may not be manifest to REA. Recognizing that the interlocutor does not have access to the expected assumptions can also be signalled through echo questions:

Am I correct in inferring that
you don't know
[lower order proposition]

Table 7.5 presents the data references of those participants who demonstrated the use of these structures within the conversation. Analysis of exemplars of this usage is presented in the discussion which follows.

TABLE 7.5 USE OF COMPLEX ECHO QUESTIONS ABOUT INFERENCES

Participant Symptom Group		Line numbers demonstrating evidence of the use of complex echo questions about inferences **	Appendix	
*BND	pNS	149	G <sub>2</sub>	
*HNT	pNS	259; 419	G <sub>8</sub>	
*IPF	pPS	286; 351; (428)	G <sub>9</sub>	
KPS	pPS	223; (470)	G <sub>11</sub>	
NPH	pPS	593	G <sub>14</sub>	
OPH	pPS	(389); (617); (622-625)	G <sub>15</sub>	
*RPD	pPS	272; 282; 303; 306	G <sub>17</sub>	
*SPG	pPS	170	G <sub>18</sub>	
VMD	MS	49	G <sub>21</sub>	
YMB	MS	(456)	G <sub>23</sub>	

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction

These questions echo and question the implicature of an utterance, attributed to REA, where the implicature is that she does not share the assumptions or have access to specific information. Although these questions may signal that the person was initially unaware of the fact that the assumptions were not mutually manifest, the recognition of a state of 'not knowing' demonstrates an awareness of what is not manifest to the interlocutor during the

<sup>\*\*</sup> Bracketed data references are not discussed in the analysis which follows

talk. In line 149 of the extract below, BND uses an echo question following REA's assertion that he can have a smoke break a little later:

```
(44) 147 *REA: Lyou can have a smoke just

148 now, later. •

149 *BND: ja, you can give me? •

150 *REA: I don't have [//] I don't smoke. •
```

BND's echo question appears to be questioning the implicatures of REA's utterance as he has interpreted them. He appears to be asking, "Am I correct in inferring that you are implying that you can give me tobacco"?

HNT also metarepresents REA's utterance or an attributed thought within his delusional talk, to question and express incredulity at the attributed representation in both extracts (45) and (46) (line 259 and line 419 respectively). In the first of these examples (occurring within delusional talk), HNT produces an echo question echoing the attributed thought implied by REA's question in line 258. He appears to convey an incredulous attitude to REA's implicature that she is not aware of the person's identity.

```
so someone's been tempting you to smoke? .
        248
              *REA:
(45)
        249
              *HNT:
                       ia. ·
              *REA:
        250
                       who is it, someone in the ward? .
                       ja, that person who lives in the corner and just like to appear
        251
              *HNT:
        252
                       it's kind of by a slow motion. •
              *REA:
        253
                      okay. .
              *REA:
                      and he tempts you to smoke? .
        254
              *HNT:
        255
                      yes. •
                      what's his name? •
              *REA:
        256
              *REA:
        257
                       # you don't know his name? .
              *REA:
                      ## I don't know him I don't think. .
        258
       259
              *HNT:
                      you don't know? .
              *REA:
                      no ##. •
        260
        261
              *HNT:
                      satan. •
              *REA:
                      oh, satan. •
        262
        263
              *HNT:
                      yeah #. .
              *HNT:
(46)
        417
                      no I behave I want to behave like Kleinkloof. .
        418
              *REA:
                      whose Kleinkloof?
                      Kleinkloef, you don't know it? •
              *HNT:
       →419
                       the location of Daveyton.
        420
              *HNT:
              *REA:
                       oh you mean you want to behave so that you can go out to home
        421
        422
                       in Kleinkloof? .
              *HNT:
        423
                       ja. •
```

Line 419 of the second example illustrates a similar echo question in which HNT is questioning the implicature of REA's utterance (that she is not aware of 'Kleinkloof').

In different instances within delusional talk IPF produces echo questions which echo a possible thought or conceptual representation attributed to REA. Line 286 of (7') and line 351 of (43') illustrate two such instances:

```
*IPF:
(7')
       281
                     recently, there was that movie shanghai nights +/. •
       282
             *REA:
                     ja. ·
             *IPF:
                     +, and I saw the stone and I went to my bedroom and I'm like
       283
                     ja but that's the stone that was # on that, it was budda but
       284
       285
                     then there was an ashtray. •
     → 286
             *IPF:
                     you know the ashtray? .
       287
             *REA:
                     mmhm. •
             *IPF:
                     I've got the ashtray. •
       288
```

```
345
              *IPF:
                      in two thousand and two I danced a competition in Johannesburg
(43')
        346
                      in truth and I won.
        347
              *REA:
                     that's amazing. •
              *REA:
                     what do you mean in truth, in the magazine? •
        348
              *REA:
        349
                      or +/.
              *IPF:
        350
                     no no no truth truth the club ≈. .
              *IPF:
      + 351
                      ≈you know e-tv? •
              *REA:
        352
                      yes. •
                      I'm not a <u>liar</u> but # there's ['E'. •
        353
              *IPF:
                      pointing at a small indistinct tattoo on her arm
        354
              %act:
        355
              *REA:
```

These are particularly interesting examples of echo questions as they occur within delusional talk and act to check knowledge attributed to REA. IPF is essentially metarepresenting the potential attributed thought (mental representation) of being aware of a particular ashtray in (7') and etv in (43'), and asking whether REA has access to this mental representation. The question is thus for desirable information about REA's mental representation with regards to these assumptions: 'do you, REA know (or have access to the related assumptions) of --- that I have mentioned'.

In extract (48) KPS and REA are talking about marshmallow Easter Eggs which they are eating during the refreshment break. REA asserts that she believes they are a uniquely South African product, and KPS uses an echo question in line 223, apparently to challenge REA's assumption.

```
218
              *REA: I think these are a very special South African thing, # I
(48)
        219
                      don't think they have them in other countries. .
              *REA:
        220
                      it's quite a South African easter egg #.
        221
              *REA:
                      I don't know is other countries have got marshmallow eggs like
        222
                      These.
              *KPS:
      → 223
                      Lyou know Beacon is actually Australian? •
              *REA:
        224
                      is it?
              *KPS:
        225
                      mmhm. •
              *REA:
        226
                      so maybe Australia and South Africa. .
              *KPS:
        227
                      mmhm #. .
        228
              *REA:
                      hmm, I didn't know that #. .
              *REA:
        229
                      how did you know #? .
        230
              *KPS:
                      I know the company #. .
              *REA:
        231
                      hmm.
```

This utterance is open to analytic interpretation. Given it conforms to the formal properties of an echo question, it is analysed as such. However it is recognised that KPS may not have intended it to correct a 'false belief' and, in that case it would not be an echo question. By using the question "you know Beacon<sup>29</sup> is actually Australian?", KPS appears to b asking, "are you aware that Beacon is actually Australian?". Her question, while in the form of an echo question, in fact echoes a thought clearly not attributable to REA – the opposite of the belief stated by REA. This use of an echo question to 'correct' a 'false belief' appears to be a sophisticated technique to challenge the assumptions of another.

In the extract below, REA has just complimented NPH on her performance on a language assessment task. In her response, a question (line 593), NPH questions a potential

<sup>&</sup>lt;sup>29</sup> A common brand of chocolates and sweets available in South Africa.

attributed thought – that REA is using encouragement just to 'make her feel better'. This question functions to check the intention (a mental state) behind REA's utterance and, as such, is analysed as an echo question. Not only is this question an example of an echo question, but it also demonstrates NPH's awareness of REA's potential *intentions* in providing praise or encouragement.

```
591
               *REA:
                       excellent. .
(49)
                       response to last test item
        592
               %com:
      → 593
                      you're not saying that just to make me feel [better? •
               *NPH:
               *REA:
        594
                                                                   Lno. .
               *NPH:
        595
        596
               *REA:
                      thanks, P. .
                       is that it? .
        597
               *NPH:
               *REA:
                       mmhm, fthat's it. .
        598
        599
               *NPH:
                            LWOW.
               *NPH: thank you. •
        600
```

In (49), NPH appears to be asking, in line 593, "am I correct in assuming that you are not saying that I did well just to make me feel better?" This is a complex metarepresentational structure when viewed in tiered structure:

```
am I correct in assuming that
you are not saying that
I did well in order to make me feel better?
```

RPD very frequently asks whether REA 'understands'. Her questions around REA's understanding frequently take the form of echo questions in their declarative syntax and rising intonation. In extracts (4'), (50) and (51), echo questions can be seen in line 272, line 282 and lines 303 and 306 respectively.

```
264
              *RPD:
                      that's why I I I'm drawing it because I he wants me to see. .
(4')
                      so I doing it I went to her so I told her if I can draw the
              *RPD:
       265
                      sketches they can put in uh the horizon or whatever they can
       266
       267
                      do [maybe they can +/. .
                      Lis the horizon a newspaper? •
       268
              *REA:
       269
              *RPD:
                      the newspaper. •
                      or there in in in the # in the # in the # on tv or or
       270
              *RPD:
       271
                      publish it in the hospitals. .
                      you understand me? .
              *RPD:
       272
       273
              *REA:
                      mmhm.
                      but let me tell you about this pictures that I draw you cannot
        281
              *RPD:
(50)
                      trace them, you understand my thought? .
      → 282
        283
              *REA:
                      you cannot trace them. .
              *RPD:
        284
                      you cannot trace them. .
        285
              *RPD:
                      because hey it's coming out of my acceleration of my human
                      body's spirit.
        286
              *REA:
                      # what do you think happens if I try and trace it? .
       296
(51)
       297
                      there's nothing wrong what [/] but what I saw the other day
              *RPD:
       298
                      when somebody wanted to trace it, it it he doesn't get it
       299
                      right. •
       300
              *REA:
                      mmm. .
                      because a why because he although he traced it, there's other
       301
              *RPD:
                      people that are tracing but they cannot trace a certain amount
       302
                      of things, you understand my point? • because this comes from your heart. •
      → 303
       304
              *REA:
       305
              *RPD:
                      this comes from the heart, and this comes from us. .
              *RPD:
      → 306
                      you cannot traced it, you understand me? •
              *REA:
                      I understand I understand. .
       307
```

While it is possible that these utterances are regular *yes-no questions* in which the initial question word is ellipsed, their content appears to be attributive. In other words, these questions appear to be active attempts to reflect on potential thoughts held by REA, and thus are considered here to be both attributive and metarepresentational. In each case, it is argued that the attributive nature of considering someone else's mental representation contributes to the echoic nature of these utterances. By asking whether an interlocutor understands, following a sequence of talk, the participant displays sensitivity to the fact that a conversation partner may not always follow or infer the intended meaning from an utterance. This sensitivity is metarepresentational. The questions here, it is argued, can be paraphrased as asking, "am I correct in inferring that you are able to interpret my utterance?" Her frequent use of this structure may also be a feature of her own communication style, or a marker of turn allocation, perhaps. It is not, however, a notable feature of SAE.

In the extract below, SPG's echo question in line 170 of (52) appears to be questioning an implicated conclusion he has drawn from REA's utterance:

```
*SPG:
(52)
        164
                      #0_24 how long have we got left? .
        165
              *REA:
                      of this? .
              *SPG:
        166
                      ja. ·
        167
              *REA:
                      probably about # fourty minutes. .
              *SPG:
        168
                      how long have we been going so far # on average? .
        169
              *REA:
                      half an hour. .
       170
              *SPG:
                      another fourty minutes in total left? •
        171
              *REA:
                      mmhm. .
        172
              *REA:
                      how does that sound? .
        173
              *SPG:
                      so I can take out a couple of minutes just to relax? .
```

Here the echo question seems to be of a complex form, paraphrased as:

Am I correct in inferring that

you are implying (saying) that we have forty minutes left in total.

VMD is accounting the origins of Matabele, a language related to Zulu in (53).

```
so \# if I ask you about the languages, when you were young you
        39
               *REA:
(53)
         40
                       were [/] obviously you grew up in Zimbabwe [so you were
        41
                       speaking is it Matabele, is that what fit's called? .
               *VMD:
        42
                       Lyes. .
               *VMD:
        43
                                              Lyes mmhm. .
        44
               *REA:
                       Matabele. •
               *VMD:
        45
                       mmhm.
               *VMD:
                       Matebeleland, Ndebele. .
        46
        47
               %exp:
                       the land which is now known as Zimbabwe
               *VMD:
        48
                       that is the Mzilikazi. •
               *VMD:
        49
                       remember Mzilikazi? •
        50
               *VMD:
                       he broke away from Shaka, he was expelled. .
        51
               %exp:
                       influential king of the Zulu Kingdom in 1800s, Mzilikazi was a
                       general and break-away king
        52
        53
               *REA:
                       okay, Tyes. .
        54
               *VMD:
                             iso we were the ones who were the ones the descendants
                       of Mzilikazi.
        55
                       okay, so does that mean the language is quite similar to
        56
               *REA:
        57
                       Zulu? .
        58
               *VMD:
                      it's similar to Zulu. .
```

In line 49 she uses an echo question to ask whether REA "remember[s] Mzilikazi³o" This example appears to be an instance of checking the information or knowledge available to REA – a case of using an echo question to check the state of knowing, or not knowing. VMD uses the word "remember", perhaps signalling that she expects REA to have learnt about the historical figure at school. VMD appears to be asking, "are you aware of Mzilikazi" or "am I correct in inferring that you know about Mzilikazi?"

### 7.3.2 The participants' use of simple echo questions

A number of participants produce simple echo questions, which act either to question an inference based on an attributed utterance or thought, or to question an attributed utterance itself (an echo question about 'saying'):

Am I correct in inferring that [lower order proposition]

Are you saying that [lower order propsition]

Table 7.6. presents the reference to the data pertaining to the use of such utterances. The analysis of several of these extracts will be presented in the discussion that follows.

TABLE 7.6	USE OF	SIMPLE	<b>ECHO</b>	QUESTIONS
-----------	--------	--------	-------------	-----------

Participant	Symptom Group	Line numbers demonstra simple echo	Appendix	
		Simple echo questions about inferences	Simple echo questions about 'saying'	
ANJ	pNS	69		G <sub>1</sub>
*BND	pNS		258	G <sub>2</sub>
DNV	pNS		381	G <sub>4</sub>
FNJ	pNS	292	222	G <sub>6</sub>
*HNT	pNS		31; 314; (520-521)	G <sub>8</sub>
JPZ	pPS		142; 217	G <sub>10</sub>
LPC	pPS		31; (79); (147-148); (319- 320); (345-346); (388)	G <sub>12</sub>
MPT	pPS		226; 231; 238; 243	G <sub>13</sub>
ОРН	pPS	729	262-263; 270; 272	G <sub>15</sub>
*RPD	pPS		(106); 129	G <sub>27</sub>
*SPG	pPS		153	G <sub>18</sub>
ТМН	MS		(571)	G <sub>19</sub>
WML	MS	400		G <sub>22</sub>

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction

In extract (54), following completion of a language assessment task, ANJ appears to make the inference that the task has been terminated because it is becoming too difficult. He questions the meaning of the place of termination (lines 62 and 64) with regular

<sup>\*\*</sup> Bracketed data references are not discussed in the analysis which follows

<sup>&</sup>lt;sup>30</sup> A historical African king who foundered 'Matebeleland' (what is now Zimbabwe).

questions and then in line 69 poses an echo question to question his own inference. While this example is open to interpretation, within the context of the termination of the test before the final section (the more basic vocabulary screening), there is a sense that ANJ has interpretated the termination as an indication on his performance. His question, in this light, appears to echo his interpretation of REA's reason for terminating the test.

```
*REA:
(54)
                      you concentrated very hard for that first one. .
        62
              *ANJ:
                      so it's, what does it mean, I only went up to T four? .
              *REA:
        63
                      hmm? •
        64
              *ANJ:
                      what does it mean? .
        65
              *REA:
                     oh, you got everything right, Tyou're the first person. .
        66
              *ANJ:
                                                    the one I got wrong and you
        67
                      stopped asking. •
              *REA: oh, it's the end, look ##. .
        68
       + 69
              *ANJ:
                     those are harder ones, [the end is harder? .
              %com: look through the end of the assessment material together
        70
              *REA:
        71
                                             ino, those are no these are easier ones
        72
              *ANJ:
                      foh. .
        73
              *REA:
                      (be)cause that's just vocabulary. •
        74
              *REA:
                      you see it ends here. .
        75
              *ANJ:
                    mmm. •
```

The echo question in line 69 can be paraphrased as follows: "am I correct in inferring that those are harder one, the end is harder?" On this interpretation (in keeping with the RT definition of echo questions) ANJ is metarepresenting an intention attributed to REA (terminate the test as it is too difficult for ANJ) and is questioning his inference. REA disconfirms this inference, reassuring him that the task is complete and the remaining items pertain to vocabulary alone and are not part of the actual assessment.

Extract (55) occurs during BND's delusional talk. He has asserted that Jan van Riebeeck (a South African historical figure) plays soccer. REA responds in line 257 that Jan van Riebeeck came to Cape Town hundreds of years ago (implying that it is not possible that he plays soccer). BND's echo question is evident in line 258 where he asks, "hundred?":

```
*REA:
(55)
        251
                      Jan van Riebeeck? •
        252
              *BND:
                      ja, ja, he plays soccer. •
              *REA:
        253
                      no man, Jan van Riebeeck is the man who came to Cape Town. .
        254
              *BND:
                      yes is is him, I I know him. .
              *REA: you know him? •
        255
              *BND:
                      ja.
        256
              *REA:
        257
                      but he came to Cape Town hundreds of years ago. .
      → 258
             *BND:
                      hundred? .
        259
             *REA:
                      ia.
              *BND:
                      mmhm #. .
        260
              *REA:
                      did you learn about Jan van Riebeeck in school? .
              *BND:
                      ja, but it's long time, hey? .
        262
                      long time 'since you were in school? .
        263
              *REA:
              *BND:
        264
                                Lja.
```

BND appears to be posing the question (possibly in surprise) – "are you saying that it is hundred[s] of years ago?" His later utterance in line 262 appears to register this surprise (although REA interprets it to mean 'a long time since you were in school' rather than relating to the hundreds of years mentioned previously). As in previous extracts of delusional talk, the misunderstanding is clear and may be argued to arise from the different

assumptions held by each party (This notion of the mutual manifestness of assumptions in delusional talk will be explored in Chapters Nine and Ten).

Both DNV and FNJ use echo questions. At the end of the interaction with DNV, REA signals which door she believes to be unlocked<sup>31</sup>. DNV echoes and questions REA's utterance in line 381 of (56). DNV, by using an echo question, asks, "are you saying that this side is open?" – thus clarifying the intended meaning of the utterance attributed to REA. FNJ, in line 222 of (57), also poses an echo question:

```
II hope that you get your discharge soon, hey. .
        377
              *REA:
(56)
        378
              *DNV:
                      ia. ·
        379
              *REA:
                      okay. .
              *REA:
                      I think that side is probably open. .
        380
       381
              *DNV:
                      oh this side? .
              *REA:
        382
                      ja. ·
        383
              *REA:
                      have a good day M. .
              *DNV:
        384
                     thank you! .
        219
              *REA:
                      are you a chiefs supporter? •
(57)
        220
              *FNJ:
                      me I'm a pirate. .
              *REA:
                      ah, me too.
        221
       - 222
              *FNJ:
                      you are a pirate? .
              *REA:
                      ja. •
        223
                      ja, it's nice! .
        224
              *FNJ:
```

FNJ's echo question in (57), "[are you saying that] you are a Pirate?<sup>32</sup>" attributes the utterance to REA and questions it, perhaps simultaneously conveying an attitude of surprise or incredulity<sup>33</sup>.

FNJ is recounting a story of an inter-hospital soccer game in which he took part. In line 292 he poses what may be analysed as an echo question, "you were taking the photos?"

```
285
              *FNJ:
                      I was playing that side on the ground. •
(58)
        286
              *FNJ:
                      then I score two goals.
        287
              *REA:
                      oh you mean in OT, you were playing. .
                      yes, I was Iplaying. •
              *FNJ:
        288
        289
              *REA:
                                 when the other hospital came to visit us. .
              *FNJ:
                      yes. •
        290
                      I was playing.
        291
              *FNJ:
              *FNJ:
                      you was taking the photo? .
       → 292
              *REA: I wasn't taking the photos but I was there, I saw some. .
        293
        294
              *FNJ:
                      where's my photos? .
                      I don't know, I didn't take the photos! .
        295
              *REA:
        296
              *FNJ:
                      okay hhh. .
                      I was there, I just went up to look what was happening. •
        297
              *REA:
        298
              *FNJ:
                      ja you see me? .
        299
              *REA:
                      I didn't see you but I didn't know you so +... •
        300
              *FNJ:
                      okay.
```

This instance is open to interpretation. The question does conform to the formal properties of echo questions, as outlined in Chapter Three. Given that this utterance appears to be checking an inference (rather than an interpretation of a prior utterance as some other

<sup>&</sup>lt;sup>31</sup> As outlined in Chapter Five, the interactions took place in a secure psychiatric hospital. Movement between sections of the ward was, therefore, controlled.

<sup>&</sup>lt;sup>32</sup> An appropriate construction in BSAE – questioning an association.

<sup>&</sup>lt;sup>33</sup> It would be unusual for women, and possibly particularly from the 'white community' to follow local soccer teams.

examples), we would not expect a prior utterance as a trigger. Instead, this question appears to be checking FNJ's inference that if REA was aware of the match (as indicated in line 289) then she may have been there and, if she was there, she may have been the therapist taking the photos. FNJ's echo question appears to be questioning an inference which he himself has made — perhaps based on a recollection of a staff member taking photos at the match. The question can be interpreted as asking, "[am I correct in inferring (or saying) that] you were taking the photos?"

HNT produces numerous echo questions which appear to function to request clarification of an attributed utterance. Extract (59) occurs at the end of the refreshment break when HNT appears to be rushing to finish his cool drink. Extract (60) occurs after HNT has asked REA if she thinks he is someone to be pitied. In line 31 extract (59) and line 314 of (60), he echoes and questions REA's utterance (attributing it to her) and appears to request clarification of what she is *saying*. In the first instance HNT appears to be asking, "are you saying that you want me to finish it now. In the second extract, line 314 he appears to be asking "are you saying that you think that I am that person".

```
30
               *REA:
                       you don't have to finish it all now. .
(59)
       → 31
               *HNT:
                       oh # you want me to to finish it? .
        32
               *REA:
                       no, you don't have to finish it +/. .
        33
               *HNT:
                       oh.
         306
               *HNT:
                       # what do you call a person who in pity whom you can feel pity
(60)
         307
                       on him and that you pass him as he is. .
         308
               *REA:
                       so it's someone is who I feel pity for and I pass him just
         309
                       because I feel sorry for him? .
               *HNT:
         310
                       ia. ·
               *REA:
         311
                       okay. .
                       I don't think you're that person. .
         312
               *REA:
       → 313
               *HNT:
                       what person? .
         314
               *HNT:
                       I am that person? .
         315
               *REA:
                       no. ·
```

Both these instances reflect complex metarepresentation – metarepresenting the higher order explicature of 'saying' on the part of REA, but with the additional complexity that the representational component itself is attributive (REA wants or REA thinks respectively). These two examples may thus be better paraphrased as the complex metarepresentations displayed in (a) and (b):

- (a) Am I correct in attributing to you the assertion [desire] that I should finish this now?
- (b) Am I correct in attributing to you the thought that I am that person?

Using this type of echo question appears to display significant skills in metarepresentation, given that what is metarepresented is not merely attributed utterance but an attributed utterance which itself is a metarepresentation<sup>34</sup>.

JPZ is originally from Swaziland, a country landlocked within the borders of South Africa. In extract (61), REA is talking about a visit to the country and her experience of seeing the king and his entourage. JPZ uses an echo question in line 142 to clarify an aspect of REA's earlier utterance. Similarly in extract (62), JPZ uses an echo question (line 217) after REA asserts that she wants to visit Maputo<sup>35</sup>, a city where JPZ reports spending time.

```
*REA:
                       I saw [/] the one day when we were on the road there, there
(61)
        136
        137
                       came the king of Swaziland. .
               *JPZ:
        138
                       mmhm hhh. •
               *REA:
        139
                       with all the cars! .
               *JPZ:
        140
                       mmhm.
        141
               *REA:
                       you know how he goes,, hey? .
               *JPZ:
       → 142
                       the cars? •
        143
               *REA:
                       you know, so many cars in a row, the police and +... .
               *JPZ:
        144
                       the police on the road. •
               *REA:
        145
                       ja. •
               *JPZ:
        146
                       hhh. .
        147
               *REA:
                       # he has too many wives though. .
               *JPZ:
                       wife? .
        148
        149
               *REA:
                      the king of Swaziland. •
        150
               *JPZ:
                      yes hhh yes. •
               *REA:
                       I want to go that side one day. .
        216
(62)
      → 217
               *JPZ:
                       # at Maputo? .
               *REA:
        218
                       mmhm. .
               *JPZ:
                       hhh. •
         219
```

JPZ's echo question in extract (61) appears to be asking, "what are you saying about the cars?", while her use of the echo question "at Maputo?" in (62) can be paraphrased as "are you REA, saying that you want to go to Maputo?". In both cases JPZ is asking a question about an aspect of an utterance attributed to REA<sup>36</sup>.

In extract (63), REA and LPC are talking about the 'benefits' of being in ward four — a less restrictive ward environment. REA asserts that the access to the library would be "nice" and LPC uses an echo question to clarify the intended meaning (line 31). Given that access to the library is represented as contingent on being in ward four (see line 24-26), LPC's question in line 31 appears to ask, "[are you saying that it would be nice] to go to ward four?" — thus clarifying the intention of a metarepresented utterance attributed to REA.

 $<sup>^{34}</sup>$  A further example of HNT's use of echo questions about *saying* can be seen in lines 520-521 of the transcript (Appendix  $G_8$ ).

<sup>&</sup>lt;sup>35</sup> The capital of Mozambique, a country on South Africa's north-east border.

<sup>&</sup>lt;sup>36</sup> Further examples of JPZ's use of echo questions appear in lines 147-148; 319-320; 345-346 and 388 of the transcript (Appendix  $G_{10}$ ).

```
20
               *REA:
                       you know we have a library at the hospital? .
(63)
               *LPC:
         21
                       ia.
         22
               *REA:
                       you know that? .
               *LPC:
         23
                       yes. •
         24
               *REA:
                       so usually I think it's if you're in ward four than [/] and you
                       have parole to go to OT then lots of people would walk to the
         25
         26
                       library.
               *LPC:
         27
                       yes. •
                       and go and choose books. .
         28
               *REA:
               *LPC:
         29
                       ves. •
         30
               *REA:
                       so that would be something nice for you,, hey? .
                       ja, to go to ward four? .
       + 31
               *LPC:
         32
               *REA:
                       ja, you'll have to ask the doctor about that but I'm saying
         33
                       when you go that side it'll be nice (be) cause you can go to
         34
                       the library a little. •
               *LPC:
         35
                       yes # Tyes. .
```

Extract (64) is taken from a sequence of talk in which MPT and REA have been talking about the two most popular South African soccer teams – 'Chiefs' and 'Pirates'. REA asserts that these teams played the Brazilian team. MPT uses an echo question to clarify and potentially to express incredulity at this unlikely (but true) scenario in line 226:

```
*REA:
                       recently they had um these matches with the Brazillian
        224
(64)
        225
                       team, is it the Brazillian team, with Ronandino? .
               *MPT:
      -1226
                       you mean South Africa? .
        227
               *REA:
                       ja. ·
               *REA:
        228
                       pirates and chiefs played them. .
        229
               *MPT:
                       I don't think that can be +/. .
        230
               *REA:
                       it's true. •
       → 231
               *MPT:
                       that way? .
                       ja, they came here. •
        232
               *REA:
               *MPT:
        233
                                Lokay. .
        234
               *MPT:
                      oh, okay. .
```

MPT's echo question can be paraphrased as asking a question about an utterance attributed to REA, "are you saying that the Brazilian team played South Africa?" When REA confirms that she did indeed say that, MPT produces the echo question in line 231, "that way?", appearing to ask, "are you saying that it happened [in the way that you describe]?" The conversation continues and in line 237 of (65) MPT uses an echo question again, "they played Pirates?".

```
# it was a few months ago. .
               *RFA:
(65)
        237
       → 238
               *MPT:
                       they played pirates? .
        239
               *REA:
                       they came here, they played chiefs and then they pay- played
        240
                       pirates. .
              *MPT:
        241
                       what happened, what Twas the score? .
               *REA:
        242
                                            Ithey beat both of them. .
               *MPT:
                       they beat both of them? .
      → 243
              *REA:
        244
                       ia. .
              *MPT:
        245
                       hhh.
               *MPT:
                       I thought as much. .
```

Again he appears to be expressing his incredulity, "are you saying that the Brazilian team play Pirates?" and then in line 243, "they beat both of them?" – clarifying REA's utterance suggesting that the Brazilian team beat both the 'Chiefs' and 'Pirates'.

In extract (66), OPH engages in uncomfortable talk around a socially inappropriate, politically volatile word ("kaffir"). OPH uses echo questions to challenge what he sees as an unacceptable state of affairs (lines 262-263 and 270, 272). OPH's use of echo questions in

the initial part of this extract appears to question the thoughts or reasons attributed to the political system or society at large, asking, "what is it that they hope to do/achieve in the constitutional court?" (line 262) and "what is it that they think they'll prove?"

```
256
               *0PH:
                       I mean is this the mentality of South Africa's mentality? .
(66)
               *OPH:
                       that's what I would call a kaffir mentality. •
         257
         258
               *0PH:
                       a kaffir is somebody who doesn't believe in God. •
         259
               *0PH:
                       that is exactly what it is. .
         260
               *0PH:
                       and yet today they tell if you call someone a kaffir they can
         261
                       take you to constitutional court.
               *0PH:
                       to do what in the constitutional court? .
         262
      →[ 263
                       to prove what? .
               *0PH:
               *0PH:
         264
                       because history taught us a kaffir is an unbeliever, that's
         265
                       what history taught me.
               *0PH:
                       so why do they want to change the equation now and make it loo
         266
                       like # oh Thabo Mbeki wants to run for president, this one
         267
         268
                       wants to run for this, this one wants to run for that, run for
         269
                       +/...
               *0PH:
       → 270
                       running for where, for what? .
        271
               *REA:
                       mmhm.
       → 272
               *0PH:
                       to do what? .
               *REA:
                       have you been listening to the news? .
         273
```

In another example, (67), REA and RPD are talking while she draws during a 'break' from language assessment tasks. RPD asks a *wh*- question about the nature of the "work which we are doing now" and follows this regular question with an echo question (line 129):

```
when I came from Valberg hospital I started drawing. •
              *RPD:
        119
(67)
              *REA:
        120
                      mmhm. •
        121
              *RPD:
                      yes, because I was drawing there in that that country. .
        122
              *REA:
                      in Valberg? •
        123
              *RPD:
                      mmhm.
              *REA:
                      # does Valberg feel like another country to you? •
        124
              *RPD:
        125
              *RPD:
                      but you see I have to understand my way what +... .
        126
                      as I say I try my best, I'm just drawing a little bit. .
        127
              *RPD:
              *RPD:
                      this work which we are doing now whats what is it called? .
        128
              *RPD:
                      research on what again?
       →129
              *REA:
                      remember what we said yesterday, it's research on language
        130
        131
                      fand communication. •
              *RPD:
        132
                      llanguage and communication. •
```

RPD's echo question appears to be attributive — seemingly referring to the detailed information given during the consent process and recapped at the follow-up which would have been done by REA at the start of the session. Her question metarepresents REA's assertion as to what the research is about, attributing the assertion to REA and requesting its completion — "what did you say that the research is about?"

SPG uses an echo question in line 153 of (68) to question an utterance he attributes to REA, during a discussion about the ingredients of a tin of juice and a carton of juice.

```
149
               *REA:
                       # it looks like they've got the same things in them. .
(68)
         150
               %com:
                       reading the ingredients
                       this one's got more kilojoules and a bit more carbohydrates. •
         151
               *REA:
         152
               *REA:
                       ## the tin. •
       → 153
               *SPG:
                       the tin has got? •
                       the tin has got two hundred and forty three kilojoules per
         154
               *REA:
         155
                       hundred mils. .
         156
               *SPG:
                       ## slightly more. .
               *REA:
                       and it's got fourteen point eight grams carbohydrate per
         157
         158
                       hundred mils.
```

Although most examples of wh- echo questions cited in the literature end with a wh- word, in this example the final question word seems to be ellipsed, but the question appears to be of a similar form: "the tin has got [what]?" This echo question can be paraphrased as "[what are you saying that] the tin has got?" Again the question pertains to an aspect of an attributed utterance.

At the end of the session, WML uses an echo question to question whether she is correct in assuming that REA does not need the remaining biscuits (line 400):

```
395
               *REA:
                       do you want to take one of those juices? .
(69)
         396
               *WML:
                       ja, thanks.
               *REA:
         397
                       maybe you should take the biscuits and share them with the
         398
                       people in the house because I don't have any way to close
         399
                       them. .
                       you won't need them? .
       → 400
               *WML:
               *REA: no, I don't have anyway to close them and then by the time I
         401
         402
                       see someone else they'll not be nice, they'll be all soft. .
               *WML:
         403
                       okay, thanks. .
```

Having been offered the biscuits by REA, WML is entitled to assume that REA does not need them, and her echo question "you won't need them?" acts to clarify her assumption<sup>37</sup>.

#### 7.3.3 Summary: Echo Questions

Most of the participants use echo questions within the interactions, to question specific aspects of what REA was saying, telling or asking and, in some cases, more complex aspects of the utterance involving questions of the accuracy of an attribution or what was inferred or implied. Their use strongly suggests the ability to engage in second-order metarepresentation within conversational interaction. A summary of the findings is presented in Table 7.7. Of those not using any echo questions in the conversation recorded CNJ, END and GNS presented with prominent negative symptomatology; PPG with prominent positive symptomatology; and UMB with mixed symptomatology. Again, the absence of a feature must be interpreted with caution as it does not necessarily imply an inability to use such an utterance in this way, but perhaps a lack of opportunity or necessity in that particular conversation. No clear commonality in terms of the language assessment profiles, psychiatric symptoms (symptom group or score on the paranoid belligerence cluster of the PANSS) or performance on the Fable Task is apparent between the participants who demonstrated the use of echo questions, or those who did not engage in its use.

Participants presenting with delusional talk during interaction displayed a perhaps surprising number of echo questions around inferences within delusional or thought

 $<sup>^{37}</sup>$  A further example of WML's use of an echo question is apparent in line 209-210 of the transcript (Appendix  $G_{22}$ ).

disordered sections of talk. These participants appear to be checking the 'knowledge state' of the interlocutor with regards to certain assumptions pertaining to their delusions. IPF and RPD's use of echo questions in this regard indicate a 'checking back' at her conversation partner's awareness of the constructs they are representing. This feature suggests a possible consideration of the mutual cognitive environment. HNT on the other hand appears to use echo questions with an expression of surprise or incredulity at REA's utterances (extracts 45 and 46), which he echoes and questions. This suggests a possible lack of awareness of the lack of a mutual cognitive environment or mutually manifest assumptions in this regard. Delusional talk thus appears to present an opportunity for exploration of how the mutual cognitive environment is treated and negotiated.

TABLE 7.7 PARTICIPANTS USE OF ECHO QUESTIONS (DISPLAYED BY TYPE AND COMPLEXITY)

Participant	Symptom	Echo questions a	about inferences	Echo questions about saying Simple	
	Group	Complex	Simple		
OPH	pPS	٧	٧	V	
*RPD	pPS	٧		٧	
*HNT	pNS	٧		V	
*SPG	pPS	٧		V	
*BND	pNS	٧		V	
*IPF	pPS	٧			
MPT	pPS	٧			
VMD	MS	٧			
*KPS	pPS	٧			
NPH	pPS	٧			
YMB	MS	٧			
FNJ	pNS		٧	V	
ANJ	pNS		٧		
WML	MS		٧		
DNV	pNS			V	
JPZ	pPS			V	
LPC	pPS			V	
TMH	MS			V	
*CNJ	pNS				
END	pNS				
GNS	pNS				
PPG	pPS				
UMB	MS				

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction P.B = Paranoid Belligerence Score on the PANSS

# 7.4 Conclusion: the use of attributive metarepresentation in speakers with schizophrenia

The pervasive and generally successful use of linguistic metarepresentation involving attributive abilities is a surprising finding in the light of the overwhelming literature on 'mentalizing' impairments in people with schizophrenia. The conversational ability to use these devices of reported speech or thought, echo and echo questions all signal an ability to use at least second-order metarepresentation in the context of conversation. In addition,

the attributive component of their use supports a conclusion of the ability to metarepresent another's thought or belief (in the case of mental representations) or reflect on another's utterance. There was no clear association between performance in this regard and performance on the Fable Task; the language assessment profile of participants; or the psychiatric profile of the participants.

The ability to use linguistic metarepresentation in conversation was pervasive, demonstrated across the three symptoms groups, as evident in the summary presented in Table 7.8.

TABLE 7.8 DEGREE OF COMPLEXITY IN THE USE OF REPORTED SPEECH AND THOUGHT BY PARTICIPANTS

Participant	Symptom Group	Complex metarepresentational structures		Echoic Use	Simple metarepresentational structures	
		Reported speech & thought	Echo questions		Reported speech & thought	Echo questions
*HNT	pNS	٧	٧	٧	٧	٧
OPH	pPS	٧	٧	٧	٧	٧
*SPG	pPS	٧	٧		٧	٧
VMD	MS	٧	٧		٧	
*RPD	pPS	٧	٧			٧
TMH	MS	٧		٧	٧	٧
DNV	pNS	٧			٧	٧
UMB	MS	٧			٧	
*IPF	pPS		٧	٧	٧	
NPH	pPS		٧	٧		
*BND	pNS		٧		٧	٧
MPT	pPS		٧		٧	
YMB	MS		٧		٧	
*KPS	pPS		٧		٧	
JPZ	pPS			٧	٧	V
FNJ	pNS			٧		V
ANJ	pNS				٧	V
WML	MS				٧	٧
PPG	pPS				٧	
GNS	pNS				٧	
*CNJ	pNS			٧		
LPC	pPS					V
END	pNS					

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction P.B = Paranoid Belligerence Score on the PANSS

Reported speech and thought was demonstrated by all but 5 of the 23 participants (CNJ, END, FNJ, LPC, and NPH). In terms of reporting thought, the predominant pattern was participants reporting their own thoughts at an earlier time, rather than reporting thoughts attributed to others. The performance did however suggest the ability to attribute representations to others and publicly represent these through the use of an utterance. The process of engaging in metarepresentational processes thus appeared to be intact, despite the bias towards specific material – attributed utterances or reporting their own thoughts.

Echoic use - specifically the communication of a dissociative or rejecting attitude - was explored. Eight participants demonstrated its use - involving an additional metarepresentational component of attitude communication, and the separation of one's own attitude to the attributed utterance. Of the subset of participants demonstrating no instances of reported speech or thought, (CNJ, END, FNJ, LPC and NPH), three of these participants - CNJ, FNJ, and NPH - demonstrated echoic use and, therefore, appear to be able to engage in the processes of metarepresentation of attributed thought and utterances (albeit in a non-reportive form). Given that echoic use is itself attributive, this pattern of performance suggests that CNJ, FNJ and NPH are able to engage in the process that underlie reported speech and thought, as they clearly have the ability to communicate their attitude towards attributed content (even though the content in these specific cases may not be classically 'reportive' in nature). All but five participants (CNJ, END, GNS, PPG and UMB) displayed clear ability to use echo questions successfully, with some evidence of participants with delusional talk 'checking' the assumptions available to the interlocutor. The overall profile of performance, then, suggests that all the participants, with the exception of END, used attributive metarepresentation in some form during their conversational engagement.

Having explored how participants engage in the use of attributive metarepresentation, it is of interest to investigate how they respond to specific metarepresentational demands in the role of 'hearers'.

# **Chapter Eight**

# The metarepresentational demands of interpreting questions: The hearer with schizophrenia

Chapter Seven considered how speakers with schizophrenia used instances of linguistic metarepresentation, illustrating some evidence of how they deploy metarepresentational abilities in conversation. In a similar manner, Chapter Eight will focus on how the participants' engagement in conversation reveals evidence for their use of metarepresentational skills, this time in the role of 'hearer'. The specific focus of this chapter is how the person with schizophrenia interprets questions, which, from a Relevance Theory (RT) perspective are instances of interpretive use and therefore inherently metarepresentational. This chapter will address the following research questions, as a subset of the research questions outlined in section 5.1 of Chapter Five:

- (1) Is there evidence in conversational data of metarepresentational (dis)abilities of people with schizophrenia, when viewed from a cognitive-pragmatic perspective? Specifically the analysis will shed light on part (c) of this question: Is there evidence that participants with schizophrenia have difficulty interpreting regular or echoic questions in conversation?
- (2) How does the engagement in metarepresentational features of talk differ between symptom groups of participants with schizophrenia?

The frequent use of questions by the researcher (REA) provides ample data for analysis. In addition, questions in conversation are generally followed by a response, which provides indirect evidence for how the questions were interpreted. As acknowledged, conversation is inherently 'messy' and dividing the discussion into consideration of performance of the person with schizophrenia as 'speaker' and performance as 'hearer' necessarily involves blurred boundaries. The particular challenge of using a person's responses (as speaker) to infer their comprehension of a preceding utterance was discussed in Chapter Five.

This chapter will be presented in three sections. The first section, section 8.1, will revisit the RT perspective on interrogatives, briefly summarising how these non-declaratives structures achieve relevance as well as the metarepresentational demands they place on the hearer. The analysis of the conversational data will follow with consideration, in section 8.2, as to how the participants with schizophrenia interpret regular (non-echoic) questions. Section 8.3 will present an analysis of how the participants interpret echo questions which demand an additional metarepresentational layer in the RT approach. While the data from all 23 participants was included in the analysis, the extent of exemplars is too vast to present each instance. As such, the discussion that follows will focus on particularly pertinent extracts which exemplify patterns in the data and the reader will be referred to

extracts in the transcripts for further supporting evidence. To promote ease of reading, the extracts are numbered from (1), and cross-referenced within this chapter. The chapter will conclude by discussing the patterns of performance across the question types, with reference to symptom profiles and performance on the Fable Task.

# 8.1 The relevance of questions

Questions are inherently metarepresentational, from a RT perspecive, and hence of interest in the current study. Implicit in the definition of questions from this perspective is that interpreting and responding to a question requires consideration of how the answer will achieve relevance for the other person. The hearer (the participant with schizophrenia in the context of the discussion in this particular chapter) is expected to identify how their answer would yield cognitive effects for the individual asking the question. As van der Henst, Carles and Sperber (2002) point out:

In asking a question, people indicate what information would be relevant to them. In answering a question, helpful speakers try to provide that information without causing the hearer any unmotivated processing effort (p.458).

The use of questions places a specific demand on the hearer with regards to identifying informative intentions. From an RT perspective, as presented in Chapter Three, "the relevance of a question derives from the indication that its answer would be relevant" (Blakemore, 1992, p. 115). In this framework, interrogatives are not relevant within themselves, but "represent desirable thoughts (or desirable information)" (Wilson, 2000, p. 154). In this way, questions represent thoughts which themselves are representations of representations and hence, metarepresentations:

[...] interrogative utterances, like echoic utterances, are doubly interpretive: they interpretively represent a thought of the speaker's, which itself interpretively represents another utterance or thought" (Wilson & Sperber, 1998, p. 283).

Given the metarepresentational nature of questions, the analysis which follows is relevant in order to address two of the research questions outlined in Chapter Five: (1) Is there evidence in conversational data of metarepresentational (dis)abilities of people with schizophrenia, when viewed from a cognitive-pragmatic perspective? Specifically part (c): Is there evidence that participants with schizophrenia have difficulty interpreting regular or echoic questions in conversation? And (2) How does the engagement in metarepresentational features of talk (in this case interpreting the inherently metarepresentational utterences that are questions) differ between symptom groups of participants with schizophrenia?

Two broad groups of questions will be considered here in detail: regular (non-echoic) questions and echo questions. The most significant difference is that echoic questions are attributive, where regular questions are not. That is, echoic questions (like other forms of echoic use) are representations which attribute a representation (e.g., thought or utterance) to someone else (or to the speaker at a different time) and question an aspect of this attribution. The additional metarepresentational demands of echo questions would be predicted to make them more difficult for people with schizophrenia. A detailed discussion of these question types, illustrated with examples, is presented in Chapter Three.

# 8.2 Interpreting regular questions

## 8.2.1 Metarepresentational considerations

The case presented first is that of regular (non-attributive) questions, that is, the content of the question is an abstract, linguistic, logical or conceptual form, rather than a thought or utterance attributed to a person. *Yes-no* and *wh-questions* are both regular questions but differ in the nature of the information they represent as relevant:

Yes-no questions express complete propositions which call for confirmation or disconfirmation, [while] wh- questions express incomplete [...] logical forms which represent the sort of complete proposition the questioner considers relevant (Carston, 2002, p. 241).

In many cases it is expected, in the context, that the hearer provide information beyond what is explicitly represented by the question, as relevant. As discussed in Chapter Three, there may be contexts in which a direct response is intuitively appropriate; in other cases it seems abrupt and less appropriate. Frequently, the question calls not only for a *yes-no* response, for example, but implies that further information would be relevant in the response. As outlined by Carston (2002) these responses

seem, in effect, to be a response to an implicit question [taken] to have been raised by her direct answer to [...] an overt question. This process of anticipating questions, hence where relevance lies for an interlocutor, seem to be a very common practice amongst speakers (p.146).

Truncated brief responses in conversation are frequently characteristic of individuals with negative symptoms of schizophrenia, a feature described as 'poverty of speech' (Frith, 1992) and thus truncated responses must be carefully interpreted. In the context of this study, responses which indicate the anticipation of implicit questions signal that a hearer has actively considered what might be relevant to the questioner by providing information predicted to be relevant. If this practice of 'anticipating questions' could be demonstrated in the hearers with schizophrenia, it would provide evidence for not only being able to

engage in metarepresentational processes inherently demanded by questions, but also an ability to 'predict' the questioner's desired cognitive effects, which is surely an exercise of 'taking the perspective of the other'.

# 8.2.2 Successful interpretation of regular questions: Participants' anticipation of questions and prediction of relevance considerations

This section will explore the analysis of participants' ability to anticipate implicit questions and predict where relevance lies for the hearer when interpreting and responding to regular questions. While many of the participants demonstrate significant skill in identifying implicit questions and predicting where relevance lies for the questioner, there are instances in which participants provide purely a confirmation or disconfirmation to a *yes-no question*. As outlined earlier, not all regular questions demand additional information, and the requirement to identify an implicit question is dictated by the broader discourse and situational context. The focus in this chapter is specifically on evidence of sophisticated metarepresentational ability or evidence of difficulty in interpreting questions. For this reason, instances of direct responses which appear to achieve relevance are not analysed here. Table 8.1 presents the summary of data demonstrating participants' ability to anticipate questions and predict where relevance lies for REA.

TABLE 8.1 EVIDENCE OF PARTICIPANTS' ABILITY TO ANTICIPATE QUESTIONS AND PREDICT RELEVANCE

Participant Symptom Group		Line numbers demonstrating ability to anticipate questions and predict relevance **	Appendix	
ANJ	pNS	7; 38; 139-140; 142-143	G <sub>1</sub>	
*BND	pNS	(232); (312); 394	G <sub>2</sub>	
*CNJ	pNS	93; 144	G <sub>3</sub>	
DNV	pNS	240; 246	G <sub>4</sub>	
FNJ	pNS	139; 306	G <sub>6</sub>	
GNS	pNS	68; 301; (54); (59-60); (242)	G <sub>7</sub>	
*IPF	pPS	(15); (98); 122; (182); 384	G <sub>9</sub>	
JPZ	pPS	128; (179-180); (182); (339)	G <sub>10</sub>	
*KPS	pPS	17; (261); (287-288); 416; (463)	G <sub>11</sub>	
LPC	pPS	12; 16	G <sub>12</sub>	
MPT	pPS	289	G <sub>13</sub>	
NPH	pPS	(292; 296)	G <sub>14</sub>	
ОРН	pPS	?? attributive	G <sub>15</sub>	
PPG	pPS	233	G <sub>16</sub>	
*RPD	pPS	114; 187; (164); (296)	G <sub>17</sub>	
*SPG	pPS	(53); 406; 408; 411	G <sub>18</sub>	
TMH	MS	(196-198); (404)	G <sub>19</sub>	
UMB	MS	12; 15; (183); (216); (445)	G <sub>20</sub>	
VMD	MS	(404-405); 431-432	G <sub>21</sub>	
WML	MS	199; 279; (294-295)	G <sub>22</sub>	
YMB	MS	302	G <sub>23</sub>	

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction

<sup>\*\*</sup>Bracketed data references are not discussed in the analysis which follows

The analysis of exemplar extracts is presented below and the reader is referred to the data references in Table 8.1 further evidence.

In the three extracts below, REA and ANJ are in conversation around his employment history and the nature of his work.

```
*REA:
                       did you work before you were in hospital? .
(1)
                       yes uh my first job was in a mapping company.
        8
              *ANJ:
        9
              *REA:
                       a mapping company?
              *ANJ:
        10
                      ja, photosurveys.
        11
              *REA:
                      okay.
        12
              *ANJ:
                       drawing topographical maps from aerial photography.
              *REA:
                      that's interesting, hey.
        13
(2)
      → 38
              *REA:
                       did you do other interesting jobs like that? .
              *ANJ:
                      my second job second job was at randlord. •
        39
        40
              *ANJ:
                      # it was drawing. •
        41
              *ANJ:
                      I was helping out in the drawing office, I was assistant in
        42
                       the drawing office, filing and taking maps. •
     →( <sup>139</sup> <sub>140</sub>
              *REA:
                      so do you remember some of the maps that you did when you were
(3)
                       doing +/. •
              *ANJ:
                       ja we did areas like Modderfontein, Seefield, 「xxx. •
        141
      → 142
              *REA:
                                                                       Lwhich one was
                       the most difficult one you ever did? •
        143
                      um, # they all sort of have a difficult piece. .
        144
              *ANJ:
        145
              *REA:
                       okay. .
        146
              *ANJ:
                       then it's easy, some parts is easier some +... •
              *ANJ:
                      the contours is a bit hard to do. .
        147
```

Although the yes-no questions (lines 7, 38 and 139-140 respectively) explicitly represent a confirmation or disconfirmation as optimally relevant in each case, ANJ displays considerable skill in anticipating where relevance lies for his conversation partner. In the first instance (line 7), he appears to be sensitive to the implicit question regarding the nature of his work. In responding to REA's question in line 38 of (2), "did you do any other interesting work like that?", ANJ's response provides an implied confirmation, but also responds to the implicit question regarding the specifics of previous employment. Similarly, he recognises that REA's question in line 139-140 of (3) ("do you remember some of the maps you did [...]"), metarepresents not just a confirmation, but also reference to any specific areas, as being optimally relevant. In responding to the wh- question in lines 142-143 of (3) ANJ displays similar success, responding by acknowledging that all the areas have a difficult component to map. Although this response may not be what REA's question explicitly represented as relevant (a 'specific area') the answer achieves relevance and leads to a sequence of talk around different types of contour lines.

Extract (4) below is taken from the interaction with BND. The conversation had turned to discussing where BND would be able to obtain his desired tobacco, or BB<sup>38</sup>. REA's

<sup>38</sup> Slang for loose tobacco.

question in line 391, "do you have a friend in the ward who shares BB with you?", represents a confirmation or disconfirmation as optimally relevant.

```
→ 391
              *REA:
                       do you have a friend in the ward who shares bb with you? .
(4)
        392
              *BND:
                       ai. •
               *REA:
                       you don't have a friend #. .
        393
               *REA:
                       your family, do they come to visit to bring you fbb?
     \rightarrow 394
        395
              *BND:
                       inot they they didn't know where I'm here. .
              *REA:
                      they don't know that you're here. .
        396
```

An implicit question of "where do you get your tobacco from?" may be present, and in fact REA goes on to question further about his access to 'BB' in line 394 (this example is reflected in the table of 'less successful' interpretation of regular questions, Table 8.2). In response to the question in line 395, BND, initially providing only a direct response, elaborates on his disconfirmation responses in a way that reflects an anticipation of further questions<sup>39</sup>.

In the two extracts below, REA poses very similar *yes-no questions* to CNJ, another of the participants with pNS, asking, "does any interesting stuff happen...". The conversation in extract (5) is about occupational therapy and CNJ can be noted to introduce delusional talk around Brad Pitt in response to the *yes-no questions* asked in lines 91 and 93. In extract (6) REA's questions in line 142 and 144 relate to the ward environment.

```
88
              *REA:
                      ## so I believe sometimes you go to OT? .
(5)
        89
              *CNJ:
                      sometimes, yes. •
              *CNJ:
                      not when I'm like tired and stuff, then I don't go. .
        90
     → 91
              *REA:
                      do you just walk down here? .
              *CNJ:
        92
                      ja. ·
              *REA:
      + 93
                      any interesting stuff happen there? .
              *CNJ:
        94
                      uh, nothing much #. .
        95
              *CNJ:
                      um, personally I am [//] I was just trying to fi- [/] # to um
                      work with um Brad Pitt and stuff. .
        96
              *CNJ:
                      trying to figure him out somehow hhh. .
        142
              *REA:
                      it's noisy in this ward, hey? .
(6)
              *CNJ:
        143
                      ja! ·
              *REA:
      + 144
                      does any interesting stuff happen on that side? .
                      not really, not much, just a whole lot of smoking hhh. .
       145
              *CNJ:
              *REA:
        146
                      a whole lot of smoking≈. •
        147
              *CNJ:
                      ≈ja hhh≈. •
              *REA:
        148
                      ≈do you smoke as well? •
                      yes most of the time.
        149
              *CNJ:
        150
              *REA:
                      so a whole lot of smoking # and sitting around and chatting? .
              *CNJ:
        151
                      ja, no chatting, fjust craziness. .
```

In both line 91 of (5) and 142 of (6) a simple confirmation ("yes" and "ja" respectively) appears to achieve relevance for REA and REA is observed to move on to talk about a related issue. In keeping with the pattern of anticipating questions, CNJ elaborates on his answer in response to REA's questions, "does anything interesting happen ...?" (lines 93 and 144 respectively). REA's question in line 76 of (5) appears to carry the implicit question of "what happens at OT?" or the request "tell me about OT". CNJ's introduction of the

 $<sup>^{39}</sup>$  A further example of BND's ability to anticipate questions is evident in line 312 of the transcript (Appendix  $G_2$ ).

delusional topic in line 95 of (5), does not appear to be directly related to OT (although may be associated in his cognitive environment). It is plausible that this example is not a response to an anticipated question, but rather may be analysed as a sophisticated attempt to 'weave' his delusion into the current talk. In extract (6) CNJ appears to anticipate that what is relevant to REA is a response to the implicit question "what happens in the ward?"

Extract (7) occurs in the conversation between DNV and REA and is about Thomas, a patient who has interrupted the session, and contains a sequence of questions. DNV is successful in responding to a number of regular questions in this extract, encompassing both wh- and yes-no questions. It is the yes-no questions which are of interest here, as they provide the opportunity for DNV to anticipate where relevance lies for REA. In responding to the yes-no question in line 240, DNV elaborates, providing the relevant information as to why Thomas is "disturbing", suggesting that "he's corrupt" He provides the relevant information in response to REA's question as to whether Thomas is his friend (line 246). In contrast, DNV does not seem to anticipate where relevance lies for REA with regards to the yes-no questions in lines 254 and 259, causing REA to pose follow-up questions in echo (line 256) and wh- format (line 262) respectively (these two instances are reflected in the table of evidece of 'less successful' interpretation of questions, Table 8.2).

```
*DNV:
                      this guy is disturbing. .
        236
(7)
     → 237
              *REA:
                      who? .
        238
              *DNV:
                      that one who was here #. .
              *DNV:
        239
                      Thomas.
                      is he disturbing you? .
      → 240
              *REA:
              *DNV:
        241
                      ah, eh, he's corrupt #. .
        242
              *DNV:
                      he's seeking too much. .
                      why? .
              *REA:
        243
        244
              *DNV:
                      he's just interfering, talking with the sisters, eh, # want to
        245
                      talk with the sisters with force you see. .
        246
              *REA:
                      is he your friend?
              *DNV:
                      he's not my friend, I met him here. .
        247
              *DNV:
                      but he make as if he's my best best friend. .
        248
              *DNV:
        249
                      he seek too much.
        250
              *REA:
                         Lwhat was he asking you now in Zulu? •
              *DNV:
        251
                      he ask me mageu.
                      a traditional African non-alcoholic drink of fermented maize
        252
              %exp:
        253
              *REA:
                      oh. ·
      → 254
              *REA:
                      and do you have mageu +/. .
        255
              *DNV:
                      ia.
      → 256
              *REA:
                      +, in the fridge? •
        257
              *DNV:
                      ja. •
        258
              *REA:
                      # mmhm. .
              *REA:
      + 259
                      were you in the same ward before this ward? .
              *DNV:
        260
                      no. ·
                      oh. ·
        261
              *REA:
              *REA:
                      where did you come from? .
      → 262
        263
              *DNV:
                      come from ward eleven. .
        264
              *REA:
                      from eleven. .
```

 $<sup>^{40}</sup>$  The usage of the word 'corrupt' appears to refer to fighting or aggressive behaviour and is used by several participants in this way. See lines 278-280 and 348-354 of Appendix G<sub>4</sub> for REA's attempt to clarify usage.

In the two extracts which follow, FNJ also displays the ability to anticipate questions.

```
(8)
        132
              *REA:
                      and your child, where is she staying now? .
        133
              *FNJ:
                      staying with me. .
              *FNJ:
        134
                      staying my [mother. •
        135
              *REA:
                                  land while you're in the hospital she's with +... .
              *FNJ:
        136
                      is with my mother. .
        137
              *REA:
                      okay. .
        138
              *FNJ:
                      yes. •
                      do you get to see her, does she come and visit? •
      → 139
              *REA:
        140
              *FNJ:
                      ja, they will come on saturday. •
              *REA:
        141
                      I'm sure you miss them. .
        142
              *FNJ:
                      I miss them.
     → 306
              *REA:
                      did we beat the other team? .
(9)
        307
              *FNJ:
                      we beat him seven two. .
```

In extract (8), FNJ and REA have been talking about his young daughter when REA poses the *yes-no question* in line 139. In extract (9) REA asks about the outcome of a recent soccer match (line 306). FNJ's response in both instances suggests that he has metarepresented the question as representing a desirable confirmation, but also recognised further information implicitly represented as relevant. He appears to anticipate that REA may want to know when last he saw, or when next he will see, his daughter in (8). Similarly, in (9), FNJ anticipates that what is relevant to REA is not just the confirmation or disconfirmation explicitly represented by the question, but also further details regarding the win over another soccer team.

GNS demonstrates a similar ability to anticipate where relevance lies for REA in extracts (10) and (11). REA asks GNS if he has friends in the ward in line 68 of extract (10) and in line 301 of (11) asks whether he was at the 'shebeen<sup>41</sup>' when he sustained a stab injury:

```
→ 68
               *REA:
                       do you have other friends in the ward as well? .
(10)
                       no, ja, James is also my friend. .
         69
               *GNS:
               *REA:
                       okay ##. •
        70
               *GNS:
         298
                           iso I had a guy he was drunk, he come and stab me sister.
(11)
               *REA:
         299
                       oh, no! .
               *GNS:
         300
                       ja he stabbed me deep here. •
       → 301
               *REA:
                       were you at the shebeen? .
               *GNS:
         302
                       no in our yard. .
         303
               *REA:
                       oh no! .
```

In most instances the nature of the question "do you have other friends..." would carry an implicit question of "who are your friends?" GNS demonstrates a sensitivity to where relevance lies for the hearer, by providing, in his response, the information implicitly represented as relevant (line 69). In extract (11), GNS disconfirms the proposition represented by REA's question in line 301, providing the information that the stabbing

<sup>&</sup>lt;sup>41</sup> An unlicensed establishment serving alcohol, often perceived to be linked to criminality. Its usage in South Africa may originate from the Irish English word with the same meaning, or may be derived from the Zulu word 'shibhile', meaning 'cheap' (Ndabandaba & Schurink, 1990).

happened "in our yard". This response suggests that, again, he has interpreted the question as conveying an implicit question – "[if no] then where did it happen"<sup>42</sup>.

The two extracts below illustrate IPF's ability to interpret regular questions and respond to the implicit questions conveyed within the context. Extract (12) is taken from talk about medication and side effects. Extract (13) occurs towards the end of the delusional talk about the role of the tattoo in IPF's life.

```
→ 122
                       have you spoken to the doctor about it? .
               *REA:
(12)
         123
               *IPF:
                       I did. .
               *IPF:
                       she gave me an injection, but it's not helping. .
        124
         125
               *IPF:
                       every morning when I wake up I'm fine as soon as I take the
                       medication it starts from # the beginning. .
        126
         127
               *REA:
        128
               *REA:
                       maybe you should tell her again, so that she knows and can try
         129
                       and +/. •
                       +, if I see her again, cos I've only seen her once.
               *IPF:
         130
         131
               *IPF:
                       in a month, and I've been here a month.
         132
               *REA:
                       mmhm. .
      → 384
               *REA:
                       have you got any other tattoos? .
(13)
               *TPF:
                       ja, got a tattoo on my neck. •
         385
                       sho, I would be too scared that it [would be sore. .
         386
               *REA:
               *IPF:
                                                           Lbut it's tiny, it's very
         387
         388
                       tiny. .
```

In response to the questions in both extracts (lines 122 and 384 respectively), IPF begins by offering a confirmatory response. Although these direct answers require minimal processing effort on the part of REA, alone they would not achieve optimal relevance, arguably because the questions also have an implied question within their intended meaning. In extract (12), the question implicitly requests information on how the doctor responded to IPF's report, that is, "has their been any solution offered for this problem?" Thus, had IPF stopped after her direct confirmation in line 123, REA would have been left with limited cognitive effects and may have needed to respond with a follow-up question of "what did she say?" In a demonstration of an ability to predict what is relevant to her hearer, IPF elaborates, summarising the doctor's response and the outcome. Similarly, in response to the question in (13), IPF elaborates, describing where the tattoo is, predicting the cognitive effects potentially sought by REA and pre-empting these with her response. IPF's responses appear to suggest a sensitivity to the 'hearer's need' within the context<sup>43</sup>.

In another example, this time from interaction with JPZ, REA asks, in line 128 of (14), "is it better here now?" following JPZ's assertion that she came to South Africa because of family difficulties.

 $<sup>^{42}</sup>$  Further examples of GNS's ability to anticipate questions appear in lines 54, 59-60 and 242 of the transcript (Appendix  $G_7$ ).

<sup>&</sup>lt;sup>43</sup> Further evidence of IPF's ability to anticipate questions can be noted in lines 15, 98 and 182 of transcipt (Appendix  $G_9$ ).

```
*JPZ:
                      # that's why I came here in South Africa. .
        126
(14)
               *REA:
        127
                      okay.
              *REA: and is it better here now? .
      → 128
              *JPZ: it's better here but I I suffer about accommodation. •
        129
               *REA:
        130
                      mmhm, difficult to find a place to stay. .
        131
              *JPZ:
                      yeah it's difficult. .
```

While the *yes-no question* explicitly represents a confirmation or disconfirmation as relevant, JPZ provides further information, using the marker "but" to signal perhaps that all is not perfect, which is information relevant to the question posed by REA. While the details of the procedural role of discourse connectives such as 'but' is beyond the scope of the discussion, it would appear to address an assumption by either eliminating it (Blakemore, 1992) (in this case eliminating the assumption that all is perfect), or by contrasting the current situation with the alternative (Olmos, 2010). On either interpretation, the important feature for the analysis is that JPZ has demonstrated the ability to be sensitive to the information represented as relevant by the question within the context of the conversation<sup>44</sup>.

There are numerous instances in the interaction with KPS in which she demonstrates the ability to anticipate questions. Extract (15) illustrates an example from non-delusional talk, while extract (16) includes delusional content.

```
*KPS:
         13
                        &=cough . .
(15)
               *REA:
                        shame, you've got quite a cough, hey? .
         14
         15
                *KPS:
                        &=cough, ja. • &=cough # xxx.
               *KPS:
         16
                       are you sick from the weather or what's the problem? .
               *REA:
       → 17
               *KPS:
         18
                       no! .
               *KPS:
         19
                        this is making zols hey. .
         20
               %eng:
                        hand-rolled cigarettes, containing either tobacco or cannabis
               *KPS:
         21
                        # from the paper. .
               *REA:
         22
                       oh. ·
               *REA:
                        so you are rolling your own cigarettes from [paper. •
         23
         24
               *KPS:
                                                                      Lyes. •
      → 416
               *REA:
                       have you been here before? .
(16)
         417
               *KPS:
                       yes I have. .
         418
               *KPS:
                       I've been here, I was here in in november # for observation
         419
                       and um ja before, # you won't believe me, fourteen death
         420
                       certificates was written out here for me I was a guinea pig. .
               *KPS: luckily it was my <religion you know> [?] to recover. •
         421
```

KPS's response in lines 18-21 of (15) displays anticipation of what information is relevant to REA, indicating the identification of an implicit question, "why are you coughing?" Similarly, her response to REA's question in line 416 of (16) displays an elaboration as to when (and why) she was admitted. KPS then provides further details in lines 418-421 (arguably details

 $<sup>^{44}</sup>$  A further example of JPZ's ability in this regard appears in lines 179-180; 182 and 339 of the transcript (Appendix  $G_{10}$ ).

which are not overtly elicited), which rely on sensitivity towards relevant information from REA's perspective<sup>45</sup>.

Extract (17) occurs during breaks in which RPD is drawing. REA poses a *yes-no* question in line 114.

```
*RPD:
                      this is is mar net simple drawings again. .
(17)
         110
                      and maybe when I see a book then I draw from the book. .
         111
              *RPD:
         112
              *RPD:
                      but this is, this is when I draw it out of my mind. .
               *REA:
         113
                      mmhm. .
       → 114
               *REA:
                      does it have a special meaning for you? .
         115
               *RPD:
                      I think it's about a special thing about my dad or whatever it
         116
                      is. ·
               *REA:
                      mmhm. .
         117
                      and [/] no it's not about my dad. .
         118
               *RPD:
         119
               *RPD:
                      when I came from Valberg hospital I started drawing. •
         120
               *REA:
                      mmhm. .
         121
               *RPD:
                     yes, because I was drawing there in that that country. •
```

In interpreting REA's *yes-no question* in line 114, RPD's response provides an implied confirmation while simultaneously recognising and responding to the implicit question, "what special meaning does your drawing have for you?"

Several participants display the ability to anticipate questions when responding to disconfirm a proposition presented in a *yes-no question*. RPD's response to the questions in line 185/187 of (18) occurs within a discussion about friendship in the ward environment. In a similar example, illustrated in extract (19), REA poses two *yes-no questions* to LPC (lines 12 and 16).

```
*REA:
                       do you have a friend in the ward at the moment? .
         185
(18)
        186
               *RPD:
                       hmm? .
               *REA:
                       do you have a friend in the ward at the moment? .
      → 187
                       no, I don't have friend. •
         188
               *RPD:
                       # I'm just sitting there, watching myself # continuously. •
         189
               *RPD:
         190
               *REA:
                       watching yourself continuously. .
                       so you like to read, K?
               *REA:
         8
(19)
         9
               %com:
                       K enters room reading an old book which looks like its from
         10
                       the hospital library
               *LPC:
                       yes. •
         11
               *REA:
                       do you go to the library a lot to fetch books?
       + 12
               *LPC:
                       no, this is my first book. .
         13
               *REA:
                       your first book, Tokay. •
         14
                                        Lyes #. .
               *LPC:
         15
               *REA:
                       did you go and get it, did you go and [choose it? •
       + 16
                                                              ino, I found it under
         17
               *LPC:
         18
                       this table. •
         19
               *REA:
                       oh, okay. .
         20
               *REA:
                       you know we have a library at the hospital? .
               *LPC:
         21
                       ja. ·
               *REA:
                       you know that? .
         22
               *LPC:
         23
                       yes. •
```

RPD's response to the question in line 185/187 of (18), 'no, I don't have a friend' would satisfy the information explicitly represented as relevant in the question<sup>46</sup>. Her elaboration,

<sup>&</sup>lt;sup>45</sup> Further evidence of KPS's ability to anticipate questions is apparent in her responses to REA's questions in lines 261, 287-288 amd 463 of the transcript (Appendix  $G_{11}$ ).

over two utterances (lines 188-189), seems to anticipate the question 'if you have no friends in the ward, what do you do?' It is of course possible, given the odd nature of the response in line 185, that this utterance is not linked to her representation of the information as relevant to REA. In interpreting REA's yes-no question in line 12 of (19), "do you go to the library a lot to fetch books?", LPC appears to interpret the question as representing desirable information. However, her response carries the implicature that the book she currently has comes from the library, which is not the case as she states in lines 17-18 that she "found it under this table". It appears that LPC may have had some difficulty in interpreting REA's initial question, or perhaps in making her own informative intention clear. In interpreting the question "did you go and choose it?" however, LPC shows the ability to respond to implicit questions — providing not just the disconfirmation but elaborating to answer the question of "where did you get it [if you didn't choose it at the library]".

Further examples of participants anticipating questions and elaborating on their responses after responding with a disconfirmation can be seen in the extracts which follow. Extract (20) is taken from the interaction with PPG. Extract (21) is taken from the conversation with MPT in which he has been speaking about how he enjoys energy drinks, and how he would like to visit a factory making such drinks.

```
→ 233
                       do you go to occupational therapy? .
               *REA:
(20)
         234
               *PPG:
               *PPG:
                       I I went one day and uh # I didn't like it. .
         235
         236
               *REA:
                       mmhm. .
               *REA:
      → 289
                       do they make them here? .
(21)
               *MPT:
         290
                       no the factory's in # New Zealand. •
         291
               *REA:
                       why did you want to visit the factory? .
               *MPT:
                       I just want to know about the drink thats all. .
         292
               *MPT:
         293
                       hhh.
```

In both extracts the participants respond to the *yes-no question* with a disconfirmation followed by an elaboration (in lines 234-235 and 290 respectively), suggesting the participants' sensitivity to the information implicitly sought by the questions.

SPG, another member of the group with pPS, displays similar success in responding to implicit questions by supplying the relevant information represented by such questions. Extract (22) occurs during a refreshment break where SPG has asked to take one of the rooibos<sup>47</sup> teabags away after the session.

<sup>4</sup> A type of South African tea, which, in the hospital setting, was often made by patients and consumed from two-litre coke bottles.

 $<sup>^{46}</sup>$  A further example of RPD's ability in this regard occurs in lines 164 and 296 of the transcript (Appendix  $G_{17}$ ).

```
402
                *SPG:
                         I've actually a friend of mine has been giving me rooibos tea
(22)
         403
                         whilst I've been here. .
         404
               *REA: oh that's nice. •
                         so what I do is I'm just going to put one of the bags in. 
 so do you just make cold like ice tea with it? 
 {}^{\bullet}
         405
                *SPG:
        → 406
                *REA:
                         ja, it's full of antioxidants and stuff. .
         407
                *SPG:
        → 408
                *REA: but isn't it nicer warm? •
                *SPG:
         409
                         it's fine hey. •
         410
                *SPG:
                         it's nice warm cold. •
        → 411
                *REA:
                         do you put sugar or anything inside? •
                *SPG:
                         just a little bit of honey. .
```

REA's question in line 406 is in regard to how the tea is made in the ward. SPG's response, in line 407, follows the typical pattern of 'anticipating questions' described above. He anticipates a further question about why he drinks the particular drink he is describing, and answers this implicit question after providing his direct affirmative response, "ja, it's full of antioxidants and stuff". In his responses to the questions in lines 408 and 411, a slightly different pattern is seen. In these instances, SPG provides no direct yes or no response, but instead produces an utterance in which the explicature of the utterance is an overt response to the anticipated question and the implicature of the response satisfies the direct yes-no question in each case. In line 408, his response "just a little bit of honey" communicates the implicature of 'yes, I put something in with the tea'. At the same time, it addresses the anticipated (and clearly implied) question of 'what do you add to the tea?"

In some instances, the use of a *yes-no question* appears to be interpreted as representing an opinion or personal perspective as relevant, as illustrated in extract (23)

```
→( 166
167
         *REA: so do you think the choice is to forget about the past and
                just go with one language? .
   168
         *OPH: # exactly. •
         *0PH:
   169
                just make it one language be +/. •
         *REA:
                do you think people will be offended? .
   170
  171
         *REA: because language is very intimately related to our culture. •
  172
         *REA: do you think people will be offended? •
   173
         *0PH:
                but what is culture?
         *0PH:
   174
                look in America we had the Red Indians. •
   175
         *OPH:
                the Red Indians had their own language. •
         *0PH:
   176
                the Spanish came and they changed things. •
   177
         *0PH:
                civil law changed things in the states. •
                people now they speak one language.
   178
         *0PH:
```

In extract (33), OPH appears to interpret the questions in lines 166-167 and 170-172 as invitations to elaborate on his own opinion about the multilingual nature of South Africa. OPH's response to the question in lines 166-167 suggests that he has interpreted it as requiring a confirmation and an invitation to explain his proposition. When REA immediately follows up with a second *yes-no question*, "don't you think people will be offended?" (lines 170/172), OPH interprets the question as representing not a confirmation

 $<sup>^{48}</sup>$  A further example of SPG's ability to anticipate questions is apparent in his response to REA's question in line 53 of the transcript (Appendix  $G_{18}$ ).

or disconfirmation as desirable but as an invitation to discuss the proposition<sup>49</sup>. This response appears to achieve relevance and, indeed, may be the typical response to a question around moral, philosophical or political issues. This question requires further exploration as it raises an interesting issue about the nature of regular questions within a RT framework. The question conforms fully to the formal properties of regular questions, however the proposition represented appears to contain an attributional element. One possible distinction is that the question in line 170/172 can be analysed as asking *about* OPH's thought or opinion, as apposed to asking *whether* an attribution holds true. RT does not directly deal with this issue, and the implications are of interest (discussed in Chapter Fourteen). Despite this question being open to analytic interpretation, there is no doubt that OPH's ability to respond appropriately signals an ability to engage with material that is attributional in nature.

UMB too displays the ability to anticipate questions implicit in *yes-no questions*. Extract (24) is taken from a discussion with UMB about his language history.

```
→ 12
               *REA:
                       do you speak other languages besides English? •
(24)
               *UMB:
         13
                       no. ·
               *UMB:
         14
                       English and Afrikaans. .
                       is english your first language? •
      → 15
               *REA:
         16
               *UMB:
                     well my dad's english and my mom's afrikaans [so +... •
         17
               *REA:
                                                                    Lso what did you
                       speak at home when you were little? •
         18
               *UMB:
         19
                       I went to an Afrikaans school and then to an English school so
         20
                       Tit's been pretty much divided between the two. •
               *REA:
         21
                       Lokay. .
```

UMB's initial response to REA's question in line 12 is a disconfirmation which he then revises in line 14. UMB's bilingual background and lack of a single first language means that responding to the *yes-no question* "is English your first language?" (line 15) appropriately entails providing further information, which he does in line 16<sup>50</sup>.

In extract (25), VMD has stated that she used to work until 8pm for a hospital pharmacy. REA poses a question in lines 431-432, revising it midway to ask, "does the pharmacy close at eight then?"

```
431
              *REA:
                      so then what happens if the [/] does the pharmacy close at
(25)
     → (432
                      eight then? .
              *VMD: the the pharmacy closes at eight because there's an emergency
        433
        434
                      cupboard. .
                      okay, I was going to say. •
        435
              *REA:
        436
              *REA:
                      iso if they need something .
              *VMD:
        437
                      iso whatever. •
        438
              *VMD:
                      if they need something, yes. .
```

lines 183; 216 and 445 of the transcript (Appendix G<sub>20</sub>).

<sup>&</sup>lt;sup>49</sup> A similar example of OPH's 'philosophical' response to regular questions appears in lines 147-155, with more typical responses apparent in lines 69-73 and 646-649 of the transcript (Appendix  $G_{15}$ ). <sup>50</sup> Further examples of UMB's successful interpretation and anticipation of questions are evident in

VMD, capitalising on information in the discourse context, as well as perhaps an ability to anticipate where relevance lies for her conversation partner, interprets and responds to satisfy the question, accurately predicting that what is of interest to REA is what would happen in the hospital if medication was required after eight<sup>51</sup>.

WML too demonstrates a sensitivity to where relevance lies for the hearer in extracts (26) (a question about friends) and (27) (a question about the 'Independent House<sup>52</sup>').

```
→ 199
               *REA:
                       ## is there any one who get along especially well with? •
(26)
         200
               *WML:
                       ja, I get along with Petunia. .
               *REA:
         201
                       mmhm.
         202
               *WML:
                       but even like all of us we get along, you see. .
               *REA:
         203
                       ja. •
                       ## who keeps the garden looking so nice? .
      → 279
               *REA:
(27)
         280
               *WML:
                       it was Peter. .
         281
               *REA:
                       Peter. •
         282
               *WML:
                       mmhm. .
               *REA:
         283
                       mmhm.
```

WML appears to interpret the question in line 199 of (26) as representing not just a confirmation as relevant but also the implicit question of "who are you friends with". In responding to the question in line 279 of (27) WML specifies that it "was Peter" who cared for the garden. Given that earlier in the conversation WML informed REA that Peter had been readmitted to the ward (lines 154-156 in the transcript), this response suggests a sensitivity to how her utterance achieves relevance for REA. If she had answered 'Peter', REA would likely have had to follow up by clarifying, "but I thought Peter went back to the ward?" By specifying the past tense, WML provides the relevant information<sup>53</sup>.

In extract (28), YMB has said that she wants her sister to be contacted. REA asks whether she knows the phone number (line 302).

```
(28) \rightarrow 302 *REA: do you know the phone number? • 303 *YMB: it's in the office. • 304 *REA: it's in the office? • 305 *YMB: ja. •
```

YMB's response to REA's question in line 302 does not commit either way as to whether she knows the number or not. However, she appears to have successfully interpreted the question as representing specific information as desirable – that is, "is the number available if I want to call them for you, or if a staff member is able to call". In fact, the fact that the number is "in the office" is perhaps more relevant than whether YMB knows it herself or not – it implies that staff able to make the call have access to the number.

<sup>&</sup>lt;sup>51</sup> Further example of VMD's success with regards to *wh-questions* occurs in lines 404-405 of the transcript (Appendix  $G_{21}$ ).

<sup>&</sup>lt;sup>52</sup> A unit on the hospital property in which patients are allowed more independence.

<sup>&</sup>lt;sup>53</sup> Further examples of WML's interpretation of regular questions appear in lines 294-295 of the transcript (Appendix  $G_{22}$ ).

A significant proportion of the participants display an ability to 'anticipate questions'. Although this is a pattern described in typical interaction (Carston, 2002), the implications of its deployment by people with schizophrenia are significant. The findings suggest that these participants are able to metarepresent the interlocutor's utterance as representing desirable information, and go a step further by anticipating further (or implied) questions.

# 8.2.3 Less successful interpretation of regular questions

There are several instances in which the analysis suggests that the participant was less successful in interpreting the relevance requirement of the interlocutor. Table 8.2 presents the summary of data in which participants are less successful in interpreting REA's questions. Analysis of exemplars follows.

	_		
TABLE 8.2 E	EVIDENCE OF LESS SUCCESSEL	IL INTERPRETATION OF	REGULAR OUESTIONS

Participant	Symptom Group	Line numbers demonstrating less successful interpretation of regular questions **	Appendix
*BND	pNS	236-237; 242; 391	G <sub>2</sub>
*CNJ	pNS	75; 77	G <sub>3</sub>
DNV	pNS	(254; 259)	G <sub>4</sub>
END	pNS	98	G <sub>5</sub>
*IPF	pPS	360	G <sub>9</sub>
*RPD	pPS	289-290	G17
YMB	MS	(287-289)	G <sub>23</sub>

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction

At times BND appears to have difficulty in predicting the information relevant within the context. In extract (29), REA and BND are discussing the identity of BND's father in a stretch of delusional talk. In response to the two wh- questions (lines 223 and 244), BND provides the information represented as relevant, that is, a name in both cases. Although the content is delusional, BND has arguably interpreted the questions as representing specific information and has responded appropriately, albeit from a delusional perspective. BND's response to the question "did you read William Shakespeare at school?" (line 232) appears to suggest that, following his disconfirmation, he is elaborating to explain where he heard about William Shakespeare (from "this man"). Although it is slightly unclear as to what BND is asserting (as discussed in the following Chapter), it is clear that he is going beyond a simple yes-no response, and perhaps anticipating a further question of 'how do you know about Shakespeare if you didn't read it at school?' (this success is reflected in the data Table 8.1 demonstrating his ability in this instance to anticipate where relevance might lie for a listener).

<sup>\*\*</sup> Bracketed data references are not discussed in the analysis which follows

```
*REA:
(29)
      \rightarrow 223
                       which one is your father? .
                       uh, William Shakespeare.
         224
               *BND:
         225
               *REA:
                       William Shakespeare? •
         226
               *BND:
                       ja. '
         227
               *REA:
                       but William Shakespeare is a # a olden day author. •
               *BND:
         228
                       huh? .
         229
               *REA:
                       he [/] William Shakespeare is someone who used to write storie
                       yes yes yes yes yes. •
         230
               *BND:
         231
               *BND:
                       is my father. •
                       okay, did you read William Shakespeare at school? •
               *REA:
       → 232
               *BND:
                       I didn't read his this man he tell me. .
         233
               *REA:
                       okay. •
         234
         235
               *BND:
                       ja. ·
               *REA:
                       is there a man called William Shakepeare in the swallows who
         236
         237
                       plays soccer? .
               *BND:
         238
                       yes yes #. •
         239
               *BND:
                       yes. •
               *REA:
                       does he have another name as well? .
       → 240
               *BND:
         241
                       does he have another name, this man, 「William Shakespeare? •
               *REA:
       → 242
         243
               *BND:
                                                              Lja, ja. ·
               *REA:
       → 244
                       what's his other name? .
         245
               *BND:
                       he's Jan van Riebeeck. .
         246
               %exp:
                       a South African historical figure
         247
               *REA:
                       # who plays for swallows? .
               *BND:
         248
                       yes. •
         249
               *REA:
                       plays soccer? .
         250
               *BND:
                       who? .
         251
               *REA:
                       Jan van Riebeeck? •
                       ja, ja, he plays soccer. •
         252
               *BND:
```

In contrast to this suggestion of successful anticipation of a further question in line 232, the yes-no questions in lines 236-237 and 242 are answered directly, with no elaboration. These questions, it is argued, have clear implicit questions to which BND does not respond, resulting in a sequence of meaning negotiation. There appear to be two potential explanations for this difficulty. The first is a difficulty in accurately representing what is mutually manifest, or the assumptions which exist in the mutual cognitive environment. In delusional talk, as discussed, the nature of beliefs may result in the presumption that delusional assumptions are available to the interlocutor. In this case, BND may presume that the information around William Shakespeare, as a soccer player with multiple identities, is mutually manifest. Support for this hypothesis comes from the success of BND's interpretation of the yes-no question in line 232, "did you read William Shakespeare at school?" (discussed above). This particular question relates to delusional content but specifically to BND's personal experience or history, that is, information which is manifestly not available to REA. The information represented as relevant by the other yes-no questions (lines 236-237 and 242) pertain to delusional content which, as a fixed false belief, BND may assume is encyclopaedic knowledge and, thus, manifest to REA. The second explanation for his difficulty is a lack of sensitivity to REA's need for information. The sequence of meaning negotiation is evidence of REA's search for understanding, a confusion which would have likely been conveyed in intonation and presumably also in facial expression. The confusion is apparent in the questions, but does not appear to signal to BND the need for elaboration or clarification.

Extract (8') occurs at the start of a refreshment break when CNJ has taken a box of juice. Following the echo questions in line 56-57 (discussed in the following section), REA asks the regular question in line 75.

```
72
              *REA:
                      you're not going to drink it, you just going to finspect it? .
(8')
        73
              *CNJ:
                                                                       LI'm just
        74
                      checking # the ingredients. .
              *REA:
        75
                      what are you checking? .
        76
              *CNJ:
                      just reading the the words on this side. •
        77
              *REA:
                      do you always read the words fon things?
              *CNJ:
        78
                                                    inot always. •
        79
              *CNJ:
                     sometimes, ja sometimes. •
              *REA: I often read them. •
        80
              *CNJ:
                     mmm #0 27. •
        81
              *CNJ:
                     cherry, it's cherry in here. .
        82
              *REA:
                     chilling? .
              *CNJ:
        84
                     cherry. •
        85
              *REA:
                      cherry. •
              *REA:
        86
                      mmm, ja can taste it,, hey? •
              *CNJ:
                      ja hhh.
```

CNJ appears to interpret the question as representing information required for clarification and responds in line 76 by saying, "I'm just reading the words on this side". However, it is argued that REA is fully aware that "checking the ingredients" involves 'words' and visually can see that he is reading something on the side of the carton. His response therefore seems to suggest that he did not interpret the question in a way which allowed him to metarepresent the information desirable to REA. Such information may have included why he was reading the ingredients or specifically what he was looking for. If he was not looking for any specific information it may have been most relevant just to mention that he is interested in the ingredients. Indeed, his utterance later, asserting the cooldrink is cherry-flavored (lines 82 and 84) suggests that he may have in fact been looking for specific information to confirm or guide his hypothesis about the main ingredient of a juice merely called 'summer fruits'.

END also displays instances of apparent difficulty in interpreting questions. REA and END are talking about soccer in extract (30). Implicit in the question "do you have a favourite player?" (line 98) is "who is your favourite player?" END does not appear to interpret the question as carrying an implicit component and his direct response in line 99 fails to achieve relevance, prompting wh- questions in the sequence which follows (lines 100 and 104).

```
→ 98
               *REA:
                       do you have a favorite player? .
(30)
               *END:
         99
                       # yes. .
               *REA:
                       who? .
         100
         101
               *END:
                       nyeltolwe.
               *REA:
         102
                       nyeltolwe? •
         103
               *END:
                       yes. •
               *REA:
                       what position does he play? •
         104
         105
               *END:
                       ai! •
               *REA:
                       you forgot? .
         106
                       Shoes Mshoe, is he in chiefs? .
         107
               *REA:
               *END:
         108
                       # ai. •
         109
               *REA:
                       no, okay. •
```

END with his significant negative symptomatology interacts with a characteristic feature of poverty of speech. The majority of his utterances throughout the interaction are single words. It is, therefore, difficult to conclude whether he has problems interpreting the question, or whether the pattern is an artefact of his possible poverty of speech.

In the extract below, REA initially uses an echo question to clarify an utterance attributed to IPF (line 357). The extract is characterised by meaning negotiation and there is a sense in which the relevance expectation raised by the subsequent *wh-question* (line 360) appears not to have been satisfied by IPF's answer.

```
*IPF:
                       I'm the owner of eddies and I'm the owner of e-tv. .
         356
(31)
         357
               *REA:
                       of what and e-tv? .
                       I know e-tv but I don't know +/. .
         358
               *REA:
         359
               *IPF:
                       e-tv. •
       → 360
               *REA:
                       what's the other thing you said? .
               *IPF:
         361
                       eddies.
         362
               *REA:
                       I don't know what that is. .
               *IPF:
                       it's a shoe. .
         363
         364
               *REA:
                       oh. ·
         365
               *IPF:
                       but they're named after me. .
```

Significantly, the question in line 360 occurs within the context of misunderstanding – REA has already attempted to clarify the concept introduced with questions in line 357 and 358. In this context, a relevant response would be one which recognised that any contextual effect to be obtained by the hearer (REA), would rely on a mutual understanding of the constructs introduced. The question "what's the other thing you said?" (line 360) should prompt not just a strictly linguistically accurate response, but a response that is sensitive to the preceding context which signals a lack of mutual manifestness. In other words, a relevant answer should address not just repetition of the semantic representation itself but clarification. A response such as "Eddies, it is a brand of shoe that's named after me" would achieve these goals, even if delusional. The follow-up declarative in line 362, prompting further clarification, is testament to REA's search for meaning.

The extract, (32) below occurs within the context of a discussion around RPD's drawings.

```
289
               *REA:
                                           iso if I trace it it will be a lie, is that
(32)
                       what you mean? .
        290
        291
               *RPD:
                       ja. •
               *RPD:
        292
                       try and trace it. •
                       just try fand trace it. .
               *RPD:
        293
        294
               *REA:
                                Lwhat will [/] what will happen if I try to trace it? .
                       just try and trace it, I just want to see if you can trace it. .
        295
               *RPD:
               *REA:
                       # what do you think happens if I try and trace it? •
        296
                       there's nothing wrong what [/] but what I saw the other day
        297
               *RPD:
        298
                       when somebody wanted to trace it, it it he doesn't get it
        299
                       right. •
        300
               *REA:
                       mmm. .
        301
               *RPD:
                       because a why because he although he traced it, there's other
        302
                       people that are tracing but they cannot trace a certain amount
                       of things, you understand my point? •
        303
        304
               *REA:
                       because this comes from your heart. .
               *RPD:
                       this comes from the heart, and this comes from us. .
        305
```

RPD has claimed that people are unable to trace her drawings and is 'challenging' REA to try to do just that. She appears to not satisfy the relevant answer represented by the question in lines 289-290. This question appears to be a search for access to the implicated premises which RPD is working from. Thus a response such as 'you will make a mistakes' or even an overtly delusional prediction would satisfy the relevance represented and provide REA with sufficient premises to predict the social outcome of tracing the picture. RPD's response does not indicate that she interpreted this question in such a way, but rather as a concern expressed by REA, perhaps of failing at the task. In fact her response would be typical of a persuasion when the conversation partner is reluctant to engage in a task. She has interpreted the question as reluctance, rather than as a clinical decision to proceed into the delusional world with caution. This pattern of performance appears to support the notion of the primary difficulty being in the realm of metarepresenting the assumptions available to the interlocutor (rather than the metacommunicative process of interpreting the question at hand). Thus, the difficulty lies in representing what is indeed mutually manifest, rather than in interpreting the question as representing relevant information. The result of the difficulty in representing the mutual cognitive environment, is a breakdown in the accurate representation of the intended relevance of the question. The ability to metarepresent a question as 'desirable information', in itself appears intact. Indeed, RPD has more success in responding to REA's follow-up question in lines 294 and 296. She appears to interpret this question as representing specific information desirable to REA – specifically the sketching of a scenario, "what will happen if...". This more successful interpretation is recorded in the summary of evidence for successful anticipation of relevance (Table 8.1).

## 8.2.4 Summary: Interpretation of regular questions

Given the inherently metarepresentational nature of questions, the performance of individuals with schizophrenia is of interest. As discussed, regular questions pose no attributive demands, but do demand that the interpreter be able to engage their metarepresentational abilities to interpret what information is represented, by the question, as relevant.

The participants with schizophrenia display a generally successful profile in terms of interpreting regular questions as representing desirable information. All participants (with the exception of END and HNT) displayed the ability to 'anticipate questions'. This success in 'anticipating questions' provides evidence for not only being able to engage in the metarepresentation inherently demanded by questions, but also an ability to 'predict' where relevance lies for the conversation partner posing the question. Despite the overall pattern of ability, some participants demonstrated difficulties in interpreting regular

questions. The profile of performance of the participants with regards to interpreting regular questions is presented in Table 8.3. The participants BND, CNJ, DNV, END, IPF, RPD and YMB displayed the use of direct responses where elaboration was manifestly relevant, in the context of the talk at hand. The difficulties demonstrated by BND, CNJ, END and IPF in particular, may be explained by either (1) a difficulty in representing the information available in the mutual cognitive environment, or (2) a difficulty in interpreting the non-linguistic cues signally the need for clarification. This 'attitudinal' aspect of the interpretation difficulties will be further discussed with regard to echo questions. It is possible that these responses occurred due to poverty of speech, rather than a difficulty in interpreting the relevance of a question. An RT analysis of conversation seems unable to provide a clear answer to assist in this distinction.

TABLE 8.3 SUMMARY OF EVIDENCE OF PARTICIPANTS ABILITY IN INTERPRETING REGULAR QUESTIONS

Participant	Symptom Group	Evidence of anticipating questions	Evidence of less successful interpretation of questions	
ANJ	pNS	V		
FNJ	pNS	V		
GNS	pNS	V		
JPZ	pPS	V		
*KPS	pPS	٧		
LPC	pPS	٧		
MPT	pPS	V		
NPH	pPS	V		
OPH	pPS	V		
PPG	pPS	V		
*SPG	pPS	V		
TMH	MS	V		
UMB	MS	V		
VMD	MS	V		
WML	MS	V		
*BND	pNS	V	×	
*CNJ	pNS	٧	×	
DNV	pNS	V	×	
*IPF	pPS	٧	X	
*RPD	pPS	٧	×	
YMB	MS	٧	×	
END	pNS		X	
*HNT	pNS			

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction

Analysis suggested that for some participants (notably BND, IPF and RPD) the difficulties were predominantly due to mismatches in the expectations of mutual manifestness. The primary difficulty, particularly within the delusional sequences, appeared to be in the realm of metarepresenting the assumptions available to the interlocutor. Thus, some of the difficulties lie, perhaps, in representing what is indeed mutually manifest, rather than in interpreting the question as representing relevant information. In other words, these delusional responses seem to suggest appropriate interpretation of the

question as a metarepresentation of specific information, but the questions themselves are tapping delusional content. Examining this performance against the symptom profile and implicit attribution of mental states (on the Fable Task) reveals some tentative associations. The majority of participants (four of seven) displaying either instances of difficulty in interpreting questions or the absence of the ability to anticipate questions present with pNS. In addition, END and HNT (who arguably show the most difficulty in interpreting where relevance lies for the interlocutor) displayed no evidence to attribute mental states on the Fable Task.

In summary, the performance across participants is one of unexpected success. However a number of participants display instances of difficulty in interpreting regular questions. There is no clear association between the performance on question interpretation and language assessment profiles. Difficulty with *yes-no questions* appears to be somewhat related to symptom profile and limited ability to engage in the implicit attribution of mental states. Such associations did not emerge with regards to *wh*-questions.

## 8.3 Interpreting echo questions

# 8.3.1 Metarepresentational considerations

Echo questions are defined, from a RT perspective, as utterances which function as questions and are echoic in that they echo and question some aspect of an attributed thought or utterance. While regular questions are "about the facts, or the facts according to the speaker", echo questions question an aspect of an attributed utterance or thought (Noh, 2000, p. 167). As outlined in Chapter Three, echo questions, within a RT framework, need not echo an actual utterance, but need only echo a thought or utterance which the speaker attributes to the interlocutor. In other words, an echo question does not require the presence of a preceding utterance to be considered echoic in a RT analysis. As such, echo questions are construed as questions which have the attitude of "wondering about" (Noh, 1995 p. 133) a thought or utterance presumed to be held or expressed by the interlocutor. Echo questions thus have an additional level of metarepresentation, representing 'desirable information' about attributed thoughts or utterances. Given their additional metarepresentational requirements for interpretation and the fact that they are inherently attributive, the ability of the participants to interpret echo questions is of interest in this study. Based on the predictions of Frith's (1992) model, the abnormality in metarepresentational ability and attributive abilities in people with schizophrenia should

cause a differential impairment in the interpretation of echo questions, compared to that of regular questions.

The broad functions of these questions are: (1) clarification and (2) the expression of incredulity (Noh, 2000). With interactions occurring within a clinical setting, echo questions, not surprisingly, are used predominantly to fulfil the former rather than the latter function. REA frequently appears to use echo questions to attribute a thought or utterance to an individual (usually the participants with schizophrenia) and invite an elaboration. Evidence for accurate interpretation of these echo questions is indirectly available through the responses of the participants with schizophrenia. Relevant responses, which account for the cognitive effects sought by the questioner, signal appropriate interpretation. Given their declarative syntax, the interpretation of these utterances as questions relies on interrogative intonation, and has been transcribed with a question mark. An additional layer of paralinguistic features of intonation and tone would likely convey the need for clarification in instances when confusion arises, or the expression of incredulity. It is beyond the scope of this study to consider an analysis of the interpretation of intonation. Where sequences of meaning negotiation occur, confusion or need for clarification can be inferred, and by extension the possible use of an intonation pattern suggestive of confusion.

This section will present an analysis of extracts illustrating interpretation of echo questions – including those metarepresenting the higher order speech act of 'saying', and those about an attributed inference or implicature. As in the previous section, analysis will consider instances of 'successful' interpretation of echo questions followed by analysis of 'less successful' performance. While only exemplars of the analysis are discussed in detail, the summary tables within each section provide reference to the extensive data pertaining to the phenomena in question.

# 8.3.2 Successful interpretation of echo questions

This section will consider examples of the successful interpretation of echo questions. Instances in which participants successfully interpreted complex echo questions will first be presented, followed by examples of the successful interpretation of simple echo questions. Table 8.4 presents the illustrative exemplars, with the analysis of each category presented in the discussion that follows.

### Interpretation of complex echo questions

Several participants demonstrate the ability to interpret echo questions with complex metarepresentational structures. These questions are at least second order in their utterance structure, requiring, on Sperber's (1994) account, third order

metarepresentational abilities on the part of the hearer. In the data only two instances of successful interpretation of a complex echo question were identified. This will be contrasted in section 8.3.3 to the difficulties experienced by a number of participants in this regard. Table 8.4 presents the data references pertaining to participants ability to successfully interpret both complex and simple echo questions. As in Chapter Seven, the simple eco questions considered include both those about 'saying' and those about inferences.

TABLE 8.4 EVIDENCE OF SUCCESSFUL INTERPRETATION OF ECHO QUESTIONS

Participant	Symptom Group	Line numbers demonstrating successful interpretation of echo questions **		
		Complex echo questions	Echo questions about saying	Echo questions about inferences
ANJ	pNS		246	235
*BND	pNS		(64); (? 79)	99
*CNJ	pNS		98; 102	
DNV	pNS		297; 302; 304; (134)	
END	pNS		(23-24)	125; 128; 130
FNJ	pNS		(65); (72); (126); 185; 187; (207); (214)	
GNS	pNS		114; (174); (247)	
HNT	pNS	451	(127); 442	(248)
*IPF	pPS		398-400	(309); 317-318
JPZ	pPS		82	
*KPS	pPS		(333); 369-370; 375	
LPC	pPS		giller of the state of the state of	165; 172
MPT	pPS			179; (194)
NPH	pPS			303
PPG	pPS		(15); 110	
*RPD	pPS		279; 287	
TMH	MS		7; (553)	
UMB	MS		279; (454)	(486)
VMD	MS		80; 84	364
WML	MS			83
YMB	MS	88	321-322	

<sup>\*</sup> Participants presenting with delusional talk during conversational interaction
Bracketed data references are not discussed in detail in the analysis which follows

The extract below occurs within the Thought Disordered (TD) talk around HNT's explanation of his communicative experience.

```
440
               *REA:
                      what do you mean by losing the words when you talk? •
(33)
               *HNT:
        441
                      I think of being disarupted@n. •
      → 442
               *REA:
                      being? .
        443
               *HNT:
                      disarupted@n. •
        444
               *REA:
                      disruptive.
        445
               *REA:
                      # does that happen to you # when you talk, that you're
        446
                      disrupted? .
              *HNT:
        447
                      ja # but +./ •
              *REA:
        448
                      how does that how does that work, how does it sound if someone
        449
                      is disrupted? •
        450
              *HNT:
                      he was is misses. .
       → 451
              *REA:
                      he misses? .
              *HNT:
        452
                      he misses and get ## and get under this what do you call it eh
                      meaning # misish@n meaning the person who can be in that
        453
        454
                      way of not who feel he's like a who feel an appetite. .
        455
              *REA:
                      he feels an appetite. •
              *HNT:
        456
                      mmhm. .
```

The sequence presented in (33) is peppered with questions, with a simple echo question used in line 442 (included in the summary data table as a simple echo question) and a complex echo question (about 'saying') in line 451. In line 451, REA's echo question is interpreted as attributive of the prior utterance and this time as representing a relevant elaboration. Given the sequence of meaning negotiation which has occurred, HNT's response suggests a clear ability to represent the echo question as asking for meaning, "what are you meaning by saying that he misses?" This is provided (albeit in TD output) in lines 452-454<sup>54</sup>.

YMB, apparently concerned that REA is there to "find out" about her actions at Matthew House, a nursing home, immediately attempts to offer an explanation in line 85-86 of (34). REA, unsure as to what she is referring to, poses an echo question in an attempt at clarification (line 88). This echo question is about an inference and takes the form:

am I correct in inferring that you are referring to

# Matthew House

are you also going to find out why I did what act did I at uh (34)84 \*YMB: uh Lakeside because I wasn't anything there but I got so 85 86 cross with the boarders there. • 87 \*YMB: my +/. 88 \*REA: you mean at Matthew House? . \*YMB: ja. • 89

YMB appears to interpret the question as a confirmation of this inference, which she provides in line 68.

#### Successful Interpretation of simple echo questions about 'saying' and inferences

Many of REA's questions are simple metarepresentational structures, requiring, in the RT model, second order metarepresentational abilities on the part of the hearer. This section will examine exemplars in which the echo questions are about the metarepresented illocutionary act of 'saying'.

Extract (35) is taken from the conversation with ANJ in which he is talking about his search for work. He states that "they go by your age and [...] a test", and REA responds in line 246 with an echo question, "so each company gives a test?". ANJ appears to interpret the echo question as metarepresenting his act of 'saying' – "[are you saying that] each company gives a test?" and confirms this proposition and comments on the nature of the tests. This response appears to achieve relevance for REA and the conversation progresses.

<sup>&</sup>lt;sup>54</sup> Similar patterns of HNT's responses to echo questions are seen in the thought disordered talk in line 462-464 of the transcript (Appendix  $G_8$ ).

```
243
              *ANJ: I tried various places, I didn't get a job. •
(35)
        244
              *ANJ:
                      I was [/] they go by your age and if you # and a test. •
              *ANJ: And the test is quite difficult so # +...
        245
              *REA: so each company gives a test? •
      → 246
        247
              *ANJ: ja. •
        248
              *ANJ: # the tests aren't easy. •
              *REA: so will you try again when you 'go out? •
        249
        250
              *ANJ:
                                                    II was uh. .
              *ANJ:
                      uh # but I did qualify as a technician. .
        251
        252
              *ANJ:
                      so I am actually qualified but I'm not uh # experienced. •
              *REA:
                      so what kind of company would be your ideal job to go and work
        253
        254
                      in? .
        255
              *ANJ:
                      uh, a civil manufacturing company like Dodds. •
```

In the extract below, ANJ has asserted that he has studied specific courses. REA infers that he may then be working and poses the echo question in line 235, "so now you're working or not yet?"

```
(36) 233 *ANJ: I studied S3 and S4 part time. •
234 *REA: okay. •

→ 235 *REA: so now you're working or not yet? •
236 *ANJ: uh, I had a job but they just trained me but it wasn't a permanent job. •
238 *REA: okay. •
```

REA appears to be asking, "[am I right in inferring that] you may be working now, or that perhaps you are not yet working?" This is analysed as different from metarepresenting 'saying' as the attributed utterance is linked to the original only through inference from real world knowledge. The echo questions is, thus, not an echo of ANJ's words, per se, but an echo of an inference that REA has made in the context of encyclopaedic knowledge that people who complete studies go on to work if they are able to find a job. ANJ's response confirms REA's inference that he has been working, elaborating that it was not a permanent position.

Extract (37) occur within a discussion between REA and BND about local soccer teams, including the 'Swallows', 'Chiefs' and 'Pirates'. The interlocutors are talking about local soccer teams they support.

```
*REA:
                       I also support the swallows. .
(37)
         92
         93
               *BND:
                       mean you? .
         94
               *REA:
                       me. ·
               *BND:
                       ja, uh me and and I like swallows≈. •
         95
               *REA:
         96
                       ≈you love swallows≈. •
         97
               *BND:
                       at the home I I I support swallows. •
         98
               *REA:
                       okay. .
       + 99
               *REA:
                       you don't support chiefs or [pirates? .
         100
               *BND:
                       lai, chiefs is the is the young brother, man. .
         101
               *BND:
                       I like swallows. •
```

REA's echo question in line 99 can be interpreted as a metarepresentation of a higher order explicature – "[am | right in inferring that] you don't support the chiefs or pirates?" BND interprets this appropriately, providing a metaphorical response<sup>55</sup> to represent information

<sup>&</sup>lt;sup>55</sup> Referring to the team as 'the younger brother' would invoke meaning of 'inferior' in a culture in which birth order and age are highly regarded.

about why he supports the 'Swallows' over the 'Pirates' or 'Chiefs' (the more popular teams in South Africa).

In extract (38) CNJ is engaged in delusional talk around Brad Pitt and his desire to "figure him out". REA assumes (based on information from the file and from ward rounds) that CNJ believes himself to be Brad Pitt; she uses echo questions in lines 98 and 102 to clarify CNJ's assertions.

```
*CNJ: um, personally I am [//] I was just trying to fi- [/] # to um
(38)
        95
                      work with um Brad Pitt and stuff.
              *CNJ: trying to figure him out somehow hhh. •
        97
              *REA: trying to figure who out? .
      → 98
              *CNJ: Brad Pitt. •
        99
        100
              *REA:
                      Brad Pitt+≈. •
                      +^ ja+≈. •
+^ at OT? •
        101
               *CNJ:
       → 102
              *REA:
              *CNJ: I was like looking at books there, looking for his pictures
        103
        104
                      and stuff #. .
                      uh, I want to know more about him and stuff. .
        105
              *CNJ:
        106
              *REA:
                      hmm. .
                      # I want to know much more fabout him. .
        107
              *CNJ:
```

In line 98, the echo question metarepresents a wh- question about the attributed utterance "[who are you saying that] you are trying to figure out?" CNJ clarifies his referring expression, as requested, despite the delusional content. In the second instance (line 102), the question "[Are you saying that you figure him out] at OT?" is a yes-no question which arguably carries an implicit question requiring elaboration. In lines 103-104, CNJ clarifies the link between OT and Brad Pitt, anticipating the implicit question. It is suggested that he achieves relevance, within the delusional frame of reference, by justifying a link between OT and Brad Pitt (i.e. demonstrating that he uses the time to read about Brad Pitt in the magazines available in OT).

REA asks DNV, in extract (39), whether he has been admitted to the hospital before. Although several questions are posed by REA in this extract, the echo questions in lines 297, 302 and 304 are of interest here.

```
295
              *REA:
                      # have you been here before? .
(39)
              *DNV: ja. *
        296
      → 297
              *REA:
                     # once? .
        298
              *DNV:
                     my sick is schizophrenia. •
              *DNV: Iside effects and fits. •
        299
        300
              *REA: Lmmhm. •
              *REA: what did you say? .
        301
       → 302
              *REA:
                      side-effects? •
              *DNV:
                      ja # and fits. .
        303
              *REA:
                      wits? .
       + 304
        305
              *DNV:
                      fits. •
        306
              *REA:
                     oh, okay. .
```

DNV's response to REA's question in line 297, "once?", may be an implied response suggesting that the nature of schizophrenia would bring him in for multiple admissions. It is, however, also possible that DNV is pursuing his narrative about his illness and hospitalisation and not responding directly to REA's question. REA's question of "side-

effects?" (line 302) is an attempt to clarify what was said, "[are you saying that] your illness is side-effects?" DNV confirms his assertion. REA appears to mis-hear DNV with regards to his assertion that he has "fits", and echoes "wits?" to clarify. DNV repeats the component requested, suggesting that he has, appropriately, recognised the need for clarification by repetition.

In extract (40), END has stated that when he is not in the hospital he spends his time at home.

```
117
              *REA:
                     what kind of stuff do you enjoy to do when you are
(40)
        118
                      outside #. •
              *END:
        119
                     # um. •
                     # I I stay to home. •
              *END:
        120
        121
              *REA:
                      stay at home. •
              *REA:
        122
                      # did I hear you right, is Tthat what you said? .
        123
              *END:
                                                 Lyes. •
                     you stay at home. •
              *REA:
        124
       + 125
              *REA:
                      you watch tv? .
        126
              *END:
                      yes. •
        127
              *REA:
                      okay.
                      you watch sport or other things? •
              *REA:
      → 128
              *END:
                      I watch yo-tv. .
        129
                      yo-tv? .
      → 130
              *REA:
        131
              *END:
                      yes, and sport. .
        132
              *REA:
                     and sport. .
```

REA's echo question in line 125 appears to be metarepresenting an inference based on an utterance attributed to END, asking, "[am I correct in inferring then that] you watch tv?" END confirms REA's interpretation. When REA asks a second echo question in line 128, paraphrased as "[am I correct in inferring that] you watch sport or do you watch other things?", END asserts that he watches "yo-tv<sup>56</sup>", signalling that he has interpreted the question as representing an attributed inference and clarifying it. The echo question in line 130 is in the form of a metarepresented higher order explicature of 'saying', ("are you saying that] you watch yo-tv?") and END confirms the proposition and elaborates.

In extract (41) REA is asking FNJ about his business of selling engraved rings.

```
180
              *REA:
                     so Tupac, then [chiefs you sell lots of those. •
(41)
        181
              *FNJ:
                                     ichiefs. •
              *FNJ:
        182
                      yes. •
        183
              *REA:
                      and which one do you only sell a little bit? .
              *FNJ:
                      ANC.
        184
      → 185
              *REA:
                      ANC? .
        186
              *FNJ:
                      they don't support, they don't support Thabo Mbeki. •
                      they don't? .
              *REA:
       → 187
        188
              *FNJ:
                     they don't. .
              *FNJ:
        189
                      and he's their father. •
        190
              *FNJ:
                      giving them money for grants. .
              *REA:
        191
                      mmhm.
        192
              *FNJ:
                      yes. •
              *REA:
        193
                      who will they support do you think? •
              *FNJ:
        194
                      sister?
              *REA:
                      who do they want to support if fthey don't support. .
        195
        196
             *FNJ:
                                                     Lthey support Tupac hhh. .
```

<sup>&</sup>lt;sup>56</sup> A popular children's network available on local South African television.

In response to a wh- question FNJ says that the ring which sells least well is that which carries the name "ANC". REA echoes and questions this in line 185. In responding to REA's question, paraphrased in this analysis as "[are you saying that] ANC rings sell poorly?", FNJ goes further than merely confirming the attributed utterance but provides his analysis of why they sell poorly. He confirms the attributed utterance metarepresented in the echo question in line 187 and expresses his disapproval with the situation. Again his responses reinforce his ability to be sensitive to information potentially relevant to his interlocutor<sup>57</sup>.

In the extract below, REA is discussing whether GNS was successful in getting tobacco from a fellow patient during a smoke break. GNS states that he got tobacco from "this other guy". The interpretation of the echo question in line 114 is of interest here. The echo question in line 114 bears little resemblance to any attributed utterance, and, as it is in the wh-form, it represents specific information as relevant.

```
*REA:
                       so did Jewel give you [some tobacco? •
         108
(42)
               *GNS:
         109
                                         ino Jewel wasn't there. •
               *REA:
         110
                       oh. ·
               *GNS:
                       this other guy gave me some. .
         111
         112
               *REA:
                       oh, that's nice.
         113
               *GNS:
                       mister Jewel only smokes cigarettes. .
       → 114
               *REA:
                       the guy who?
         115
                       I said mister Jewel is only smoking cigarettes, that man is
               *GNS:
         116
                       smoking bb. •
                       slang for loose tobacco
         117
               %exp:
         118
               *REA:
                       oh, okay. .
```

GNS appears sensitive to the disparity between the form of the echo question and the content of the preceding utterances, concluding, it seems, that REA may have misheard him. His response is an overtly marked quotation of his previous utterances. This pattern of response suggests that GNS was able to interpret the echo question as echoing and questioning an aspect of a mis-attributed utterance. To achieve relevance (by providing the information and keeping processing costs low), he responds by immediately giving the information required and marking it as a quotation to address the attributive nature of the echo question<sup>58</sup>.

The extract below occurs when REA introduces talk about IPF's friends in the ward. IPF begins introducing the notion that the other patients are not suitable as friends but trails off in line 308, perhaps because it is difficult to word the utterance in a 'socially appropriate' or inoffensive way.

 $<sup>^{57}</sup>$  A further example of FNJ's interpretation of echo questions and anticipating questions in this regard appears in his responses to REA's questions in lines 65-67; 72; 126; 207 and 214 of the transcript (Appendix  $G_6$ ).

<sup>&</sup>lt;sup>58</sup> Another example of GNS's successful interpretation of echo questions appears in line 174; 247 and 256-259 of the transcript (Appendix  $G_7$ ).

```
307
               *REA:
                       so have you got anybody in this ward who's your friend? .
(43)
               *IPF:
        308
                       not really, I try to make no friends as they are all +... .
               *REA:
                       # so it's difficult to get on with them? •
      → 309
               *IPF:
        310
                       ja. ·
        311
               *REA:
                       do you want one of these? .
               *IPF:
        312
                       thank you. .
               *REA:
        313
                      and a biscuit? .
               *IPF:
        314
                      no # not now. .
                      thank you. •
        315
               *IPF:
               *REA:
        316
                       pleasure.
               *REA:
        317
                      so you're not getting on with anyone in the ward who you can
        318
                       chat to and sit with? .
        319
               *IPF:
                       no not really. •
        320
               *IPF:
                       Tiny or Miny, but she moved to ward four. .
        321
               *REA:
                       oh did she? .
```

REA's echo question in line 317-318 is a question about the inferred implicatures of IPF's assertion that she has no friends. This complex echo question can be paraphrased as:

```
[am I right in inferring that
```

you are not getting on with anyone in the ward?"

This is clearly an attributive metarepresentation, to which IPF responds. She not only responds to confirmation represented as relevant, but elaborates in a pattern similar to that described in the 'regular question' analysis above. Her response suggests that she has anticipated further questions or cognitive effects sought by REA.

Extract (44) is a sequence of meaning negotiation between REA and IPF, in the context of non-delusional talk. It occurs as REA brings the refreshment break to a close. The echo question in line 400 is of interest in the context of this 'misunderstanding':

```
391
               *REA:
                       are you sure you don't want anything else during the break? •
(44)
               *IPF:
         392
                       ja, [I'm fine. •
               *REA:
         393
                           Lto go to the bathroom? .
               *IPF:
                       I'm fine thank you.
         394
         395
               *IPF:
                       「<you don't mind if> [/] +/. •
               *REA:
                       LDo you know C? .
         396
               *IPF:
         397
                       C, ja. •
                       sorry, you've got a? • uh, C? •
               *REA:
      → 398
         399
               *IPF:
               *REA:
                       no, you were saying before that, you've got a something? •
       → 400
                       oh, there's only three left so I'll go afterwards don't worry.
         401
               *IPF:
        402
               *REA:
                       there's only two left. .
         403
               *IPF:
                       two left.
               *IPF:
                       it's fine, I'll wait. .
        404
               *REA:
        405
                       you sure? .
               *IPF:
        406
                       ja. •
```

In this case the misunderstanding seem to occur due to "disturbances along the communication channel" (Bazzanella & Damiano, 1999, p. 821) as both parties speak over each other in lines 395 and 396 and subsequently 'miss' what the other has said due to this 'noise'. In addition, the recording suggests that the ward at this point in the conversation was a noisy environment. It is notable that both interlocutors use echo questions in the repair sequence. Lines 398 and 400 are clearly attributed utterances, a case of clear quotation, used as an echo question. In this case, the echo question metarepresents a whquestion about the attributed utterance, such as "[What are you saying that] you've got". REA appears to have mis-heard the utterance as an assertion that IPF has 'got' something

and is attempting to clarify what she 'missed' in IPF's utterance (line 395). Despite this clear misunderstanding, IPF has no difficulty interpreting this question when it is rephrased in line 400, as a question which relies on complex metarepresentational abilities. Her response suggests that she has not only interpreted the question as clarification, but has predicted that's REA's question is a request for information to clarify what she has missed. IPF has been asking if she could go to the bathroom. Her glance at the outline plan of the session provided her with the information that there were only a few components of the assessment left and she decided to complete the assessment without interruption. Thus, she has decided that the information which REA is seeking in line 400 (that she had wanted to go to the bathroom) is no longer optimally relevant in the context, and she responds in a way which both provides the missed information and indicates the information optimally relevant to REA (line 401). It would appear that, in this case, IPF is able to bring sophisticated metarepresentational abilities to bear within her conversational exchange.

In extract (45), REA and JPZ are talking about her language use in the hospital. JPZ has asserted that she speaks Zulu and Siswati in the hospital. In response to JPZ's assertion that she mixes languages, REA asks the echo question "oh, you're mixing?" in line 82:

```
who speaks Swati in the hospital? .
          78
                  *REA:
(45)
                           me only. .
          79
                  *JPZ:
          80
                  *REA:
                           okay. •
          81
                  *JPZ:
                           I'm mixing. .
                           oh, you're mixing? • but they understand me. •
         + 82
                  *JPZ:
          83
                  *REA:
          84
                           okay. .
```

REA is asking a question about the higher order speech act of 'saying', asking, "[are you saying that] you're mixing languages". JPZ's response appears to acknowledge a potentially implicit question of "do they understand you if you mix your languages?" JPZ appears to be taking into account the potential for misunderstanding, anticipating the needs of REA as an English-speaking clinician, who may not be aware of the mutual intelligibility of Zulu and Siswati.

KPS displays the ability to interpret echo questions within delusional talk at times. Extract (46) follows a discussion about China, after KPS asserting that she would like to visit China (See Appendix  $G_{11}$  line 352). Given the preceding discussion about China and "different ways of living", REA's echo question in line 367 could appropriately be interpreted as a 'summary' or clarification of inferences – "[am I correct in inferring then that] you are interested in other cultures". KPS affirms this inference, suggesting that she has interpreted the question as representing a relevant confirmation of the proposition.

```
(46) \rightarrow 367
              *REA:
                      so you're interested in other cultures? .
              *KPS:
                      ja, I am. •
       368
       369
              *REA: you wouldn't go and visit America or something, you would go
    →[ 370
                      to China? •
              *KPS:
                     no no I no I have to America sometime you know # ja #. .
       371
       372
              *KPS:
                     I was born in America, I have to go back sometime go and see
       373
                      my see my father. .
             *KPS:
                     not father, fathers. .
       374
              *REA:
       375
                     fathers? •
              *KPS:
       376
                      yes, I was a test tube baby. .
             *REA:
                     okay? .
       377
                    ja hhh #. •
              *KPS:
       378
                     so, how will you find them, that might be difficult. •
       379
              *REA:
       380
              *KPS:
                     no it's no, I know we get on, Tyes we still have contact. •
       381
              *REA:
                                                    Lyou still +/.
              *REA:
       382
```

KPS also displays the ability to interpret echo questions as representing desirable information beyond a simple confirmation or disconfirmation. Her responses to the echo questions in lines 367 and 375 are evidence of KPS's ability in the role of the hearer. KPS, in lines 372-373 not only disconfirms that China is the only place she would like to visit, but also elaborates on why she feels she would like to visit America. In keeping with her performance in interpreting regular questions, she is able to anticipate questions and elaborate accordingly to the question which could be paraphrased as "[are you saying that] you would not go to America, [are you saying that] you would visit China?' Similarly in line 376, KPS responds in a way which represents REA's question as representing desirable information beyond just confirming the use of the word "fathers", but explaining why she feels entitled to use this word. The question seems to metarepresent the higher level explicature "[Are you saying that] you have (multiple) 'fathers'", or even "[what are you implying by saying that] you have 'fathers'" (which, on the latter analysis, would be considered a complex echo question). KPS's response then suggests a successful interpretation of the question and an ability to metarepresent REA's assumptions as different from her own, that is, that REA does not know that she was a test-tube baby. What remains, despite this delusional content in the response, is the fact that KPS is clearly able to interpret the question as requesting specific information to clarify an attributed utterance.

Both LPC and NPH demonstrate the ability to interpret echo questions about inference. After LPC has stated that accounting was her favourite subject, REA asks the echo question in extract (47), "you were good at it?" (line 163), metarepresenting an inference. In (48) NPH has stated that she plays netball in the hospital and a discussion follows about the nature of the teams.

```
*REA:
                      what was your favourite subject? .
(47)
       159
              *LPC:
        160
                      accounting.
              *REA:
        161
                      wow, hmm! .
        162
              *REA:
                      for me that was so hard #. .
              *REA:
       163
                      you were good at it? .
       164
              *LPC:
                      ia #.
        165
              *REA:
                      you know what used to happen to me? .
        166
              *LPC:
                      hmm? .
        167
              *REA:
                      I would write my accouting exam, I only did it until standard
                      eight, I wasn't good enough.
        168
              *REA:
                      So I would write my accounting exam in standard eight and then
        169
        170
                      you'd get to the end and the balance sheet wouldn't balance and
                      you don't know where the mistake is + ... .
        171
              *REA:
      → 172
                      that didn't happen to you? .
              *LPC:
        173
                      it happen. •
              *REA:
                      it happened. .
        174
        292
              *REA:
                      so are there two teams within the hospital, two? .
(48)
              *NPH:
                      ja most of them are [/] some of them are nurses.
        293
        294
              *NPH:
                      the last time that we had a match we had, uh, student nurses
        295
                      and we did quite well. •
        296
              *REA:
                      so who else is in the team? .
              *NPH:
                      L also as well, she's # oh she usually uh # um what do you call
        297
        298
                      those people who are uh, # blowing the whistle? .
              *REA:
        299
                     uh +/. •
              *NPH:
                     the referee, you know. .
        300
              *REA:
                     yes, [that's right.
        301
        302
              *REA:
                           ishe's usually the referee. .
              *REA:
                      Diane from OT. OT? .
      → 303
              *NPH:
                      ja, the OT lady hhh. .
        304
```

The responses of LPC and NPH demonstrate that both of these participants with pPS are able to interpret these specific instances of echo questions as metarepresenting inferences presented for confirmation or disconfirmation.

In extract (49), REA poses an echo question, following an earlier assertion by MPT that he does not watch sport (lines 117-120 of transcript  $G_{13}$ ):

```
do, do you not watch in the ward? .
         172
               *REA:
(49)
         173
               *MPT:
                        the tv? .
               *REA:
         174
                        mmm. .
         175
               *MPT:
                        no I don't watch the tv, it's boring. .
                *MPT:
         176
                        hhh.
               *MPT:
         177
                        I sometimes watch days of our lives, bold and the beautiful
         178
                        but + . . .
               *REA:
                        so no one in the ward is following this rugby? .
       → 179
               *MPT:
                        I don't know about those people in the ward, but me, no. .
         180
```

In the context of the conversation in (49), the form of the question signals a question about an inference (i.e., not an utterance explicitly attributed to MPT). Given the South African context and the excitement around the event, this question carries not only a desire for clarification but also a degree of incredulity. MPT's response suggests that he has indeed interpreted the question as checking an inference, rather than an utterance directly attributed to him. He does not respond in a way to dispute an attribution (e.g. by saying, "no that's not what I meant") but instead responds to an inference by giving only the information available to him<sup>59</sup>.

<sup>&</sup>lt;sup>59</sup> A further example suggesting MPT's sensitivity to an attitude of incredulity carried by an echo question is apparent in line 194 of the transcript (Appendix  $G_{13}$ ).

In extract (50), PPG repeats the part of his utterance represented by REA's echo question as relevant.

```
(50)

108 *PPG: +, I love to fix things plaster, I plaster the walls I made a creche for my mother, she said it wouldn't work. •

→ 110 *REA: you made a what? •

111 *PPG: I I opened up a creche for my mother. •

112 *REA: oh, okay. •
```

PPG is able to clarify the utterance attributed to him by the echo question in line 110, "[what are you saying that] you made?" <sup>60</sup>.

The extract below is taken from the delusional talk around RPD's drawings. The evidence of TD talk is clear and REA appears to impose meaning by using echo questions to clarify whether her interpretation is a faithful enough resemblance of the intended message. The notion of imposing meaning will be further explored in Chapter Ten.

```
*RPD:
         274
                       just show the people if you can look at this pictures try to
(51)
         275
                       draw on your own what's happening around you why your life this
         276
                       is how your life circulates and your life will be completely
         277
                       when you start drawing you feel enormously # um # how
        278
                       educated-minded because then you know when you draw this one. •
       → 279
               *REA:
                       you almost feel relieved? .
               *RPD:
                       you feel enormously relieved.
         280
         281
               *RPD:
                       but let me tell you about this pictures that I draw you cannot
        282
                       trace them, you understand my thought? .
               *REA:
         283
                       you cannot trace them. •
         284
               *RPD:
                       you cannot trace them. .
               *RPD:
                       because hey it's coming out of my acceleration of my human
        285
        286
                       body's spirit. .
               *REA:
       + 287
                       it's coming from your heart? •
        288
               *RPD:
                       it's coming from my Theart.
```

In these echo questions (lines 279 and 287) REA is asking, "are you saying that...", and in each example RPD confirms the interpretation. As REA is presenting a proposition and echoing it as an interpretation of an attributed utterance, RPD's confirmation achieves relevance by confirming the faithfulness of the resemblance.

Extract (52) is taken from the beginning of the recorded interaction between TMH and REA. The conversation had begun before their entrance to the room, and TMH had said that she was reading a book on accounting, and asserted that the vocabulary was interesting. REA poses an echo question in line 7:

```
*REA:
                       Tthe vocabulary's interesting? .
(52)
         8
               %com:
                       referring to a conversation that had started before entering
         9
                       the room
         10
               *TMH:
                       tum, ja, you know it, ways to enrich your word power, type of
         11
                       thing. •
               *REA:
                       it will take a bit to convince me that # faccounting words are
         12
         13
                       interesting. •
               *TMH:
         14
                                                                  (well it's +/. .
               *TMH:
         15
                       well it's, there's when you when you don't have that much to do
         16
                       then it does become interesting. .
```

 $<sup>^{60}</sup>$  A further example of PPG's interpretation of echo questions is evident in lines 15 of the transcript (Appendix  $G_{16}$ ).

This question appears to be an expression of incredulity, given that REA later says, "you'll have to convince me that accounting words are interesting". TMH's response suggests that she has responded to the echo question in a way to clarify and justify her interest – giving further information. She has clearly interpreted the question as metarepresenting her act of saying, "[are you saying that] the vocabulary is interesting?" as well as conveying a specific attitude<sup>61</sup>.

In extract (53), REA is asking UMB about the books which he has been talking about. REA begins asking (over a number of lines) as to which library carried these books, and, after he asserts that they were from "the library in town" (line 276), REA asks the echo question "oh, our Jo'burg library?" (line 279):

```
and this [/] you say um those books were in is it the library
         272
               *REA:
(53)
         273
                       near where you live not +/. .
               *UMB:
                       ja, they're from Texas.
         274
               *REA:
                      +, our library here. •
         275
         276
               *UMB:
                       no, it's the library in town. .
         277
               *REA:
                       mmhm.
         278
               *UMB:
                       it's from Texas so it's these Americans that have gone. •
               *REA:
                       oh, our Joburg library? .
       + 279
         280
               *UMB:
                       ja.
               *UMB:
                       no no not Johannesburg, Stilldorp. .
         281
         282
               *REA:
                       oh, Stilldorp. .
```

REA is questioning a metarepresented higher order explicature of 'saying', "[are you saying that they're from] our Jo'burg Library". UMB responds by clarifying his intended meaning — that the books are in fact from another local library. UMB appears to have interpreted REA's echo question as representing clarification about an attributed utterance<sup>62</sup>.

In extract (54) REA poses the echo question, "so its been easy for you to learn Zulu then?" This question follows an assertion by VMD that Zulu and her home language of Matabele are related:

```
→ 80
                       so it's been easy for you to learn Zulu then? .
               *REA:
(54)
               *VMD:
        81
                       I don't have to learn it (be)cause that's what we speak
         82
                       actually at home there.
                       we speak Zulu. •
        83
               *VMD:
      → 84
               *REA:
                       okay, so at home you were speaking Zulu? .
         85
               *VMD:
                       yes. •
```

VMD appears to interpret the echo question as metarepresenting an act of 'saying' attributed to her and corrects REA's interpretation – emphasising that she does not have to learn it as she already speaks the language. She responds with similar success to the echo question in line 84.

 $<sup>^{61}</sup>$  A further example of TMH's interpretation of echo questions is apparent with regards to her response to REA's question in line 553 of the transcript (Appendix  $G_{19}$ ).

 $<sup>^{62}</sup>$  A further example of UMB's interpretation of echo questions is apparent in line 454, visible in the transcript (Appendix  $G_{20}$ ).

In extract (55), REA makes an inference and checks it with VMD through the use of an echo question in line 364. In extract (56), REA and WML are talking about the mobile 'tuckshop' run by the residents of the 'Independent House'. REA uses an echo question in line 83 to confirm an assumption — that the residents do not go all the way to a ward situated a distance away.

```
362
                       I only worked in that one company until I came here to South
(55)
         363
                       Africa.
       → 364
               *REA:
                       and in South Africa you also working in pharmacy? •
               *VMD:
                       yes, I'm also working in a pharmacy but in a hospital. .
         365
         366
               *REA:
                       okav. •
      → 83
               *REA:
                       # you don't go all the way to eighteen hey, to [ward eighteen?
(56)
         84
               *WML:
                                                                        Lno. ·
         85
               *WML:
                       no. ·
               *WML:
                       we go eight, seven, five, four and two. .
         86
         87
               *REA:
                       okay.
               *REA:
         88
                       # so do you start at the side for eight and then you come back
         89
                       this way? .
               *WML:
         90
                       yes. .
               *REA:
         91
                       and also the buildings at the top? .
               *REA:
         92
                       do you go there? .
                       # only in the morning? .
         93
               *REA:
               *WML:
         94
                       only in the morning. .
```

All three participants confirm the respective inferences metarepresented by the questions, with VMD and WML<sup>63</sup> offering further information.

YMB states that she has been "selfdrawn" in her life in extract (57) – a neologism which REA attempts to clarify with an echo question in line 321-322:

```
320
               *YMB:
                       I'm # I've I've been selfdrawn@n all my life &=crying . .
(57)
         321
               *REA:
                       you've been self? .
     →[ 322
               *REA:
                       ## self conscious? .
         323
               *YMB:
                       selfdrawn@n. •
         324
               *REA:
                       selfdrawn@n.
               *YMB:
                       # it's very difficult to understand. .
```

REA's question is an attempt to clarify the neologism used by YMB, initially leaving it openended in wh- form, "[what are you saying that] you've been?" and then after a pause, asking, "[are you saying that you've been] self-conscious?" YMB appears to interpret the question as asking whether the metarepresented act of 'saying' is a faithful enough interpretation and reasserts her neologistic term, "selfdrawn". In fact, it emerges later that she meant 'withdrawn' and thus REA's echo of "self-conscious" is indeed not a faithful resemblance to the intended meaning, and YMB's reassertion of her phrase, therefore, is appropriate.

### 8.3.3 Less successful interpretation of echo questions

While many of the participants display successful interpretation of echo questions, there are instances which signal less successful interpretation. This section will examine such

<sup>&</sup>lt;sup>63</sup> The other echo questions in extract (82) are immediately followed by a regular question and therefore their interpretation as echo questions is difficult to ascertain.

evidence, beginning with exploring instances in which participants are unsuccessful in interpreting complex echo questions, before considering difficulties in interpreting simple echo questions about 'saying' and simple echo questions about inferences. Table 8.5 presents the data references pertaining to evidence of less successful interpretation of echo questions by participants. Again, the analysis will begin with discussion of complex structures (higher order metarepresentations), before discussing simple echo questions about 'saying', followed by analysis of the interpretation of simple echo questions about inferences.

TABLE 8.5 EVIDENCE OF LESS SUCCESSFUL INTERPRETATION OF ECHO QUESTIONS

Participant	Symptom Group	Line numbers demonstrating less successful interpretation of echo questions **		
		Complex echo questions	About saying	About inferences
*BND	pNS	76	(48); (66); (71);84- 85; 225; 247; 249	
*CNJ	pNS		129; 136	
HNT	pNS		(296); (140); (400)	254
*IPF	pPS		259; (357)	
JPZ	pPS	121		
*KPS	pPS		425; (348)	

<sup>\*</sup>Participants presenting with delusional talk during conversational interaction

# Less successful interpretation of complex echo questions

The complex echo questions used by REA are utterances which are three tiered metarepresentational structures and hence second order metarepresentations. The interpretaion of these utterances involves third order abilities on the part of the herer, as discussed earlier. JPZ and BND display difficulty with the interpretation. Of these utterances.

In extract (58), REA poses an echo question in line 121. JPZ has asserted that she has "no right parents" and that Swaziland is nice "when you've got the right parent".

```
what was it like to live in Swaziland? .
        111
              *REA:
(58)
        112
              *JPZ:
                      uh. ·
        113
              *JPZ:
                      what? .
         114
              *REA:
                      how was it there? .
                      it was nice. •
        115
              *JPZ:
        116
              *REA: it was nice. •
              *JPZ:
        117
                      yes. .
         118
              *JPZ:
                      but because I've got no, I've got no parents, right parents it
        119
                      was bad.
              *JPZ:
                      it's nice when you've got the the a right parent. .
        120
              *REA:
                      a right parent? •
       → 121
              *JPZ:
         122
                      yes.
                      so you mean family things were difficult? .
              *REA:
         123
         124
              *JPZ:
                      the family was not right to me. .
         125
              *REA:
                      okay.
         126
               *JPZ:
                      # that's why I came here in South Africa. .
         127
              *REA:
                      okay.
```

<sup>\*\*</sup> Bracketed data references are not discussed in the analysis which follows

REA's echo question, "a right parent?" (line 121), seems to be interpreted by JPZ as "[did you say] 'a right parent'?" In fact, although not overtly marked as such, REA seems likely to be asking, "[what do you mean by saying] a right parent?" JPZ confirms the phrase represented by the echo question, but fails to elaborate on the meaning, which appears to be what REA is seeking, given her negotiation of meaning in lines 123-125.

Extract (59) occurs within a discussion between REA and BND about local soccer team, called the 'Swallows'. BND has asserted that he is the "son of swallows", a phrase which REA attempts to clarify through the use of echo questions in lines 76, 79 and 84-85.

```
*REA:
                         what does it mean, son of swallows, I don't know. .
(59)
                *REA:
       → 76
                         you mean you support the swallows [soccer team? .
                *BND:
         77
                         II'm the I'm the I'm the young I'm the young I'm the young baby
                         of swallows. •
         78
                *REA:
                         of swallows the 'soccer team? .
        → 79
                *BND:
         80
                                           ıja. •
                         ja, the soccer team, moroko swallows team. •
so you're the son of the swallows +/.
                *BND:
         81
                *REA:
         82
         83
                *BND:
                         ımy moroko swallows my Nyatidi is my father. •
                *REA:
                         # so one of the swallows is the [/] is your father? .
      →( <sub>85</sub>
         84
                *REA:
                         one of the 'players? .
                *BND:
                                     ıja, ja, ja, ſja. ⋅
         86
         87
                *REA:
                                                   Loh! .
                *REA:
                         so you're a good soccer player. •
         88
                         ja. ·
         89
                *BND:
```

REA's echo question in line 76 could be paraphrased as, "[am I correct in inferring that] you mean that you support the swallows soccer team?" BND's initial response of rephrasing the utterance that he is not just "the son of swallows" but the "young baby of swallows" suggests that he has not been successful in interpreting the information represented as relevant. This apparent difficulty in responding to the question as expected may signal that he is unaware of the assumptions manifest to REA, despite this signal for further information. The echo question in line 79 is answered with far more success. The question, in the context of the discussion, is asking, "[am I correct in inferring that you are talking about] swallows the soccer team?" BND is able, in this case, to metarepresent the question as representing desirable information about the nature of "the swallows" and also the implicit question as how it is that he calls himself "the son". REA's echo question in lines 84-85 is a final attempt at clarifying her interpretation, and is a metarepresented act of 'saying'. While BND confirms the proposition, he does not seem to be sensitive to the possible incredulity expressed by REA, providing no additional information (such as the name of his father or the position he plays), which is arguably implicitly represented as relevant.

### Less successful Interpretation of simple echo questions about 'saying'

A number of participants fail to achieve relevance in responding to echo questions about 'saying'. The analysis suggests that these participants have difficulty in interpreting the question and predicting where relevance lies for REA.

In extract (29') BND asserts that his father is "William Shakespeare". After claiming that his father is in the well-known soccer team 'the Swallows' and that his name is William Shakespeare, REA uses echo questions in an attempt to clarify BND's intended meaning. BND appears to have difficulty with the echo questions in (29') (lines 225, 247, 251), similar to the difficulties he displays in interpreting the regular questions (discussed in sections 8.2.2). All three echo questions are associated with meaning negotiation.

```
*REA:
                        which one is your father? •
          223
(29')
          224
                *BND:
                        uh, William Shakespeare. •
                *REA:
                        William Shakespeare? .
        → 225
          226
                *BND:
                        ja. ·
                *REA:
                        but William Shakespeare is a # a olden day author. •
          227
          228
                *BND:
                        huh?
                *REA:
                        he [/] William Shakespeare is someone who used to write stories
          229
          230
                *BND:
                        yes yes yes yes yes. •
                *BND:
                        is my father. •
          231
          232
                *REA:
                        okay, did you read William Shakespeare at school? .
          233
                *BND:
                        I didn't read his this man he tell me. •
          234
                *REA:
                        okay. •
                        ja. ·
          235
                *BND:
                        is there a man called William Shakepeare in the swallows who
          236
                *REA:
          237
                        plays soccer? .
          238
                *BND:
                        yes yes #. .
                *BND:
          239
                        yes.
                *REA:
                        does he have another name as well? .
          240
                *BND:
          241
                *REA:
                       does he have another name, this man, [William Shakespeare? •
          242
          243
                *BND:
                                                              ıja, ja. •
                *REA:
                       what's his other name? .
          244
          245
                *BND:
                       he's Jan van Riebeeck. •
                       a South African historical figure
          246
                %exp:
          247
                *REA:
                        # who plays for swallows? .
                *BND:
          248
                        yes. •
        → 249
                *REA:
                        plays soccer? .
          250
                *BND:
                        who? .
         + 251
                *REA:
                        Jan van Riebeeck? •
                *BND: ja, ja, he plays soccer. •
          252
```

REA's question in line 225, "William Shakespeare"?, appears to be interpreted as a request for confirmation of an attributed utterance, rather than as a request for clarification. A similar pattern is noted in the interpretation of the echo questions in line 247 and 251. BND does not appear to be sensitive to the incredulity or confusion communicated by the sequence of meaning negotiation (and likely corresponding intonation), nor is he aware of the contextual need for clarification<sup>64</sup>.

In extract (60), CNJ is engaged in delusional talk around Brad Pitt and his desire to "get to know him". REA uses echo questions in lines 129, 134 and 136 to clarify CNJ's

 $<sup>^{64}</sup>$  Further examples of the interpretation of echo questions by BND appear in lines 48, 66 and 71 of the transcript (Appendix  $G_2$ ).

assertions. While some of CNJ's responses to these question achieve partial relevance, he is less successful in interpreting the questions, compared to his performance in extract (38).

```
128
               *CNJ:
                       I'd like to get, like to get to know him almost. •
(60)
               *REA:
      → 129
                      you mean personally or + ..? .
        130
               *CNJ:
                       personally, yes. .
               *CNJ:
                       like as in uh, [/] um like being by his side like his inner
        131
        132
                       being and stuff.
               *CNJ:
        133
                       to know what he's like all about almost because xxx. .
       → 134
               *REA:
                      because what? .
        135
               *CNJ:
                      he's hiding some stuff from me. .
                      he's hiding some stuff from you? .
      → 136
               *REA:
        137
               *CNJ:
                      ja. ·
```

In extract (60), REA uses an echo question for clarification in line 109, asking, "[are you saying that] you want to get to know him personally?" CNJ infers the relevance of question as seeking clarification of his utterance (demonstrated in line 130-133), not only accepting REA's attributed utterance, but clarifying exactly what he means by "get to know him". This response indicates an ability to interpret the echo question and predict where relevance lies for the questioner, but from within his delusional framework. CNJ does not, however, respond to or acknowledge the incredulity expressed, meaning that he does not fully achieve relevance. The echo question in line 134 is a specific request for the information in the second part of the utterance in line 133, as it was unintelligible. CNJ interprets it as such and provides the answer to the wh- component of this echo question. REA's echo question in line 136 arguably carries the implicit question of 'what is he hiding from you', while at the same time expressing incredulity. To achieve relevance, CNJ would have to anticipate the implicit question and, in responding, provide some evidence of his assertion. CNJ simply confirms the utterance attributed to him by REA's echo question, suggesting that he has not interpreted the question as intended.

In extract (61), which follows, IPF introduces the delusional topic of her link to "the Samurai Kingdom". This sequence appears to pose more difficulties than extracts from the non-delusional talk with IPF — perhaps signalling that delusional talk poses specific challenges to communicators. In line 259, REA uses an echo question in an attempt to clarify or elicit elaboration on IPF's utterance in line 258:

```
258
               *IPF:
                       go back home, to the samurai kingdom. .
(61)
                       to the samurai kingdom? •
       → 259
               *REA:
         260
               *IPF:
                       ja. ·
               *REA:
                       what country is that? .
         261
               *IPF:
                       uh, China.
         262
                       China, not Japan? •
               *REA:
         263
         264
               *REA:
                       Is it China? •
               *IPF:
                       China, Japan. .
         265
               *IPF:
                       it's what's in the middle isn't it? .
         266
```

IPF appears to interpret REA's echo question to represent desirable information of a confirmation or disconfirmation (essentially treating it as a *yes-no question* about an attributed utterance). In fact, the information represented as desirable by REA would plausibly be more along the lines of why the Samurai Kingdom is considered home or where

the Samurai Kingdom is (evident from the sequence of talk that follows). Thus, this echo question may be paraphrased as "[Are you saying that] the Samurai Kingdom is home?" or, alternatively, "[Did you say] the 'Samurai Kingdom?'" Either way, the expected pattern would most likely include an elaboration of the sort analysed in earlier sections. The apparent difficulty in metarepresenting the echo question would appear to be related again to a difficulty in representing the mutual cognitive environment. Thus, if IPF assumes that it is manifest to REA that far eastern countries are 'home', or if she assumes that REA is familiar with the notion of calling the far east the Samurai Kingdom (in the 21st century context), then she would be justified in interpreting the echo question as a request for confirmation of the original utterance<sup>65</sup>.

KPS is not consistent in her successful interpretation of echo questions within delusional talk. In extract (62), REA and KPS are discussing KPS's religion, which she has introduced in line 421. REA poses an echo question in line 425, seemingly to gain clarification:

```
421
               *KPS:
                       luckily it was my <religion you know> [?] to recover. •
(62)
                       what freligion was that? .
         422
               *REA:
         423
               *KPS:
                            LSO +/. .
               *KPS:
                       imam. •
         424
        + 425
               *REA:
                       imam? •
               *KPS:
                       imam. .
         426
         427
               *REA:
                       okay.
         428
               *KPS:
                       ja. ·
         429
               *KPS:
                       so at least I [/] they revived me you [know. .
         430
               *REA:
                                                              Lja.
                       was that when you were here [before? •
               *REA:
         431
               *KPS:
                                                    tyes, when I was here. .
         432
               *REA:
         433
                       what is imam, I don't know about it. .
         434
               *KPS:
                       it's like hindu. •
         435
               *REA:
                       okay. .
```

KPS appears to interpret this question as metarepresenting the structure "did you say Imam?" as requiring pure clarification. In fact, it appears to be an invitation to elaborate, as KPS has done in other instances, and REA is forced to follow up with a regular wh- question later in the interaction (line 433) to achieve the desired cognitive effects<sup>66</sup>.

The difficulties in interpreting echo questions about 'saying' appear more pervasive than those related to echo questions about inferences. HNT is the only participants who shows clear difficulty with these questions. REA appears to use echo questions to clarify meaning which she has inferred (or is struggling to infer) from the participants' utterances. Nowhere is this more apparent than within delusional talk, such as extract (63).

<sup>&</sup>lt;sup>65</sup> Another example of such difficulties experienced by IPF in delusional talk is apparent in the meaning negotiation of lines 356-357 of the transcript (Appendix G<sub>9</sub>).

<sup>&</sup>lt;sup>66</sup> Further examples of KPS's interpretation of echo questions as merely seeking confirmation for an attributed utterance appear in line 348 of the transcript (Appendix G<sub>11</sub>).

```
(63)
         245
               *HNT:
                       since my [//] madam last week I suspecting this person who is
         246
                       inside me to me to tempting me since I've been watching
         247
                       <it> [?]. •
               *REA:
       → 248
                       so someone's been tempting you to smoke? .
         249
               *HNT:
                       ja. ·
         250
               *REA:
                       who is it, someone in the ward? .
                       ja, that person who lives in the corner and just like to appear
         251
               *HNT:
         252
                       it's kind of by a slow motion. .
                       okay. •
         253
               *REA:
       + 254
               *REA:
                       and he tempts you to smoke? .
         255
               *HNT:
                       yes. •
```

In line 249, HNT affirms REA's interpretation of his preceding discourse presented in the echo question of line 248, and relevance is achieved in this way. REA's interpretation is an inference from various utterances and thus the echo question might be metarepresenting a higher order explicature around this inference, such as "[am I right in inferring that] someone's been tempting you to smoke". A simple confirmation would achieve relevance in this regard (and this success is reflected in the data table 8.4). REA's second echo question in line 254 metarepresents the act of 'saying', "[are you saying that] he tempts you to smoke?" Despite the sequence of clarification and questioning, HNT confirms but does not elaborate. Again this may be due to the nature of the question or perhaps due to a belief that the delusional assumptions are manifest to REA<sup>67</sup>.

## 8.3.4 Summary: Interpreting echo questions

Despite the extra layer of metarepresentational demand, all of the participants display evidence of being able to cope with interpreting echo questions, indeed, some of the participants show ability to interpret and respond to echo questions; involving verifying attributed implicatures. Success is seen across echo questions metarepresenting different higher level explicatures.

Six participants display clear instances of difficulty, including BND, CNJ and HNT from the group with prominent negative symptomatology and IPF, JPZ and KPS from the group with prominent positive symptomatology. Problems in interpretation appear to arise specifically with metarepresented acts of 'saying', with fewer difficulty in echo questions about the accuracy of inferences. The more frequent difficulty with echo questions metarepresenting higher order explicatures of 'saying' may reflect less frequent occurrence of the other types of echo questions. However, it is suggested that the difficulties may be due to the nature of these echo questions themselves. Metarepresenting acts of 'saying' in a yes-no form entails questions which can be interpreted as "are you saying that..." and as such may be interpreted as instances of clarification in which a simple confirmation or

 $<sup>^{67}</sup>$  Similar patterns in which the echo question invites clarification and elaboration, but instead is interpreted as a straightforward *yes-no question* by HNT appear in lines 140, 296 and 400 of the transcript (Appendix G<sub>8</sub>).

disconfirmation will suffice. REA, however, appears to demonstrate instances in which echo questions are used to encourage elaboration on an utterance which she has clearly heard and which appears to offer no complexity in terms of interpretation. In this way, echo questions are used at times to facilitate ongoing interaction, perhaps by representing the attributed thought as 'desirable information' and, therefore, in need of elaboration. Echo questions asked by REA in this data set appear to function almost exclusively as some type of clarification or invitation for the participant to elaborate. Where no elaboration is forthcoming, the response does not fulfil REA's expectations of relevance. This difficulty then appears to be about predicting what is relevant to the hearer in the context of the echo question - rather than a difficulty with interpreting the echo question itself. In all cases, the participants do respond to the echo questions in a manner signalling that they recognised that a piece of information was represented as relevant. In these examples, the participants appear 'less proficient' or less successful in identifying the informative intentions expressed by REA when compared to the success achieved in other portions of the talk. In contrast to echo questions which can be paraphrased as yes-no questions, echo questions containing a wh- element appear to be used and interpreted as signals for clarification or repetition. These utterances seem to be interpreted as signalling a misunderstanding or the need for repetition.

TABLE 8.6 SUMMARY OF EVIDENCE OF PARTICIPANTS ABILITY TO INTERPRET ECHO QUESTIONS

Participant	Symptom Group	Successful interpretation of echo questions			Less successful interpretation of echo questions		
		Complex	Simple		Complex	Simple	
			saying	inferences		saying	inferences
*IPF	pPS	٧	٧	٧		X	
HNT	pNS	٧	٧	٧		×	×
YMB	MS	٧	٧				
ANJ	pNS		٧	٧			
UMB	MS		٧	٧			
VMD	MS		٧	٧			
END	pNS		٧	٧			
*BND	pNS		٧	٧	×	×	
DNV	pNS		٧				
FNJ	pNS		٧				
GNS	pNS		٧				
PPG	pPS		٧				
*RPD	pPS		٧				
TMH	MS		٧				
LPC	pPS			٧			
MPT	pPS			٧			
NPH	pPS			٧			
WML	MS			٧			
*CNJ	pNS		٧			×	
*KPS	pPS		٧			X	
JPZ	pPS		٧		X		
OPH	pPS						
*SPG	pPS						

Examining performance on the implicit attribution of mental states and performance on language assessment tasks of those participants who displayed difficulty interpreting echo question reveals no clear pattern explaining the difficulties noted. Of interest is that five of the six participants presenting with difficulty are those who engaged in delusional talk during the interactions. Most of the extracts in which instances of difficulty with echo questions were noted were extracts of delusional talk. In many of the instances of difficulty, the analysis suggested that, for the most part, the challenge arose due to problems in predicting what information or assumptions were available to REA. In some instances, the difficulty may have been related to a failure to predict the cognitive effects sought by REA.

# 8.4 Conclusion: Responding to the metarepresentational demands of question interpretation

While difficulties emerge with both regular and echo question interpretation, the difficulties noted are by no means pervasive, nor are they confined to echo questions alone. In their performance as hearers, the participants with schizophrenia display surprising evidence of the use of metarepresentational abilities. Indeed, despite Frith's model predicting that the individuals would have available to them only "ritual and behavioural routines for interacting with people, which do not require inferences about mental states" (Frith 1992, 121), the participants demonstrated sophisticated abilities to predict the cognitive effects sought by their interlocutor. There were, however, certain participants who appeared to have more difficulty than others, and these patterns may be related to Frith's predictions based on psychiatric symptomatology. CNJ, BND, END and HNT of the pNS group displayed some instances of difficulty in the interpretation of regular questions, while IPF, JPZ, LPC and RPD were the individuals with pPS who demonstrated most difficulty with regard to regular questions. YMB was the only participant with mixed symptoms who displayed any difficulty with regular questions. Although these participants all come from different groupings of symptomatology, those presenting with active engagement in delusional talk during the interactions appear to be over-represented. In fact, five of the seven participants presenting with delusional talk are represented in the group of those with difficulties in regular question interpretation. In contrast to their performance on regular questions, only five participants displayed significant difficulty with echo questions, and both the pNS and pPS groups are represented, with BND, CNJ and HNT having difficulty from the pNS group and IPF, JPZ and KPS from the pPS group. Again, those presenting with delusional talk are over-represented, with five of the six displaying active delusional talk during the interactions recorded.

The analysis did not show a clear disproportionate difficulty with regards to echo questions, as predicted. Part of the reason may be related to the nature of the echo questions, which for the most part echoed a thought or utterance attributable to the participant in the immediately preceding talk. This feature may make the interpretation easier than, for example, echo questions about thoughts or utterances attributed to others or attributed to the participant at a much earlier time. However, the pattern of performance may also suggest that it is not in fact the attributive layer of metarepresentation which is challenging to participants, but rather the process of metarepresentation itself, and perhaps, specifically, the metarepresentational demands of representing the mutual cognitive environment as a component of the individual's total cognitive environment.

Given the inherently metarepresentational nature of questions from an RT perspective, the successful performance of the participants on many of the examples attests to a level of ability not predicted by the 'mentalizing models' of the disorder. Is there something inherent in the conversation which is supporting this ability, or masking the difficulties? Chapter Ten will consider collaborative meaning making in an attempt to explore how conversation supports metarepresentation or masks the difficulties. Given the disproportionate difficulty experienced in delusional talk, the following chapter will concentrate specifically on the seven participants displaying clear instances of delusional talk, exploring how the mutual cognitive environment is managed within interactions by these individuals as speakers.

## **Chapter Nine**

# Delusional talk and the `mutual cognitive environment': tailoring utterances for the hearer

Conversation provides more than an opportunity to examine metarepresentational use in vivo – it provides a unique window into how individuals with schizophrenia tailor their contributions to allow their hearers to accurately interpret what they wish to communicate. The previous chapters have revealed a perhaps surprising degree of metarepresentational ability within the conversational context, contrary to what might have been predicted given the hypothesised impairment in mentalizing. Delusional talk has emerged as a potentially interesting terrain for the investigation of how particular individuals with the disorder attend to the information available to their interlocutor. In delusional talk there is likely to be a distinct separation between the assumptions held by the participant and those held by REA. These potentially 'problematic' stretches of talk may, therefore, provide an opportunity in which to investigate how the individuals 'assert relevance', as in the role of speaker. I have suggested that individuals engaging in delusional talk appear, at times, to have difficulties in accurately presuming what assumptions are mutually manifest. The analysis in this chapter will focus exclusively on those seven participants presenting with active delusional talk within the conversational data. From the group with predominantly negative symptomatology (pNS) this includes BND, CNJ and HNT; from the group with predominantly positive symptomatology (pPS) it includes IPF, KPS, RPD and SPG. None of the participants with mixed symptomatology (MS) engaged in delusional talk.

As explored in Chapter Three, successfully conveying one's meaning as a speaker relies on (1) the existence of a goal (or informative intention) to make manifest (or more manifest) some set of assumption; (2) the speaker considering the context accessible (or manifest) to the hearer at that point of the conversation; and (3) the formulation of an utterance which is an ostensive act designed to point the hearer towards the informative intention (the communicative intention), thereby allowing the hearer to identify the intended meaning with minimal effort. As was argued in Chapter Four, Frith's (1992) metarepresentational model of schizophrenia seems to predict that people with the disorder will have little difficulty with (1), that is, their 'goal' appears as intact in Frith's model. However, depending on their profile of symptoms people with schizophrenia are predicted to have varying degrees of difficulty with both (2) and (3), that is, considering the context available to the hearer and formulating an utterance to achieve their informative intention. It is these predictions which will be explored here, in the context of delusional talk. In investigating these aspects of talk, this chapter will address the sub-question (1d),

identified in section 5.1 of Chapter Five: Do participants account for the knowledge of their interlocutor during delusional talk and how is this managed within conversation?

This chapter is organised as follows: section 10.1 will briefly consider how speakers must consider the hearer's 'perspective' when tailoring their utterances in conversation. Section 10.2 will then analyse instances of delusional talk which pose a challenge to the hearer, considering first those participants presenting with pNS (BND, CNJ and HNT) and then those presenting with pPS (IPF, KPS, RPD and SPG). Section 10.3 will explore evidence for participants' successful consideration of the mutual cognitive environment when engaging in delusional talk, again considering those with pNS and then those with pPS. The performance in delusional talk will be summarised before drawing conclusions about how these seven participants function during instances of delusional talk. The analysis in this chapter will again be based on extracts, which will be numbered beginning at (1) and cross-referenced within the chapter as appropriate.

## 9.1 Tailoring utterances to account for the hearer's 'perspective'

Given the Communicative Principle of Relevance, a speaker must formulate his utterance in such a way as to provide cognitive effects for the hearer while keeping to a minimum the processing effort required (Sperber & Wilson, 1986/1995). As Carston (2006) outlines:

This involves choosing a linguistic stimulus that gets the balance between decoding and pragmatic inference right, which in turn involves the speaker taking account of whether relevant information is or is not readily accessible to the hearer or intended audience (p. 3).

The logical form of an utterance – the linguistic structure and semantic representations chosen – carries the blueprint for how meaning should be inferred. The logical form of an utterance is not a complete proposition, and must be developed by the hearer to yield the communicated explicature, that is, the meaning which "falls within the speaker's communicative intention" (Carston, 2002, p. 117). This development is essentially a process of 'filling the gaps' of meaning not provided by the logical form. It requires adjustment of concepts carried by lexical terms, reference assignment and disambiguation (Sperber & Wilson, 1986/1995). RT has focused predominantly on how the hearer deals with these pragmatic requirements to arrive at the intended interpretation. However, it is also acknowledged that the speaker must take into consideration the information accessible to the hearer, constructing an utterance which will fulfil the expectation of optimal relevance:

it is left to the communicator to make correct assumptions about the codes and contextual information that the audience will have accessible and be likely to use in the comprehension process (Sperber & Wilson, 1986/1995, p. 43).

It is argued here that this process requires that the speaker be able to represent what information is available to the hearer (or at the very least represent what information is not available to the hearer and, therefore, requires more overt encoding). This process is inherently metarepresentational, specifically requiring that the individual represent the mutual cognitive environment as distinct from his own total cognitive environment and predict what information is unavailable to the hearer, adjusting his output accordingly. Where relevant information may not be readily accessible, the speaker must make it more manifest, perhaps by encoding a greater amount of information with the linguistic code (overtly introducing referents, for example). Where the information is clearly mutually manifest, the speaker can rely more heavily on pragmatic inference processes, thereby increasing efficiency and minimising processing effort.

# 9.1.1 Producing an utterance in a conversational context: considerations of the mutual cognitive environment

In analysing how the participants tailor their utterances with reference to the mutual cognitive environment, in the following extracts the features of how they employ the use of specific semantic representations requiring concept adjustment or disambiguation, as well as their use of pronominal reference, will be explored. This section will briefly address how the features of concept adjustment, reference assignment and disambiguation function with regard to the mutual cognitive environment and how the analysis will be focused in the discussion that follows.

The specific meaning intended by the use of a lexical item requires processes of 'pragmatic adjustment' of concepts or 'concept adjustment' (Carston, 2001, 2006) if the hearer is to infer the intended meaning. Two broad groups of concept adjustment processes can be identified and were discussed in Chapter Three – those of concept narrowing (or enrichment) and those of concept broadening (or 'loose use'). Ad hoc concepts are particularly important in the account of concept narrowing and broadening. As presented in Chapter Three, this term refers to the pragmatic construction of concepts in which the concept is adjusted during online interpretation in the light of relevance expectations (Carston, 2002). These are, therefore, concepts in which the communicated meaning is particularly context-sensitive and, thus, distinct from concepts accessed via decoding which are "context-invariant" (Carston, 2002, p. 322). In order to maximise the chances that an utterance is optimally relevant for a hearer, the speaker must, therefore, consider the context available to the hearer to guide concept narrowing or broadening. This choice involves consideration of the hearer's 'perspective' and what is manifest to the hearer, and thus is dependent on metarepresentational abilities.

Like concept adjustment, the context-sensitive nature of reference assignment makes it a worthwhile area of investigation in this study. It allows for yet another window into how the individual with schizophrenia takes into account their listener's 'perspective' or cognitive environment in producing the specific logical form to communicate their meaning. With regard to reference assignment, the analysis will consider instances of pronominal reference. Pronominals are of particular interest as, unlike definite descriptions, they lack nominal content. Using a pronominal assumes "the accessibility of a given representation", rather than acting to make the representation accessible (Blakemore, 1992, p. 69). The referent may be accessible given the situation or the preceding discourse context, or the speaker may assume that the hearer can retrieve the information from memory (Blakemore, 1992). Implicitly then, their successful use demands that the speaker consider whether the representation referred to is indeed accessible to the hearer within the mutual cognitive environment. The use of plural pronouns will also be considered, as these may typically be used more 'vaguely' - definite plural pronouns are often used in reference to entities that are not previously accessible to the addressee" (Borthen, 2010, p. 1813). Borthen (2010) states that

the speaker may prefer to be vague or is unable to be more specific, and that the addressee may accept vague reference because it does not seem likely that identification of a more specific referent will be worth the extra processing efforts (p. 1814).

The fact that this vague use rarely creates difficulty in typical interaction is in keeping with the RT notion that processing effort and speaker preferences play a role in utterance interpretation.

The analysis of disambiguation requirements of utterances produced by the participants will be limited to those which are based on 'shared social knowledge'. This is defined, for the purpose of the analysis which follows, as disambiguation which relies on information assumed by the participant to be mutually manifest by virtue of both conversation partners being South African, and local to the city of Johannesburg. Specifically, these utterances rely on a specific subset of assumptions accessible by virtue of a shared social, cultural and physical context. Examples of this sort are included in the analysis, as they would appear to rely on specific encyclopaedic knowledge that the speaker would have to evaluate on the basis of an individual interlocutor. In other words, the use of terms requiring disambiguation based on cultural or socially-specific information requires that the speaker consider whether this potentially idiosyncratic information is available to their hearer. This type of information is distinct from 'commonplace assumptions' (also a part of encyclopaedic knowledge) (Carston, 2002 p.321), which a speaker could more easily presume to be accessible. These instances of disambiguation requirements thus rest on two

levels of inference – the first is inferring from stimuli that the conversation partner is local, and the second is inferring that a set of assumptions is, therefore, available to them to guide utterance interpretation (and specifically disambiguation, in this case).

## 9.2 Challenges in predicting mutual manifestness during delusional talk

This section will examine instances in the data in which the utterance produced by the speaker with schizophrenia demands processes of concept adjustment, reference assignment or disambiguation which challenge REA as the hearer. Such instances are frequently associated with extended sequences of meaning negotiation and may signal that the speaker is experiencing difficulty in considering the assumptions available to REA. As discussed in Chapter Five, extended sequences of meaning negotiation suggest that the interlocutor is in some way searching for the 'intended meaning' of a potentially problematic utterance. These sequences can thus be argued to provide indirect evidence for the speaker not having taken the needs of the hearer into account.

## 9.2.1 Participants with predominantly negative symptomatology

Several participants with predominantly negative symptomatology (pNS) engage in delusional talk which is characterised by extended sequences of meaning negotiation.

In extract (1) below, BND asserts that he is "a son for a swallows" (line 65). While within a South Africa context "swallows" may be disambiguated and interpreted to refer to "the Swallows" soccer team, the direction of the narrowing processes for the phrase is not immediately clear to the hearer, resulting in the sequence of meaning negotiation over lines 66-81.

```
62
              *REA:
                      are you a farmer, is that why you like the rain to come? .
(1)
        63
              *BND:
                      no, I'm a #. .
                      you're not a ffarmer? .
              *REA:
        64
        65
              *BND:
                                    ieh, I'm a son of of a swallows. .
              *REA:
                      a son of 'swallows? .
        66
              *BND:
        67
                                Lja. •
                      okay, what does that mean? .
              *REA:
        68
                      but I swear about the # this space this one. .
        69
              *BND:
        70
              *BND:
                      I'm English guy. •
                      You're an English guy? •
        71
              *REA:
              *BND:
        72
                      ja. ·
        73
              *REA:
                      okay #. .
        74
              *REA:
                      okay. .
                      what does it mean, son of swallows, I don't know. •
              *REA:
        75
        76
              *REA:
                      you mean you support the swallows [soccer team? .
              *BND:
                      \iota I'm the I'm the young I'm the young I'm the young baby
        77
        78
                      of swallows.
              *REA:
                      of swallows the soccer team? .
        79
        80
              *BND:
                                       ıja. •
              *BND:
                      ja, the soccer team, moroko swallows team. •
        81
        82
              *REA:
                      so you're the son of the 'swallows +/.
        83
              *BND:
                      ımy moroko swallows my Nyatidi is my father. •
```

REA interprets the utterance as metaphoric<sup>68</sup> (that is, interpreting it to mean that BND is an ardent supporter), where in fact, as emerges over the course of the talk, BND intends the literal interpretation (asserting himself as the biological son of one of the players).

The interaction with BND around his delusional talk about his father is characterised by extensive meaning negotiation. There is a sense that REA's questions are consistently attempting to enrich the terms and assign reference to the names used. The interaction is characterised by an active search for meaning on the part of REA (in lines 225-229 of (2) and lines 243-257 of (3) below).

```
*REA:
       223
                      which one is your father? .
(2)
              *BND:
       224
                     uh, William Shakespeare. •
      225
              *REA:
                      William Shakespeare? .
              *BND:
                      ia. •
              *REA:
                     but William Shakespeare is a # a olden day author. •
       227
              *BND:
                     huh? •
       228
      7 229
230
              *REA:
                     he [/] William Shakespeare is someone who used to write stories.
              *BND:
                     yes yes yes yes yes. •
             *BND:
       231
                     is my father. •
     × 242
              *REA:
                     does he have another name, this man, 「William Shakespeare? •
(3)
              *BND:
       243
                                                           ıja, ja. •
       244
              *REA:
                    what's his other name? .
       245
              *BND:
                     he's Jan van Riebeeck. •
       246
              %exp:
                     a South African historical figure
              *REA:
       247
                     # who plays for swallows? .
       248
              *BND:
                     yes. •
              *REA:
       249
                     plays soccer? .
       250
              *BND:
                     who? .
              *REA:
                     Jan van Riebeeck? •
       251
       252
             *BND:
                     ja, ja, he plays soccer. •
             *REA:
       253
                     no man, Jan van Riebeeck is the man who came to Cape Town. •
       254
              *BND:
                     yes is is him, I I know him. .
              *REA:
       255
                     you know him? .
       256
             *BND:
                     ia. •
              *REA:
       257
                     but he came to Cape Town hundreds of years ago. .
       258
              *BND:
                     hundred? .
       259
             *REA:
                     1a. •
       260
             *BND:
                     mmhm #. .
```

The names used have strongly associated encyclopaedic facts or assumptions which guide interpretation in a specific way. William Shakespeare thus immediately triggers encyclopaedic information around literature and a specific era of history. BND's insistence, however, that William Shakespeare and Jan van Riebeeck play soccer (and are his father), is incompatible with this narrow interpretation of the individuals as historical figures and thus calls for these same terms to be interpreted through concept broadening. The two processes (that of specific context-invariant interpretation and that of concept broadening to include delusional interpretations of the characters) appear to be incompatible and thus frequent and persistent attempts at clarification are required (but not fulfilled).

<sup>&</sup>lt;sup>68</sup> This usage is interpreted as metaphoric by language informants, taken to mean an ardent supporter. The metaphoric interpretation appears most accessible and is the one taken by REA.

HNT displays some difficulties with the use of reference expression in his delusional talk. In line 358 of (4), the pronominal "it" does not have a clear referent. This difficulty may be due to the fact that the syntax itself is disturbed ('incoherent' in psychiatric terms) and also contains a neologism ("votcar"). Thus, although on reading the extract it appears he may have been referring to the Bible, the incoherence of the utterance itself brings into question the intended referent. The "votcar" may be a potential referent, although intuitively it appears to refer to the Bible, the only immediate non-neologistic referent.

```
# one day when I was in the church in Orlando # I was reading
              *HNT:
        353
(4)
        354
                      outside. •
              *HNT:
        355
                      # oh, it seems as they expel me. .
                      so I went out and read my Bible thinking that God might punish
        356
              *HNT:
        357
                      my # punish me.
      → 358
              *HNT:
                      when I leave out soweto votcar@n consulting it to get moving. •
                      I was reading this Bible outside. •
        359
              *HNT:
        360
              *REA:
                      mmhm.
                      so as I looked up I saw this dove, what can you [/] the bird? •
        361
              *HNT:
        362
              %com:
                      pronouced to rhyme with mauve.
        363
              *HNT:
                      this +/. •
        364
              *REA:
                      a dove.
                      dove yeah, it clap its hands for me and say yes and then I hear
        365
              *HNT:
        366
                      the word of God that say this is my one son with whom I'm
        367
                      pleased. •
              *HNT:
        368
                      like as he say to Jesus. •
```

REA's use of a backchannelling response, seemingly to encourage elaboration, may suggest that in the online interpretation process she is unsure as to the intended meaning of the utterance, and perhaps the intended referent in particular.

### 9.2.2 Participants with predominantly positive symptomatology

Of the participants with predominantly positive symptomatology (pPS), IPF is noted to engage in significant stretches of delusional talk, which poses significant challenges to REA, as a hearer.

Extract (5) is taken from the delusional talk of IPF in which she is talking about her interest in China and the Samurai culture. Of particular interest here is IPF's utterance in lines 273-274. An extended sequence is presented to provide the discourse context of these utterances. Both "the stone" (line 273) and "the bloodline" (line 274) are definite descriptions, and thus act as referring expressions. These referring expressions differ from pronominals in that they have nominal content, being linked to concepts that give the hearer access to encyclopaedic information (Blakemore, 1992). As Blakemore (1992) points out, this access to concepts encoded in the referring expression does not, however, negate the need for situation or discourse context in interpreting a referring expression. The speaker's use of such terms must take into account whether the hearer has the appropriate context to interpret the referring expression and adjusting the intended specific meaning of the concept encoded. Neither the concept "the stone" (line 273) and "the bloodline" (line 274) has been introduced in the preceding discourse present. The hearer is entitled to

assume that the utterance is relevant in the context accessible (in this case the context of talk about Samurai culture). In this light the "bloodline" would be interpreted to refer to the bloodline or ancestry of the Samurai people, as this would yield cognitive effects in explaining why IPF might have an interest (albeit delusional) in this particular culture. "The stone" is less easy to interpret in this context, and there does not appear to be a readily identifiable referent in the physical context. The assumption can be made that it is linked again to Samurai culture and thus IPF's delusional content. IPF has clearly assumed that REA has access to information which would assist in enriching this term and thus in guiding utterance interpretation.

```
254
              *REA:
                      so if you were going to live in another country if you were
(5)
       255
                      going to go on an adventure or visit another place where
       256
                      would you go? .
       257
              %com:
                     following language test item about man being in another country
       258
              *IPF:
                      go back home, to the samurai kingdom. .
              *REA:
       259
                     to the samurai kingdom? .
       260
              *IPF:
                     ia. ·
              *REA:
                     what country is that? .
       261
              *IPF:
       262
                     uh, China.
       263
              *REA:
                     China, not Japan? .
             *REA:
       264
                     Is it China? •
                     China, Japan. •
       265
              *IPF:
              *IPF:
       266
                     it's what's in the middle isn't it? •
              *REA:
       267
                     so the samurai country does it include China and Japan? •
              *IPF:
       268
                     only China. •
              *REA:
       269
                     oh only China.
                     # I don't know too much about the samurai culture. •
              *REA:
       270
       271
             *IPF:
                     me neither I have to find out more. .
             *REA:
       272
                     okay. .
             *IPF:
                      I've got the stone. .
       273
       274
             *IPF:
                     I've got the bloodline, but I don't know much. .
       275
             *REA:
                     how do you know you've got the stone? .
       276
              *IPF:
                     it's here. .
                     okay.
       277
              *REA:
    → 278
             *IPF:
                     up in room thirteen. .
```

In this extract the basic elements of her core delusion are presumed by IPF to be mutually manifest – "the stone" and "the bloodline". Despite this, and the fact that even on analysis the meaning or significance (and therefore relevance) is unclear, REA colludes with this terminology (line 275) (a feature which will be discussed in Chapter Ten). In line 278 of (5) above, the semantic representation "room thirteen" must also be enriched. Given the context and REA's manifest role as a member of staff, IPF is entitled to expect the hearer to enrich the term to mean 'room thirteen in the nursing block where patient's personal effects are kept during admission'. As a member of staff, REA would have no difficulty with correctly interpreting this expression.

In extract (6), IPF is asserting that she was to move to ward 4 – a move which would signal impending discharge. She 'enters' delusional talk, introducing grandiose ideas about being an award winning dancer, and alluding to the delusion of her Samurai ancestry.

```
I just want to move to ward four where there's a bit open
       330
             *IPF:
(6)
       331
                     space.
             *IPF:
       332
                     I want to wear my own clothes. .
       333
             *IPF:
                     I want to go home. .
       334
              *IPF:
                     I've got a court case. .
      335
             *IPF:
                     I just became a springbok, I've got a double platinum here,
       336
                     I've got my emerald here. .
       337
             *REA:
                     what's an emerald? .
       338
             *IPF:
                     my stone. .
              *REA:
                     oh oh, is your stone an emerald, okay. .
       339
       340
             *IPF:
                     ia. ·
       341
              *RFA:
                     and the [/] explain about the springbok thing? •
                      I just recently became a springbok, a world title holder # for
      × 342
              *IPF:
       343
                      dance.
```

The expectation of optimal relevance means that semantic representations in lines 335-336 of (6) require enrichment if the utterance is to yield cognitive effects for the hearer. The word "springbok" (line 335) requires disambiguation to reach the conceptual representation of a person who has been recognised to represent South Africa in a specific domain of sport (rather than a type of antelope or a member of the South African rugby team). IPF's expectation that REA will be capable of disambiguating the term is appropriate in the context as it is mutually manifest that both participants are South African nationals and IPF is therefore justified in expecting REA to use her encyclopaedic knowledge to disambiguate this term, contributing to the utterance's relevance. Despite the success of disambiguation requirements in line 335, the rest of this utterance immediately raises challenges for the hearer in terms of inferential interpretation. The terms "double platinum" and "emerald" require enrichment but the direction and scope of this enrichment is left unspecified. The impression that these must relate to sporting achievements is raised by the preceding context of "springbok". "Double platinum" would have a clearer potential link to sporting achievement (enriched along the lines of silver and gold medals), however "emerald" has a less clear relation. This difficulty in the process of enrichment is reflected by the REA clarification question of "what's an emerald" (line 337). Given that REA clearly knows what an emerald is, a more likely question would initially appear to be 'what emerald are you talking about' rather than a clarification which appears to request almost a definition of the term. It could be suggested that this particular question form displays the extent to which REA is searching for contextual information to guide the process of enrichment. The interpretation that these terms are sporting awards might be entertained on enrichment grounds, until IPF's response that the emerald is her 'stone'. Given that the stone is linked to Samurai culture, as introduced in preceding discourse (see (4) above), the enrichment process following the line of sporting achievement and dance is called into question (perhaps explaining REA's further clarification of "springbok" in line 341). This listing of terms, with one term ostensively linked but unclear, places doubt on the direction of the enrichment for the other term ("double platinum"). Clearly, the assumptions around the nature of the "double platinum" and the "emerald" are not manifest to REA in that they are

not perceptible or capable of becoming perceptible, primarily because they lie in the realm of IPF's delusion. REA is, therefore, unable to draw any strong implicated premises or identify any implicated conclusions as she has no clear guidance on how to choose the context in which these utterances are to be interpreted. It will be argued later that the result of this lack of manifest context leads the hearer to interpret the utterances within a context of delusional talk, clearly not what IPF has intended to be communicated.

Within IPF's delusional talk around her achievements, disambiguation and enrichment of the semantic representation "truth" is required (lines 345-346 of (7) below):

```
345
         *IPF:
                in two thousand and two I danced a competition in Johannesburg
→ 346
                in truth and I won. .
   347
         *REA:
                that's amazing.
   348
         *REA:
                what do you mean in truth, in the magazine? •
   349
         *REA:
                or +/. .
         *IPF:
   350
               no no no truth truth the club ≈. •
```

IPF produces this utterance (which requires knowledge of a club called "Truth") within the city in which the interaction is occurring. The expectation of mutual manifestness of the fact that "truth" is a club may be a reasonable assumption to make in the context of the interaction. Interestingly, however, she does not presume an intimate knowledge with the city, calling it "Johannesburg", when 'Joburg' would be the preferred term among locals. The use of the term "Johannesburg" leads to an assumption that IPF may not be local or that she presumes REA is not local. This utterance, therefore, sets up a contradiction in expectations. It assumes a mutual manifestness of two contradicting assumptions, firstly the assumption that both parties are not equally familiar with the city itself and, secondly, the assumption that both are equally familiar with a specific club within the city. This contradiction is noteworthy as it may contribute to REA's erroneous assumption that "truth" refers to a national magazine (rather than something inherently local).

Following on a delusional discussion about winning a dance competition, IPF introduces two new concepts which require enrichment — "e-tv" and "eddies" in lines 351, 356, 359 and 361, in (8) below (extended from extract 7). The extract is characterised by a sequence of meaning negotiation between lines 357 and 363. The existence of a local television channel called e-tv may be mutually manifest, and this encyclopaedic information may explain why REA acknowledges 'knowing' e-tv in line 352. However the assertion that IPF 'owns' e-tv (line 356) serves to alert REA to the possibility of grandiose delusions and undermine the interpretation of e-tv she has reached, calling into question whether the television station is the intended meaning. The context in which "eddies" is to be enriched appears to be absent, or at least not mutually manifest. There appears to be nothing in the preceding talk to guide REA towards a successful interpretation of this concept. REA's turns

in lines 357-362 appear to be dedicated towards clarifying how these terms can be appropriately enriched to allow for the speaker's intended meaning to become clear.

```
350
              *IPF:
                      no no no truth truth the club ≈. •
(8)
       351
              *IPF:
                      ≈you know e-tv? •
              *REA:
                      yes. •
        352
        353
              *IPF:
                      I'm not a <u>liar</u> but # there's ['E'. •
                      pointing at a small indistinct tattoo on her arm
        354
              %act:
              *REA:
        355
                                                    Loh!
                     I'm the owner of eddies and I'm the owner of e-tv. •
              *IPF:
       356
       357
              *REA: of what and e-tv? .
              *REA:
                     I know e-tv but I don't know +/. .
        358
        359
              *IPF:
                     e-tv. •
              *REA:
                     what's the other thing you said? .
        360
        361
              *IPF:
                      eddies.
        362
              *REA:
                      I don't know what that is. .
      × 363
              *IPF:
                      it's a shoe. •
        364
              *REA:
                      oh. ·
                      but they're named after me. •
              *IPF:
        365
```

The introduction of the 'topic' in line 351, a quick follow-on from the utterance in line 302, sets up the expectation that it will be relevant in the light of clarifying the question around "truth the club" (that is, it will provide REA with contextual effects in this regard, with reasonable processing demands). The surprise noted in line 306 on REA's part must be due in part to the fact that following the introduction of e-tv, one would expect an explanation of how this very 'new information' is relevant to the talk at hand, thus yielding positive cognitive effects. One could imagine the utterance in line 353 easily reading as 'the broadcast of when my platinum award for dance was made' or even 'truth is next door to the e-tv studios'. This link, and therefore the contextual effects of the interaction, seem to be manifest solely to IPF rather than lying within the realm of the mutual cognitive environment.

#### 9.3 Embracing Mutual Manifestness during Delusional Talk

This section will examine instances in the data in which the utterance produced by the speaker with schizophrenia demonstrates their evidence for consideration of the assumptions manifest to the hearer. Again instances taken from participants with pNS will be presented first, followed by analysis of those presenting with pPS.

#### 9.3.1 Participants with predominantly negative symptomatology

A number of participants with pNS display sensitivity to the hearer's 'perspective', tailoring' their utterances with apparent reference to the mutual manifestness of assumptions (or lack thereof).

CNJ displays no difficulties in using referring expressions in a manner in which the hearer can assign reference. He consistently is able to use personal pronouns to refer to Brad Pitt in his instances of delusional talk, as illustrated by extracts (9) and (10):

```
95
               *CNJ:
                       um, personally I am [//] I was just trying to fi- [/] # to um
 (9)
       → 96
                       work with um Brad Pitt and stuff. .
       → 97
               *CNJ:
                       trying to figure him out somehow hhh. .
         98
               *REA:
                       trying to figure who out? .
         99
               *CNJ:
                       Brad Pitt. .
         100
               *REA:
                       Brad Pitt+≈.
               *CNJ:
                       +^ ja+≈.
         101
                       +^ at OT? •
         102
               *REA:
       → 103
               *CNJ:
                       I was like looking at books there, looking for his pictures
         104
                       and stuff #. .
       → 105
               *CNJ:
                       uh, I want to know more about him and stuff. .
         106
               *REA:
                       hmm. .
               *CNJ:
                       # I want to know much more Tabout him. .
         107
               *CNJ:
(10)
         119
                       nothing much, I was just thinking about uh [//] ## there's
         120
                       trying to get to know Brad Pitt and his life and I don't know,
         121
                       he's like a movie actor you know so he's like [//] um that
         122
                       means that I try I don't know [/] try to figure him out
         123
                       somehow, like what what he's what he's all about and stuff. .
         124
               *CNJ:
                       you know. .
         125
               *REA:
                       how do you figure him out? .
         126
               *REA:
                       where do you find out? .
         127
               *CNJ:
                       I just know him as a movie actor, that's all. •
         128
               *CNJ:
                       I'd like to get, like to get to know him almost. •
         129
               *REA:
                       you mean personally or + . . ? •
         130
               *CNJ:
                       personally, yes. .
                       like as in uh, [/] um like being by his side like his inner
         131
               *CNJ:
         132
                       being and stuff. .
```

He introduces the referent in line 96 (extract 9) and again in line 119 (extract 10), a move which acts to constrain the hearer's assumptions in assigning reference to subsequent pronouns. The introduction of the referent suggests a sensitivity on the part of CNJ, that he needs to create a mutual cognitive environment by explicitly introducing the referent of Brad Pitt. However, despite this skill, REA is still seen to clarify the referring expression with her question in line 98 of (9). This could perhaps be related to the unexpected content of line 80, given that the REA assumes (based on information from the file and from ward rounds) that CNJ believes himself to be Brad Pitt. In this case, although CNJ has explicitly introduced the referent, REA's assumptions cause her to expect specific cognitive effects and thus seek clarification of the referring expression.

HNT uses few referring expressions, particularly in terms of pronominals. In line 365 of (4') and in line 382 of (11), the pronominal "it" is used by HNT:

```
*REA:
         364
                       a dove. .
(4')
         365
               *HNT:
                       dove yeah, it clap its hands for me and say yes and then I hear
         366
                       the word of God that say this is my one son with whom I'm
         367
                       pleased. .
               *HNT:
         368
                       like as he say to Jesus. •
         375
               *REA:
                       so thats what you're meaning when you say you bow your head
(11)
         376
                       when I'm coming? .
               *REA:
                       you mean you're praying so that you can do nicely on the tasks?
         377
               *HNT:
         378
                       ja. ·
               *REA:
         379
                       okay. •
         380
               *HNT:
                       ja.
               *HNT:
         381
                       hhh (be)cause when I was praying before I do nice. •
       → 382
               *HNT:
                       I do not struggle at it.
               *REA:
         383
                       okay. .
         384
               *REA:
                       you did very nicely on some of them. .
         385
               *REA:
                       some of them are very difficult H. .
```

In the first example, (11), above, "it" is used to refer to the dove in the immediately preceding part of the utterance, an example of successful use of referring expressions

within delusional talk. The use of the metaphorical phrase in line 365, referring to the dove 'clapping its hands', would require *ad hoc* concepts formation about how a dove might be seen to perform this action. Given the discourse context and encyclopaedic knowledge, REA, guided by the Communicative Principle of Relevance (Sperber & Wilson, 1986/1995), can construct a hypothesis about HNT's meaning, developed from the logical form produced. The encoded concept is a starting point for interpretation – it triggers an adjusting of context, content and cognitive effects to arrive at an interpretation, in this case the *ad hoc* concept will achieve the effect of metaphor. In extract (12), "it" is taken by REA to refer to the tasks he has been engaged in during formal assessment. This ability is not merely an ability to use reference, it displays an ability to consider the context available to the hearer to allow for interpretation.

HNT also uses the third person plural pronoun clearly in line 355 of (4"):

(4") 353 \*HNT: # one day when I was in the church in Orlando # I was reading outside. • 
$$\rightarrow 355 \quad *HNT: \\ 356 \quad *HNT: \\ 356 \quad *HNT: \\ 357 \quad *HNT: \\ 357 \quad *HNT: \\ 357 \quad *HNT: \\ 357 \quad *HNT: \\ 358 \quad *HNT: \\ 359 \quad *$$

Although not actively identifying the referent, it is clear from the discourse context that a "they" would refer to people, perhaps those in authority, within the church. This level of 'vague reference' is sufficient for his narrative to achieve cognitive effects for the hearer and, on Borthen's (2009) analysis, avoids the extra processing efforts of identifying a specific referent which would achieve no further cognitive effect.

#### 9.3.2 Participants with predominantly positive symptomatology

Several participants display the ability to adequately tailor their utterances with consideration to the hearer's 'perspective.

IPF, despite her significant difficulties in some instances (explored above), is one of those who displays such sensitivity. In extract (12) IPF has been talking about health concerns, which are delusional in nature. IPF uses the reference of "it" (line 180) to clearly refer to the sensation of numbness in her arm at the time. This reference is clear and unambiguous and the hearer is able to assign the referent within the context of the preceding discourse. Given that the use of referring expressions demands the speaker consider the context available to the hearer, this example suggests that IPF is able to consider issues of optimal relevance even within delusional talk. In line 185, REA would be expected to enrich "Pinewood" to "Pinewood Hospital", a reasonable expectation on the part of IPF as the speaker, and successfully done, as illustrated by REA's response in line 186.

```
*IPF:
                                                  LMy arm went numb for about two
         178
(12)
         179
                       years at once and I never knew why. .
               *IPF: I thought it was the arthritis and all of a sudden I had heart
      → 180
        181
                       attacks and then I had the strokes. .
                       were you in hospital? .
         182
               *REA:
               *IPF:
                       ja for a month.
         183
        184
               *REA:
                       which hospital were you in? .
               *IPF:
       + 185
                       Pinewood. .
        186
               *REA:
                       where's Pinewood Hospital, I've never Theard of it. .
        187
               *IPF:
                                                              LValpark. .
               *REA:
        188
                      okav. .
        189
               *REA:
                       # okay, and what did they say there? .
               *IPF:
       → 190
                      nothing. .
        191
               *IPF:
                       they never even moved me to the i+c+u section for the # muscle
                       spasm fits but it's okay! .
        192
        193
               %com:
                       ironic tone of voice
```

IPF's use of "nothing" (line 190) in response to REA's question related to her delusional reports of a hospital admission, requires that the hearer broaden the concept encoded, or interpret it loosely, to mean that the doctors said 'nothing useful' (the echoic aspect of this utterance was discussed in Chapter Seven). IPF's use of the plural pronoun in line 191 follows REA's introduction of the referring expression, "they" in the preceding utterance. Although no specific referent is available in the immediate context to resolve this reference assignment, encyclopaedic knowledge might guide the process to identify referents of 'hospital staff'. This 'vague reference' does not appear to pose any problem to either of the interlocutors.

In interaction with KPS within the delusional talk about the nature of her previous admissions, REA as the hearer must enrich the concept of "observation" in line 418 of (13):

```
*KPS:
      → 418
                      I've been here, I was here in in november # for observation
(13)
        419
                      and um ja before, # you won't believe me, fourteen death
      → 420
                      certificates was written out here for me I was a guinea pig. .
              *KPS:
        421
                      luckily it was my <religion you know> [?] to recover. •
        422
              *REA:
                      what freligion was that? .
        423
               *KPS:
                           LSO +/. .
        424
              *KPS:
                      imam. •
```

Within this context, "observation" means more than just being watched, but being watched for the purposes of diagnosing mental illness. Given REA's role as a clinician in the hospital context, KPS appropriately presumes the mutual manifestness of the context required to enrich the term and communicate the seriousness of her previous admissions. The use of "guinea pig" (line 420) may be analysed as metaphoric (or perhaps idiomatic) use and an example of concept broadening.

The interaction with RPD around her delusion of the value of her drawings requires the hearer to engage in enrichment processes.

```
*REA:
                      what do you mean by um Rita can express it to me? •
        259
(14)
        260
               *RPD:
                      she has, she said she will would come and find somebody for
        261
                      arts and culture and I think this man he is wanting me to to
        262
                      draw this sketches for him you understand me.
               *REA:
        263
                      okay. .
                      that's why I I I'm drawing it because I he wants me to see. .
        264
               *RPD:
               *RPD:
        265
                       so I doing it I went to her so I told her if I can draw the
        266
                       sketches they can put in uh the horizon or whatever they can
        267
                       do fmaybe they can +/. .
                      Lis the horizon a newspaper? •
        268
               *REA:
        269
               *RPD:
                      the newspaper. •
        270
               *RPD:
                      or there in in in the # in the # in the # on tv or or
                       publish it in the hospitals. .
        271
               *RPD:
        272
                      you understand me? .
               *REA:
                      mmhm. .
        273
```

The phrase "somebody for arts and culture" in lines 260-261 of (14) requires enrichment. Within the context of the assumption of delusional talk, it is likely to be enriched along the lines of 'The minister of Arts and Culture' (a government position in South Africa), with the related (implied) notion of a person of importance and influence. After introducing the referent "somebody for arts and culture" RPD uses the pronoun "he" and "him" to refer to this individual (extract 16, lines 261, 262, 264). She introduces the referring expression using the phrase, "this man he...". This process of fronting the noun phrase is a feature of BSAE (Mesthrie, 2004) and is notable as RPD would not fall into this category of speakers. The plural pronoun "they" is used in line 266 with no clear referent in the preceding discourse. Despite the lack of explicit mention of the referent, given the context and mutually manifest assumptions about the governmental structures, the referent in this case might be assigned as 'the Ministry of Arts and Culture' or even just 'the government people'. Again, this use of vague reference is typical and appropriate, acting to lower the processing costs of the hearer. The use of the term "the horizon" by RPD in line 266 clearly requires disambiguation. By virtue of a shared context and the mutually manifest assumption that both parties are aware of the context of the specific locality of the hospital, (where the local newspaper is called 'The Horizon'), REA appears able to disambiguate this term. However, it may be significant that REA checks this interpretation, despite the apparent success in disambiguation (confirmed by RPD in line 269). If REA had been certain of her interpretation it seems unlikely that she would clarify the term, which she does in line 268. This clarification may be related to the assumption that RPD is mentally ill and engaging in delusional talk and thus may be referring to facts which are inaccessible to REA.

SPG also relies on information presumed to be mutually manifest. "Recovery" requires disambiguation between the interpretation of the word along the lines of 'become well' and the meaning related to a large company in South Africa (lines 293 of (15) and line 321, Appendix  $G_{18}$ ):

(15)  $\rightarrow$  293 \*SPG: Jees, I've now got into a lawsuit with Recovery and that's why 294 I'm here. • 295 %com: content changed slightly to protect confidentiality

In the linguistic and situational context, SPG clearly expects REA to be able to disambiguate this term. Given the context and the mutually manifest assumption that both participants are South African, and therefore aware of the big health care companies, this process poses no difficulty to the hearer.

SPG consistently sets up a discourse context allowing REA to enrich (and disambiguate) the various semantic representations he uses. SPG does the opposite of what was seen is the earlier analysis related to IPF. He assumes that very little is mutually manifest, and instead introduces the relevant assumptions. Instead of just introducing Patrick Holford<sup>69</sup>, SPG first mentions the name of the book and the 'status' of the man himself in (16). In this way, SPG is assuming that REA may not have this encyclopaedic information on the referent, Patrick Holford. It is this clarity which perhaps allows REA to engage more directly with the talk.

```
# I was quite a sick child and then I realised a couple of
        267
(16)
        268
                       years back I opened up a book called optimal nutrition for the
        269
     →{ <sub>270</sub>
                       mind by a world renowned a # professor and professional named
                       Patrick Holford. .
               *REA:
        271
                       mmhm. .
               *SPG:
                      uh whose written and studies clinical trials and testimonials
        272
        273
                       on the effects of the way that nutrition and supplementation,
        274
                       natural supplements effects the stimulation of of the human
        275
                       anatomy.
               *REA:
                      mmhm.
        276
               *SPG:
        277
                      and, uh so as far as that is concerned # I've seen major
        278
                       differences in my life just from eating supplementation +/. 
 \bullet
               *REA:
        279
               *SPG:
                       +, in fact changed my whole life.
        280
        281
               *REA:
                       ja, I don't know much about him but he was quite controversial
                      in his time, hey? .
        282
        283
              *REA:
                       in the beginning I think. .
        284
               *SPG:
                      ſja. •
        285
               *REA:
                       lam I right? •
        286
               *SPG:
                      and now he's mainstream and now he's taking over the
        287
                       mainstream. •
               *SPG:
        288
                      he's hitting the whole of psychiatry in the UK. •
        289
               *SPG:
                       actually I'm working on a big case and the biggest part of our
        290
                      case is to work on the nutritional # value that that children
        291
                      are eating in our schools. .
               *SPG:
        292
                      nutritional content and values of +... .
        293
               *SPG:
                      Jees, I've now got into a lawsuit with Recovery and that's why
        294
                      I'm here. .
              %com:
                      content changed slightly to protect confidentiality
        295
```

The clarity of SPG's introduction of referents in the early part of the delusional discourse appears to allow the hearer to easily perform the task of reference assignment. The use of "he" in lines 286-288 follows REA's use of a pronominal referent in referring to Patrick Holford, introduced by SPG in line 269-270. Similarly, in lines 289-291, when introducing the school feeding scheme he reports trying to establish, he introduces the concepts, not assuming mutual manifestness of the assumptions. Similarly, in extract (17), SPG's use of "she", in lines 230, 231, 234 and 244 can be clearly interpreted as referring to the doctor, a referent explicitly introduced in line 228.

250

<sup>&</sup>lt;sup>69</sup> A popular nutritionist and author.

```
*SPG:
                       #0 30 I wonder if you could speak to doctor T again for me
         228
(17)
         229
                       please. •
      →( 230
               *SPG:
                       I spoke to her yesterday we managed to have a chat for about
         231
                       half an hour forty-five minutes but the medication she gave me
         232
                       yesterday was really horrible. •
         233
               *REA:
                       why? .
               *SPG:
                       she gave me an antidepressant and then when when it
       → 234
                       seemed to subside, the side effects or whatever from the
         235
                       medication I started to feel more pain. .
         236
               *SPG:
                       I had much more pain yesterday after the medication had worn
         237
         238
                       off than than before. .
         239
               *REA:
                       okay.
                       I'll mention it to her but from my understanding sometimes it
         240
               *REA:
         241
                       takes a while to work. .
               *SPG:
         242
                       ja. •
         243
               *REA:
                       mmhm. .
                       she said the best way for the medication to work is to not be
         244
               *SPG:
         245
                       on the medication to be out of here. .
         246
               *SPG:
                       which is ideal. .
```

Again showing the ability to use pronominals in way which allows the hearer to identify the intended referent, SPG's use of "it" in line 234 ("she gave me an antidepressant and then when it seemed to subside, the side-effects or whatever from the medication I started to feel more pain") can be interpreted as the effects of the medication. As discussed above, SPG appears to take very few assumptions 'for granted', that is, he presumes that assumptions are not mutually manifest, tailoring for the hearer's needs. A number of participants across the symptom groups appear to display sensitivity to what is mutually manifest.

# 9.4 Conclusion: Navigating the Mutual Cognitive Environment within Delusional Talk

Producing utterances is more than encoding concepts into a spoken symbolic system for the hearer to decode. The act of producing an utterance requires, if it is to be successful in its intention of conveying meaning, that the speaker is attuned to the 'perspective' of the hearer. The success of making one's informative intentions known depends on the ability to "take into account whether relevant information is readily accessible to the hearer" (Carston, 2006, p. 3). It is this consideration which will allow the speaker to make appropriate choices as to the way in which the utterance is constructed. The process of considering what information is available (manifest) to the hearer would seem to be metarepresentational, that is, the speaker must mentally represent the assumptions manifest to the hearer. Given the nature of delusional talk, tailoring an utterance for the hearer should be a significant challenge for these participants.

Many of the participants demonstrated the ability to appropriately use lexical items which required concept adjustment, reference assignment and disambiguation, all processes which rely on the sensitive use of lexical items by speakers. This success demonstrates an ability to consider the context available to the hearer to allow for interpretation. It is a signal that the participants are sensitive to the cognitive effects sought by the hearer, in the production of the logical form. This finding of success is unexpected

given the documented difficulties of people with schizophrenia in mentalizing — an ability which would be required to 'take the hearer's perspective' when constructing an utterance. Delusional talk in particular is potentially a problematic context for consideration of the hearer's perspective. If delusions are fixed false beliefs their related assumptions will be presumed as 'reality-based' and manifest to a hearer, when in fact there is a high chance that the hearer has limited or no access to these assumptions.

There were, however, instances in which the participants did not appear to be sensitive to the assumptions which were truly mutually manifest. BND and IPF displayed the most obvious and pervasive difficulties in this regard, with HNT demonstrating difficulties at times. Difficulty in the use of semantic representations requiring concept adjustment and difficulty establishing reference suggested that they were unaware that the assumptions guiding utterance interpretation were not manifest to the hearer. In addition, there were clear instances in which the hearer required clarification in order to disambiguate the semantic representation as intended, most notably in the conversation with IPF, although similar features were noted in the conversation of BND. The evidence that speakers engaging in delusional talk failed to consider the assumptions manifest to their hearer supports the analysis of previous chapters. The individual's sensitivity to assumptions available to REA appear to be mediated in part by whether the delusional information pertains to a 'personal experience' (presumed to be unknown to REA) or to information which is delusional but about the world at large (presumed to be 'general knowledge'). Of interest is that those participants experiencing the most difficulty in attending to issues of mutual manifestness are from different symptom groups and display significantly distinct profiles of performance on the Fable Task and language assessment data. This finding will be explored in Chapter Eleven.

Misunderstandings do occur in typical talk and are expected to occur within the risky ostensive-inferential communication process. Speakers may use referring expressions which are difficult to enrich pragmatically; they may use terms which require further clarification with regard to disambiguation, concept narrowing or broadening. Difficulties appear to be specifically related to the speaker's awareness of the set of assumptions available to the hearer at that point. In other words, it does not appear that the participants are completely ignoring that the hearer may have a specific perspective, rather it appears that they have trouble predicting exactly what is manifest to the hearer during delusional talk. Through negotiation and within the dyadic process of conversation, these difficulties are, for the most part, overcome, a process which is further explored in Chapter Ten.

# **Chapter Ten**

# Collaborative meaning-making: The challenges of delusional talk

Conversation has been shown in the previous chapters to provide a unique window into how individuals with schizophrenia might deploy metarepresentational abilities both in producing and interpreting inherently metarepresentational utterances and to contend with issues of the mutual cognitive environment. The analysis in the previous four chapters has revealed metarepresentational abilities in conversation beyond what would be expected from the reported results of experiments on Theory of Mind (ToM) and 'mentalizing' (e.g. Corcoran, 2000; Corcoran & Frith, 1996; Drury et al., 1998). Despite this overall profile of 'success' in deploying metarepresentational ability on the part of participants with schizophrenia in the production and interpretation of utterances, subtle difficulties did emerge. These difficulties appeared to be predominantly related to disturbances in the ability "to make correct assumptions about the codes and contextual information that [REA would] have accessible and be likely to use in the comprehension process" (Sperber & Wilson, 1986/1995, p. 43). This disturbance may be seen as essentially one of a difficulty in metarepresenting the mutual cognitive environment as distinct from one's own total cognitive environment. The question that has emerged from the profile of subtle disturbances in metarepresentational abilities, amidst an overall picture of communicative success, is whether these abilities are supported in conversation. Does REA, as a facilitatory interlocutor, scaffold the communication process? If so, what form does this facilitation take? Given that ToM tasks and more sterile experimental processes have revealed robust deficits with regards to mentalizing, is it possible that REA as a conversation partner, supports the process of metarepresentation and thus facilitates conversation success? Delusional talk presents a clear opportunity for analysis of how meaning is negotiated in the context of the challenges of establishing a truly mutual cognitive environment. For this reason, stretches of talk which are delusional in nature will be the focus of the analysis of this chapter, focusing again on the seven participants who displayed clear instances of delusional talk in the interactions. This chapter will therefore build on the exploration of the previous chapter in investigating subquestion (1d), identified in section 5.1 of Chapter Five: how delusional talk is managed within conversation?

The chapter will begin by briefly introducing the concept of 'negotiating meaning' and the types of talk of interest in this chapter. In section 10.2, evidence for how REA as a conversational partner may co-construct inaccessible contexts within some of the delusional talk will be analysed, and the implications of such co-construction will be

discussed. Finally, section 10.3 will explore the search for mutual manifestness of assumptions in the process of meaning-making. In each section, the relevant extracts will be presented with those participants presenting with predominantly negative symptomatology (pNS) first, followed by those with predominantly positive symptomatology (pPS). Extracts will again be presented and numbered sequentially. Given that the consideration in this chapter is how meaning is negotiated, the extracts will be presented, with a gloss to contextualise the reader, but arrows will not be used as in previous chapters. The focus in this context is less on individual utterances, and more on the processes of collaboratively achieving meaning in the talk.

# 10.1 'Negotiating meaning': Delusional talk as potentially 'problematic' sequences of talk

Misunderstandings are ubiquitous in communication. Indeed communication may frequently 'fail' and misunderstandings occur frequently in everyday talk and are a common feature of all typical interactions (Mirecki, 2005; Sperber & Wilson, 1986/1995). However, as communicators, we have the sense that in most cases we are able to overcome these difficulties and communication is achieved. As a clinician, I would have the same experience in engaging with people with communication disorders. The misunderstandings may be more pronounced or persistent, but communication is usually achieved. As has been argued strongly by RT, communication is not based on a "failsafe" procedure of systematic encoding and decoding but rather:

Communication is governed by a less-than-perfect heuristic. On this approach, failures in communication are to be expected: what is mysterious and requires explanation is not failure but success (Sperber & Wilson, 1986/1995, p. 45).

This 'mystery of success' may be seen as particularly significant when it occurs within the context of delusional or thought-disordered talk.

As was outlined in Chapter Five, this analysis is not focused on describing and categorising communication failures or misunderstandings that occur within the talk of people with schizophrenia. Instead, what is of interest is how meaning is negotiated in the face of potential challenges to successful communication. 'Meaning negotiation' has been alluded to in previous chapters and is a term which has been widely used in the applied linguistic literature since the 1980s (Long, 1983; Oliver, 2002; Pika, 1994; Varonis & Gass, 1985). Meaning negotiation refers to the conversational practice of engaging in modifications or adjustments during interaction to ensure the chances of successful communication (Lijuan, 2010). In the analysis and discussion to follow, I will use the terms

'meaning negotiation' and 'collaborative meaning-making' to reflect the focus on the collaborative process of achieving successful communication. Attention will paid to how the RT notion of communicators influencing the mutual cognitive environment amounts to a cognitive account of collaborative meaning-making.

Meaning negotiation is perhaps most necessary, in the context of this study, within talk in which one party is delusional. Delusional content interferes with REA's ability (as the conversation partner) to draw on what is mutually manifest to guide inference. For this reason the analysis is focused specifically on the most potentially problematic sequences of talk from a metarepresentational perspective – delusional talk – to explore how meaning-making is collaboratively negotiated.

Delusional talk, in this case, presents the largest potential chasm between the assumptions manifest to the participant and those manifest to REA. The analysis thus far has suggested that a frequently encountered challenge within delusional talk may be related to the fact that a mutual cognitive environment is not available for many of the assumptions at play. This is a fairly straightforward conclusion, given that delusions are not based in reality and, therefore, the associated assumptions would logically not be available to the interlocutor. It is important though that RT is able to explicate this through a transparent analysis of conversation. As delusional talk is not based in reality there is a greater likelihood that, unless the delusion is based on content familiar to REA, or the relevant underlying assumptions are overtly introduced, she will not have access to the associated assumptions. The result may be that REA would have difficulty in interpreting the utterances as intended by the speaker with schizophrenia. In some cases, as noted in Chapter Nine, the participants seem able to metarepresent the assumptions available to REA and thus produce utterances which take into account the mutual cognitive environment. Others have significant difficulty in metarepresenting this information (appearing to assume it to be mutually manifest) and yet, at least in some cases, communication is achieved.

## 10.1.1 Delusional assumptions and the conversational partner

For communication to occur, there must be a mutual cognitive environment – that is, the participants must have access to mutually manifest assumptions, those assumptions which are perceptible or capable of becoming perceptible (Sperber & Wilson, 1986/1995; Weigand, 1999). The result of successful communication is an increase in the mutual cognitive environment of the participants involved and a change in "their possibilities of further communication" (Sperber & Wilson, 1986/1995, p. 62). Delusional talk then

challenges not just the immediate context of communication, but also the possibilities of further successful interaction if a mutual cognitive environment cannot be accessed.

The previous chapters have demonstrated that, although communication is frequently successful between the participants with schizophrenia and the clinician-researcher, at times there are difficulties in taking into account the assumptions manifest to the audience. However, it is clear that even within typical talk there are times when a speaker assumes access to information which the hearer does not have. The result is miscommunication or communication failure, as illustrated in this example from Blakemore (1992, P. 17):

ME: The place I've always wanted to visit is ...what's it

called...Portmeirion.

COLLEAGUE: Oh yes. We went there. It's really strange.

ME: Yes. And full of tourists. Really crowded. Anyway, I went to Number

Six's house.

Blakemore (2006 p. 17) writes about this example:

I suspect that many reader's will be as baffled as my colleague by my last contribution. I had mistakenly assumed that he knew that Portmeirion was the setting for a cult television series called 'The Prisoner', in which the hero was referred to as Number Six. More accurately I had assumed that the mention of Portmeirion would have given him access to this information which he had stored in memory.

Blakemore had, in other words, assumed that the information around "The Prisoner" and the character "Number Six" was manifest and accessible in the mutual cognitive environment. The rest of the dialogue is not published, but one would imagine that with a quizzical look from her colleague or a request for clarification, Blakemore would realise that her audience had no access to the relevant assumptions and make these more manifest in subsequent contributions.

In typical talk miscommunication can, therefore, occur when the speaker assumes that a conversation partner has access to information which is in fact not manifest to them:

A speaker who intends an utterance to be interpreted in a particular way must also expect the hearer to be able to supply a context which allows that interpretation to be recovered. A mismatch between the context envisaged by the speaker and the one actually used by the hearer may result in a misunderstanding (Sperber & Wilson, 1986/1995).

These mismatches do occur in typical talk. In typical talk, this misunderstanding would, for the most part, be noticed and quickly resolved. A persistent mismatch in the context envisaged by the speaker and that accessible to the hearer, and a persistent lack of awareness of this mismatch, is perhaps more unique to delusional talk.

#### 10.2 Tacit collusion in delusional talk: Co-construction of an inaccessible context?

REA at times appears to tacitly collude with the participants around delusional talk. This feature may potentially contribute to assumptions around what is mutually manifest.

In the following extract, REA's comments and use of IPF's delusional terminology appears to implicitly communicate that the set of delusional assumptions which IPF holds are mutually manifest, when in fact they are not.

```
*REA:
                      # I don't know too much about the samurai culture. •
        270
(1)
        271
              *IPF:
                      me neither I have to find out more. .
              *REA:
                      okay. •
        272
        273
              *IPF:
                      I've got the stone. •
              *IPF:
                      I've got the bloodline, but I don't know much. .
        274
              *REA:
        275
                      how do you know you've got the stone? .
              *IPF:
                      it's here. •
        276
        277
              *REA:
                      okay. •
```

By not challenging IPF's assertion of Samurai ancestry, but instead commenting on her own lack of knowledge on the subject (line 270), REA appears to communicate acceptance of the delusion. By using the definite description introduced by IPF (line 275), REA communicates that it is manifest what particular "stone" is being spoken about. In fact, this is not the case, but its use reinforces not only the manifestness of the referent, but also implicitly communicates the manifestness of the associated assumptions around the significance of the stone to Samurai ancestry, for example.

Again within talk around IPF's delusion of having Samurai ancestry, REA's affirmative response in line 287 of (2) indicates that she is familiar with "the ashtray". The utterances in line 289 only reinforce the idea that she is familiar with the set of assumptions around the ashtray and the meaning of having this object in your possession. In fact, REA is unfamiliar with the object and its implications. Rather, these contributions appear to be social, that is, attempts to acknowledge communicative intention despite missing the informative intentions.

```
*REA:
                      how did you first find out about samurai culture? .
        279
(2)
              *IPF:
                      I've never. .
        280
              *IPF:
                      recently, there was that movie shanghai nights +/. •
        281
        282
              *REA:
                      ja. ·
              *IPF:
                      +, and I saw the stone and I went to my bedroom and I'm like
        283
        284
                      ja but that's the stone that was # on that, it was budda but
        285
                      then there was an ashtray. •
        286
              *IPF:
                      you know the ashtray? .
        287
              *REA:
                      mmhm.
        288
              *IPF:
                      I've got the ashtray. .
        289
              *IPF:
                      so you only realized after you watched that movie? •
        290
              *IPF:
```

In line 381 of (3), REA's use of the plural pronoun "they" communicates to IPF that her explicature has been understood and that the context required to interpret her utterances is mutually manifest.

```
(3) 379 *IPF: it took them six years to send me my springbok title for dancing. •
381 *REA: mmhm, and did they find you because of the tattoo? •
382 *IPF: ja, I think so, I'm not sure. •
383 *IPF: but they've been looking for me for quite some time. •
```

By not asking 'who found you' or 'who was looking for you', REA is complicit in coconstructing an inaccessible context.

In extract (4), REA's rephrasing in the interaction with RPD about her drawings, appears to function in a similar manner, that is, co-constructing an inaccessible context by tacitly colluding in delusional talk. REA rephrases RPD's contributions, frequently in statement form, with the implicated conclusion being that she accepts the proposition (and perhaps related assumptions) as true. Line 304 of (4), for example, carries an implicated conclusion that the picture cannot be traced (driven by the procedural meaning of the word "because").

```
296
              *REA:
                      # what do you think happens if I try and trace it? •
(4)
       297
              *RPD:
                      there's nothing wrong what [/] but what I saw the other day
       298
                      when somebody wanted to trace it, it it he doesn't get it
       299
                      right. •
              *REA:
       300
                      mmm. .
       301
              *RPD:
                      because a why because he although he traced it, there's other
       302
                      people that are tracing but they cannot trace a certain amount
       303
                      of things, you understand my point? •
              *REA:
                      because this comes from your heart.
       304
              *RPD:
       305
                      this comes from the heart, and this comes from us. •
```

There does not appear to be any overt misunderstanding in the extract above, and the core assumptions may be more mutually manifest due to the tangible nature of the stimuli. Despite this, REA may have unknowingly communicated that she has access to the assumptions related to RPD's assertion that you "cannot trace them".

The role of REA in co-constructing a situation in which the cognitive environment is not mutual must be considered. REA does not always overtly acknowledge the gap between the cognitive environments of the participants. The attempts at engaging in conversation to keep the conversation going may, appropriately, be interpreted by the participant as evidence that the context is mutually manifest. After all, even in non-delusional talk REA asked questions and clarified points. This suggests that REA may perhaps play a role in perpetuating the situation of 'communication outside a mutual cognitive environment'. Indeed, in the sections that follow, similar processes of co-construction of inaccessible content will be evident — even within sequences of negotiation of meaning. Thus, the 'blame' for presuming delusional assumptions to be mutually manifest cannot be shouldered by the person with schizophrenia alone. Some of REA's contributions appear to communicate the mutual manifestness of delusional assumptions.

# 10.3 Accessing the conversational space in delusional talk: a search for mutual manifestness?

Despite the instances of difficulty in accessing the assumptions of a conversationalist engaged in delusional talk, in most instances there is an attempt to make meaning within that conversation. These attempts take the form of collaborative meaning-making. It is suggested that there are two ways in which the interlocutor could support the interaction in a case where the person with delusions is assuming material to be manifest, which is in fact inaccessible to REA. The first would be to negotiate access to the inaccessible assumptions through signalling to the participant that they need to make the relevant assumptions more manifest. At a conceptual level, this first strategy appears to represent the use of responses, such as questions or comments, to communicate the problem of accessibility to the relevant assumptions, and thereby negotiate access to these assumptions. Although the interpretation of questions was discussed at length in Chapter Nine, this discussion will focus on how these questions function within a broader process of collaborative meaningmaking. The second strategy would be to draw contextual implications from the limited information available and check if these rather weaker interpretations reflect the informative intention of the participant. This second strategy would be a process of 'checking' or clarifying the interpretation, perhaps through 'imposing meaning'. While the intention behind these strategies may be to support interaction, in some cases the result, as discussed, may contribute to the co-construction of the inaccessible delusional context. These strategies will be explored as evidence of REA's search for mutual manifestness. The strategies used by REA to 'exit' delusional talk will also be explored.

### 10.3.1 Evidence of negotiating access to delusional assumptions

As demonstrated in Chapter Nine, REA very frequently uses questions in her interactions with the participants. Many of REA's questions in the delusional portion of the interactions may be seen as attempts to engage with the participants as communicators. They are indications that despite the assumption that the interlocutor is delusional, REA is asserting that the answers would be relevant. REA appears to be recognising the individuals' communicative intentions and attempting to uncover their informative intention. There seems to be, in some cases, a search for the relevant assumptions which are required for the utterances to be interpreted as intended.

In extract (5), REA appears to be searching for meaning within what is a confusing stretch of talk, where BND asserts his belief that his father is William Shakespeare and plays in a local soccer team:

```
*BND:
         220
                       ja, the swallows is my father there. •
               *REA:
                       it's your father there? .
         221
               *BND:
         222
                       ja. •
               *REA:
         223
                       which one is your father? .
                       uh, William Shakespeare. •
               *BND:
         224
         225
               *REA:
                       William Shakespeare?
               *BND:
         226
                       ja. •
         227
               *REA:
                       but William Shakespeare is a # a olden day author. •
               *BND:
         228
                       huh? .
         229
               *REA:
                       he [/] William Shakespeare is someone who used to write stories
               *BND:
         230
                       yes yes yes yes yes. •
         231
               *BND:
                       is my father. •
               *REA:
         232
                       okay, did you read William Shakespeare at school? .
         233
               *BND:
                       I didn't read his this man he tell me. .
               *REA:
         234
                       okay.
                       ja. ·
         235
               *BND:
                       is there a man called William Shakepeare in the swallows who
         236
               *REA:
         237
                       plays soccer? .
               *BND:
         238
                       yes yes #. .
         239
               *BND:
                       yes.
               *REA:
         240
                       does he have another name as well? .
         241
               *BND:
                       huh? .
               *REA:
                       does he have another name, this man, [William Shakespeare? •
         242
         243
               *BND:
                                                              ıja, ja. •
               *REA:
         244
                       what's his other name? .
         245
               *BND:
                       he's Jan van Riebeeck. •
                       a South African historical figure
         246
               %exp:
         247
               *REA:
                       # who plays for swallows? •
               *BND:
         248
                       ves. •
               *REA:
         249
                       plays soccer? .
         250
               *BND:
                       who? .
         251
               *REA:
                       Jan van Riebeeck? •
         252
               *BND:
                       ja, ja, he plays soccer. •
         253
               *REA:
                       no man, Jan van Riebeeck is the man who came to Cape Town. .
         254
               *BND:
                       yes is is him, I I know him. .
         255
               *REA:
                       you know him? .
        256
               *BND:
                       ia.
         257
               *REA:
                       but he came to Cape Town hundreds of years ago. .
         258
               *BND:
                       hundred? .
               *REA:
        259
                       ja. •
               *BND:
                       mmhm #. .
        260
               *REA:
                       did you learn about Jan van Riebeeck in school? •
        261
        262
               *BND:
                       ja, but it's long time, hey? .
        310
               *REA:
                      and now you supp [/] you like soccer you say. •
[cont]
               *BND:
        311
                       ia ##. •
        312
               *REA:
                      do you go to OT? .
               *BND:
                       ja but I they didn't go give me the # the contract I must go to
        313
        314
                      OT.
               *REA:
        315
```

so, tell me about the swallows? •

\*REA:

(5)

219

Clearly the assumption (reached as a contextual implication) most manifest to REA is that BND is delusional. However, there is still this persistent search for some meaning. This interaction is perhaps unique in that REA appears not to avoid the delusional talk at all but instead persists, with many questions, trying to access BND's 'frame of reference' or his assumptions about the players, their names and identities (e.g., lines 223, 236-237, 242, 251). In addition, REA makes several comments asserting a proposition in direct contrast to BND's claims, such as the utterance in line 227, "but William Shakespeare is an olden day author". Such an utterance, prefaced by "but", is an argument against BND's claim. As such, it should signal to BND that REA has not been able to access the relevant assumptions to allow her to make the connection between this "olden day author" and the participant's father. The use of these questions and comments by REA seem to be attempts to gain access or signal to BND the interlocutor's need for further information. Given the context,

this conversation is not an argument about the truth or falsity of the delusional claim, but an attempt to find common ground, or, specifically, facts which may be mutually manifest through which communication can be navigated. The meaning is so inaccessible that it appears impossible for REA to gain access to even one assumption within the talk which may be mutually manifest. Communication failure occurs over a significant amount of turns (lines 223 – 258) before REA returns to the topic of soccer and the more tangible 'here-and-now' topic of soccer within occupational therapy (line 310-314), a move away from delusional talk towards something mutually manifest which will be discussed in more detail in section 10.4.3.

In extract (6), CNJ is talking about wanting to get to know Brad Pitt.

```
*REA:
                      any interesting stuff happen there? .
(6)
                      uh, nothing much #. .
              *CNJ:
        94
        95
              *CNJ:
                      um, personally I am [//] I was just trying to fi- [/] # to um
                      work with um Brad Pitt and stuff. .
        96
        97
              *CNJ:
                      trying to figure him out somehow hhh. .
        98
              *REA:
                      trying to figure who out? .
        99
              *CNJ:
                      Brad Pitt. .
        100
              *REA:
                      Brad Pitt+≈. •
                      +^ ja+≈. •
+^ at OT? •
        101
              *CNJ:
              *REA:
        102
                      I was like looking at books there, looking for his pictures
        103
              *CNJ:
        104
                      and stuff #.
                      uh, I want to know more about him and stuff. .
        105
              *CNJ:
        106
              *REA:
                      hmm. .
        107
              *CNJ:
                      # I want to know much more fabout him.
        108
              *REA:
                                                  Land you do other things [/] I
                      think once when I was there to talk to one of the OTs you were
        109
                      all busy making decorations for the dance. •
        110
              *CNJ:
        111
                      um ja [ja. •
        112
              *REA:
                            Lyou do that stuff [sometimes? .
        113
              *CNJ:
                                                Lsometimes, ja. •
        114
              *REA:
                      do you go to the dances when they happen? .
        115
              *CNJ:
                      um ja I do go. •
              *CNJ:
                      I do go there ## xxx. •
        116
        117
              *CNJ:
                      #0_21 xxx.
        118
              *REA:
                      hmm? .
        119
              *CNJ:
                      nothing much, I was just thinking about uh [//] ## there's
                      trying to get to know Brad Pitt and his life and I don't know,
        120
        121
                      he's like a movie actor you know so he's like [//] um that
                      means that I try I don't know [/] try to figure him out
        122
        123
                      somehow, like what what he's what he's all about and stuff. .
              *CNJ:
                      you know. .
        124
                      how do you figure him out? .
        125
              *REA:
              *REA:
        126
                      where do you find out? .
        127
              *CNJ:
                      I just know him as a movie actor, that's all. .
              *CNJ:
                      I'd like to get, like to get to know him almost. •
        128
        129
              *REA:
                      you mean personally or + ..? .
        130
              *CNJ:
                      personally, yes.
              *CNJ:
                      like as in uh, [/] um like being by his side like his inner
        131
                      being and stuff. •
        132
        133
              *CNJ:
                      to know what he's like all about almost because xxx. .
        134
              *REA:
                      because what? .
                      he's hiding some stuff from me. .
              *CNJ:
        135
                      he's hiding some stuff from you? .
        136
              *REA:
              *CNJ:
        137
                      ja. ·
        138
              *REA:
                      I'm just going to close this door because it's so noisy. •
        139
              %act:
                      REA walks to close the door and CNJ continues speaking
        140
              *CNJ:
                      I'd like to get to know what he's like hhh. .
        141
              %act:
                      REA returns
              *REA:
        142
                      it's noisy in this ward, hey? .
        143
              *CNJ:
                      ja! ·
```

Despite his claim of wanting to 'get to know' Brad Pitt, REA was aware that It had been idocumented, however, that CNJ presented with a long-standing delusion that he was, in fact, Brad Pitt. The manifest assumption held by REA that CNJ presented with a specific delusion (which was to be avoided on doctor's instructions) may have influenced the interaction. REA's clarification and questioning (lines 98, 102, 125, 126, 129) appear to be part of the 'meaning-making' necessary because of the delusional nature of the talk and the mismatch between REA's manifest assumption about the nature of the delusion (that CNJ believes himself to be Brad Pitt) and the actual content of the delusional talk produced by CNJ (that he wants to get to know Brad Pitt). In addition, it can be noted that REA actively avoids the topic in lines 108 and 138. REA makes a rather overt move to shift topic (line 108) and then physically leaves the interaction briefly to close the door (in line 138). This process of 'exiting' the delusional talk will be further explored in section 10.4.3.

In interaction with IPF, the attempts at meaning-making around the talk of "eddies" and "e-tv" in (7) and the role of the tattoo in (3'), are not successful despite attempts to gain access to the assumptions manifest to IPF. Recall that the context of this talk is the grandiose delusion of having won a prestigious dance competition, and the role of a tattoo in staking claim to her title and influence. Much of the questioning on the part of REA seems to be a search for relevant information which could assist in the broader identification of IPF's informative intentions. This active (and sometimes persistent) search for the context for utterance interpretation is evidence of an interlocutor-driven process of meaning-making, in which REA is attempting to access the assumptions held by IPF.

```
*IPF:
                     in two thousand and two I danced a competition in Johannesburg,
(7)
      345
      346
                     in truth and I won. .
            *REA:
      347
                     that's amazing. •
            *REA:
      348
                     what do you mean in truth, in the magazine? .
      349
            *REA:
                     or +/. •
      350
             *IPF:
                     no no no truth truth the club ≈. .
             *IPF:
      351
                     ≈you know e-tv? •
            *REA:
      352
                     yes. •
            *IPF:
                     I'm not a <u>liar</u> but # there's ['E'. •
      353
                     pointing at a small indistinct tattoo on her arm
      354
            %act:
            *REA:
      355
                                                   Loh! .
      356
            *IPF:
                    I'm the owner of eddies and I'm the owner of e-tv. .
      357
            *REA:
                     of what and e-tv? .
            *REA:
                     I know e-tv but I don't know +/. .
      358
            *IPF:
      359
                     e-tv. •
            *REA:
                    what's the other thing you said? •
      360
      361
            *IPF:
                     eddies.
            *REA:
                     I don't know what that is. .
      362
      363
             *IPF:
                     it's a shoe. .
             *REA:
      364
                     oh.
      365
            *IPF:
                    but they're named after me. .
```

```
*IPF:
       374
                     # if I didn't get this tattoo <that evening> [?] they would
(3')
       375
                     never had found me. .
             *REA:
       376
                     what do you mean? .
                     (be)cause it took them seven years for me [/] six years to send
       377
             *IPF:
       378
                     the platinum over. .
             *IPF:
                     it took them six years to send me my springbok title for
       379
       380
                     dancing. •
                     mmhm, and did they find you because of the tattoo? \bullet
       381
             *REA:
       382
             *IPF:
                     ja, I think so, I'm not sure. .
             *IPF:
                     but they've been looking for me for quite some time. .
       383
       384
             *REA:
                     have you got any other tattoos? .
                     ja, got a tattoo on my neck. •
             *IPF:
       385
```

In extract (7), there are two instances in which REA overtly signals her inability to access the relevant assumptions. In line 358, she acknowledges, "I know e-tv, but I don't know...", before being interrupted by IPF. In line 362 she asserts that she 'does not know what Eddies is', an assertion which then yields an explanation. Similarly, in line 376 of (3'), REA overtly seeks clarification, asking, "what do you mean?" In contrast, REA displays two instances in which she uses a strategy of attempting to clarify her own interpretation of an utterance (instances of the second strategy identified above). In line 348 of (7), she questions, "what do you mean in truth, in the magazine?" Here she not only flags her difficulty with coming to a relevant interpretation but also provides information to IPF about the proposed direction of interpretation. This attempt at clarification has the result of achieving repair (line 350), but may also act to reinforce the delusional content (implicitly accepting that she won the prestigious award). Similarly, REA's attempt to negotiate meaning in line 381 of (3') with the question "okay and did they find you because of the tattoo" gains clarification, but at the expense of reinforcing the notion of access to inaccessible delusional context.

In some instances of the examples explored above, REA can be described as negotiating access to the participant's cognitive environment. This is not consistently successful. REA appears to never truly access the content of the talk in part of the interaction with IPF, nor in that with BND, for example.

### 10.3.2 Evidence of 'imposing meaning and 'cautious optimism'

In interaction with several of the participants REA presents an interpretation of an utterance, seemingly seeking clarification. In presenting her own interpretation she appears to impose meaning where the intended meaning is unclear.

This imposition of meaning is perhaps most clearly seen in the talk with HNT, shown in extract (8). In interacting with HNT, the assumption that he is mentally ill, and therefore possibly delusional, appears to actively shape the interaction.

```
235
              *REA:
                      so you're going to save that cigarette for later or you're
(8) →
        236
                      waiting to smoke it now again? .
        237
              *HNT:
                      now again.
              *REA:
        238
                      now again? .
        239
              *HNT:
                      but when I want to spend now and now I smoke it I listen myself
                      first, # what is happening. .
        240
                      then hear my mood smoke you know, <don't give this> [?] okay,
              *HNT:
        241
        242
                      then I smoke. •
              *REA:
        243
                      so you see how you're feeling, you look at your mood. .
              *HNT:
                      ja I look at my mood.
        244
                      since my [//] madam last week I suspecting this person who is
        245
              *HNT:
        246
                      inside me to me to tempting me since I've been watching
        247
                      <it> [?]. •
       248
              *REA:
                      so someone's been tempting you to smoke? .
       249
              *HNT:
                      ia.
              *REA:
       250
                      who is it, someone in the ward? .
       251
              *HNT:
                      ja, that person who lives in the corner and just like to appear
       252
                      it's kind of by a slow motion.
       253
              *REA:
                      okav. .
              *REA:
       254
                      and he tempts you to smoke? .
       255
              *HNT:
                      yes. •
              *REA:
                      what's his name? .
       256
                      # you don't know his name? .
       257
              *REA:
              *REA:
       258
                     ## I don't know him I don't think. .
                     you don't know? .
       259
              *HNT:
       260
              *REA:
                      no ##.
              *HNT:
                      satan. •
       261
              *REA:
       262
                      oh, satan. •
                      yeah #. •
       263
              *HNT:
```

REA, in line 235 asks about the cigarette that HNT is holding. In the context of this discussion about deciding whether or not to smoke, HNT refers to "suspecting this person who is inside [him]" of "tempting" him (line 245-247). While many cultural and spiritual explanations of phenomena (health related and otherwise) exist about temptation in typical South African populations, in this interaction, REA's assumption of delusional talk appears to be what guides her interpretation. REA immediately provides her interpretation, and, as an echo question, seeks confirmation of the meaning she has constructed (line 248). Where in typical interactions in a South African context the hearer might use a spiritual framework to extract meaning, REA utilises other inputs to guide interpretation. It is apparent that, from the initiation of her questions (line 250), REA ignores the spiritual dimension and focuses instead on what could be construed as following up on possible paranoia (i.e., someone is out to get me by tempting me to do wrong). REA's questions are around the identity of 'the tempter', and seemingly ignore the reference to "this person who is inside me" - which could have a spiritually and culturally acceptable interpretation. Given the input of the physical environment, the encyclopaedic knowledge of the nature of delusions and the knowledge of HNT's psychiatric history, the most accessible interpretation is that HNT is presenting a paranoid delusion in his belief that someone is 'out to get him'.

Extract (9), extended from extract (4), appears to be significantly collaborative. The assumption that RPD presents with specific delusions around her drawing would have been manifest to REA at the outset of the interaction, given access to her medical records. This particular stretch of delusional talk is characterised by REA assuming a fairly facilitatory role,

using back-channelling behaviours (lines 273, 300) and echoing what she has interpreted (line 279, 283, 287, 304).

```
she has, she said she will would come and find somebody for
        260
(9)
                      arts and culture and I think this man he is wanting me to to
        261
        262
                      draw this sketches for him you understand me.
        263
              *REA:
                      okay. .
        264
              *RPD:
                      that's why I I I'm drawing it because I he wants me to see. •
        265
              *RPD:
                      so I doing it I went to her so I told her if I can draw the
                      sketches they can put in uh the horizon or whatever they can
        266
        267
                      do [maybe they can +/. .
        268
              *REA:
                      Lis the horizon a newspaper? •
        269
              *RPD:
                      the newspaper. .
                      or there in in in the # in the # in the # on tv or or
              *RPD:
        270
        271
                      publish it in the hospitals. .
              *RPD:
                      you understand me? .
        272
              *REA:
        273
                      mmhm. .
                      just show the people if you can look at this pictures try to
        274
              *RPD:
        275
                      draw on your own what's happening around you why your life this
                      is how your life circulates and your life will be completely
        276
                      when you start drawing you feel enormously # um # how
        277
                      educated-minded because then you know when you draw this one. •
        278
        279
              *REA:
                      you almost feel relieved? .
              *RPD:
        280
                      you feel enormously relieved. .
        281
              *RPD:
                      but let me tell you about this pictures that I draw you cannot
        282
                      trace them, you understand my thought? .
                      you cannot trace them. .
        283
              *REA:
        284
              *RPD:
                      you cannot trace them. .
        285
              *RPD:
                      because hey it's coming out of my acceleration of my human
        286
                      body's spirit. .
              *REA:
        287
                      it's coming from your heart? .
              *RPD:
                      it's coming from my Theart. .
        288
              *REA:
                                          iso if I trace it it will be a lie, is that
        289
                      what you mean? .
        290
              *RPD:
        291
                      ja. ·
        292
              *RPD:
                      try and trace it. .
                      just try fand trace it. •
              *RPD:
        293
                               Lwhat will [/] what will happen if I try to trace it? .
        294
              *REA:
        295
              *RPD:
                      just try and trace it, I just want to see if you can trace it. '
              *REA:
        296
                      # what do you think happens if I try and trace it? •
                      there's nothing wrong what [/] but what I saw the other day
        297
              *RPD:
                      when somebody wanted to trace it, it it he doesn't get it
        298
        299
                      right. .
              *REA:
        300
                      mmm. .
        301
              *RPD:
                      because a why because he although he traced it, there's other
                      people that are tracing but they cannot trace a certain amount
        302
        303
                      of things, you understand my point? .
              *REA:
                      because this comes from your heart. .
        304
        305
              *RPD:
                      this comes from the heart, and this comes from us. .
                      you cannot traced it, you understand me? .
        306
              *RPD:
              *REA:
                      I understand I understand. .
        307
```

This extract appears to be strongly collaborative and negotiated, that is, REA's interpretations are echoed back to RPD and confirmed, appearing to act as a collusion in the meaning asserted. Although the content of the delusion is bizarre, REA appears to have little difficulty accessing the relevant assumptions which allow her to impose meaning in a way which is accepted by RPD. One hypothesis for the difference in this engagement could be the tangible nature of the delusion. The drawings are being produced in front of REA and this gives both parties something to refer directly to, allowing for some level of mutual cognitive environment within the delusional content.

The process of imposing meaning and clarifying interpretations appears to be one of the strategies used by REA in an attempt to negotiate meaning and collaborate in the meaning-making process within overtly delusional talk.

# 10.3.3 A clinician's avoidance of delusional talk: A relevance-theoretic account choosing a 'safe topic'

Although REA engages in processes of collaborative meaning-making within talk, she ultimately moves away from overtly delusional content at some point in the interaction. This move, however, is very rarely an abrupt or intrusive change of topic, but rather a case of 'topic-shading'. Such a reluctance to engage in talk around psychotic symptoms is described not only in talk between SLTs and their clients (Walsh, 2008b), but has also been noted in conversations between psychiatrists and their patients with schizophrenia (McCabe et al., 2002). Previous research suggests an avoidance of content from within a delusional context, in which it is "side-stepped through topic manipulation" on the part of clinicians on occasion (Walsh, 2008b, p. 6). On the other hand, clinicians have been described as more willing to engage in talk about delusions, often by selecting a 'sub-topic' in a process of 'side-stepping' actively delusional or overtly delusional content (Walsh, 2007b, 2008b). Walsh (2007b, p. 31) sees the choice of a "safe topic" as functioning as a politeness strategy by "claiming common ground between the speaker and hearer". In the context of a cognitive-pragmatic account, could it be that side-stepping the delusional content may be related to a desire to communicate - a desire which can only be fulfilled within a context that is mutually manifest? The question arises of how the clinician chooses this 'safe topic' or selects an appropriate 'sub-topic' from a cognitive pragmatic perspective, and what makes it 'safe ground' within the possibly threatening context of delusional talk.

#### A return to a prior utterance

There are frequent examples in which REA exits the delusional talk by referring back to earlier non-delusional utterances (either attributed to herself or to the participant). At times, REA is seen to move towards a 'sub-topic' that is mutually manifest by virtue of being in the physical environment. The fact that a stimulus is perceptual, and can as such be 'pointed out', seems to increase the likelihood of a mutual cognitive environment and thus a successful communicative exchange.

In interaction with CNJ (extract 6'), REA appears to actively avoid the delusional content about Brad Pitt very early on in the talk, probably due to the doctor's request that this particular content be avoided.

```
*CNJ:
                     I was like looking at books there, looking for his pictures
(6')
       103
       104
                     and stuff #. .
                     uh, I want to know more about him and stuff. .
       105
             *CNJ:
       106
             *REA:
                     hmm. .
                     # I want to know much more [about him. •
       107
             *CNJ:
       108
             *REA:
                                                Land you do other things [/] I
                     think once when I was there to talk to one of the OTs you were
       109
                     all busy making decorations for the dance.
       110
             *CNJ:
                     um ja ſja. •
       111
                           Lyou do that stuff [sometimes? .
       112
             *REA:
             *CNJ:
                                              isometimes, ja.
       113
       114
             *REA:
                     do you go to the dances when they happen? .
             *CNJ:
                     um ja I do go. •
       115
       116
             *CNJ:
                     I do go there ## xxx. .
             *CNJ:
       117
                     #0 21 xxx.
       118
             *REA:
                     hmm? .
                     nothing much, I was just thinking about uh [//] ## there's
       119
             *CNJ:
                     trying to get to know Brad Pitt and his life and I don't know,
       120
       121
                     he's like a movie actor you know so he's like [//] um that
                     means that I try I don't know [/] try to figure him out
       122
       123
                     somehow, like what what he's what he's all about and stuff. .
       124
             *CNJ:
                     you know.
       125
             *REA:
                     how do you figure him out? .
             *REA:
                     where do you find out?
       126
       127
             *CNJ:
                     I just know him as a movie actor, that's all. •
       128
             *CNJ:
                     I'd like to get, like to get to know him almost. •
       129
             *REA:
                     you mean personally or + . . ? .
                     personally, yes. •
       130
             *CNJ:
       131
             *CNJ:
                     like as in uh, [/] um like being by his side like his inner
       132
                     being and stuff.
             *CNJ:
       133
                     to know what he's like all about almost because xxx. •
       134
             *REA:
                     because what?
             *CNJ:
                     he's hiding some stuff from me. .
       135
                     he's hiding some stuff from you? .
       136
             *REA:
             *CNJ:
       137
                     ja. •
       138
             *REA:
                     I'm just going to close this door because it's so noisy. •
                     REA walks to close the door and CNJ continues speaking
       139
             %act:
       140
             *CNJ:
                     I'd like to get to know what he's like hhh. •
                     REA returns
       141
             %act:
       142
             *REA:
                     it's noisy in this ward, hey? .
             *CNJ:
                     ja! ·
       143
```

In 'exiting' the delusional talk REA chooses to return to the original topic of occupational therapy and link it to the delusional talk, through the use of the words "you do other things..." (line 108). CNJ persists with the delusional talk, and REA physically leaves the conversation (to close a door) (line 139). This acts as a more abrupt change and is perhaps explained in part by the professional need to avoid the talk, based on the doctor's request.

In interacting with HNT, evidence of a search for a 'safe topic' can be seen during his talk about the dove communicating with him, in (10).

```
*HNT ·
                      he say this is my one dear son with whom I'm + ... ## .
        374
(10)
        375
              *REA:
                      so thats what you're meaning when you say you bow your head
        376
                      when I'm coming? .
        377
              *REA:
                      you mean you're praying so that you can do nicely on the tasks?
        378
              *HNT:
                      ja. ·
              *REA:
        379
                      okay. •
        380
              *HNT:
              *HNT:
                      hhh (be)cause when I was praying before I do nice. .
        381
        382
              *HNT:
                      I do not struggle at it.
              *REA:
        383
                      okay. .
        384
              *REA:
                      you did very nicely on some of them. .
        385
              *REA:
                      some of them are very difficult H. .
```

In line 377 REA moves away from the overtly delusional talk (in which the implicature is leading to possible talk around HNT being a deity) back towards the more mutually manifest assumption that HNT had been praying to do well on the tasks. Although prayer is not a

typical topic between relative strangers in a clinical context, it provides a set of assumptions which is mutually manifest, in the light of the earlier talk. At the same time it provides the opportunity for REA to steer the talk towards the much more concrete (and therefore manifest) notion of how HNT has performed on the tasks.

In the talk around being tempted, REA moves the talk away from the dimension of temptation and spiritual forces which dominates the interaction in lines 250-262 of (11).

```
250
               *REA:
                       who is it, someone in the ward? .
(11)
         251
               *HNT:
                       ja, that person who lives in the corner and just like to appear
         252
                       it's kind of by a slow motion. •
         253
               *REA:
                       okay.
         254
               *REA:
                       and he tempts you to smoke? .
         255
               *HNT:
                       ves.
         256
               *REA:
                       what's his name? .
         257
               *REA:
                       # you don't know his name? .
               *REA:
                       ## I don't know him I don't think. .
         258
         259
               *HNT:
                       you don't know? .
                       no ##. •
         260
               *REA:
               *HNT:
         261
                       satan. •
                       oh, satan. •
               *REA:
         262
               *HNT:
         263
                       yeah #. •
         264
               *REA:
                       sho #. .
               *HNT:
         265
                       &=sighs .
         266
               *REA:
                       so should we finish this and then you need to smoke? .
               *REA:
         267
                       is that what you're telling me? .
         268
               *HNT:
                       no.
               *REA:
                       hmm? .
         269
                       no, I save it for ##. • for later. •
         270
               *HNT:
               *RFA:
         271
         272
               *HNT:
                       ja I want to save it later but if you say I should smoke # I
         273
                       should smoke.
         274
               *REA:
                       no I don't say you should smoke now. .
         275
               *REA:
                       I just thought you wanted to, cos you're holding it so tightly.
         276
               *HNT:
                       yeah. •
               *REA:
                       I think it's wise to save it for later. .
         277
               *HNT:
         278
                       yeah. •
```

REA appears to actively move the talk towards the act of smoking and planning a smoke break (line 266), concepts which are familiar to both parties and which are salient enough to be mutually manifest. Again, the exit (in line 266) occurs in reference to the earlier discussion on HNT having another cigarette for a later smoke break. This referral back to a previous utterance is conceptually linked to the preceding delusional talk (being 'tempted' to smoke) but 'safe territory' in terms of mutually manifest assumptions.

In extract (12), IPF has been talking about her delusional health concerns. This talk, as discussed in the section above, was initiated by a discussion around her desire for an audio-recording device. REA exits the talk in line 201 with reference to this attributed utterance. In this case, REA appears to not only be using an earlier utterance to achieve mutual manifestness, but specifically bringing the talk back to something salient and tangible within the environment – the recorder. This is argued to be a 'safe-topic' not simply because it is uncontroversial, but because it forces the talk towards 'common ground' and creates a mutual cognitive environment.

```
I thought it was the arthritis and all of a sudden I had heart
(12)
         180
               *IPF:
                       attacks and then I had the strokes. .
         181
               *REA:
         182
                       were you in hospital? .
               *IPF:
                       ja for a month.
         183
         184
               *REA:
                       which hospital were you in? .
               *IPF:
         185
                       Pinewood.
         186
               *REA:
                       where's Pinewood Hospital, I've never Theard of it. .
               *IPF:
                                                              LValpark. •
         187
               *REA:
         188
                       okay. •
               *REA:
                       # okay, and what did they say there? .
         189
         190
               *IPF:
                       nothing. •
               *IPF:
                       they never even moved me to the i+c+u section for the # muscle
         191
                       spasm fits but it's okay! .
         192
         193
                       ironic tone of voice
               %com:
         194
               *REA:
                       so what month did all of that start in? .
               *IPF:
         195
                       um, march. •
         196
               *IPF:
                       may the seventh I was admitted. .
               *IPF:
         197
                       the eighth of may the spasms occurred. •
         198
               *IPF:
                       for two days! .
               *REA:
                       hmm, that's difficult hey? .
         199
         200
               *IPF:
                       ja. •
         201
               *REA:
                       so you want to be able to record yourself so that when your
                       hands are sore you don't have to write? •
         202
               *IPF:
         203
                       ja. •
```

In the extract below, extended from (3'), REA is seen to exit the delusional talk of IPF by moving towards what may be considered a 'safe topic', that of tattoos in a general sense. Perhaps due to the unsuccessful attempts to establish the intended meaning of IPF's contributions, REA brings interaction away from clearly delusional content, that is, back to a 'safe topic' of the tattoo (line 366). Although the concept of the tattoo has its roots in the delusional content, it is a fact which is mutually manifest by virtue of its visible presence in the environment and thus provides an opportunity for 'topic-shading' towards content which is manifest to REA.

```
*REA:
       366
                      so is that a tattoo? .
(3'')
             *IPF:
       367
                      ja. ·
             *IPF:
                     Tit says 'E'. .
       368
       369
              *REA:
                      Lwas it sore? .
              *REA:
       370
                      ja I know, was it sore when you got it? .
       371
             *IPF:
                     no.
             *REA:
       372
                     no? ·
       373
              *REA:
                     I would be too scared. .
                      # if I didn't get this tattoo <that evening> [?] they would
       374
              *IPF:
       375
                      never had found me. .
             *REA:
       376
                     what do you mean? .
                      (be)cause it took them seven years for me [/] six years to send
       377
              *IPF:
       378
                      the platinum over. .
                      it took them six years to send me my springbok title for
       379
             *IPF:
       380
                      dancing.
                     mmhm, and did they find you because of the tattoo? •
       381
              *REA:
              *IPF:
                      ja, I think so, I'm not sure.
       382
              *IPF:
                      but they've been looking for me for quite some time. .
       383
              *REA:
                      have you got any other tattoos? .
       384
       385
              *IPF:
                      ja, got a tattoo on my neck. •
                      sho, I would be too scared that it [would be sore. .
       386
              *REA:
              *IPF:
                                                          ibut it's tiny, it's very
       387
       388
                      tiny. .
             *REA:
       389
                      okay, hmm! .
       390
              *REA:
                      hmm, interesting. .
                      are you sure you don't want anything else during the break? .
       391
              *REA:
                      ja, 'I'm fine. .
       392
              *IPF:
```

REA, in line 384, exits the delusional talk again through returning to a 'tangible object'. Despite REA's attempt to exit the delusional talk, IPF is seen to persist with the delusional content. The fact that one assumption is mutually manifest (the presence of the tattoo) may

serve to support her assumption that IPF's own set of delusional assumptions are also mutually manifest.

#### Focusing on mutually manifest encyclopaedic information

In exiting delusional talk, REA appears to occasionally move away from the overtly delusional content by focusing on a component of the talk which is salient with regards to encyclopaedic information.

The content of BND's delusional talk in extract (5') is completely inaccessible to REA, with the discourse context incompatible with encyclopaedic information. BND has been talking about his belief that his father is William Shakespeare and plays in a local soccer team. REA can be seen to move the talk towards the more tangible topic of school in line 261, linking it with the history lessons around the historical figures which are reflected in BND's delusional talk. The exit from the delusional talk appears to be driven by a similar process to those discussed above. In order to achieve cognitive effects, REA requires access to mutually manifest assumptions. The exit towards more accessible content appears to be driven by a process of meaning-making.

```
236
             *REA:
                     is there a man called William Shakepeare in the swallows who
(5')
       237
                     plays soccer? .
             *BND:
       238
                     yes yes #. •
             *BND:
       239
                     yes. •
       240
             *REA:
                     does he have another name as well? .
             *BND:
                     huh? .
       241
       242
             *REA:
                     does he have another name, this man, [William Shakespeare? •
             *BND:
      243
                                                           ıja, ja. •
      244
             *REA:
                     what's his other name? .
             *BND:
      245
                    he's Jan van Riebeeck.
      246
             %exp:
                    a South African historical figure
      247
             *REA:
                    # who plays for swallows? .
      248
             *BND:
                    yes. •
      249
             *REA:
                     plays soccer? .
      250
             *BND:
                     who? .
      251
             *REA:
                    Jan van Riebeeck? .
      252
            *BND:
                    ja, ja, he plays soccer. •
             *REA:
                    no man, Jan van Riebeeck is the man who came to Cape Town. •
      253
      254
             *BND:
                    yes is is him, I I know him. .
      255
             *REA:
                     you know him? .
      256
             *BND:
                     ia. •
             *REA:
      257
                     but he came to Cape Town hundreds of years ago. .
      258
             *BND:
                     hundred? .
             *REA:
      259
                     ja. •
      260
            *BND:
                    mmhm #. .
            *REA:
                    did you learn about Jan van Riebeeck in school? •
      261
      262
             *BND:
                     ja, but it's long time, hey? .
             *REA:
                     long time [since you were in school? •
      263
      264
             *BND:
                               Lia.
      265
             *BND:
                     yes, uh standard five, it was standard five, ja. •
                    that you learnt about [Jan van Riebeeck? •
      266
             *REA:
```

In extract (13), KPS asserts that her daughter lives in "utopia". The exit shown in line 331 reflects a focus on information which is accessible from mutually manifest encyclopaedic information. REA's exit from the delusional talk involves an implicated premise: that a mother would travel to visit her children living in other parts of the world, if possible.

```
*KPS:
                       I've just got two children here in South Africa. •
         328
(13)
         329
               *REA:
                       okay, where are the ones overseas, what countries are they in?
         330
               *KPS:
                       um my son, my oldest son in in America ≈. •
         331
               *REA:
                       mmhm. .
         332
               *KPS:
                       ≈ my one daughter's in utopia. •
               *REA:
                       in, ethiopia? .
         333
         334
               *KPS:
                       utopia, utopia. •
                       okay. •
         335
               *REA:
         336
               *KPS:
                       she's a lecturer there. .
               *KPS:
                       I don't know what what (be)cause she specialises in almost
         337
         338
               *REA:
                       hmm. .
         339
         340
               *KPS:
                       I know #.
               *KPS:
                       then my other daughter I don't really know what she is up to
         341
         342
               *REA:
                       hmm. .
         343
         344
               *KPS:
                       they don't really contact anymore, I don't know why. •
                       so where would you like to visit, if you could go anywhere for
         345
               *REA:
                       a visit where would you [go? •
         346
               *KPS:
         347
                                                (China. .
         348
               *REA:
                       China? •
         349
               *KPS:
                       China hhh. •
                       really, that's finteresting, why China? •
         350
               *REA:
               *KPS:
         351
                                       Lja.
         352
               *KPS:
                       (be)cause they've got such a lo- different way of living,
         353
                       Tyou know, ja. •
         354
               *REA:
                       Lmmhm.
                       very different [culture. •
         355
               *REA:
```

In the second extract taken from KPS, (14), KPS is engaged in delusional talk with regard to previous admissions. REA is seen to slowly move towards a component of the talk which is more mutually manifest (albeit less socially 'safe'), that is, talk of religion (line 422).

```
have you been here before? .
         416
               *REA:
(14)
         417
               *KPS:
                       yes I have.
         418
               *KPS:
                       I've been here, I was here in in november # for observation
         419
                       and um ja before, # you won't believe me, fourteen death
         420
                       certificates was written out here for me I was a guinea pig. .
               *KPS:
                       luckily it was my <religion you know> [?] to recover. •
         421
                       what freligion was that? .
         422
               *REA:
               *KPS:
         423
                            LSO +/. .
         424
               *KPS:
                       imam. •
               *REA:
         425
                       imam? •
         426
               *KPS:
                       imam. •
         427
               *REA:
                       okay. .
         428
               *KPS:
                       ia.
                       so at least I [/] they revived me you rknow. .
         429
               *KPS:
         430
               *REA:
                       was that when you were here [before? •
         431
               *REA:
                                                    Lyes, when I was here. •
               *KPS:
         432
               *REA:
                       what is imam, I don't know about it.
         433
               *KPS:
                       it's like hindu. •
         434
               *REA:
                       okay. .
         435
```

The talk is steered away from that based on the less mutually manifest assumptions around paranoid delusions about the hospital (lines 418-421), and towards talk in which the details of her religion and how KPS discovered this path (lines 422-433) become the content of the interaction. Although one may argue that this is not moving towards a 'tangible' topic in the same sense as seen in many of the other interactions, it clearly is moving towards a topic which can be grounded in 'reality' in some way and, from an RT perspective, be based on assumptions which are more accessible to both parties.

Despite the success of the interaction with SPG, extract (15) illustrates how REA still tends to maximise the relevance of the most salient (that is, the most mutually manifest) aspect of the delusional content.

```
*SPG:
        293
                      Jees, I've now got into a lawsuit with Recovery and that's why
(15)
        294
              %com:
        295
                      content changed slightly to protect confidentiality
        296
              *REA:
                      mmhm, hmm, I know uh [/] I don't know anything about it here
        297
                      but I know I remember a show about Jamie Oliver. •
        298
              *REA:
                      you know Jamie Oliver the cook? .
                      # he's # he's sort of a celebrity chef now.
              *REA:
        299
        300
              *REA: um but he he tried to implement a scheme in the UK about
        301
                      healthy eating. •
              *REA:
                      because I think more so in the UK they've got sort of feeding
        302
                      schemes in the schools. •
        303
        304
              *SPG: ja they do. •
```

Instead of picking up on the court case or the involuntary admission (which SPG brings up multiple times), REA focuses on the content around nutrition and school feeding schemes (lines 296-298). Nutrition and feeding schemes are clearly a component of SPG's delusion, but the associated assumptions are far more readily accessible to REA as the hearer. From an RT perspective, by using this strategy REA maximises the chances that she will have access to the intended context for utterance comprehension.

#### **Exceptions**

The above extracts all appear to support the notion that REA is seeking a mutual cognitive environment to facilitate the process of communication. It is this which appears to be driving her exit from the delusional talk. However, there are a number of instances in which the move away from delusional talk does not fit this pattern. These are presented below.

Extract (16) (encompassing extracts 9 and 10 considered above) presents IPF's talk around her realisation that she had "the bloodline" and "the stone" of the Samurai Culture. REA exits the talk abruptly, introducing the next assessment task (line 294).

```
*IPF:
                       I've got the stone. .
(16)
               *IPF:
                       I've got the bloodline, but I don't know much. .
         274
         275
               *REA:
                       how do you know you've got the stone? .
               *IPF:
                       it's here. •
         276
         277
               *REA:
                       okay. .
               *IPF:
         278
                       up in room thirteen. .
         279
               *REA:
                       how did you first find out about samurai culture? •
         280
               *IPF:
                       I've never. .
               *IPF:
         281
                       recently, there was that movie shanghai nights +/. •
         282
               *REA:
               *IPF:
         283
                       +, and I saw the stone and I went to my bedroom and I'm like
         284
                       ja but that's the stone that was # on that, it was budda but
        285
                       then there was an ashtray. .
               *IPF:
                       you know the ashtray?
        286
               *REA:
                       mmhm. .
        287
         288
               *IPF:
                       I've got the ashtray. .
               *IPF:
                       so you only realized after you watched that movie? .
        289
               *IPF:
        290
                       ja. ·
               *REA:
                       so you've never watched any other samurai movies. .
        291
        292
               *REA:
                       no never. •
               *REA:
        293
                       hmm, interesting. .
        294
               *REA:
                      okay, let's do this one. .
        295
               %com:
                      assessment continues
```

In interacting with KPS, REA very quickly (and abruptly) changes the topic away from the delusional talk about her "fathers" in line 374 of (17).

```
*KPS:
                        no no I no I have to America sometime you know # ja #. .
         371
(17)
                       I was born in America, I have to go back sometime go and see
         372
               *KPS:
         373
                       my see my father. •
         374
               *KPS:
                       not father, fathers.
               *REA:
         375
                       fathers? .
         376
               *KPS:
                       yes, I was a test tube baby. .
               *REA:
                       okay? .
         377
         378
               *KPS:
                       ia hhh #. •
               *REA:
                       so, how will you find them, that might be difficult. •
         379
         380
               *KPS:
                       no it's no, I know we get on, Tyes we still have contact. .
               *REA:
         381
                                                       Lyou still +/.
               *REA:
         382
                       sort of more of less. •
               *KPS:
         383
         384
               *REA:
                       okay #.
               *REA:
                        should we see what else I have for us ##? .
         385
         386
               *REA:
                        we have a few more things to do. .
               *KPS:
         387
                       okay. .
```

It is notable that no attempt is made to slowly shift towards a 'safe topic' as is seen with the other participants. There may be multiple explanations for this example. REA may have been focused on her agenda (and perhaps time constraints) and prioritised assessments over responding to the individual. It may also reflect an uncomfortable sense or unwillingness to engage in a perhaps sensitive topic.

In extracts (18) and (9'), there is not direct evidence from the discourse that REA is actively attempting to change the topic or avoid the delusional talk. This feature is in clear contrast with many of the other interactions considered in this analysis. Although the interaction is brought to a close and the assessment task brought back (extract (9'), line 308), one can note that this was negotiated in lines 158-159 of (18) when RPD began drawing a bicycle and agreed that once the picture was complete the assessment could continue.

```
158
             *REA:
                      ## are you going to draw one last picture and then we can
(18)
       159
                      continue? •
                      yes. •
       160
              *RPD:
       161
              *REA:
                      ## have you ridden a bicyle before? .
                      RPD drawing a bicyle
       162
              %com:
       301
             *RPD:
                      because a why because he although he traced it, there's other
(9')
       302
                      people that are tracing but they cannot trace a certain amount
       303
                      of things, you understand my point? •
       304
              *REA:
                      because this comes from your heart. •
              *RPD:
       305
                      this comes from the heart, and this comes from us. .
              *RPD:
                      you cannot traced it, you understand me? .
       306
              *REA:
                      I understand I understand. •
       307
              *REA:
       308
                      okay S, let's look at this one. .
       309
              %act:
                      assessment continues
```

The delusional talk going on around the drawing 'activity' occurs then in waiting for the assessment to continue. One might speculate, given the discussion above and the consistent pattern for REA to move towards a tangible component of the delusion to give her access to the interaction, that this delusional talk is different along the dimension of accessibility. In this case, as noted above, the subject matter of the delusion is tangible (drawings which are physically present) and mutually manifest in the perceptual

environment. This may, in part at least, account for the duration of the talk and the lack of control taken over the topic by REA. The final exit in line 308 appears to have been negotiated earlier in the talk and seems to represent a natural 'moving on'.

#### 10.3.4 Summary: Negotiating 'exit' from delusional talk

Just as the process of meaning-negotiation depended heavily on REA accessing the context in some way, so the exit from delusional talk appears driven by the same constraints. Given the general account that a lack of mutually manifest assumptions characterises delusional talk, the move away from such delusional talk may be considered as a process of meaning-making. A component of this clinician-driven behaviour could perhaps be construed as the search for a context which is more overtly manifest and, therefore, a greater likelihood of mutual manifestness and successful engagement.

The conversational move away from overtly delusional content is consistent throughout the data and has been described in other data (Walsh, 2007b, 2008b). Although there are exceptions, REA's attempts to 'exit' delusional talk all seem to have a similar pattern - that of a search for something 'mutually manifest' which can allow for communication to successfully occur. This is in keeping with the findings that REA's process of meaning-making is frequently a search for that which is mutually manifest. It seems that this process of attempting to access that which is not mutually manifest (i.e., the delusional assumptions) prompts REA to exit this talk in favour of something more clearly mutually manifest – whether that be in the physical or cognitive context of the communicators. This RT account of how the interlocutor chooses an exit from delusional talk augments the account by Walsh (2008b, p. 6) of the avoidance of delusional talk as a process of "sidestepp[ing] through topic manipulation" on the part of clinicians on occasion. By providing a cognitive-pragmatic explanation of this behaviour, the analysis has shown how the SLT as a clinician and conversationalist attempts to maximise the opportunity for engagement with the individual with schizophrenia. The 'transition zones' between delusional and nondelusional talk emerge not as a tussle for talk but as a navigation of conversational terrain.

#### 10.4 Summary: Access and collaboration in delusional talk

A particular challenge within the delusional talk, as presented in detail above, is the sometimes inaccessible nature of the set of assumptions manifest to the individual with schizophrenia. It should be emphasised, however, that not all delusional talk occurs around assumptions inaccessible to REA. Such instances were discussed in Chapter Nine, in which some participants displayed the ability to tailor utterances to the 'perspective' of their

hearer, even within delusional talk. In many instances, however, the related assumptions are not manifest by REA and challenge the process of meaning-making.

In the process of engaging the person with schizophrenia during delusional talk there are numerous instances in which REA's utterances seem to have the effect of implicating that the conversation is occurring smoothly, despite obvious difficulty in accessing the speaker's informative intentions. The result appears at times to be a co-construction of the inaccessible delusional context. The participants' subtle disturbances in metarepresenting what information is truly accessible to REA, may, therefore, be aggravated by REA's co-construction of this inaccessible content.

While REA does occasionally signal her inability to access delusional assumptions, there are a relatively limited number of examples in which this clearly occurs. The examples above illustrate situations in which REA either overtly asserts that she 'does not know', or uses questions in an attempt to access the assumptions presumed mutually manifest by the person with schizophrenia. A second strategy used by REA is the application of the limited information available to construct and 'impose meaning' while attempting to clarify this interpretation, often through the use of echo questions.

## 10.5 Conclusion: Collaborative meaning-making and negotiating 'problematic' sequences of talk

The level of interactional success and meaning-making possible within delusional talk was perhaps a surprising finding, given that from an RT perspective even typical communication is not governed by 'fail-safe' rules. This inferential demand, coupled with the clear language and communication disturbances of the participants, makes for a potentially fragile engagement. Difficulties were certainly encountered and suggest specific pragmatic disturbances (as discussed in previous chapters), but even where the context was inaccessible to the hearer, meaning was frequently successfully negotiated.

The role of mutual manifestness (or the lack thereof) is an unmistakable theme in the discussion above. Many of the participants appear to assume mutual manifestness of assumptions which are not always available to REA. At first glance, this conclusion that the individual with schizophrenia is working from a different context in delusional talk appears to be self-evident. Delusions by nature are held as reality, so it is surely obvious that the person with the delusion would presuppose that those around her 'see' the world in a similar light. This fact is not disputed. What a relevance-theoretic account does provide however, is clear cognitive-pragmatic evidence from the discourse of individuals that this in fact is the case. In addition, this type of account provides a cognitive explanation about why

this may be so, as well as providing an explanatory theory of how this impacts on interaction and, crucially, what makes it possible to make meaning within a conversational engagement of this type. The implications of an explanatory theory of the conversational characteristics of meaning-making in delusional and thought-disordered talk allow us to identify our own role in co-constructing or negotiating this talk. In addition, it allows the person with schizophrenia to be viewed in a different light. This account serves in some respects to de-mystify the 'odd' communication of some individuals with schizophrenia – it seems that it is not their language or communicative competence which is impaired, but rather they are working from mistaken assumptions about what is mutually manifest. Despite the content of the talk being bizarre, the person does appear to be engaged in an attempt at communication. The difficulty lies in their assumptions of mutual manifestness and their related difficulty in making their informative intentions the most easily accessible interpretations for the hearer. Recognising that we, as communication partners, are lacking access to this cognitive environment may change the way we frame the discourse.

Communication is an exquisitely complex process and, from an RT perspective, not dependant on a 'fail-safe' heuristic but on a fallible inferential procedure. In this light the quote considered earlier is particularly pertinent: "failures in communication are to be expected: what is mysterious and requires explanation is not failure but success" (Sperber & Wilson, 1986/1995, p. 45). The successes of communication within delusional talk are perhaps even more remarkable than the successes of typical interaction and involve an active collaboration between interlocutors.

### **SECTION IV**

### **Chapter Eleven**

# Schizophrenia as a disorder of metarepresentation: examining the conversational evidence

This study has confined itself to extending the understanding of the metarepresentational abilities of individuals with schizophrenia as they relate to communicative function in conversational interaction. The account of schizophrenia put forward by Frith (1992) is that of an underlying impairment in metarepresentation. Frith provides a robust account of how this impairment may underlie the range of signs and symptoms in the disorder, including the disturbances in communication which are commonly associated with schizophrenia. In order to investigate the predictions of Frith's theory within conversational data, a cognitive pragmatic interface was required to 'map' verbal communication from a cognitive perspective. Relevance Theory (RT) provided the tools by which communicative interaction could be explored from such a perspective. Applying RT in this way has allowed the analysis put forward to be a cognitive-pragmatic account of how the person with schizophrenia performs in conversation, specifically in regard to the metarepresentation requirements of verbal interaction. I have not attempted to characterise the full range of pragmatic impairments (or abilities) of the participants with schizophrenia, but have instead attempted to explore whether the hypothesised mentalizing deficits are manifest in conversation and, in this way, engage in an explanatory theory which holds for 'real-world' pragmatics. This exploration has involved a necessary investigation of a circumscribed set of pragmatic abilities, as well as abilities which may be conceptualised as underpinning the pragmatic processes at play. This study attempted to examine the symptom-based predictions which emerge from the experimental studies, by extending the investigation beyond performance on structured tasks to on-line conversation. As suggested by McCabe, it is necessary to examine "how patients use or fail to manage mental attributions in naturalistic interaction and [link this performance] with symptom profiles" (McCabe et al., 2004, p. 411). The current study follows a very limited number of studies investigating ToM or metarepresentation in on-line conversation (e.g. McCabe et al., 2004) and is unique in its application of RT to interactional data from this realm of clinical pragmatics.

In this chapter I will discuss the implications of the findings of this study for the understanding of the communication disturbance in schizophrenia as a manifestation of a more fundamental disorder of metarepresentation. The chapter will begin, in section 11.1, by briefly reviewing the findings which emerged from the analysis presented in the

preceding chapters. The second section will then consider the predictions of Frith's metarepresentational model of schizophrenia, specifically the prediction relating to attribution of mental states to others and the profiles of performance as related to psychiatric profiles. Section 11.3 will explore the possible reasons for discrepancies which have arisen in this and other research, between performance on structured tasks of mental state attribution and conversational performance. Section 11.4 will explore the nature of any impairment, considering the dimensions of material or computational impairment put forward by Frith (2004). Section 11.5 will discuss the implications of the findings in terms of considerations of modularity. The limitations of the study, as well as suggested directions for future research, will be presented in section 11.6 before conclusions are drawn in section 11.7.

#### 11.1 A review of the findings

The analysis proceeded from consideration of individual performance – how participants displayed metarepresentational (dis)abilities in tasks and conversational engagement – to a focus in the latter part of the findings on considerations of the dyadic nature of the interactions, confining the analysis to the subset of the data representing those displaying delusional talk. All analysis was conducted with reference to the metarepresentational abilities involved. The following points summarise the main findings:

- The performance of participants on the Fable Task supported, in part, the
  prediction that mental state attribution (as assessed in an 'off-line' task) is
  challenging for some people with schizophrenia, and that these difficulties would
  coincide with symptom profiles on the Positive and Negative Syndrome Scale
  (PANSS) (Kay et al., 1987).
- 2. A consistent pattern of ability emerged in relation to the use of linguistic metarepresentation in conversation.
  - a. All participants, with the exception of END, displayed the use of some form
    of linguistic metarepresentation in their conversational engagement –
    indicating ability to engage in at least second order metarepresentation
    requiring attribution.
  - b. No clear symptom-based pattern was noted with regard to the use of attributive linguistic metarepresentation by participants, nor did performance mirror that of the Fable Task.
- 3. An overall pattern of ability emerged in the interpretation of questions, a process inherently dependent on metarepresentational ability.

- a. All participants, with the exception of END and HNT, displayed some ability to 'anticipate questions', an ability signaling a sensitivity to the cognitive effects sought by the interlocutor. This sensitivity suggests an implicit ability to consider the perspective of the other.
- b. The predicted difference between the interpretation of echo and regular questions was not seen. There was no apparent additional interpretive burden with regard to echo questions which carry an additional attributive element.
- 4. Success in question interpretation was not consistent, with some participants displaying apparent difficulty in interpreting the question as intended by the questioner.
  - a. Difficulties displayed by participants with regard to the metarepresentational demands of question interpretation were explained by either (a) difficulty in representing information available in mutual cognitive environment, or (b) difficulty with the attitudinal aspect signaling confusion on the part of the questioner.
  - b. Difficulty with *yes-no questions* appeared to be somewhat related to a predominantly negative symptom profile and to limited ability to engage in the implicit attribution of mental states. Such associations did not emerge with regard to *wh-* or echo questions.
  - c. Individuals with delusional talk were over-represented in those who had difficulty with regular questions and echo questions.
- 5. While there was evidence of participants taking account of the 'perspective' of their hearer, within delusional talk, and tailoring their utterances accordingly, a number of participants displayed apparent difficulty in their sensitivity to mutual cognitive environment. A focused exploration of delusional talk provided cognitive-pragmatic evidence that the delusional assumptions appear to be continuous with the individual's cognitive environment. Presumptions of mutual manifestness of delusional assumptions were common and interfered with the ease of interpretation of utterances at times. The individual's sensitivity to assumptions available to REA appear to be mediated in part by whether the delusional information pertained to a 'personal experience' (which could be presumed to be unknown to REA) or to information which is delusional but about the world at large (presumed to be 'general knowledge').
- 6. Consideration of the dyadic features of the conversations between the researcher (REA) and those participants with delusional talk revealed the potentially powerful

role played by the conversation partner in supporting and collaborating in the process of meaning-making.

- a. The process of meaning-making emerged as a search by REA for that which is mutually manifest. This feature was visible not only in the meaningmaking processes within the engagement in delusional talk, but also in negotiating 'exit' from delusional talk through moves towards what was more overtly mutually manifest.
- b. REA appeared to contribute to the persistence of 'misunderstandings' on occasion, by producing utterances during delusional talk which signaled that the conversation was occurring smoothly. The result was a type of 'tacit collusion' and instances of co-construction of inaccessible delusional context.

In keeping with the nature of schizophrenia itself, the performance of these participants with regard to the metarepresentational aspects of conversational engagement is inherently heterogeneous. Despite the heterogeneity, however, the overall profile is one of unpredicted success, when considered in the light of the mentalizing models of the disorder. In the discussion that follows, I will explore the potential implications of these findings for how we understand the communication and pragmatic abilities of individuals with schizophrenia.

# 11.2 Profiles of performance: Conversational interaction and the predictions of the metarepresentational model of schizophrenia

In recognising that the predominant communicative disturbances seen in schizophrenia are pragmatic in nature, Frith (1992) suggests that specific types of difficulty in metarepresentation may interfere with communication in particular ways. He suggests specifically that an abnormality in metarepresentation results in (1) difficulties in representing one's own goals and intentions (explaining poverty of speech), (2) difficulties in self-monitoring (explaining perseveration; incoherence; and contextually inappropriate utterances), and (3) difficulty in accurately representing the intentions, beliefs and desires of others (explaining the difficulty in taking the interlocutor's perspective when engaging in conversation). The current study has focused predominantly on (3), as this aspect of mentalizing is assumed in both psychology literature and much of the linguistics literature to underlie the ability to engage in pragmatic processes, and thus has been the focus of much of this study (see Chapter Three for discussion). This section will be presented in two parts. The first focuses on examining prediction (3) in light of the evidence from the current study as it relates to the ability of the participants to consider the 'perspective' of the

interlocutor. The second part of this section will consider whether the profiles of performance in the conversational data and the 'task-implicit' attribution of mental states on the Fable Task are in keeping with the symptom-based predictions of research inspired by Frith's model (e.g. Corcoran & Frith, 1996; Corcoran et al., 1995; Pickup & Frith, 2001).

# 11.2.1 Failure to account for the 'perspective' of the interlocutor: Considerations of mutual manifestness and conversation

The hypothesised impairment in the ability to monitor the intentions of others is predicted to contribute, in the metarepresentational model, to "faulty communication in schizophrenia [as the] patient fails to take account of the knowledge of the listener when constructing their utterances" (Frith, 1992, p. 106). RT has offered a window into how this difficulty may manifest in communication. The model, as I have conceptualised its interaction with RT, predicts difficulties in the person with schizophrenia metarepresenting the assumptions available to the hearer, given their disturbance in the awareness of others. Specifically, the interaction of Frith's (1992) model and RT suggest that these interactional difficulties may stem from being unaware of the fact that the assumptions required for the utterance to be interpreted are not manifest to the hearer. This difficulty in metarepresenting the information accessible to the hearer is likely to result in a mismatch between what the person with schizophrenia assumes to be accessible to the hearer, and what is in fact manifest to him/her. This difficulty in adequately considering the hearer's perspective may result in the speaker with schizophrenia producing utterances which lead to sequences of meaning negotiation, as the hearer attempts to 'gain access' to these assumptions which would guide both explicature and implicature identification. However, a difficulty in monitoring the intentions of 'the other' will have other profound effects beyond the ability to take into account the knowledge available to the hearer. A person who is unable to accurately infer the intentions of a conversation partner would be predicted to have significant difficulty uncovering the informative and communicative intentions of their conversation partner – impacting on the success of utterance interpretation.

The overwhelming finding that the majority of participants engaged in conversational actions dependent on metarepresentational abilities challenges the hypothesis that a failure to account for the 'perspective' of the other is a pervasive feature of communication in people with the disorder. At the individual level, the findings of robust use of attributive linguistic metarepresentation are strongly suggestive of the fact that for most participants such 'perspective taking' was unproblematic. In producing instances of reported speech and thought, echoic use and echo questions, the participants demonstrate an ability to produce utterances which are inherently attributive (summary point 2a). The

use of such structures demonstrates not only the ability to engage in metarepresentation (representing lower order representations of a mental or public nature) but also, in many cases, evidence of the ability to appreciate the mental states of others.

Some of the strongest evidence for consideration of both the informative and communicative intentions and the cognitive environment of the interlocutor came from analysis of question interpretation. To accurately interpret a question, the participant had to not only infer the communicative and informative intentions of the communicator, but also had to formulate their answer to achieve relevance for REA (relying on consideration of the cognitive environment and relevance expectations of the interlocutor). Many of the participants demonstrated the ability to 'anticipate questions' when responding to questions posed by the interlocutor (summary point 3a). The ability to anticipate the cognitive effects sought by the interlocutor points to mentalizing abilities allowing for sensitivity to the 'perspective' of the conversation partner. Similar abilities are described by McCabe and colleagues (2004) in the interactions between people with schizophrenia and clinicians, in relation to what has been called 'anticipatory interactive planning' (Drew, 1995; Goody, 1995). These instances are taken as evidence for complex Theory of Mind (ToM) skills, by MacCabe (2004), and are defined as:

conversational moves which display planning and the development of a conversational sequence, which can only succeed if one appreciates the other participant's mental state and likely response to a particular utterance (McCabe et al., 2004, p. 406).

Although the current study used a different methodological paradigm from that of McCabe, the abilities revealed by most participants are remarkably similar in this regard – pointing to a sophisticated pragmatic skill reliant on the ability to, in some way, anticipate the communicative needs and future 'moves' of the conversational partner.

However, instances of difficulty did occur in accurately considering what assumptions were available to the interlocutor (summary point 4). Much of this difficulty occurred within delusional talk and analysis seemed to support the hypothesis that the participants were prone to making mistaken assumptions about the information available to the interlocutor. Apparent difficulties in anticipating where relevance lay for REA, when interpreting yes-no questions, accounted for the majority of cases. Similar difficulties where apparent in the interpretation of echo questions within delusional talk. These difficulties occurred mainly in the interpretation of echo questions about 'saying', with no evidence that the metarepresentational complexity of the question contributed to difficulties in interpretation. The difficulties in this regard were more significant than what would be predicted on the basis of the study by McCabe (McCabe et al., 2004). This difference

warrants consideration of the participants in the study. Those participants enrolled in the current study, all of whom were still hospitalised in a secure setting, are likely to have been more actively mentally ill than the outpatients included in McCabe's study. Of the participants in the current study, 43% of the group were classified as mildly, moderately or severely ill (based on the criteria of Opler, Yang, Caleo, & Alberti, 2007). Although it is acknowledged that hospitalisation is influenced by practical factors beyond illness, the specialised referral centre nature of the hospital in question lends weight to the notion that the patients admitted were actively ill. However, despite the potentially more acute state of those enrolled in the current study, and the finding of subtle difficulties in conversation, the overall profile of performance still supports the notion that ToM abilities are brought to bear in conversational interaction.

Another difference between the current study and that by McCabe and colleagues (2004) is the nature of the interactions. Both sets of data involved delusional talk, with the current study focused on 'chat' over refreshments, while McCabe considered sessions of Cognitive-Behavioural Therapy (CBT) and patient-psychiatrist consultations. The nature of CBT means that delusional beliefs would have been more likely to be directly addressed, while in psychiatric consultations, a different agenda may exist. By not directly addressing the talk as delusional, not challenging or questioning beliefs and, in fact, frequently tacitly colluding in the talk, REA contributed to the 'problematic sequences' (summary point 6b). Given that delusions are fixed false beliefs, their manifestness is predictably assumed to be mutual by the delusional individual. In fact the analysis suggested that these delusional assumptions are continuous within the cognitive environment of the individual (summary point 5). Thus, where delusional assumptions were related to the life history of an individual, they tended not to presume its manifestness. However when the assumptions could be presumed to be part of world or encyclopaedic knowledge, the assumption of their manifestness led to difficulties. For example, BND (Chapter Eight, extract (5)) elaborated on delusional information linked to his personal history (and, therefore, overtly not manifest to REA), but failed to do the same when the delusional assumptions were related to a 'state of the world' (such as the names of soccer players within his delusional talk) which he assumed were, therefore, manifest to his interlocutor. Similarly, IPF, when recounting a specific personal experience in which she 'realised' that she has Samurai ancestry, checks REA's knowledge (e.g. "you know the ashtray") (Chapter Seven, extract (26')). In other delusions, she appears to assume mutual manifestness of the related assumptions. Given the heterogeneity of performance, even within delusional talk, it is uncertain whether such instances are in fact indicative of ToM difficulties, or in fact a predictable artefact of active

delusional states. The fact that in some instances there were differences in how delusional assumptions were brought to bear in the conversation supports the latter view.

The data in this study appears to demonstrate a relative dichotomy between the ability to engage in sophisticated and complex linguistic metarepresentation, alongside instances of difficulty in accurately predicting the assumptions available to the interlocutor for utterance interpretation. The extent of overall success in deploying metarepresentational abilities in conversation is in contradiction with the predictions of pragmatic impairment based on Frith's (1992) model.

#### 'Perspective taking' in typical adults: Contextualizing the findings

Any difficulties in 'predicting' the information available to a conversation partner, described in clinical populations, are generally interpreted as instances of 'impairment' in social cognition. These difficulties are frequently interpreted as markers of 'pathology'. The socalled 'normal adult' (the adult without a history of mental illness or neurologic impairment) is implicitly attributed with sophisticated competence in mindreading (Barr & Keysar, 2005). However, research on the mentalizing abilities of the 'normal adult' is surprisingly limited and the research that does exits suggests that the 'ideal' may not be accurate (Barr & Keysar, 2005; Birch & Bloom, 2004; Epley, Morewedge, & Keysar, 2004). In fact, 'normal adults' display egocentricity in processes of on-line utterance interpretation in laboratory settings (Barr & Keysar, 2005). Although in these studies the initial failure to account for the perspective of the interlocutor is fleeting, it has been shown to be a consistent feature of utterance interpretation, suggesting that reasoning about beliefs is not automatic, even for adults (Apperly, Riggs, Simpson, Chiavarino, & Samson, 2006).

In a study comparing the processing of utterances in a referential communication task, Epley and colleagues concluded that children and adults displayed "equivalent egocentrism but differential correction" in relation to their ability to take the perspective of the other (Epley et al., 2004, p. 260). They propose that adults do not develop a sophisticated fail-safe theory in which the perspectives of others are automatically considered in on-line processing but instead they correct their assumptions in an on-line fashion. Their proposal is an 'egocentric-correction account' of perspective taking:

The egocentric-correction account [...] suggests that adults and children do not differ in their initial egocentric interpretation, but in the speed and effectiveness with which they overcome that interpretation (Epley et al., 2004, p. 261).

The intermittent difficulties displayed by some of the participants in the current study thus may not be that unusual. It is the persistence of these difficulties over a sequence of utterances, rather than their occurrence, which appears to be unusual for adult

participants. While it appears that it may be typical to initially interpret an utterance based on one's own immediate perspective, a communicator must then be able to monitor the reaction of others (perhaps through extralinguistic cues such as facial expression and intonation for example) to infer whether they are 'on the right track'. The data provided some evidence that the participants may have persisted in their 'egocentric' approach to the interaction due to a disturbance in their ability to respond to contextual cues regarding their interlocutor's difficulty in accessing the relevant assumptions. The participants in this study may not have consistently responded to a sense of confusion of the interlocutor, as evidenced by the extended sequences of meaning negotiation described. However, prosodic analysis was not undertaken and facial expression not available for analysis, both of which would lend more weight to the suggestion that the participants lacked sensitivity to these cues. While the models of typical processing would explain some of the egocentricity noted, it would predict an increase in incidence of accidental relevance – something which was not overtly apparent on analysis.

While the limited number of such studies on typical adults confirm the egocentric nature of utterance *interpretation* as being 'normal', the current study appeared to suggest that participants failed to take into consideration their partner's perspective in *producing* their utterance — a process which requires predicting what information is available to the hearer to guide the balance of inference and decoding required. A related finding of Epley and colleagues is that difficulties only arise where there is a mismatch in perspectives: "Difficulties in perspective taking [...] are likely to arise when one's own egocentric perception is relatively clear but unique" (Epley et al., 2004, p. 766). This perspective may explain the intermittent difficulties in 'taking the perspective of the other' in the data analyzed here. The apparent difficulties in anticipating relevance in yes-no questions and echo questions about 'saying', as well as tailoring utterances to account for the perspective of the hearer were most visible in the conversations of participants engaged in delusional talk. Delusional talk could be considered a particularly clear case of a perspective which is "clear but unique" to the participant holding the delusion.

Two broad types of demands, then, appear to make ToM challenging for typical adults: resisting interference from one's own egocentric perspective and selecting the contextual information relevant to the mentalistic judgment (Samson & Apperly, 2010). Despite these demands, adults in typical situations tend to resolve the mentalizing requirements to allow them to take account of the perspective of another. Difficulties do appear to exist in some of the participants' ability to metarepresent the assumptions available to the hearer and update their initial egocentric approach, but these do not

override a profile of general communicative success. These findings suggest then that what may need explanation is why some people with schizophrenia persist, in some instances, to interpret and produce utterances from an 'egocentric' perspective.

#### 11.2.2 Symptom profiles and metarepresentational performance

A number of researchers have suggested that deficits in ToM can be associated with specific clusters of symptomatology: those presenting with negative symptoms presenting generally with the most severe difficulty in tasks of mentalizing, while those with paranoia have more subtle and less consistent deficits on testing (e.g. Corcoran et al., 1995; Frith, 1992; Pickup & Frith, 2001). Based on Frith's model (1992) and Gricean conceptualisations of pragmatic processing, those participants with poorest mentalizing should have the poorest pragmatic performance.

This study was particularly interested in the manifestation of metarepresentational (dis)ability in conversation, rather than the measurement of ToM per se. However, a novel discourse task was employed to explore how participants attributed mental states to characters during implicit but 'off-line' processing. The use of this task allowed for some of the ToM predictions to be explored in the context of 'on-line' performance (that is, during the experience of communication) versus 'off-line' performance (that is, reflecting on communication or on reported interaction, as in false belief tasks). The performance on the Fable Task was, in general, in keeping with the findings of previous studies (summary point 1). Those participants who had the most difficulty on the attribution of mental states were those with prominent negative symptomatology. Of the five participants who failed to display any evidence of attribution of mental states on the Fable Task, four of them presented with prominent negative symptomatology, equating to half of the total number of participants with predominantly negative symptoms. In addition, those with the lowest scores on the PANSS (i.e., those with less severe symptomatology) showed less difficulty in attributing mental states. However, there was no clear pattern in performance amongst those with high scores on the Paranoid/Belligerence subscale of the PANSS. This ambivalent finding is, again, in keeping with the literature which reports equivocal results for ToM performance in patients presenting with paranoia (Brüne, 2005).

Despite the performance on the Fable Task mirroring the general symptom-based predictions of Frith's model, there was no robust symptom pattern which emerged in relation to metarepresentational abilities in conversation. While there was a trend for those with negative symptoms to display more difficulty in engaging in heavily metarepresentation-dependant conversational 'tasks' (specifically the interpretation of regular yes-no questions), this association was not pervasive. In other words, the use of

attributive metarepresentation, the interpretation of *wh*- and echo questions, and the ability to consider the mutual manifestness of assumptions during delusional talk, showed no symptom-based pattern with regards to performance. In addition, there was no clear pattern between performance on the Fable Task (implicit attribution of mental states) and evidence of these metarepresentational abilities in conversation. In fact, participants looked surprisingly successful in their deployment of sophisticated metarepresentational abilities, including the use of utterances which were clearly attributive or indicated a sensitivity to the interlocutor's needs. This discrepancy between performance on a structured task and performance in conversational discourse parallels the discrepancy identified by McCabe and colleagues (McCabe et al., 2004) and discussed by Frith (2004) as a possible artefact of online versus off-line processing. These and related explanations for discrepancies in task versus conversational performance will be explored in the section which follows.

# 11.3 Exploring the discrepancy: Mentalizing 'task performance' versus conversational performance

The findings presented in this thesis, through the lens of Relevance Theory, support the notion that the majority of the participants with schizophrenia brought metarepresentational abilities to bear during conversational exchanges. These abilities were apparent through the individuals' use of attributive linguistic metarepresentation; their ability to, for the most part, successfully interpret both regular and echo questions; as well as the ability of many to negotiate the mutual cognitive environment despite the challenge of delusional talk. In fact, despite some instances of subtle difficulties, complex instances of metarepresentational use in conversation were demonstrated across the participants, in those with prominent negative symptomatology, prominent positive symptomatology and those with mixed symptoms. The Fable Task, by contrast, seems to have revealed more extensive difficulties in the metarepresentational abilities of some participants, with the emergence of distinct symptom-based patterns of performance. This performance mirrors the distinction across previous studies between that of performance in unstructured interactional tasks and structured experimental paradigms. A dichotomous relationship appears to exist between performance on tasks in which a social interaction is represented (e.g. The Fable Task, a narrative task, false belief tasks) and instances in which social interaction is experienced (Begeer, Malle, Nieuwland, & Keysar, 2010). There is some indication, for example, that children too young to pass false belief tasks demonstrate communication abilities and processes which rest on sophisticated 'mindreading' processes, suggesting that they are able to deploy ToM in the service of communication (e.g. Bloom, 2002; Happè & Loth, 2002; O'Neill, 1996; Samson & Apperly, 2010; Southgate, Chevallier, &

Csibra, 2010). Further discrepancies between ToM task performance and performance in social situations comes from the literature on autism. Even where children with autism pass 'ToM'-type tasks, they may fail to use these abilities effectively in real-life situations (e.g. U. Frith, 1994; Leekam & Prior, 1994). Conversely, a more recent study on adolescents and adults with Autism Spectrum Disorders (ASD) showed that despite having difficulty on a ToM test, the individuals were able

to take another person's knowledge into account when interpreting what she/he said. This demonstrates that ASD individuals can be just as effective as controls in using their ToM when it really matters: when they try to understand others' behaviour (Begeer et al., 2010, p. 114).

In a similar vein, the performance of people with schizophrenia in naturalistic clinical interactions has been shown to demonstrate intact 'ToM' (McCabe et al., 2004) despite the significant body of literature suggesting that this function is impaired in the condition.

There has been much made of the task demands inherent in false-belief assessments and other ToM-type tasks (Astington, 2003; Bloom & German, 2000; McCabe, 2004), as discussed in Chapter Two. In addressing the seeming discrepancy between conversational performance and ToM impairment on experimental tasks, Frith (2004) draws on additional distinctive demands by invoking the notion of 'on-line' versus 'off-line' processing:

During discourse mentalizing is used implicitly and automatically in the service of communicating. In this sense it is used on-line. In most theory of mind tasks mentalizing is carried out off-line. The patient is not taking part in the interaction, but must make explicit use of mentalizing to answer questions about an interaction that has been described. This requirement puts more weight on working memory and on meta-cognitive processes (i.e. reflecting on mentalizing) (Frith, 2004, p. 386).

This distinction between 'on-line' and 'off-line' performance brings into sharp focus the nature of the tasks used to investigate mentalizing as well as those used to explore pragmatic ability.

So-called on-line procedures are necessary for the study of comprehension as it occurs in 'real time'. On the other hand, the more typical clinical study relies on off-line tasks in which a patient makes a much slower response after a sentence is heard or read and, moreover, after many key processes have been completed and integrated. We could say that on-line studies get closer to the action, especially a specific cognitive event (Davis, 2007, p. 113).

I suggest that there is in fact a further distinction between 'on-line' and 'off-line' tasks which emerges from the findings of this study. The exploration of the dyadic processes at work in the conversational data suggested an active process of meaning-negotiation, specifically with regards to elucidating and confirming assumptions available in the mutual

cognitive environment. 'On-line' tasks not only "get closer to the action" in a cognitive sense as suggested by Davis (ibid), but mirror the performance of mentalizing processes as they naturally occur - in interaction with a partner and, most importantly, embedded in an evolving context with opportunity for meaning negotiation. 'Off-line' tasks, I suggest, lack the notion of an evolving context and have minimal opportunity for negotiation of meaning. Indeed, the findings explored in Chapter Ten (summarised in point 6a) suggest that the opportunity for meaning negotiation allows for a level of conversational success even where the participant has had difficulty in accurately predicting the assumptions manifest to the interlocutor. A collaborative search for meaning, in which the responsibility for interactional success is shared by the communication partner, may allow for competence to be revealed in interaction which is masked in sterile and less natural tasks of utterance interpretation. The criticism of the use of such decontextualised tasks as the exclusive measure of ToM is mounting (e.g. Astington, 2003; Bloom & German, 2000; McCabe, 2009). It would seem essential that we ask the question of whether performance in "answer[ing] questions about an interaction that has been described" (Frith, 2004, p. 386) can be extrapolated to predict and explain behaviour in true conversational engagement. Although studies considering conversational data are still limited in number, the initial findings would seem to suggest that this type of extrapolation may be inappropriate. ToM as it pertains to social interaction thus may be better measured in 'on-line tasks'.

There may be another, more dramatic, explanation for the discrepancy in performance between traditional ToM tasks and conversational performance relying on the communicator uncovering intentions. This second explanation is not to do with the nature of the 'tasks' (that is, the Fable Task and conversational engagement), which are inherently distinct, as discussed above, but the nature of the cognitive abilities demanded by each task. Perhaps these two 'tasks' are measuring different abilities altogether. In other words, the vastly discrepant findings may point to the possibility that in these two instances performance is underscored by different metarepresentational abilities, rather than a single 'ToM system'. There is an implicit assumption in much of the psychology literature that the ability to pass a false belief task is a measurement of ToM abilities which are the same as those required for pragmatic processes. However, the false belief task has an additional requirement beyond the overt 'mindreading' component - a fact which has been increasingly acknowledged (e.g. Bloom & German, 2000; Mascaro & Sperber, 2009; Sperber et al., 2010). A more recent development in considering such tasks suggests that in fact the metarepresentational ability underpinning performance has to do with "the ability to evaluate the truth-value of the meta-represented belief and to predict behaviour on the basis of false belief" (Origgi & Sperber, 2000, p. 163). Mascaro and Sperber (2009, p. 377)

have demonstrated that children pass these tasks at around the time that they demonstrate "the capacity to process the epistemic status of representations". According to this interpretation, the false belief task also draws on epistemic vigilance (the ability to be vigilant against misinformation and deception by evaluating the truth-value of represented propositions). Failure on the task thus may have less to do with a difficulty in metarepresented attributed mental states ('ToM' abilities) and more to do with problems in processing the status of the propositions presented. In this account then

there is nothing inconsistent or paradoxical therefore in the idea of an individual capable of attributing speaker's meaning and incapable of attributing false beliefs (and conversely) (Origgi & Sperber, 2000, p. 163).

The discrepancies are not easily dismissed and lead to the hypothesis that on-line processes are fundamentally different from those being carried out in off-line tasks: (1) either off-line tasks do not tap the interface between mentalizing and communication processes, or (2) off-line ToM tasks draw on other metarepresentation abilities, such as metalogical abilities.

There is, of course, the suggestion that the discrepancy arises between task-based ToM performance and on-line conversation because conversation does not rely on inferring other people's intentions. This is certainly the argument put forward by ToM opponents (e.g. Antaki, 2004; Leudar & Costall, 2004). Taking a cognitive pragmatic stance, there seems, from this perspective, to be significant evidence that communication is inherently inferential and relies on consideration of communicative and informative intentions (as discussed in Chapter Three). This study has situated itself within a largely accepted framework of a mentalist account of communication. The critiques, being addressed in the introductory chapters, will not be further dealt with here.

It follows from the discrepant findings in the current study between conversation performance and performance on ToM tasks that any predictions or explanatory accounts extrapolated from performance on ToM tasks to explain observed communicative behaviour must be approached with caution. Like McCabe (McCabe, 2009), I suggest that if we are to explain pragmatic and communicative behaviour, the cognitive models of the disorder must be systematically applied and tested within conversational data. Indeed, the mounting evidence of unpredicted 'ability' in conversational data in this and previous studies suggests that perhaps what is being measured as impaired in ToM tasks and off-line pragmatic processing tasks may involve different abilities altogether — a hypothesis which will be explored in the light of the RT modular conception of metarepresentational abilities.

#### 11.4 The nature of the 'impairment': Material or computational?

While the analysis of the use of reported speech and thought, echoic use and echo questions may seem far removed from the realm of schizophrenia as a disorder of mentalizing, their investigation has important implications for how the disorder may be understood. Mentalizing is reliant on the ability to entertain, attribute and metarepresent representations. If, as Frith appears to suggest, schizophrenia involves an abnormality in metarepresentation, then investigating the range of metarepresentational abilities available to and deployed by individuals is of crucial import. As discussed in Chapter Two, most research considers ToM or mentalizing when discussing metarepresentational abilities in schizophrenia. This entails a focus on how individuals with the disorder create and entertain representations of mental representations or mental states of others. However, it is clear that metarepresentational abilities go beyond the ability to mentally represent mental states, as explored in Chapter Three. People are capable of mentally representing public representations (such as utterances) or abstract representations (such as an hypothesis). We are also able to publicly represent these lower order representations through utterances (e.g., an utterance about a mental state). These distinctions may have an important role to play in the understanding of the metarepresentational deficits seen in some people with schizophrenia.

Frith (2004, p. 385) alludes to the idea that the metarepresentational impairment may need to be explored as to whether they relate to a computational 'impairment' (which I interpret to mean an impairment in the capacity to engage in metarepresentational processes more generally) or relating to an inability to represent a "special kind of material" (suggesting that this may be a difficulty with the specific 'material' of mental states). As illustrated in Figure 11.1, the suggestion is that humans may possess a general metarepresentational capacity which allows them to engage in metarepresentational processes. The 'materials' processed are metarepresentations of the tiered nature presented in the early chapters of this thesis, such as:

David thinks [mental representation]
that Jenny wants [mental representation]
to leave soon [proposition]

While Frith does not speculate as to the nature of the other 'materials', Sperber's work in cognition, culture and communication suggests that the material represented in the second (and subsequent) tiers of these structures may be of different types, namely mental, public or abstract (Sperber, 2000a). These types of representation (mental, public or abstract) may thus be processed by a general metarepresentational capacity (Figure 11.1).

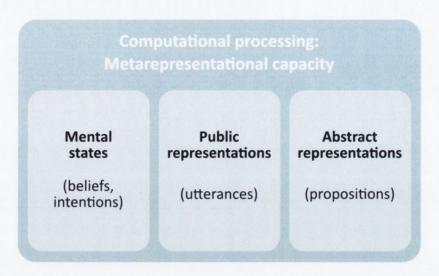


Figure 11.1 General computational capacity for processing metarepresentational material

It is possible, however, that these metarepresentational 'computations' are not conducted by a 'general metarepresentational capacity' but instead involve specialised metarepresentational 'modules' to deal with the relevant processing of each type (Sperber, 2000b). Such a model may be conceptualised as portrayed in Figure 11.2.

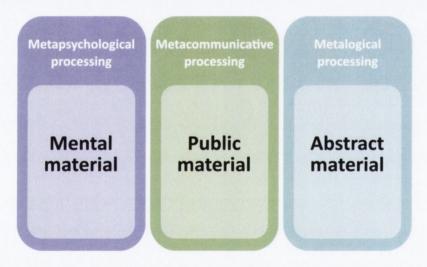


FIGURE 11.2 DIFFERENT MATERIAL REPRESENTATIONS PROCESSES BY DISTINCT MODULES

The conversational data of this study has allowed a detailed exploration of how the participants use and interpret public representations (utterances), some of which represent mental representations (beliefs, desires, intentions), while others represent attributed utterances. These discourse data have provided a fertile ground in which to investigate how people with specific profiles of symptoms perform in terms of different metarepresentational requirements — both in relation to complexity and type of metarepresentation. By exploring how these types of metarepresentation are used in conversation (in Chapters Seven and Eight) we have 'naturalistic samples' of how the participants engaged with these different materials. If the difficulty is with a "specific type of material", we would expect a specific difficulty with reported thought (over reported

speech) and more difficulty with echoic use and echo questions related to attributed thoughts (as opposed to those related to attributed utterances). Based on Frith's (2004) suggestions, if the difficulty is related to a general computational deficit regarding metarepresentations, we might expect a more uniform difficulty and one in which complexity of metarepresentational demands played a role in success.

The analysis provided strong evidence for the successful use of complex linguistic metarepresentations by the participants, including reported speech and thought, echoic use and echo questions. Although no clear differentiation emerged between the ability to metarepresent mental and public representations, there was a bias in the participants' reporting of their own, rather than others', thoughts. This feature should be interpreted with caution as it may not indicate a difficulty in metarepresenting the mental states of others but merely a lack of opportunity to do so within the conversation – illustrating a complexity in using unstructured conversational data. Despite this complexity, no clear evidence for a specific impairment in the processing of mental states (over public representations) emerged. Indeed, even in the Fable Task, participants frequently displayed similar difficulty in reporting on the woman's utterances as they did in inferring her beliefs or intentions (Chapter Six).

At times the use of linguistic metarepresentational utterances revealed subtle disturbances in the accuracy of the content that was being represented (most noticeable in regard to reported utterances where the original utterance was either available for comparison or could be predicted in the context). In RT terms, the representation did not meet the required faithfulness of resemblance. The difficulty in these instances was in the faithfulness or attribution of the lower order representation, rather than the metarepresentational structure itself. This finding agrees with Frith's proposal that some individuals may have 'impaired content' within metarepresentations. In particular, the conversational data suggests that if something is to go awry with the processes of reporting speech and thought, the most likely error is in a misrepresentation of the lower order representation. Such a situation may arise if the original utterance is misunderstood (in the case of reported speech), or the original mental state erroneously attributed. I would suggest, however, that the process of metarepresentation is still presented as 'intact' in these instances, in that the individual has metarepresented some type of content. As in deceit, the speaker may metarepresent a (false) utterance which cannot be accurately attributed to the person in question:

David: Simon said that I could have the bike.

If Simon did not in fact say so, the utterance still remains a metarepresentation. Similarly, if I misunderstand a statement and repeat it, I still metarepresent that utterance, despite the fact that I do so with disregard for the faithfulness of the representation. Based on this reasoning, I would argue that disturbances in the accuracy of the content represented do not signify a difficulty in the computation of metarepresentations. Given that such disturbances occurred both in reporting thoughts and reporting utterances, there is no indication of a specific 'material' difficulty.

The lack of a clear difference in performance between interpretation of regular and echo questions (summary point 3b) also calls into question the prediction that individuals with schizophrenia would have greater difficulty on items with an attributive component which were predicted to be more complex. It appears that in a conversational context the attributive layer of metarepresentation posed no undue demand, as some difficulties appeared across both regular and echo questions. This profile would initially appear to suggest that the impairment is, therefore, neither 'material' (given the equal performance on mental and public representations) nor 'computational' (given the lack of a complexity effect predicted for echo questions). However, there appears to be an additional complexity dimension which did challenge a number of the participants. When faced with beliefs which were strongly held but 'unique' (that is, delusional in this context), participants appeared to fail to metarepresent the mutual cognitive environment as distinct from their own cognitive environment, presuming mutual manifestness of assumptions. This feature was particularly salient for those individuals presenting with delusional talk, who, in addition, were overrepresented amongst those participants displaying difficulty with the interpretation of regular and echo questions (summary point 4c). However, it must also be acknowledged that the individuals presenting with delusional talk had more significant psychiatric symptomatology (indicated by high Total Score on the PANSS). As such, the overrepresentation of this group of individuals may be an artefact of the illness severity, rather than specifically related to the presence of delusional talk. Support for the notion that delusional talk may play a role in the difficulties observed comes from evidence from typical adults which suggests that there is greater complexity in perspective taking when the assumptions held by one party are "clear but unique" (Epley et al., 2004, p. 766), as discussed earlier. The fact that the findings of the analysis of individuals engaged in delusional talk revealed such difficulties supports the notion that perhaps there are specific but subtle computational difficulties which emerge in conversation, only when particular demands are placed on the individual. This interpretation will be further explored in the section which follows.

The participants displayed clear instances of being able to metarepresent attributed utterances and thoughts, and interpret utterances which were metarepresentational in nature. However, the same participants displayed intermittent difficulty with these metarepresentational demands of conversation. While the analysis presented in the previous chapters reveals some subtle difficulties in metarepresentational abilities deployed in conversation, there is no clear indication that these difficulties were specific to either the general 'computational' processes or to the specifically mentalistic 'material' of some of the metarepresentations. An alternative account may be necessary, and the developments in the RT proposals relating to the modular nature of metarepresentational abilities may provide promise in this regard.

## 11.5 Metarepresentational modularity: Hints of distinct (dis)abilities in people with schizophrenia

The findings of this study provide hints of intact and impaired processes and yield some support for the work by Sperber, Wilson and colleagues on the multiple metarepresentational capacities held by humans (Origgi & Sperber, 2000; Sperber, 2000b; Wilson, 2000, 2005). I will argue for two possibilities in interpreting the data – possibilities which emerge from patterns in the data but which are preliminary at best.

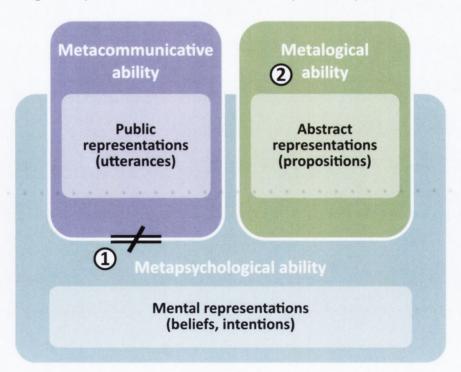


FIGURE 11.3 A MODULAR CONCEPTUALISATION OF METAREPRESENTATIONAL ABILITIES: THE METACOMMUNICATIVE ABILITY AS A SUB-MODULE OF THE METAPSYCHOLOGICAL ABILITY

In discussing these possible interpretations, I will draw on Figure 11.3 (adapted from the more general figure in 11.2), which I have based on my reading of Sperber and Wilson's

conceptualisation of the relationship between the metarepresentational capacities they hypothesise to exist. In this model, the metarepresentational ability required to subserve pragmatic processes is a modularised 'metacommunicative ability', which itself "is a subpart of a more general metapsychological ability, or 'theory of mind'" (Wilson, 2000, p. 37-38). There are, of course, strong opponents to the idea that any type of mindreading underlies communication (e.g. Antaki, 2004; Leudar & Costall, 2004), and perhaps even more forceful debates around the notion of modularity.

The first suggestion I will make is that the difficulty for people with schizophrenia lies at the interface between metapsychological and metacommunicative processes (labelled ① in Figure 11.3). The difficulties which emerged in the pragmatic processes at play appeared to be largely related to making the correct presumptions about what assumptions were manifest to the interlocutor (summary point 4a). The process of predicting what information is truly mutually manifest is seen as central to the communication process and hinges, as argued, on the ability to metarepresent the mutual cognitive environment as distinct from one's own total cognitive environment. While this ability subserves communication, it seems best conceptualised as metapsychological and part of a more general mindreading ability subserving a range of metarepresentational processes. If Sperber and Wilson are correct and people posses both a general metapsychological 'module' (a 'ToM module') and a specialised comprehension module, then it would appear that the interface between these modules may be a candidate as the domain of 'disability' for people with schizophrenia. Breakdown at the interface between these two abilities may be occurring either (1) when there is overt demand during communication on predicting what assumptions are available to the interlocutor; or (2) in processing the attitudinal information of the questions, an ability which would appear to be a candidate process for the metapsychological or ToM module (Wilson, 2000), impinging on the communication process.

In the case of (1), drawing on the work of Epley, it could be predicted that assumptions which are discrepant or unique to one communicator may result in obvious breakdown if the individual had difficulty predicting what information was manifest to the other party. Such an interpretation explains why the overall pattern is one in which there is evidence for 'ToM' processes in conversation: when assumptions are truly mutually manifest, the individual does not display difficulty as the default position of presuming mutual manifest is sufficient to lead to success. This success may even apply to delusional talk, particularly in therapeutic contexts where the clinician is aware of the delusional content and can infer some of the mis-placed assumptions which underlie the talk. With

regard to (2), attitudinal information carried by intonation, facial expression or nonverbal cues is seen as metapsychological (Wilson, 2000). This information may convey a dissociating or confused attitude, for example, and utterance interpretation in these instances would be expected to be heavily dependent on the information being used in the inference process:

[...] there are cases [...] in which the mindreading ability directly feeds the comprehension process, by interpreting paralinguistic information (gestures, facial expressions, intonation, and so on) to provide information about the speaker's mood or epistemic state, which may in turn be picked out by the pragmatic comprehension procedure and attributed as part of a speaker's meaning. Inferring these aspects of speaker's meaning is likely to prove particularly difficult for people whose general mindreading ability is weak (Wilson, 2000 p.38)

Indeed, the difficulties experienced by people with schizophrenia in recognising facial expression and prosody are well-documented (Edwards, Pattison, Jackson, & Wales, 2001; Hoekert, Kahn, Pijnenborg, & Aleman, 2007; Leppänen et al., 2008; Suslow, Roestel, Ohrmann, & Arolt, 2003). A study on individuals with Autism Spectrum Disorders (ASD) did not, however, show a difference between interpreting prosody related to attitudinal information (presumed to be heavily dependant on ToM) and prosodic information with lower ToM demands (Chevallier, Noveck, Happè, & Wilson, 2011). Although this research calls into question the relationship between prosodic information and mentalizing, further research is warranted and a relationship strongly implicated on theoretical grounds. It was beyond the scope of this study to engage in a fine-grained analysis of prosody, and nonverbal information was unavailable for analysis. However, there was some indication that difficulties were experienced by participants when such attitudinal information may have been available but not appropriately processed. If this approach were extended, it would imply that on-line pragmatic processes are in themselves far more resilient in people with the disorder than has been previously thought. In other words, the 'metacommunicative module' itself is intact, but how it draws on or accepts relevant information as inputs from other modules is impaired.

The second interpretation of the data leads me to suggest an alternative view that, in fact, the metarepresentational difficulty in people with schizophrenia is not metapsychological at all, but metalogical (② in Figure 11.3). The 'metalogical' or 'argumentative' ability has been proposed by Sperber and his colleagues as a third metarepresentational ability. Wilson (2009, p. 185) summarises the work:

the metalogical or argumentative ability [is the ability] to think about propositions in the abstract and assess their truth or falsity, evidential status and logical relations to other propositions. According to Sperber and his

colleagues, this third type of metarepresentational ability plays a central role in enabling speakers to formulate persuasive arguments, and hearers to defend themselves against mistakes and deliberate deception by communicators.

The metalogical ability thus encompasses the 'argumentative ability' (or ability to formulate persuasive arguments as a communicator) and 'epistemic vigilance' (the ability to filter propositions by weighing their truth or falsity). This 'metalogical ability' may be a better candidate as the ability underlying performance on false belief tasks. In this interpretation, the impairment in 'pragmatic processes' seen in off-line tasks using vignettes and story interpretation are reflections of disturbances in epistemic vigilance, rather than in the ability to infer or entertain mental states. The inappropriate application of such epistemic vigilance was noted in one instance in the data in which the strategy of 'sophisticated understanding' was inappropriately applied by IPF (Chapter Seven, extract (49)), leading her to misinterpret the intentions behind REA's utterance. Such an explanation may also be able to be extended to explain features of paranoia. Further support for this second hypothesis comes from McCabe's data, which shows that the participants with schizophrenia demonstrated intact ToM skills in conversation but were poor when trying to "justify holding beliefs that others did not share" (McCabe et al., 2004, p. 408). Given that the 'metalogical ability' is hypothesised to enable individuals to "formulate persuasive arguments", the inability to adequately justify beliefs could be seen as signalling impairment in the argumentative ability. Such difficulties in justifying delusional beliefs did not emerge in the current study, possibly due to the different nature of the interactions, as previously alluded to. The CBT sessions in which McCabe's data occurred would likely have had a therapeutic agenda to explicitly address delusional assumption. Such an explicit agenda was not the case for the conversations recorded for this study, which therefore did not engage participants in justifying beliefs and may explain some of the tacit collusion which was noted (summary point 6b). As the current study did not set out to investigate the metalogical ability, the extent of the evidence for the hypothesis put forward here is limited. However, the fact that metarepresentational abilities appear as remarkably intact in conversation data, even when viewed through the lens of different methodological tools, suggests that perhaps metarepresentational abilities, other than those directly involved in pragmatic processes, are implicated in the disorder. The poor performance on the Fable Task, for example, may be reflecting a difficulty with a degree of abstraction and mentalizing present in these types of tasks but not necessarily in the 'on-line' processing of utterances. There is support for such a position in research unrelated to RT or Sperber's (2000b) hypothesis of multiple metarepresentational abilities and that is research on the phenomenon of 'Jumping To Conclusions' (JTC) in people with schizophrenia. JTC is a

reasoning anomaly which has been described in people with schizophrenia and is thought to contribute to "the uncritical adoption of implausible thoughts" (Langdon, Ward, & Coltheart, 2010, p. 322). There is now growing evidence that individuals with the disorder accept implausible statements more readily and are relatively uncritical of unreliable information (Moritz & Woodward, 2006; Moritz, Woodward, & Hausmann, 2005; Woodward, Moritz, Arnold et al., 2006; Woodward, Moritz, & Chen, 2006). While this feature needs further exploration, it may be evidence for a disturbance in the epistemic vigilance of people with the disorder. The difficulties which are so well described in people with schizophrenia may be easily construed, at a basic theoretical level at this stage, as related to disturbances in epistemic vigilance and the argumentative ability ('metalogical abilities').

In light of the years of research supporting a 'mentalizing' model of the disorder, such suggestions are dramatic, and perhaps foolhardy, being based on a limited pool of purely qualitative data. However, I would like to again emphasise that these interpretations are not being put forward as robust conclusions, but rather suggestions which have emerged from the analysis of the conversational data – possibilities which I believe have implications for further research.

#### 11.6 Limitations of the study and implications for further research

While this study successfully tested the hypothesis that impairment in mentalizing would manifest in the on-line conversational performance of participants with schizophrenia, several important limitations are recognised. Many of the conclusions signal new avenues for research and theoretical development. The qualitative and exploratory nature of the study means that in several instances potentially important implications are hinted at, or tentatively suggested, but cannot be definitively presented. This brief discussion will address the limitations of the study and consider specific implications for future research.

The study was limited in its consideration of only one situational context for the conversational data, involving only one conversation partner, the researcher. It is recognised that the factors brought to bear in the context and by the researcher as interlocutor are unique and certainly not representative of all possible conversations and conversational partners encountered by these individuals. While the study did not set out to investigate conversations which were representative of typical conversations in which these individuals would engage, the narrow and specific contextual factors may be critiqued as having a significant impact on the ability to generalise from these findings. Previous work with other clinical populations suggests that interaction with examiners rather than key conversation partners is qualitatively different and that "sampling methodologies that allow

a transparent view of how language is used in a person's usual social context are crucial" (L. Perkins, Whitworth, & Lesser, 1998). The findings, as they relate to the dyadic exploration of the data, did suggest an active and collaborative process of meaning-making and this process is likely to be significantly impacted by the expectations and beliefs of the conversation partner and nature and purpose of the interaction itself. This study is clearly limited in this regard and future research to examine performance across contexts and conversation partners is vital. I would argue that this limitation is valid in so far as the potential familiarity and facilitatory role of the interlocutor is recognised. From a cognitivepragmatic perspective, the processes should remain consistent across contexts and conversational partners. In other words, the majority of the individual participants in this study displayed significant skill in deploying metarepresentational abilities within conversation. That this finding supports the findings of McCabe's (2004) study is undeniable and adds to a body of evidence suggesting that people with schizophrenia show unexpected ability in using 'ToM' abilities when engaged in interaction, forcing us to question the validity of models which suggest that communicative performance is hampered by impairments in mentalizing. What would be expected to vary across contexts and conversational partners is the assumptions available and those potentially evoked during the interaction. For this reason, further research should explore similar dimensions across a range of conversational data. Of particular interest would be an exploration of the performance of individuals in a range of conversational settings, with a range of partners.

A related limitation is in how the notion of 'context' was embodied with regard to the social and individual assumptions of the conversation partners. While as the analyst I clearly had access to REA's assumptions during the interactions, those assumptions available to the participants were invoked (or imposed) by virtue of the 'insider' role. As a South African and a member of the hospital community, many of the situational, sociocultural and sociohistorical assumptions would be available to me as interlocutor and analyst. However, despite sharing some of these common assumptions, it must be recognised that "beyond this common framework, individuals tend to be highly idiosyncratic" (Sperber & Wilson, 1986/1995, p. 16). It is therefore possible, and indeed probable in some instances, that the analysis reflects occasions in which I, as the analyst, impose assumptions on the participants, presuming these to have been invoked in the pragmatics processes at play. This stance is a risk of participant-observation, which, although exceptionally 'close to the action' in some ways, can still never presume to 'know' the other. Applying a cognitive theory to this type of data is perhaps more challenging and entails more risks of assumption in some instances. Triangulation of studies and methods is a viable means to reduce this risk.

The absence of traditional ToM or false belief tasks in the data set is a limitation of the current study. Such data would have complemented the discussion and perhaps pointed more specifically to the deviance between performance on the traditional-type assessments and on-line conversational performance. The inclusion of such an assessment would also have allowed the usefulness of the Fable Task to be more robustly considered. The exclusion of a traditional ToM task in this study stemmed from the qualitative and exploratory nature of the study, which developed out of an initial probe that aimed to describe language and communication functioning of the participant group. As detailed in the methodology chapter, the conversational data yielded several interesting hypotheses which were then pursued. Future research should not only consider the Fable Task against more traditional ToM test data, but also evaluate performance on these tasks alongside conversational performance.

While language history was controlled as much as possible in a diverse context, the heterogeneity of the participants in this regard imposed a limitation on the generalisability of the findings. Future research should constrain this aspect more specifically. An interesting and potentially fertile area for further exploration would be to investigate multilingual and monolingual participants. All the participants in the current study were multilingual, given the socio-cultural context. There are early indications that multilingual children show precocious development of ToM, thought to be related to greater inhibitory control, metalinguistic awareness and sociolinguistic experience (Goetz, 2003). It is possible that this 'multilingual advantage' persists into adulthood. Recent research into aging and dementia has suggested that multilingualism may in fact offset age-related cognitive changes, and even be a protective factor in the disorder of dementia (Bialystok, Craik, & Freedman, 2007; Bialystok, Craik, Klein, & Viswanathan, 2004). While much of the current understanding of schizophrenia points to it as a neurodevelopmental, rather than neurodegenerative, disorder, it is possible that multilingualism facilitates increased metalinguistic skill and an associated robustness in communicative ability.

The current study was limited by its reliance on audio- rather than video-taped data, which is recognised as superior in the analysis of communicative encounters (McCabe, 2008). The suggestions around the modularity of metarepresentational abilities which have emerged from this study warrant further investigation. One direction for future research in this regard would be further investigation of the attitudinal aspect of verbal communication. Exploring the prosodic interpretation and interpretation of facial expression in people with schizophrenia during communicative exchanges may shed further light on the nature of the nuanced disturbances which were seen in the participants'

conversational performance. For this exploration, video-taped data is essential. The findings of this study suggest that the model of multiple metarepresentational abilities, proposed by Sperber, is a promising one. Clear falsifiable hypotheses can be extracted from the model and tested in both typical individuals and those presenting with schizophrenia.

This study has argued that conversational performance is an essential component of testing theories of pragmatic processes in schizophrenia. While experimental tasks constrain the variables involved they also necessarily constrain and potentially distort the concept of pragmatic processing. At the same time, it is recognised that for the findings of this study to be developed, a greater level of control of the task demands is required. Drawing from the field of experimental pragmatics and social cognition, several 'naturalistic tasks' can be constructed in which conversation features in a more controlled context. A range of tasks, from the most controlled 'false belief' tasks to conversational engagement, could shed light on how task-demands interact with performance along the parameters of interest. These developments have potential practical implications for the assessment and intervention for pragmatic disturbances in schizophrenia and will be further explored in Chapter Thirteen.

### 11.7 Conclusion: Conversation as a window into metarepresentational (dis)abilities in people with schizophrenia

Conversation, through an RT account, has indeed provided a unique window into how individuals with schizophrenia deploy their somewhat unexpected skill in metarepresentation. It has also begun to reveal an explanatory account of what might be the conversational result of subtle disturbances in aspects of the range of metarepresentational abilities with which humans are endowed.

The overall profile of conversational performance of the people with schizophrenia in this study has been one of unpredicted 'success'. The difficulties predicted by the mentalizing models of schizophrenia are far from pervasive in the data analysed and support the notion put forward by McCabe (2004) that ToM abilities in 'real life' on-line communication are preserved, at least in part. These results may point to a resilience in metacommunicative function, in the face of a possible impairment in aspects of metapsychological or metalogical function. Some of these participants displayed significant difficulties in the Fable Task which required implicit attribution of mental states. When interpreted from a 'multiple metarepresentational capacities model' this discrepancy in performance may lend some support to the RT proposal that the metarepresentational demands of communication are met by a specialist 'submodule' of metapsychological ability

– one which is resilient when considered in its natural habitat of conversation. The finding by Happè and Loth (2002, p. 24), that mentalizing abilities in the specific service of communication appear to emerge precociously in children, may be mirrored in this idea that the same abilities are resilient in the disorder process of schizophrenia: "communication [might] be a privileged domain for theory of mind".

### **Chapter Twelve**

### Relevance Theory and clinical pragmatics

This chapter aims to primarily consider the implications of an application of Relevance Theory (RT) for the domain of clinical pragmatics. The implications of the study for RT, and its conceptualisation of metarepresentational abilities at work in communication, will be addressed in the latter parts of the chapter.

In her appraisal of the domain of clinical pragmatics, Cummings (2005, p.26) criticizes the fact that studies in the area have often "proceeded [...] in a theoretical vacuum". She calls for cautious application of theories from areas such as cognitive science to move towards explanatory theories of disorders of pragmatics:

Pragmatics theory can help us move beyond merely describing pragmatic impairments in children and adults – the overriding tendency in clinical studies to date – to providing a coherent explanation of those impairments (ibid, p.26).

It will be argued that, in specific respects, RT has much to offer the area of clinical pragmatics, particularly with regard to disorders where the interface between cognition and communication is of interest. Schizophrenia is a notoriously complex condition. In justifying why resources are invested in studying communication in this condition, Titone (2010) states:

One reason is that the language disorder seen in schizophrenia speaks directly to the dynamic interplay of linguistic, cognitive, and neural capacities enabling the symbolic exchange of ideas within a social context. While it only subtly (but significantly) affects discrete linguistic capacities, it profoundly affects how these capacities come together in the service of real-world communication. In this way, schizophrenia, like cognitive neuroscience itself, forces us to abandon modular psycholinguistic approaches that have historically relegated real-world contextualized language understanding to 'pragmatics' or 'problem-solving' (p. 174).

From an RT perspective, I would challenge the implicit definition of communication as a "symbolic exchange of ideas", given the clearly inferential nature of communication. Despite these terminological differences, this quote aptly illustrates how the complexity of schizophrenia has the ability to shed light on the interface between a range of human abilities.

This study has attempted to apply RT to conversational data involving participants with schizophrenia, a disorder which allows for investigation of the intricate relationship between pragmatic and cognitive capacities. It has been argued that in so doing, the study fills a gap, not only in the application of this robust cognitive pragmatic theory to the

domain of clinical pragmatics in this population, but in extending the small pool of studies which apply RT to recorded conversational data.

Section 12.1 of this chapter will explore the implications of RT for our definitions of 'communication disorder'. I will specifically explore whether RT has 'an edge' in analysing the full range of performance of individuals with pragmatic disorders, avoiding the typical pitfall of 'pathologising' individuals with little regard for pragmatic resourcefulness. Section 12.2 will present a discussion of the RT conceptualisation of 'context' and its potential application in clinical pragmatics. Section 12.3 will then examine the challenge of applying idealised 'hearer' and 'speaker' roles to conversational data, discussing whether RT is able to address the complexities of speaker and hearer roles in the analysis of online communication data, as well as the inherently collaborative process that is conversation. Section 12.4 will examine the application of interpretive use as an analytical tool for investigating metarepresentation. The final section, section 12.5, will examine the potential implications of the current study in elucidating the relationship between mentalizing and pragmatics, as well as the potential implications for our understanding of the modularity of metarepresentational abilities.

# 12.1 Defining pragmatic ability, disability and impairment: Potential insights from Relevance Theory

Like demarcating the domain of pragmatics itself, drawing the line of distinction between typical pragmatic ability and the realm of pragmatic impairment is a challenge to the field (Cummings, 2007a; Perkins, 2007). In the attempt to identify pragmatic disability, the realm of clinical pragmatics research and practice has been flooded by checklists and profiles which are as heavily used as they are criticized (Cummings, 2009). In response, conversation analysis and discourse analysis approaches to clinical pragmatics have increased, adding to the social, interactional and sociolinguistic perspectives on a range of clinical concerns (e.g. Ferguson, 1996; Perkins, 2007; L. Perkins, 1995; Tarling, Perkins, & Stojanovik, 2006; Walsh, 2007b; Wilkinson, Bryan, Lock, & Sage, 2010). At the same time, descriptions of pragmatic impairments in terms of their neurological, cognitive and behavioural substrates are increasing (see Perkins, 2007 for overview). It is through this context of burgeoning models, descriptions, research approaches and clinical applications that the clinician and client must navigate. Not surprisingly perhaps, the field is one characterised by uncertainty (Cummings, 2009). It remains to be discussed whether RT, as operationalised in the current study, has the potential to offer insights into the demarcation between typical and atypical pragmatic behaviours - helping to define, and perhaps then adequately assess and manage, communication disorders.

Given the premise that human cognition is inherently relevance driven, Sperber and Wilson (1986/1995, p. 162) claim that:

[c]ommunicators do not 'follow' the principle of relevance; and they could not violate it even if they wanted to. The principle of relevance applies without exception: every act of communication communicates a presumption of optimal relevance.

Perkins (2007, pp. 20-21) quotes personal communication with Deidre Wilson in which he reports that this fundamental principle would extend even to individuals with communication disorders. In other words, even those with frank communication impairment would be driven by the principle of relevance. This stance rings true in relation to clinical experience with individuals with pragmatic disturbances, such as those associated with schizophrenia, Right Hemisphere Disorder (RHD) and Traumatic Brain Injury (TBI). In many of these cases there is a sense that, although something may be 'going wrong' in communication, the individual is communicating to a specific purpose - they intend to convey meaning in some context. Communication, it is argued, is an intentional purposeful activity and, if we accept the RT premise that human cognition is geared towards relevance, then it is difficult to imagine how any attempts at communication would occur in the vacuum of relevance considerations. This argument is not to imply that communication disorders do not exist. Indeed, even in the definition of optimal relevance there is a recognition that communicators may come to interactions with different "abilities and preferences" (Sperber & Wilson, 1986/1995, p. 270) and a hearer is entitled to presume that any utterance is the most relevant one, given these abilities and preferences. An individual may, therefore, have an impairment in their ability to draw certain inferences, as in RHD (e.g. Dipper et al., 1997). This disturbance may result in interpretations of utterances different to the interpretation intended by the speaker and, therefore, pragmatic difficulties in interaction. However, the difficulty itself does not mean that the individual with RHD is violating the communicative principle of relevance. Instead, they can be considered to be seeking optimal relevance within the constraints of their processing difficulty. What seems to distinguish various disorders then, is how individuals with a specific disorder engage in the processes related to considerations of relevance. For example, in the current study, the ability to predict what assumptions were truly manifest to the hearer was sometimes significantly (and predictably) affected by the presence of delusions. Difficulties in predicting the assumptions available to the interlocutor would be one such example which may impact on how the individual constructs the logical form of the utterance. Other potential processes would be difficulties in inferring the communicative or informative intention of a speaker. This approach would imply that what 'goes wrong' in disorders of pragmatics relates to the processes at play in achieving optimal relevance or identifying the

meaning intended by the communicator. In light of this approach, it would appear then that there is no clear dividing line between pragmatic ability and disability – communicatively we all function driven by the Communicative Principle of Relevance. Does this mean then that pragmatic impairment does not exist as a category but rather as a continuum along which all people have 'differences' in cognitive-communicative preferences and abilities? Is pragmatic impairment really just a different way of being communicative? This line is not clinically useful as there are clearly individuals who present with frank difficulties in utilising their language abilities in the context of social interaction. Perhaps the question to ask then is not where the demarcation between ability and disability exists, but rather how we might 'even the playing field' in clinical pragmatics. By this I mean that, in identifying that we all work from the same fallible mechanism, clinical pragmatics must avoid pathologising that which is typical and develop accounts which can accommodate for both the pragmatic resourcefulness and pragmatic impairment which is likely to be seen in clinical populations. RT may provide some tools with which to consider pragmatic performance in this light.

# 12.1.1 'Pathologising' utterances in conversation: Can Relevance Theory 'even the playing field' in clinical pragmatics?

If we accept the idea that pragmatic impairment exists for some individuals, it remains necessary to acknowledge that even in individuals with marked pragmatic difficulties, area of pragmatic strength also exist and any explanatory theory must acknowledge and account for such strengths (Cummings, 2007a). Similarly, not all communication 'failure' is as a result of pathology. There is a real risk in clinical pragmatics that the populations of interest are investigated within a vacuum - 'errors' and 'impairment' are sought out, often within contrived tasks, and these deficits compared against an ideal norm (Duchan, Maxwell, & Kovarsky, 1999). Instances of breakdown in communication occur frequently in typical talk and, therefore, extracting instances of 'failure' in participants and comparing them to an ideal norm is an exercise in fiction. While these criticisms are far from novel, the solution has remained complex. One potential solution that has been proposed is that methods of analysing conversational performance in context be used in adjunct with more traditional structured assessments or quantitative approaches investigations. The need to investigate linguistic ability within conversation has long been recognised in other domains of SLT (e.g. Beeke, Wilkinson, & Maxim, 2003; L. Perkins, 1995) and is of particular importance when investigating pragmatic ability (e.g. Chantraine, Joanette, & Ska, 1998; Friedland & Miller, 1998; L. Perkins et al., 1998). Using methods to analyse utterances and interaction in conversation, it is argued, increases the ability of the clinician/researcher to situate

performance within a consideration of the contextual factors at play and, therefore, may mitigate against judgments based on contrived tasks.

### 12.1.2 Misconstruing pragmatic performance: Considerations of clinical encounters and analysis processes

Even where the data is conversational in nature there is a risk of misconstruing a participant's pragmatic performance, as shown in Cummings' (2007a) critique of the field. That is, the researcher or clinician fails to acknowledge their own active and collaborative role in constructing the individual's profile of ability or disability, both within the process of clinical interaction (Duchan et al., 1999) and within the process of analysing conversational data more generally (Cummings, 2007a). Where interaction occurs within a clinical context (specifically where the pragmatic analyst is herself, the clinician involved in the conversation), there is the potential that the nature of the interaction may construct the individual as pragmatically incompetent. For example, it is recognised that in SLT clinics the person with a communication disorder may easily be cast in the "error-maker" role (Kovarsky, Kimbarow, & Kastner, 1999, p. 293), constructing an interaction which is unlikely to be representative of their ability and may, indeed, mask pragmatic skill. Similarly, asking 'test-questions' in which it is manifest to both parties that the clinician knows the answer may erode the true pragmatic nature of the task and result in responses which are appropriate in the 'test-question' context, but 'inappropriate' if construed (and analysed) as typical question-response sequences. In the current study, the importance of recognising the role of the interlocutor in co-constructing pragmatic ability or disability was starkly revealed in how the researcher tacitly colluded with delusional talk. The recognition of the role that was played in co-constructing the inaccessible context, allowed for a balanced analysis which recognised that, in referring to delusional assumptions, the pragmatic failure was not shouldered by the individual with schizophrenia alone, but emerged in the process of collaborative meaning-making. In addition, recognising the collaborative attempts at meaning-making redresses the balance and embraces the notion that failures or breakdowns in communication do not rest with one party alone.

The inappropriate pathologising of individuals' pragmatic skills with little regard for pragmatic strengths, may also result from the clinician or researcher failing to recognise their own influence in 'choosing' the communication behaviour of interest. In analysis this risk relates to the processes undertaken in isolating and selecting instances of interaction for investigation. Mason (2006) highlights the potential discrepancy between what communicators see as 'relevant' in the communication process and the features of interest for the analyst. As analysts we must accept that in viewing the data and deciding what

features are of interest, we influence the profile constructed. For example, in choosing instances of "communicative oddness" Leinonen and Kerbel (1999, p. 372) risk construing the participants as incompetent, rather than developing a full profile of abilities and disabilities. By examining utterances, or even adjacency pairs in isolation there is a risk that the ability of the client is ignored. For example, by isolating an adjacency pair as an example of pragmatic failure, the analysis may fail to account for the resolution of the difficulty over the course of the interaction, or fail to recognise the true constraints of the task (e.g. see Cummings (2007) reanalysis of Body, Perkins, & McDonald, 1999). The current study set out to avoid these potential pitfalls by not specifying interactional success, failure or 'misunderstanding' as criteria for selecting extracts, but rather features rooted in the theoretical paradigm applied. The performance with regard to these features could thus be explored, both in terms of instances revealing ability, and those suggesting disability. RT embraces the notion that pragmatic performance is an exercise involving inherent risk of misunderstanding, even within typical interaction. This perspective allows clinical pragmatics to re-emphasise the balance with consideration given to how successful communication is achieved, and contextualizing communication failure within a model which recognises the shortfalls of typical communication.

#### 12.1.3 Judgments on 'appropriacy': Considering 'intentions of relevance'

Even when the interaction is approached with sensitivity to the pragmatic features of clinical engagement and the analysis incorporates considerations of resourcefulness alongside instances of difficulty, making judgments on appropriacy has been demonstrated to be potentially contentious (Leinonen & Smith, 1994). In addition, designating pragmatic behaviours as 'inappropriate' is not likely to be helpful in either descriptive or explanatory accounts of pragmatic disorders. Garcia and colleagues make the point that judgments of inappropriateness (or 'irrelevance' in this case) must be cautiously made. The implication is that the role of analysts in judging appropriateness may be equally as powerful as whether the speaker is in fact inappropriate (or 'irrelevant') at all:

It is important to ask how judgments of irrelevance are being made. We need to be able to specify what inferences are derived from the conversation to arrive at our clinical diagnoses and what kind of adaptive strategies are useful for intervention. If we do not seek to answer these questions, clinical hypotheses that are made during assessments may be wrongly confirmed. [...] the role of the hearer must not be neglected in developing such tools. Relevance may very well be in the eye and ear of the beholder and not reside so much with the speaker (Garcia, Metthé, Paradis, & Joanette, 2001, pp. 34,35).

The transparent focus, in an RT approach, on an operationalised construct of 'relevance' forces the analyst to consider utterance production and interpretation from the communicators' perspectives. This makes it less likely that an utterance would be judged as 'inappropriate', for example, but rather from the more constructive perspective of how it was *intended* to achieve relevance, or how it was interpreted within considerations of optimal relevance, given the abilities or preferences of the communicator. Utterances may, in this model, still be shown to be either successful or unsuccessful in achieving relevance as expected. However, through examining sequential responses from the perspective of relevance expectations, there is the opportunity (as demonstrated in this study) to constructively consider how the utterance was intended by the communicator and why it may have 'failed' in the collaborative endeavour of conversation. Although not a fail-safe solution to a holistic analysis of pragmatic ability in clinical populations, RT does provide tools which allow for a contextually sensitive analysis. The constructs which may be applied as clinically relevant tools will be examined in the sections which follow.

# 12.2 The Relevance Theoretic notion of context: A useful approach for clinical pragmatics?

There is no clear agreement across the field regarding the extent of 'context' invoked in pragmatic processes. The indeterminacy of the concept of 'context' has resulted in approaches which narrow or constrain the notion, and those which embrace it's "sprawling" nature (Cummings, 2007a, p. 406) but leave undefined the extent and interactional reality of the 'contextual variables'. There are two important features of context which I will suggest are seldom captured in clinical pragmatic research. These will be briefly presented and I will then demonstrate how the RT framework, operationalised in the conversational data analysed in the current study, may demonstrate promise with regard to these contextual complexities. Context, firstly, can be considered as the unbounded set of assumptions or information which are brought to bear on the process of interpreting an utterance:

context is a sprawling notion that evades all attempts to place limits on it. The potentially infinite range of factors that may be employed in the recovery of an implicature of an utterance is evidence enough of context's capacity to go beyond boundaries. It is in this respect that the inferential process involved in pragmatic interpretation is a truly global process (Cummings, 2007a, p. 406).

The second important feature of context is its dynamic nature, that is, it is not 'given' but created in an on-line fashion. In 'real life communication' that which has come before actively shapes what context the communicators create and each utterance adds, not just

to the linguistic context, but to the broad range of assumptions selected for utterance interpretation at that point. These two features make both clinical pragmatics research and the practice of clinical pragmatics a challenge. While context is recognised as important, researchers and clinicians alike shy away from the inherent complexity and possible 'data chaos' which seem to accompany incorporating the features of context as (1) potentially infinite, and (2) as dynamic, and therefore involving uncontrolled variables. Failing to address these central considerations arguably limits the validity of clinical pragmatic research, and therefore its application to patient populations, by undermining some of the core features of context in pragmatic terms (Cummings, 2007a).

The current study attempted to embrace the "sprawling" (*ibid*) nature of context by making online conversation the data of interest. The challenge in such an approach, however, is how to capture the subset of assumptions at play at any one point in the dynamics of interaction. The RT notion of cognitive environments and mutual manifestness was used to operationalise the concept of context in the analysis. Incorporating methods used in Conversation Analysis (CA), the cognitive construct of RT 'context' was supported by ethnographic methods allowing for transparent incorporation of specific contextual assumptions. This approach was useful in operationalising the notion of 'encyclopaedic information', with assumptions available through the researchers' 'insider' status. Cameron and Williams (1997) appeared to have successfully invoked a similar approach in their study of performance on a non-native speaker in a healthcare setting, marrying an RT analysis with ethnographic-type information. Such a perspective gives a framing context in which the interaction can be situated for analysis:

[...] we need to incorporate into our notion of context, in addition to a 'broad', framing context of situational and ethnographic information, a 'narrow', local element whereby user assumptions are negotiated and renegotiated continuously in interaction (Mason, 2006, p. 366).

Within the current study, it was possible to combine the cognitive-pragmatic approach to context, advocated by RT, with an ethnographic perspective which allows for specific contextual information to be brought to bear from an 'insider perspective'. The conversational nature of the data, and the fact that the conversationalist was the researcher, made such an approach plausible, as detailed in the methodology. As a member of the community (both in a sociocultural and socio-institutional sense) I also had available to me, during analysis, an 'insider's perspective' on the social, cultural and situational assumptions which could be presumed to be manifest to members of that society. The result was that during analysis I had access to those assumptions at play for myself during the conversations.

The RT definition of context as "the set of premises used in interpreting an utterance" and "a subset of the hearer's assumptions about the world" (Sperber & Wilson, 1986/1995, p. 15) appears to focus only on the role of context from the hearer's perspective. In addition, however, the RT approach also clearly recognises that communicators must envisage the context intended by the speaker (and, conversely, the assumptions available to the hearer) to avoid misunderstanding. Implicit in such a recognition is the role for metarepresenting the assumptions available to one's interlocutor - a feature which has been useful in the analysis of the data in this study. Mason (2006) suggests that "there are advantages in constraining context to those assumptions actually used in communication and in focusing on the need for communicators to make assumptions about (others') assumptions" (p.361). The advantages, it has been argued, relate to the transparency imbued to the potentially opaque and complex construct of 'context'. By defining and operationalising the role of context in pragmatic processes, RT does appear to have the potential to avoid "distorting the notion of context in pragmatic interpretation" – a feature common to many studies in the field (Cummings, 2007a, p. 404). RT takes a broad view of context but, unlike most theories of pragmatics, it attempts to couch the notion in cognitively feasible constructs. This approach allows context to simultaneously incorporate the range of information and assumptions which intuitively should be included, while at the same time providing a usable analytical framework in which to situate the assumptions.

The recognition that communication depends to some extent on a 'shared knowledge' or 'shared context' has been the basis of much of pragmatic theory (Clark & Carlson, 1981), but faces challenges in terms of theoretical explication (Sperber & Wilson, 1986/1995). The RT notion of the mutual cognitive environment, and mutual manifestness, addresses how assumptions can be accessed by both parties in a psychologically plausible way. The findings in the current study, of the drive of REA for mutual manifestness in the process of meaning-making, appear to lend support for the notion that RT can address such social concerns:

Mutual manifestness may be of little cognitive importance, but it is of crucial social importance. A change in the mutual cognitive environment of two people is a change in their possibilities of interaction (and, in particular, their possibilities of further communication (Sperber & Wilson, 1986/1995, pp. 60-61).

REA's search for mutual manifestness in meaning-making, and in the processes of exiting delusional talk, suggests that the construct is recognised in the process of interaction and that interactional success is dependent on its persistence.

The use of an RT approach to context in the present study would appear to attest to its applicability in clinical pragmatics. The communication process emerged as a powerfully inferential one, with the conversation partners drawing continuously on context to illuminate the speaker's informative intention and guide their own production of optimally relevant utterances. Difficulties in accurately predicting the context available to the interlocutor were also visible through this analytic lens, with the implications discussed in Chapter Eleven. I would echo Pattermore's (2006) suggestion that "[c]onsiderations of optimal relevance in mutual cognitive environments have the potential, taken alongside other proven techniques, to throw light on the analysis of conversational data" (p.316). The findings of the current study certainly appear to suggest that the RT approach to context is useful and sufficiently nuanced, particularly when used alongside an ethnographic-type approach, to provide analytic power in the approach to conversational data.

#### 12.3 Conversational data: where speakers become hearers and hearers, speakers

While much of the work in Relevance Theory has focused on utterance interpretation processes, the cognitive processes exposed in this study have proved to be equally applicable to the speaker role. Although this 'mirror-image' applicability would seem an obvious extension of a pragmatic theory, its application to clinical data and conversation has served to confirm its feasibility and potential applicability to clinical pragmatics.

Some areas of difficulty were apparent in the analysis, notably the division of speaker and hearer roles. The need for clinical pragmatics to account for conversational data has been argued. However, as Mason (2006) points out in relation to translation and interpretation studies:

much pragmatics, including RT but also neo-Griceans [...], work exclusively on confected data – in the form of de-co-textualized (sic) sentences – for which a (schematic) context is imagined. As a corollary of this, discussion is of an ideal Speaker and Hearer, thus filtering out many of the features of real communication (Mason, 2006, p. 362).

I disagree with Mason that "the experience of actual users may be fundamentally at variance with such idealized accounts", as RT has shown a 'good fit' with the data presented. However, there is a challenge in investigating 'real' conversational data (rather than using idealised data) and that is the inevitable blurring of the boundaries between speaker and hearer roles by virtue of both the data and the analysis process. In other words, during conversation, speakers do not remain as speakers, but act simultaneously as hearers. In addition, the analysis of how the participant performs as *hearer* (i.e., utterance interpretation) relies on the indirect evidence gleaned from the participant's response as *speaker*. In cases in which we suspect that an individual may have difficulty expressing

themselves (for whatever reason), this analysis becomes a double bind. In the current study, for example, there were instances in which it was unclear whether the participant had difficulty interpreting a regular question, for example, or whether the symptom of poverty of speech interfered with the ability to respond adequately.

RT, to a large extent, has relied on idealised roles of speaker and hearer is unable to provide any clear guidance in this regard. It must also be recognised that this particular challenge is not unique to RT but an artifact of both the data itself and, as Mason (2006) points out, the nature of inferential pragmatic theories in general. Continued application of pragmatic theory, and RT in particular, to conversational data may elucidate some of the issues around analysis of speaker and hearer performances. Indeed, there is a small but growing body of research in which RT has been successfully applied to conversational data (e.g. Cameron & Williams, 1997; Leinonen & Kerbel, 1999; Pattemore, 2006). Both the application of RT to conversational data, and the use of novel tasks which approximate or simulate online performance within an RT analytic framework, appear to be fruitful directions for clinical pragmatics and investigation of the communicative performance of people with schizophrenia in particular. These directions will be further explored with regard to practical applications in Chapter Thirteen.

It is not just the boundary between hearer and speaker which is potentially problematic for inferential pragmatic theories such as RT, but also accounting for the collaborative nature of interaction and meaning-making in online conversation. The importance of collaborative processes in interaction has long been recognised by qualitative work within clinical pragmatics. Discourse analysis and CA has been used to explore phenomena such as the collaborative management of communication with speakers with aphasia (e.g. Ferguson, 1996; Wilkinson et al., 2010), the conversational resources and challenges for people with dementia and their partners (e.g. L. Perkins et al., 1998) and the negotiation of meaning and agenda in clinical interactions (e.g. Walsh, 2007b). The current study demonstrated clear evidence for the important role of negotiated meaning and collaborative meaning-making in the interaction process. The question as to whether a cognitive-pragmatic approach can deal with such an issue mirrors the discussion put forward in Chapter Five as to whether RT is able to handle issues of social import. Collaboration in conversational engagement is inherently a social concern.

Accounting for meaning negotiation is arguably essential in addressing pragmatic disorder. Approaches to clinical pragmatics must be able not only to identify 'impairment', but also to investigate how meaning is achieved in the course of interaction and how this may be capitalised on in intervention (see Chapter Thirteen).

It is possible to extend our notion of communicative competence beyond consideration of how competence is vested in the individual, by recognizing competence as arising from the interactive relationship of communication partners as they negotiate messages (Ferguson, 1996, p. 56)

Despite its consideration of 'the space between the conversationalists' in the notion of the mutual cognitive environment, RT focuses on the individual processes required of speakers and hearers in conversation. Notwithstanding this individualistic focus, RT has been applied by researchers to analyse conversational data in which negotiation of meaning was shown to occur between a student nurse, her supervisor and a patient (Cameron & Williams, 1997). In the current study, RT was clearly able to address the collaborative concerns of the interactions, showing it to be suitable for investigation of the social feature of collaborative meaning-making (Chapter Ten). The approach demonstrated that by recognising the attempts at optimal relevance made by the speakers with schizophrenia, and the inferential work undertaken by the interlocutor, it was possible to shed light on the subsequent negotiations to access assumptions and ultimately the collaborative meaning-making process which occurred. Of course, communicative difficulties occurred too, as would be predicted by RT and as is recognised as typical of human interactions. Although not directly addressed by RT, the process of meaning negotiation between interlocutors has been shown to be amenable to analysis through the RT lens, further confirming its applicability to the social aspects of analysis.

### 12.4 The Relevance Theoretic notion of interpretive use as a window into a range of metarepresentational abilities

The theoretical link between mentalizing and communication is historical, being birthed in the writings of Grice, who reflected on the need for the hearer to uncover the intentions of the speaker. Clinical research and pragmatic interest has generally focused on ToM or the ability of individuals to represent the mental states of others and make predictions based on these states. However, the representation of mental states is just one type of such an ability. Despite the clinical focus on these phenomena, research in other domains has yielded important insights into how humans represent the utterances of others (quotation) and even how they represent abstract propositions. The notion of metarepresentation is a helpful abstraction. It allows for distinctions to be drawn between types of metarepresentation, recognising mental states as one type (and mentalizing therefore as the processing of this specific category of metarepresentation). Such a distinction allows for the metarepresentations of public representations, such as reported speech, to be viewed alongside the more clinically familiar construct of mental states. As Wilson (2000) points out, although research on ToM (or the metarepresentation of mental states) has dominated

psychology literature, considering this ability alongside other forms of metarepresentation is likely to shed new light of the relationship between these processes and those of communication.

The case for systematically examining conversational performance in clinical pragmatics has been made strongly throughout this thesis. The challenge of such a call is how to operationalise the constructs of interest, specifically those related to metarepresentation, in a way which is underpinned by a strong theoretical base, while at the same time yielding enough exemplars to provide sufficient data for analysis. The notion of interpretive use as applied to the abilities of attribution and metarepresentation has demonstrated promise in this regard. As discussed in Chapter Three, the theoretical distinction drawn within RT that of between descriptive and interpretive use has shown to be useful in clinical pragmatic research. The distinction avoids equating ToM and pragmatic processing and instead allows researchers to make theoretically sound predictions on the relationship between the two constructs, that is, between the ability to engage in specific orders of ToM and the association with the ability to interpret certain kinds of utterances. In the current study, the construct of interpretive use was extended to conversational rather than experimental data and investigated in the light of both the *use* and *interpretation* of such utterances.

The notion of 'resemblance' was particularly useful to delineate the intuitive difference between cases in which the 'content' or lower-order representation of a metarepresentational structure was 'accurate' and cases which contained inaccuracies or were misattributed, yet intuitively still demonstrated metarepresentational ability. Although the 'original' representation (utterance or mental state) is clearly not always available for analysis, the model of resemblance provides a transparent means of analysing the representation as faithful or unfaithful, a feature which is of particular use in reported speech and thought. Despite the fact that the predicted pattern of differential performance on attributive versus non-attributive metarepresentational structures was not observed in question interpretation (that is, echo questions versus regular questions), the application of the concept of interpretive use proved useful in exploring the dimensions of metarepresentation in the data.

The lack of a clear relationship between mental state attribution on the Fable Task and the engagement in attributive metarepresentation in conversation may initially seem to call into question the validity of the notion of 'interpretive use'. Given the documented discrepancy between structured false beliefs tasks and performance in comparison to online communication, the lack of association is not unexpected. A number of reasons may

explain the discrepancy. Firstly, the study attempted to use a different paradigm for exploring the implicit attribution of mental states. Without a traditional false belief task as comparison, it cannot be assured that the same pattern of performance would be seen. Secondly, the pragmatic processes most often measured in laboratory investigations appear to rely on assessments in which the nature of the tasks distorts the concept of pragmatics. Thus, the nature of interpretive use and the truly online nature of its implementation in the data may in fact involve discrepant skills to those brought to bear in the 'pragmatic' tasks of vignette completion or interpretation. In this light, analysis from the interpretive use perspective and the traditional association between mental state attribution and pragmatics are perhaps less easily comparable. Future research should explore the phenomena further, with particular attention paid to the expected relationship between performance on traditional false belief tasks and the ability to engage in and interpret instances of linguistic metarepresentation.

## 12.5 Mentalizing and communication: Metarepresentational (dis)ability and the modularity of the mind

Early writings in RT presumed a direct relationship between 'mindreading' and utterance interpretation (Sperber & Wilson, 1986/1995). They have continued to defend the view that pragmatics is "metapsychological through and through" but have further developed the idea that communication is subserved by a specialist module (Sperber & Wilson, 2002, p. 5). In this more recent work (Origgi & Sperber, 2000; Sperber, 2000b; Sperber & Wilson, 2002; Wilson, 2000, 2005), Relevance Theorists have explored how the current theories of ToM cannot account for the processes of utterance interpretation which, therefore, necessarily involves its own machinery. RT sees pragmatics as a process of expressing and uncovering intentions. However, instead of being driven by simulation of mental states or a 'theorising process' about mental states, the process is driven by a fundamental consideration of relevance. Both the 'Theory Theory" or the Simulation approaches are flawed in explaining communication in which uncovering the intention behind an utterance is in itself the fulfilment of the pragmatic process, as presented in Chapter Three. In imagining the desired effect to infer the mental state, the model becomes circular when applied to utterance interpretation, as uncovering the desired effect is uncovering the informative intention and, thus, the completion of the process. In simulating the mental state, the hearer must infer the intended meaning to allow for simulation, in which case the pragmatic process has again been fulfilled before the simulation process has run its course. The pragmatic processes involved in verbal interaction involve to some extent the ability to 'mindread' however the two abilities are not seen as synonymous in this model. They argue that:

Verbal communication presents special challenges, and exhibits certain regularities, not found in other domains. It therefore lends itself to the development of a dedicated comprehension module with its own particular principles and mechanisms (Sperber & Wilson, 2002, p. 5).

The model currently being explored by cognitive scientists working from this perspective is that humans possess more than one metarepresentational ability, that is, the 'core' ability of mentalizing is a metapsychological ability which interacts in some way with a 'metacommunicative ability' and a 'metalogical ability', which deal with pragmatic processing and reasoning abilities respectively (as presented in the previous chapter). They go on to suggest that such a module may be a specialised submodule of the more general ToM module, as discussed in Chapter Three. The modular view of pragmatics, as pioneered by Sperber, suggests that pragmatic processes are accomplished by a dedicated module. The model is a developing one, and not without its critics. A potentially important line of support for this perspective would come from evidence of dissociations between general mindreading abilities and those related to inferential communication (Wilson, 2005). The current study would appear to offer some tentative evidence in this direction.

The picture of metarepresentational abilities in on-line communication emerges as remarkably resilient in the individuals with schizophrenia who participated in this study. While difficulties did emerge, these were nuanced and intermittent difficulties for the most part. In light of their psychiatric profiles and sometimes significantly tenacious delusional talk, as well as profiles of difficulty on the task of implicit mental state attribution, the extent of their ability to engage in linguistic metarepresentation and anticipate the needs of the interlocutor in conversation is remarkable. The proposals presented in the previous chapter would suggest a dissociation. While there are important questions with regard to what is being assessed in ToM tasks, the performance on the Fable Task suggests a traditional ToM-type impairment (although this may clearly reflect a metalogical impairment, as argued).

The findings of this study urge caution in how the relationship between mentalizing and communication is explored. While the association between ToM and pragmatic processing has been supported by empirical data, it is argued that much of the psychological research uses tasks which assume or imply that the two are equivalent abilities. An example would be the use of tasks which involve interpreting 'indirect speech' ('hints') in a vignette and interpreting the results to draw conclusions about 'ToM' skills (Corcoran et al., 1995). Can such an approach be taken to imply that ToM and pragmatics are one and the same ability? The use of such tasks in this way appears to invoke an unstated assumption that inferring meaning from utterances is equivalent to ToM. Although

there is much research to support the notion that utterance interpretation in specific contexts is associated with performance in ToM tasks, this is not equivalent to using tasks and drawing conclusions which implicitly communicate that pragmatic processing and ToM are interchangeable concepts. This type of dualistic use of tasks to investigate different cognitive phenomena has the unfortunate consequence of further blurring the distinction between utterance processing (or pragmatic processes) and ToM. These two processes are likely to be closely related or intertwined and it is theoretically (and clinically) problematic to equate the two. While it is clearly a valid approach to use evidence from one domain (say pragmatic processing) to make inferences about the other, this process must be used with caution and should be transparent in addressing associated processes. The nature of the relationship between mentalizing and pragmatics remains to be fully elucidated at a theoretical level and caution should be exercised in devising tasks which may draw on both abilities and, therefore, confound the results. The conversational performance of participants in this study demonstrated (for the most part) sophisticated use of attributive metarepresentational abilities, and could be taken to infer 'intact ToM'. Some of the same participants had significant difficulty attributing mental states on the Fable Task - a performance profile which could be taken to infer impaired ToM. It is clearly not possible to come to the conclusion that a single individual has both an intact and impaired process if the process is assumed to be unitary. If, on the other hand, a modular view is embraced then the distinction across performances is more easily reconciled.

While the nature of this study and the analysis undertaken can do no more than point towards some possible implications for the modularity of the mind (as presented in Chapter Eleven), what has emerged would appear to have some interesting implications for the proposals put forward by Sperber and Wilson regarding a "modularized metacommunicative ability".

Language is full of metarepresentational devices, which are often quite fragmentary or incomplete: I have argued that they provide no more than triggers for spontaneous metacommunicative processes by which speaker meanings are inferred. I have outlined a pragmatic comprehension procedure which might help to resolve indeterminacies in meaning and form the basis for a modularised metacommunicative ability, itself a sub-part of a more general metapsychological ability, or 'theory of mind' (Wilson, 2000 p. 37-38).

The difficulties noted in the data do seem to fractionate along the possible lines drawn by the Sperber and Wilson model of metarepresentation abilities. The ability to produce and interpret utterances within conversation is relatively robust, supporting the findings of McCabe and colleagues (2004). These pragmatic processes, hypothesised to be subserved by a "metacommunicative ability", appear then to be intact and potentially dissociable from

(1) the abilities linked to the interface between pure 'Theory of Mind' and communicative performance, such as the ability to accurately predict what information is available to the interlocutor and the ability to interpret subtle cues related to misunderstanding; and (2) the abilities linked to metalogical skills, such as the ability to exercise epistemic vigilance and argue or justify one's position. The hypothesised dissociation of these abilities has been only tentatively shown in this qualitative study but would appear to offer initial support for the notion that different cognitive processes underlie these functional abilities — as proposed by developments in RT.

The benefit of such an approach within the realm of clinical pragmatics is one of transparency. Instead of a mysterious unitary and complex ability of ToM as the ability which underlies a range of complex phenomena, this approach can articulate theoretically distinct components which are united in their metarepresentational nature and are functionally related. This model, it is argued, is an alternative explanation for the discrepancy found in this and previous studies, between conversational performance and performance on 'ToM' tasks. It remains to be seen how such an approach can be further applied to cognitive neuroscience and whether it holds up under such scrutiny. It would seem to be, however, a theoretically plausible solution to elucidating this complex relationship. The possible interpretations have interesting implications for the disorder of schizophrenia (discussed in the previous chapter), but also serve to provide initial support for the existence of such modular abilities.

#### 12.6 Conclusion: Relevance Theory as a tool for clinical pragmatics

Many researchers have made the point that the application of theoretical pragmatic models to the realm of clinical pragmatics has potentially significant benefits for both fields. I would like to echo those sentiments, and emphasise that the relationship between pragmatic theory and clinical pragmatics is symbiotic rather than a one-sided relationship. Indeed, the application of RT to a clinical population has the potential to strengthen the theory itself. The application in this study has demonstrated the ability of the theory to deal with socio-interactional concerns. Given that a strong criticism against RT has been that it is "asocial" (Jary, 1998, p. 157), such a finding may provide support for the application to wider pragmatic concerns. In addition, the link between social cognition and pragmatics is another central issue for both the theory of RT and clinical pragmatics. The application of RT to the data in this study has shown tentative evidence to support the proposal regarding the nature of metarepresentational abilities and their hypothesised modularity.

I have argued that there are also some specific needs of clinical pragmatics that may potentially be addressed by an RT account. In this chapter I have argued that RT may offer a

different perspective in our conceptualisation of pragmatic disability and 'pathological' performance. In addition, I hope to have shown that some of the specific constructs inherent in an RT approach are able to tackle some of the contentious areas in clinical pragmatics. The notion of context in utterance processing and accounting for this in considering clinical populations is extremely challenging and may be addressed by a RT approach. The notion of interpretive use may provide a window into how metarepresentational abilities are deployed in conversation. It remains to be discussed as to whether the theoretical implications of RT for clinical pragmatics have potential for application in the practical sense. The challenge of addressing communication disturbances in people with schizophrenia was alluded to at the outset of this thesis. Clinical application of the concepts discussed will be attempted in Chapter Thirteen.

### **Chapter Thirteen**

# Communication and people with schizophrenia: Implications for clinical care

Communication with people with schizophrenia is a complex domain. It is complex, not because of multiple failings and impairments on the part of the individual with the disorder, but because of the nuances of ability and disability, and the difficulties, encountered by some, in everyday social life that so hamper the art of living. This thesis began as a quest for an answer to clinical dilemmas – most specifically a quest for an explanatory theory as to why, in a cognitive-pragmatic sense, people with schizophrenia present with communication difficulties.

The previous two chapters have discussed the implications of the findings for how we might understand communication performance in people with schizophrenia, and the potential role of relevance theory in exploring clinical pragmatics and the cognitive-communicative interface in people with the disorder. This chapter will briefly discuss the clinical implications by addressing the possible significance for assessment and intervention with regard to communication in people with schizophrenia. At the same time, directions for further research will be highlighted. I will begin by addressing the role of the SLT in this context in section 13.1 before briefly surveying, in section 13.2, the approaches to social skills and conversation which exist in the field. Section 13.3 will then examine the constructs which emerged in Chapter Twelve as important for clinical pragmatics, and attempt to operationalise these notions with regard to assessment and intervention practices for people with schizophrenia. The role of the conversation partner, and potential implications for intervention in this regard, will be addressed in section 13.4, before a brief conclusion is given in section 13.5.

#### 13.1 The role of the speech and language therapist

The extent of 'ability' rather than 'disability' with regard to the pragmatic skills investigated supports the findings of a small number of previous studies which have championed the skills of individuals with schizophrenia in relation to conversational engagement (e.g. McCabe et al., 2002; McCabe et al., 2004; Walsh-Brennan, 2001). This profile of ability or 'resilience' in conversational ability brings into question the role of the SLT with this population of people. If the communication of these individuals is characterised by ability similar to that seen in typical individuals, is there any role for the SLT in the intervention process?

It was argued at the outset that if people with schizophrenia report social interaction difficulties, and difficulties with communication are reported to impact on functioning in everyday life, then we have a responsibility to address these difficulties. While the difficulties may not be frank linguistic deficits as those described in people with aphasia, the SLT is uniquely placed to address disturbances in cognitive-communicative domains. The role of the SLT in individuals with schizophrenia is unique but relatively unexplored in comparison to that recognised in other clinical populations. Although research has described the perhaps unexpected ability and strength in the communication abilities of people with schizophrenia, the subtle but sometimes pervasive difficulties in social communication are a significant obstacle for many people with the disorder, as illustrated by various first-person accounts:

I feel quiet, too quiet like when people are sitting down talking, having conversations and things like that. I don't really say much and I feel like the odd one out (Brophy, 2007, p. 53).

My own experience of paranoia can be succinctly described using language games. [...] What I found was that my perception of how people conversed became reduced to the simple rules of a language game, and I was an unwilling participant in this game (Anonymous, 2011).

It is your responsibility as medical professionals to communicate well with us. We have schizophrenia. We are mentally ill and we can't always manage our interactions with other people. You must teach us how to communicate well with you (Schneider et al., 2004, p. 574).

Given these accounts we, as clinicians and researchers, must recognise that despite the significant demonstration of 'ability' in research contexts, people with the disorder appear to live with daily struggles related to socialisation and communication. I would like to argue that these accounts should compel us to seek out explanatory theories which are able to guide appropriate assessment and intervention where required. Despite the lack of clarity as to the underlying reasons for communication disturbances in people with schizophrenia, intervention for difficulties in socialization and conversation have emerged out of necessity to deal with these features of the disorder.

# 13.2 A survey of the groups of approaches to communication in people with schizophrenia

In this section I aim to sketch the range of approaches used to address the communication disturbances which are common in schizophrenia. This area of practice is vast and multidisciplinary in nature and it is beyond the scope of this chapter to survey it in any depth. Rather, I aim to provide a context and backdrop against which a cognitive-pragmatic approach to communication difficulties may be presented. Although the area of social skills

training and related approaches is vast, research is limited in relation to the impact of these approaches on the nature of pragmatic competence in on-line, naturalistic conversation. I will argue that although many of the approaches show promise in the general area of socialisation, they lack the specificity to truly address the specific and complex nature of pragmatic disability.

#### 13.2.1 Social skills training

'Social Skills' programs are frequently designed and carried out by mental health professionals. Social Skills Training (SST) typically involves a range of skill areas and entails:

the systematic teaching of interpersonal skills through the process of breaking complex behaviors into their constituent elements, demonstrating (modeling) those skills in role plays, engaging clients in role plays to practice those skills, providing positive and corrective feedback to improve performance, additional role play practice, and developing assignments to practice those skills in naturally occurring interactions in clients' lives (Mueser & Bellack, 2007, p. 549).

Most social skills programs, having developed from early programs in assertiveness training, have a communication or conversation skills component (Walsh, 2008a). The evidence for the effectiveness of SST is generally accepted and acknowledged to impact on behaviour skills and social functioning (e.g. Bellack, 2004; Kurtz & Mueser, 2008). However there are still debates about the magnitude and significance of such improvements (Mueser & Bellack, 2007). In addition, generalisation of skills has been recognised as a significant challenge (Pilling et al., 2002).

A variant of SST is that of Conversation Skills Training where there is more directed and explicit focus on conversation. Such programs incorporate the didactic teaching common in SST but extend the nature of the learning, as described by Walsh (2008a):

As well as direct instruction or the demonstration of appropriate conversational skills through focused individuals and group sessions, the enhancement of metacommunicative awareness has been found to complement and reinforce the didactic approach often adopted. Hence, role-playing of particular communication situations accompanied by discussion of these situations in meta-communication terms enhances learning and generalization (Walsh, 2008a, p. 332).

Examining the nature of SST broadly suggests that there is often a mismatch between what is hypothesised to underlie communication difficulties in schizophrenia and what methods are used by mental health professionals in intervention. In relation to the "conversation skills" aspect of SST, instruction, as a method of didactic teaching of the surface structures or rules of conversation, would be predicted to have very limited success, based on the findings of the current study. However, a meta-analysis of social skills

intervention (Pilling et al., 2002) revealed that of the nine studies that conformed to the inclusion criteria, five used a combination of instruction, modeling, role-play and feedback to train social skills. The others used variants of behavioural rehearsal, modeling and discussion, as well as video modeling. If the difficulty for people with schizophrenia lies at the interface of ToM and pragmatic skills then explicit teaching of conversational management is likely to lack the complex context and on-line evolving nature of interaction that makes certain encounters difficult. Even the element of behavioural rehearsal is unlikely to reflect the complexity and novelty of each instance of communication, perhaps explaining why such attempts have little generalisation beyond the training situation (Pilling et al., 2002). The incorporation of meta-communication around tasks may ameliorate these challenges to some extent, but, in the light of the results of the current study, are still unlikely to fully prepare the individual for the complex and dynamic nature of on-line conversation. Interventions which couch learning in the experience of on-line communication may be useful in this regard — an approach which is surveyed in the following section.

#### 13.2.2 'Experiential' programs for social skill development

A different approach to social skills 'training' includes interventions which I am classifying as 'experiential programs' based on their emphasis of 'learning through doing in context'. Many of the difficulties in social engagement may be effectively dealt with by programs designed to increase supported socialisation opportunities for people with schizophrenia (e.g. Davidson et al., 2004). However, pragmatic language difficulties are a core feature of the disorder for many individuals and there appear to be those for whom opportunity may not be enough. This need for both opportunity and supportive training is addressed in some of the 'experiential' approaches. These models, such as "supported socialization" (Davidson et al., 2004, p. 455) have been built on the understanding that training in different areas of functioning often has limited generalisation in people with mental health disorders. Supported Socialization has been built on the observations that in other domains (e.g. living skills) supported integration into 'real life' settings has resulted in improved outcomes compared to the less contextualised approaches to 'training' (Davidson et al., 2004). Other 'experiential programs' include the In Vivo Amplified Skills Training (IVAST) (Liberman, Glynn, Blair, Ross, & Marder, 2002). Both of these programs work through many of the components common to SST and have a strong focus on supported In Vivo exercises and contextualised supported practice. Where 'experiential approaches' are used to provide opportunity for skills training or learning they may fare better than didactic approaches being based on the notion that experiencing successful conversation and reflecting on

success and breakdown offers opportunities for on-line processing and judgments which could then, in some instances, serve as material for therapeutic reflection.

While these types of approaches do seem to 'tick the box' in terms of on-line naturalistic experience, they may fail to target the hypothesised area of breakdown if the goal is towards specific pragmatic ability. It risks being a hit-and-miss approach. Consider the inconsistency of the difficulty displayed by participants in the current study. The difficulties in considering the assumptions manifest to their interlocutor emerged only in specific circumstances. The implication is that engaging in 'chat' is unlikely to consistently provoke the skills or situations which are challenging to the individual and thus likely to achieve therapeutic change. However, there is a clear role for such experiential intervention from a social perspective — de-stigmatising the disorder within the community and providing a sense of competence, success and ability for the individual. Indeed, with regards to the Supported Socialization approaches, they are defined as such:

The provision of structured opportunities and supports that enable people with psychiatric disabilities to participate in the naturally occurring rhythms of community life within the context of caring, reciprocal relationships in which they experience themselves as having something of value to offer other (Davidson et al., 2004, p. 459).

Such intervention is situated within the social paradigm of disability and has played an important role in the approach to other communication disorders (e.g. Byng & Duchan, 2005; Kagan, 1998). It must, however, be recognised that for individuals who wish to pursue intervention for specific conversation skills, a different, and probably complementary, approach must be developed. The findings of the present study suggest that to aim for these specific pragmatic goals, intervention designs are required which demand particular types of metarepresentational ability, while not sacrificing the on-line nature of interaction.

### 13.2.3 Towards a pragmatically grounded approach to communication in schizophrenia

All of the approaches surveyed have demonstrated some benefit for the person with schizophrenia. Indeed, all appear to have a potential role in dealing with the complex social and communication needs of the population. However, none appear to address the hypothesised difficulties which underlie the pragmatic disturbances experienced by some people with schizophrenia. While I am certainly not suggesting that any of the broad range of approaches be abandoned, I am suggesting that in addressing pragmatic (dis)ability a theoretically grounded explanatory account is necessary to construct appropriate assessment and intervention techniques.

SLTs, with their grounding in linguistics, psychology and speech-language disorders may be uniquely placed to work within this domain (Muir, 2001) - a domain at the interface of complex and nuanced pragmatic disability and a lack of social opportunity to use the ability that is present. While current approaches to communication difficulties in people with schizophrenia have shown benefit, specific interventions which account for the complexity and rapidly changing nature of on-line conversation may increase the success of such intervention. I have argued that the specifically pragmatic component of the difficulties experienced by some people with schizophrenia cannot be effectively dealt with in a theoretical vacuum. Pragmatic theory is essential to develop explanatory accounts of the disorder in order to provide a comprehensive set of approaches for the communication difficulties encountered by these individuals, an intervention paradigm in which the SLT plays an important role. The application of RT to clinical pragmatics, presented in the preceding chapter, may be clinically operationalised and applied to the processes of assessment and intervention in this population. In addition, the approach allows for the recognition of the collaborative nature of interactional success. Pragmatic ability, or pragmatic disability, cannot be situated within the individual alone. The findings of this study have, therefore, implications which extend to consideration of communication partners and the barriers to successful interaction which may exist for the person with schizophrenia. Developing novel and sophisticated ways of assessing the complex domain of pragmatic competence and building on approaches to intervention should impact on the quality of the service provided to individuals with schizophrenia and ultimately their ability to more readily navigate the social world.

### 13.3 Operationalising Relevance Theory constructs for assessment and intervention

There is a clear argument for including conversational data in the assessment of communication abilities of people with schizophrenia. If difficulties in social communication are reported, and are to be the target of intervention, a measure of such abilities is not only necessary but crucial. One clear 'pull' towards contrived pragmatic tasks is the ability to better control for these factors. The patient or participant investigated as hearer in such controlled tasks can be assessed as just that – a hearer. However, the argument for analysis of processes occurring in an on-line fashion remains, and thus a balance between 'natural' pragmatic tasks and tasks which can be constrained for the purposes of robust analysis must be sought. A structured language task may be seen as a useful adjunct to conversational data, in exploring how participants deal with the metarepresentational demands exerted by verbal communication. A structured language task at the level of

discourse may have the advantage of requiring more complex metarepresentational processes than may be systematically required in conversation by virtue of specific task demands. The findings of the current study suggested that REA is in fact supporting the communication and compensating for the manifest difficulties in metarepresenting the mutual cognitive environment. A structured language task may be designed to tap into specific abilities to attribute intention, or the ability to consider the manifestness of assumptions, for example.

#### 13.3.1 Considerations of context and the mutual cognitive environment

The two main features of context which emerged from the discussion as central to an RT account are (1) context as encompassing those assumptions selected from an unbounded possible set of assumptions, and (2) context as dynamic and evolving during the course of communication. The findings of the study suggested that individuals with schizophrenia had the most frequent difficulties in taking the conversation partner's 'perspective' into account when their own assumptions were unique and distinct from those held by the interlocutor. In other words, the participants made incorrect presumptions about what was mutually manifest when their contributions or utterance interpretation relied on assumptions which were unique. While typical speakers are likely to suffer from initial difficulties in the same regard, typical communicators have been shown to quickly resolve these discrepancies and adjust their expectations, something which did not occur in the participants. In this light, assessment and intervention tasks should re-create the conditions in which representing the mutual cognitive environment is challenging.

Recreating a context which challenges the representation of the mutual cognitive environment may necessitate the use of a degree of 'contrived' tasks. While I would advocate that intervention maximise the naturalness of the encounter, the findings of this study suggest that difficulties arise only in specific circumstances. The novel use and adaptation of more traditional tasks may allow the clinician to approximate naturalness and aim towards generalisation of skills. One of the more traditional techniques in SLT practice is that of barrier tasks, or referential communication tasks (Yule, 1997). This group of tasks have been widely used across clinical pragmatics and have implicit within their construction a 'uniqueness' in the perspective of each participant. This uniqueness is also mutually manifest by virtue of the barrier obscuring the view of the interlocutor's visual context. Manipulating such tasks so that participants are aware of what information is available, and unavailable, to their communication partner is possible through the use of grid structures in which some boxes are closed and not visible to one party. Such tasks have shown promise in investigating how individuals make use of ToM inferences during interactions (e.g. Barr &

Keysar, 2005; Begeer et al., 2010). Harnessing these tasks in assessment may be a relatively easy way to consider how an individual performs with regard to considerations of mutual manifestness. Similarly, their use in intervention may provide an initial and structured step to assist the person in actively considering the information manifest to their conversation partner. Problems of generalisation are likely to arise, however. The contrived nature of barrier tasks is unquestionable. Novel adaptations, to modernise and approximate naturalness, may be possible. Several tasks have been described in pragmatics research which rely on participants engaging in an initial interaction with a fellow participant over what they believe to be a common experience or common goal, followed by a conversation with the researcher in which they evaluate the original interaction. The video conversation task used by Barker and Givón (2005) is a possible candidate for such a novel adaptation.

In their research, Barker and Givón (2005) asked pairs of participants to talk about a video which they had watched simultaneously but independently of each other. The participants were told that they had watched videos that were almost identical and were told to find out as much as possible about the video that their partner had seen. Following their conversations they were asked, individually, to recount the conversation that they had engaged in with their participant partner. Although such a task may initially seem time consuming, it may be able to avoid some of the pitfalls inherent in relying on very structured tasks or on variable conversational demands. Firstly, as the authors point out, by using video content, the informational content of the interactions is kept relatively constant. The feature constrains the context of the interactions while sparing the on-line nature of the conversational engagement between participants. The nature of the task demands not only engagement in on-line communication (with the participant partner), but engagement designed to tap into the ability to seeks another's perspective. The design of this task inherently taps into the mutual cognitive environment, and modifications of the instructions could further tax context selection abilities. For example, by showing two related but different clips with the same instructions, the participants would almost inevitably presume mutual manifestness of certain assumptions and need to negotiate meaning to resolve the task. This type of task has potential as both an assessment and intervention task. As an assessment task it can be carried out by the clinician and an assistant (as the fellow conversationalist) or even another client. Although time consuming and resource dependant, the information would provide a rich source for analysis of pragmatic performance on a number of fronts, including negotiation of the mutual cognitive environment, the ability to infer meaning within conversation and the ability to convey meaning within considerations of optimal relevance. As a therapy task, feedback processes and reflection could be incorporated into the task, as could strategy-training, for example,

facilitating sensitivity of awareness of signals indicating conversational breakdown, which can then be applied in 'real-world' conversations. Although the task remains relatively contrived, it does incorporate an element of on-line conversation, while maintaining a high demand on 'perspective-taking' processes.

#### 13.3.2 Hearer and speaker roles

While on-line tasks are arguably essential to an appropriate assessment of pragmatic abilities, they pose specific problems in terms of clinical feasibility and replicability. The clinical response to such challenges has been to create structured tasks in which the client answers questions about pragmatic engagement, for example, reflecting on interaction portrayed in a vignette. This type of task is clearly qualitatively different from 'live' on-line engagement — being a represented interaction rather than an experienced interaction (Begeer et al., 2010). While such tasks may provide additional information about the individual's ability to engage in metacognitive processes, the resulting profile of performance may bear very little similarity to how the individual performs in interaction. Such a discrepancy has emerged in the literature (e.g. McCabe et al., 2004), as discussed in the previous chapter and is supported by the findings of the current study.

Given that the aim of SLT would be to maximise functional communicative ability and opportunities for successful engagement, assessment and intervention should clearly take cognisance of the fact that discrete task performance may have little bearing on the functional implementation of those same skills. This fact suggests that conversational data should feature in the assessment process. Such a suggestion is not new to the field of SLT and the need to use contextualised and functional assessments of individual's performance in interaction has been emphasised across clinical populations (e.g. Adams & Lloyd, 2005; Best et al.; Bloch & Wilkinson, 2004; Dormandy & van der Gaag, 1989). Conversational data allows the clinician an opportunity to analyse how the individual functions as both speaker and hearer with rapidly evolving contextual and interactional demands. An overarching clinical concern is the challenge of time and material resources to conduct such embedded assessment procedures (Armstrong, Brady, Mackenzie, & Norrie, 2007). Two complexities emerge in this regard - how to collect a sample of performance that is as representative as possible of the individuals' (dis)abilities, and how to go about the analysis of the assessment data. With regard to the first challenge, the response from the clinical literature has been to suggest that best practice is to collect data from multiple settings with multiple conversation partners. To reduce time demands, a sampling procedure has also been advocated. Such an approach may be useful in relation to considering the functioning of people with schizophrenia too, providing valuable information not just about the

individual's pragmatic performance but also the communicative responsiveness of the conversation partner.

While there are many possible methods to approaching the analysis of conversational data in clinical settings, the results of this study suggest that there are particular features of interest with regard to people with schizophrenia. In light of these results, I would suggest that a fruitful approach to analysis would seek out instances of potential "mismatch between the context envisaged by the speaker and the one actually used by the hearer" (Sperber & Wilson, 1986/1995, p. 16), and analyse the outcome. Such an analysis is likely to shed light on whether an 'egocentric' interpretation occurs initially and how that is resolved, including whether the individual is sensitive to the cues suggesting a "mismatch in contexts" (*ibid*). In addition, giving consideration to any instances of attributive metarepresentation may be useful. Such an approach may not replace the more traditional analysis of clinical conversational data (such as CA), but may be a useful adjunct to shed light on specific concerns unique to this population.

A potential challenge of using naturally occurring conversation as the sole assessment material is how the clinician satisfies herself that the conversation(s) sampled have offered the individual every possible opportunity to deploy the relevant cognitive-communicative skills or reveal difficulties. As the findings demonstrate, the participants were most likely to have difficulty in representing the mutual cognitive environment when there was a unique mismatch between the assumptions held by both parties. It may be difficult to know whether such a situation has arisen and, therefore, difficult to assess whether or not the person has managed the mismatch appropriately.

#### 13.3.3 Considerations of metarepresentation and communication performance

The tentative explanations which were proposed in Chapter Twelve suggest that in the future assessment may be required to address either the interface between mentalizing and pragmatic performance or the metalogical component of metarepresentational abilities in people with schizophrenia.

#### Mentalizing and communication: Assessment considerations

Assessment of ToM is an established domain. However there are significant reasons to question the validity of ToM tasks in relation to predicting or explaining communication performance. Most of these reasons have been presented in the preceding chapters, including the fact that our understanding of the relationship between the metapsychological ability of ToM and the metacommunicative processes in pragmatic function is arguably still being refined. In this light it is perhaps not wise to extrapolate from

a 'pragmatic task' that an individual has ToM deficits and visa versa. Of particular importance to this discussion, however, is whether structured ToM tasks truly tap into the interface which appears to exist between mentalizing and metacommunicative abilities. The findings of this study suggest that difficulties arose only when there were specific demands on this hypothesised interface. Discrepancies have begun to emerge in the literature which highlight the difference between performance on ToM tasks and conversational performance. One suggestion has been that this discrepancy represents a distinction between explicit and implicit mentalizing. In this case, the assessment of mentalizing as it relates to communication depends on the design of a task which taps into implicit mentalizing.

The Fable Task was hypothesised to draw on implicit mentalizing abilities. Despite the more structured nature of the Fable Task, the hearer is still required to select a context for the interpretation of the individual utterances and the narrative as a whole. It would seem that the Fable Task requires the use of mentalizing in responding to the language operations requested of the participant. However, it could also be argued that the Fable Task, by avoiding direct questions about what the characters think, believe or intend, bridges the 'gap' between tasks requiring clear implicit mentalizing (like conversation) and those requiring clear explicit mentalizing. However, the findings of this study suggest that there was little association between performance on this task and conversational performance. Such a discrepancy suggests that there is more to the relationship between ToM tasks and conversation than an 'explicit-implicit' distinction. Further research should consider the nature of performance on this task against existing tasks of mental state attribution. If we assume that mentalizing is somehow involved in communication, as many of the pragmatic theories propose, and the findings of the current study tentatively support, then perhaps tasks which tap into the interface between the two processes will be more fruitful. I suggest that the tasks discussed as assessing the individual's ability to account for the mutual cognitive environment are candidates for assessing the mentalizing-pragmatic interface. These tasks attempt to maintain the on-line process of conversation, thus maintaining both the dynamic and implicit nature of the process. They also have inherent, within their design, a demand on the predictive attribution of mental states (that is, predicting the information available to conversation partner).

#### Metalogical abilities and communication: Assessment considerations

Given the research suggesting metalogical ability may underlie performance on the false belief task, as well as the very preliminary argument that this capacity may be of importance in schizophrenia, future assessments may want to tap into this domain. A significant amount of future research is needed to explore the validity of this hypothesis and the clinical application is likely to be challenging. Indeed, although one can easily imagine different types of tasks in which participants must judge the truthfulness of a statement, there are a large number of variables which could impact on performance. These would include issues of interest and personal 'relevance' of the materials, for example (Sperber et al., 2010). While some elegant tasks have been described by Mascaro and Sperber (2009), these utilise 'pretend play'-type scenarios in which the ability to detect deception is investigated. The nature of these tasks would need to be adapted to be age appropriate, while also avoiding reinforcing any specific delusional content. Direct work on reasoning appears to have some promise in increasing the flexibility and data gathering processes of individuals (Ross, Freeman, Dunn, & Garety, 2011).

### Mentalizing, Metalogical Abilities and Communication: Intervention considerations

I have argued that pragmatic disturbances in on-line communication may arise under particular conditions in people with schizophrenia. As such, intervention aimed at the domains hypothesised to underlie these difficulties needs to be targeted and specific. The types of tasks which I have drawn on in the preceding sections have implication for assessment and intervention, as discussed. In light of the fact that the difficulties described are likely to be underscored by impairments in either mentalizing or metalogical processes, many of the tasks presented would be relevant in addressing issues at the interface between metarepresentational abilities and communication. Those tasks proposed to tap the ability to represent the mutual cognitive environment and the on-line functioning in speaker and hearer roles are all potential sources for intervention tasks. In each case, the demands and support can be varied to the abilities of the client to maintain a level of therapeutic challenge.

An emerging area of practice in mental health intervention is that of Metacognitive Training (MCT) (Moritz & Woodward, 2007). MCT targets areas such as Jumping To Conclusions and Theory of Mind, using a combination of discussion, reflection and exercises aimed at tapping these skills:

Exercises targeting each bias individually demonstrate the fallibility of human cognition in general, with an explicit focus on thinking biases that are important in schizophrenia. Personal examples of these biases expressed by MCT participants, and discussion of ways to counter them, serve to provide corrective experiences in a fun and supportive atmosphere, yielding obvious advantages over mere lecturing (Moritz & Woodward, 2007, p. 621).

While pragmatics or interpersonal communication is not an overt target of MCT, the program does appear to target candidate difficulties underlying pragmatic disturbances. In addition, intervention may draw on some of the principles of 'experiential' programs for social skills which show promise in achieving generalisation of abilities to novel settings. The principles of such an approach may also be adapted for specific conversational intervention, with outcome measures designed to reflect real world communication and performance. Given the potential to engage in delusional content, SLTs working in the area may need opportunities to access training which reduces the risk of reinforcing delusional content. Training in Cognitive Behavioural Therapy, for example, has proven useful in the emerging area of practice of SLT service provision in mental health in the Irish context (Brophy, personal communication). A complementary approach, and one which I have used in clinical practice, is collaborative work with other mental health care professionals. In this context, co-therapy can be harnessed, with the SLT free to directly engage in working with the individual on pragmatic considerations in the interaction, and other professionals focusing on particular psychiatric symptoms, for example.

### 13.4 Addressing the collaborative nature of conversational competence: The role of conversation partners

There is clearly a tension between maintaining the on-line nature of communication, and providing a context in which the individual can build on their pragmatic skills in a way which challenges their ability. At the same time, communication is a social process and meaningful engagement is important. Situated pragmatics (Duchan, 1997) is an approach to intervention which focuses on enhancing the opportunities for interaction, rather than on identifying and remediating deficits. Such an approach advocates that we look beyond the individual, to the individual in their context. Supported Socialization, and identifying barriers to successful social interaction may be important. However, the focus of this study leads to a specific consideration of the role of communication partners in the success of conversational engagement.

The findings of the current study demonstrated the collaborative nature of the engagement. REA at times facilitated the engagement and meaning-making process through seeking mutual manifestness. The findings suggested that REA consistently searched for mutually manifest assumptions, both in the process of collaborative meaning-making and in exiting delusional talk where the relevant assumptions had alluded her attempts to access them. Such engagement resonates with Thomas' (1995) definition of pragmatics, and forces us to consider the collaborative space as central in interactional success:

Pragmatics is meaning in interaction. This reflects that meaning is not something which is inherent in the words alone, nor is it produced by the speaker alone, nor by the hearer alone. Making meaning is a dynamic process involving the negotiation of meaning between speaker and hearer, the context of the utterance (physical, social and linguistic) and the meaning potential of an utterance (Thomas, 1995, p. 22).

Indeed the analysis in Chapter Ten suggested that REA supported the communication, compensating at times for the manifest difficulties in metarepresenting the mutual cognitive environment. At times, however, REA appeared to co-construct inaccessible context and in this way possibly undermine the opportunities for successful interaction. It has been acknowledged and discussed in previous chapters that this approach to the interaction in unlikely to be representative of how all communication partners might respond in conversation. While these factors need more investigation, both in relation to a range of conversation partners and in relation to the impact they have on interaction, it can be hypothesised that styles and strategies brought to the conversation will impact on the success of the engagement. The resulting level of success is likely to impact on how the individual is subsequently portrayed or perceived: either as competent or incompetent. As quoted in the previous chapter:

It is possible to extend our notion of communicative competence beyond consideration of how competence is vested in the individual, by recognizing competence as arising from the interactive relationship of communication partners as they negotiate messages (Ferguson, 1996, p. 56).

The RT analysis of the data in this study supported the notion of competence (and incompetence) arising from the interaction between the two conversationalists. For this reason, I would suggest that it is not sufficient merely to 'assess' the individual with schizophrenia in order to uncover (dis)ability. The significant conversation partners also need to be part of the assessment and intervention process.

Consideration of the communication skills and resources of conversational partners is now a practice common within SLT, approached in different ways. The significant others of people with aphasia or dementia, for example, are commonly offered opportunities to learn strategies which will support successful communication (e.g. Kagan, 1998; L. Perkins et al., 1998; Wilkinson et al., 2010), as well as opportunities for support, discussion, information and skill acquisition (e.g. Lock et al., 2001; Pound, Parr, & Duchan, 2001). Frontline and healthcare staff may also be trained to support communication, as has been done in settings in which people with acquired communication disorders reside or are treated (e.g. Simmons-Mackie et al., 2007; Sorin-Peters, McGilton, & Rochon, 2010). Although the strategies are likely to be distinct, this practice may be very useful in promoting successful engagement between people with schizophrenia and those friends,

family and professionals with whom they interact. In fact research within the realm of communication and psychiatry has argued that interventions targeted at improving patient-clinician communication have favourable outcomes and should be pursued in research and clinical practice (McCabe, 2008; Priebe & McCabe, 2008; Priebe et al., 2007). In the participatory action research study by Schneider and colleagues (2004), the ability of the mental healthcare professionals to support successful interactions with people with schizophrenia emerged as a powerful theme. The SLT, with experience in training communication partners, may be well placed to engage other healthcare professionals, or even work alongside people with schizophrenia to improve the communication strategies used by medical staff.

Practically, the engagement of significant others may involve a process of appraising their own communication skills and strategies. This appraisal may apply to family members or significant others, where a profile of current patterns and strategies of communication may assist in planning intervention, as has been used in other populations (e.g. L. Perkins et al., 1998; Whitworth, Perkins, & Lesser, 1997). These members of the individual's social network can then be "encouraged and facilitated to communicate more effectively with the person with a [mental health disorder] in a way which promotes shared understanding and a positive communicative experience" (Walsh, 2008a, pp. 337-338). A skill appraisal may not be appropriate for other mental health professionals, who are likely to form a significant part of the individual's social network. In these instances, sensitising staff to general principles of facilitating successful engagements may be useful.

Building on the discussion about pragmatic disability from an RT perspective (section 1 of Chapter Twelve) may have application in sensitising conversation partners of those with schizophrenia to the communication profiles of individuals. While conversation partners may helpfully adjust their communication strategies to accommodate for an individual assumed to be less communicatively 'competent' (Garcia et al., 2001), such an assumption also has the possibility of eroding successful engagement. Particularly in a disorder in which stigma is rife, an assumption of mental illness may lead to a subsequent assumption of 'incompetence', an avoidance of engagement (Walsh, 2008a). In addressing a similar issue in relation to communication of people with neurological impairment, Garcia and colleagues suggest:

a conversational partner can decide not to interpret a statement as relevant if he or she believes or has been told that this person is 'incompetent'. The partner might also decide that it is not worth the effort to work on keeping the conversation coherent. This means that the partner has the option of not inventing or inferring the necessary discourse links. Likewise if the speaker is

judged to be incompetent, such a label may lead to an interpretation of irrelevance even when not warranted (Garcia et al., 2001, p. 19).

Conversely, sensitising the conversation partners of an individual with schizophrenia to the notion that the individual is aiming for relevance within their own framework of assumptions may lead to a more positive approach to interaction.

While the current study gives some indication of the potential importance of engaging conversation partners in the therapeutic process, further work may see these approaches integrated with a broader 'situated pragmatics' approach to working with people with schizophrenia.

# 13.5 Conclusion: Towards the application of a Relevance Theory approach to the communication disturbances of people with schizophrenia

I have argued that taking a Relevance Theoretic perspective, this study has begun to explore some of the unanswered questions in relation to metarepresentational abilities in the disorder of schizophrenia and performance within the 'natural' context of conversation. In doing so, it has shed some light on the relatively new discussion of modularity in relation to pragmatics. These tentative steps towards an explanatory account of the disorder have been argued to have important implications for the clinical concerns of assessment and intervention.

There is a clear need to include conversation in both assessment and intervention practices. However, given that the difficulties which emerged in conversation were subtle and inconsistent, such assessment may need to be supplemented by other tasks. There is a dearth of tasks which are able to bridge the gap between conversational demands and the less natural contexts of current discourse level tasks. Novel tasks, which approximate online processes and experienced rather than represented interactions (Begeer et al., 2010), may prove to be useful in this regard, as they attempt to maintain an authenticity of interaction while manipulating variables related to mutual manifestness, for example. To achieve directed intervention with the aim of targeting pragmatic ability, the design of assessment processes and direct intervention programs must consider the cognitivepragmatic context and constraints of the task. Ingenious task design will be required if intervention is going to maintain a level of 'on-line' processing while, at the same time, intensively challenging specific skills. It is recognised that direct intervention of this sort may not be appropriate or relevant for all individuals. However, for those actively seeking to work on their communication we, as clinicians, should be able to provide intervention which is theoretically sound and appropriately focused. Only then, I would argue, are we meeting the needs of this client group to the degree that we are able to offer focused therapy in

more developed areas of the profession. The pragmatic nature of the difficulties offer a particular challenge to the field, a challenge that is arguably only met when we respond with assessment and intervention practices that "get closer to the action" (Davis, 2007, p. 113) of cognitive-communication processes.

# **Chapter Fourteen**

# Reflections on methodological challenges and final thoughts

While this study successfully tested the hypothesis that impairment in mentalizing would manifest in the on-line conversational performance of participants with schizophrenia, several important limitations are recognised. The methodological challenges raised by the application of RT to the analysis of discourse data are particularly important considerations and will be considered in section 14.1. The role of the researcher and the challenges of the design of the study in this regard will be considered in section 14.2. The limitations imposed by the design of the study will be addressed in section 14.3 before the chapter is concluded.

### 14.1 Limitations and challenges in the application of Relevance Theory

The notable strength in applying RT to the question of metarepresentation and mentalizing in people with schizophrenia is arguably its cognitive perspective on communication. This cognitive paradigm is also its most significant limitation. I have argued throughout this thesis that the cognitive underpinnings of the mentalizing account of schizophrenia requires a cognitive perspective on pragmatics, however the limitations of this analysis are acknowledged. RT is undoubtedly and unapologetically cognitivist in its stance. Despite this stance it has been successfully applied to issues of social or interactional importance (as discussed in Chapter Five). While I have embraced this cognitivist approach, its application to conversation entails an awareness of the inherent indirectness in drawing cognitive conclusions from the analysis of what is essentially behavioural data.

Exploring metarepresentational ability in the participants in this study was achieved through the 'window' of conversation. RT provided the basis for theorising about what types of utterances indicate metarepresentational abilities, but these in themselves are merely manifestations of what cognitive functions are assumed to underpin them. Similarly, in identifying how participants 'take the perspective of the other' the analysis must extrapolate from linguistic behaviour to cognitive abilities. This extrapolation to mental states is criticised by some scholars who argue that the analysis should rest on what is visible in the data alone. Such an argument is compelling, but it constrains the analysis from exploring any cognitive dimension, the dimension of interest when investigating mentalizing models of the disorder. In analysing how participants interpret metarepresentational utterances, the analyst is faced with further challenges. Like many other approaches to the analysis of conversational data, analysing how a participant has interpreted an utterance relies on the indirect evidence gleaned from their response. While this is clearly accepted as

evidence for how a communicator has interpreted a prior 'turn' in the conversation, the evidence is once again indirect.

There were challenges in operationalising the construct of interpretive use within conversational data. The first was raised by a question posed by REA to OPH in extract (23) (Chapter Eight). This utterance, while conforming to the properties of a regular question, was asking about a potential attribution. Such an example brings into question the seemingly stark differentiation between regular and echoic questions. To my knowledge RT has not dealt with this potential 'overlap' and the implications for analysis of metarepresentational abilities have yet to be explored. While the analysis in this case stayed true to the formal RT definitions of regular and echoic questions, it is recognised that such examples require further theoretical developments. The open ended discussion in (23) is intended to reflect some of this uncertainty. An additional challenge raised by the application of the notion of interpretive use to conversational data was also in relation to echo questions. A powerful feature of RT is its recognition that echo questions may echo thoughts or inferences, rather than restrictively confined to the echoing of prior utterances. This notion has proved powerful in providing a unified theory of such questions. It's application to conversational data is more challenging as, without referring to an overt prior utterance, the analyst must make some assumptions about the speakers intentions or interpretations which lead them to ask such a question. At times this analysis is realtivley straight forward, given contextual information. However the 'jump' from behavioural data to cognitive assumptions can challenge the analysis.

RT, as a theory of pragmatics, is not attempting to describe typical and atypical function. Again this can be viewed as a strength, but it also poses significant limitations in the analysis of data from clinical populations. It is my view that recognising that typical interaction entails breakdown is a strength of a RT approach to clinical pragmatics, however when it comes to demarcating the nature and extent of disability (necessary in clinical research as well as practice), there are limitations to this approach. The fact that its starting point is a recognition that pragmatic function is a less-than-prefect heuristic means that identifying atypical difficulties, as apposed to typical pragmatic 'breakdown' is difficult. Identifying with any certainty whether a negotiation of meaning is 'typical' or whether it is due to a breakdown in the ability of the participants to take into consideration that perspective of the hearer, is largely based on a qualitative analysis which considers performance in that sequence of talk. While the call from the domain of clinical pragmatics has been to further the application of established pragmatic theory to clinical populations, the relationship between the two fields requires further exploration.

The cognitive processes underlying pragmatic function of individuals are essentially invisible, or at best, only indirectly accessible, to the discourse analyst. Such research may be complemented by descriptive approaches to research questions in this field. Triangulation between descriptive discourse analytic studies, and studies utilizing cognitive approaches may help to validate findings. While the analysis is based in established theoretical paradigms and can be indirectly established through the analysis of talk, developments in experimental pragmatics and electrophysiological technologies may yield new research avenues. Recent developments in experimental pragmatics have suggested that approaches and theories may be refined by drawing on some of the principles of psycholinguistics (Sperber & Noveck, 2004). The emerging use of language sensitive Event Related Potentials<sup>70</sup> (ERPs) in the field of pragmatics appears to have much to offer (Coulson, 2004). Such research may assist theorists in further refining pragmatic theories and, perhaps for example, the establishment of response markers to 'relevant' utterances may help to further define how such utterances or responses manifest in talk. I am not suggesting that such means should, or could, replace the role of the analysis of discourse, but merely that such endeavours may help to further elucidate how individuals produce and respond to utterances at a neural level. The findings of this study suggest that the model of multiple metarepresentational abilities, proposed by Sperber (2002), is a promising one. Clear falsifiable hypotheses, such as those explored in the previous three chapters, can be extracted from the model and tested in both typical individuals and those presenting with schizophrenia, utilising multiple methodologies.

# 14.2 The role of the researcher: considerations and implications for generalisability

The role of the researcher across the phases of data collection, extract selection and data analysis was recognised at the outset as a potential challenge (section 5.8 of Chapter Five). The section will reflect on the role of the researcher, acknowledging the limitations imposed by the study design and suggesting potential solutions in future research.

#### 14.2.1 Data collection: nature of the interactions

The conversational data in this study is comprised of 23 conversations, all of which involve the researcher as conversationalist. While participant observation is an accepted method in communication research, and offers certain advantages (discussed in section 5.9.1 of Chapter Five), there are significant challenges posed by this design. Previous work with

<sup>&</sup>lt;sup>70</sup> A non-invasive measure of electrical activity in the brain, used to study the neurobiological responses to behavioural stimuli (Coulson, 2004).

other clinical populations suggests that interaction with examiners rather than key conversation partners is qualitatively different (L. Perkins et al., 1998), and thus REA as a conversational partner may impact on the generalisability of the findings. The findings, as they relate to the dyadic exploration of the data, did suggest an active and collaborative process of meaning-making and this process is likely to be significantly impacted by the expectations and beliefs of REA as the conversation partner, as well as the nature and purpose of the interaction itself. In Chapter Thirteen, I acknowledged the possible analytic bias of a clinician, who may be biased towards identifying disability. However, during the course of the interaction itself a clinician-researcher, may interact in a manner which biases the data in another direction. As a clinician, I may have attempted to compensate for the pragmatic difficulties, as the analysis of the collaborative meaning-making process suggested. Such a collaboration may not be characteristic of other interactions, or other non-clinician communication partners. Equally, the collusion in delusional talk may not be seen in other interactions. This collusion was analysed to perpetuate talk 'outside' the mutual cognitive environment. It is acknowledged however, that colluding in delusional talk may itself have been facilitatory at an interactional level. Given that features of the talk were clearly facilitatory and may have been driven by the interlocutors role as a clinician, it is plausible that pragmatic disturbances would be more apparent in other interactions which are less facilitatory.

I would argue that this limitation on generalisability is valid in so far as the potential familiarity and facilitatory role of the interlocutor is recognised. From a cognitive-pragmatic perspective, the processes should remain consistent across contexts and conversational partners. In other words, the majority of the individual participants in this study displayed significant skill in deploying metarepresentational abilities within conversation. That this finding supports the findings of McCabe's (2004) study is undeniable and adds to a body of evidence suggesting that people with schizophrenia show unexpected ability in using 'ToM' abilities when engaged in interaction, forcing us to question the validity of models which suggest that communicative performance is hampered by impairments in mentalizing. What would be expected to vary across contexts and conversational partners is the assumptions available and those potentially evoked during the interaction. Without data on a wider range of conversational contexts and conversation partner this hypothesis cannot be tested. Future research should recognise that the use of "sampling methodologies that allow a transparent view of how language is used in a person's usual social context [is] crucial" (L. Perkins et al., 1998). For this reason, further research should explore similar dimensions across a range of conversational data. Of particular interest would be an exploration of the

performance of individuals in a range of conversational settings, with a range of partners, as discussed in section 14.3.

### 14.2.2 Data analysis: Extract selection and analysis

In Chapter Five I outlined the approach taken to selection of utterances and sequences for analysis. In this study, the selection of data was based on the theoretical constructs of interest, as determined by the research question. I have argued that the approach taken in this study avoids the possible risk of bias imposed when extracts for analysis are selected based on judgements of 'interactional success' or 'interactional failure'. However, in the analysis of discourse, extracts and utterances for analysis must be selected in some manner and, in isolating utterances, or sequences of talk, limitations are inevitably imposed. All instances of the phenomena of interest were coded for analysis to ensure systematicity across participants. This approach is only as reliable as the theoretical constructs chosen and findings are constrained by the choice of phenomena. A narrow focus on specific phenomena allows for a systematic considerations of the data in relation to the research questions, however such an approach may still risk missing the 'whole picture'. In other words, features of the data relevant to the research questions, but not specified by the theoretical stance taken, may be missed.

Extracts were selected and analysed by the researcher alone, without the use of a second rater. There is some debate in the literature whether inter-rater reliability is appropriate in qualitative research (Cook, 2012). Cook suggests that in his analysis of reliability assessments, such inter-rater reliability within qualitative research "deferred to positivist research standards, which are at odds with the purpose of qualitative inquiry" (p. 98). The decision to use a second rater is determined in part by the philosophy of the methodology and in part by the practical and analytical requirements of the study. In the current study, a decision was taken to avoid inter-rater reliability given the burden of requiring the analyst to have familiarity with the socio-cultural and situational context of data collection as well as the novel theoretical framework deployed in analysis. These very specific analytic requirements appeared to undermine the possible benefits of inter-rater reliability. Future research should consider whether a second rater is feasible within the paradigm employed. If the RT application used in the current study is replicated, I would suggest a process of external triangulation as an alternative to inter-rater reliability. This approach would entail investigation of the research questions through the analysis of the same body of data from two different methodologies.

A specific challenge within the analysis of the extracts selected was how 'context' was embodied with regard to the social and individual assumptions of the conversation

partners. While as the analyst I clearly had access to REA's assumptions during the interactions, those assumptions available to the participants were invoked (or imposed) by virtue of the 'insider' role. As a South African and a member of the hospital community, many of the situational, sociocultural and sociohistorical assumptions would be available to me as interlocutor and analyst. However, despite sharing some of these common assumptions, it must be recognised that "beyond this common framework, individuals tend to be highly idiosyncratic" (Sperber & Wilson, 1986/1995, p. 16). It is therefore possible, and indeed probable in some instances, that the analysis reflects occasions in which I, as the analyst, impose assumptions on the participants, presuming these to have been invoked in the pragmatics processes at play. This stance is a risk of participant-observation, which, although exceptionally 'close to the action' in some ways, can still never presume to 'know' the other. Applying a cognitive theory to this type of data is perhaps more challenging and entails more risks of assumption in some instances. Triangulation of studies and methods is a viable means to reduce this risk.

## 14.3 Limitations of the study components and implications for further research

Many of the conclusions presented in the previous three chapters signal new avenues for research and theoretical development. The qualitative and exploratory nature of the study means that in several instances potentially important implications are hinted at, or tentatively suggested, but cannot be definitively presented. This brief discussion will address the limitations of the components of data included in the study and consider specific implications for future research.

The study was limited in its consideration of only one situational context for the conversational data, involving only one conversation partner, the researcher. It is recognised that the factors brought to bear in the context and by the researcher as interlocutor are unique and certainly not representative of all possible conversations and conversational partners encountered by these individuals. While the study did not set out to investigate conversations which were representative of typical conversations in which these individuals would engage, the narrow and specific contextual factors may be critiqued as having a significant impact on the ability to generalise from these findings. As outlined in section 14.2, future research in this area should considering collecting samples of a range of conversations, contexts, and interactions with different conversational partners.

The absence of traditional ToM or false belief tasks in the data set is a limitation of the current study. Such data would have complemented the discussion and perhaps pointed more specifically to the deviance between performance on the traditional-type assessments and on-line conversational performance. The inclusion of such an assessment would also

have allowed the usefulness of the Fable Task to be more robustly considered. The exclusion of a traditional ToM task in this study stemmed from the qualitative and exploratory nature of the study, which developed out of an initial probe that aimed to describe language and communication functioning of the participant group. As detailed in the methodology chapter, the conversational data yielded several interesting hypotheses which were then pursued. Future research should not only consider the Fable Task against more traditional ToM test data, but also evaluate performance on these tasks alongside conversational performance. Given the questions raised by researchers in the area of typical ToM performance (e.g. Barr & Keysar, 2005; Epley et al., 2004), a complementary line of research includes investigation of typical performance on the Fable Task and related ToM tasks. This study has argued that conversational performance is an essential component of testing theories of pragmatic processes in schizophrenia. While experimental tasks constrain the variables involved they also necessarily constrain and potentially distort the concept of pragmatic processing. At the same time, it is recognised that for the findings of this study to be developed, a greater level of control of the task demands is required. Drawing from the field of experimental pragmatics and social cognition, several 'naturalistic tasks' can be constructed in which conversation features in a more controlled context. A range of tasks, from the most controlled 'false belief' tasks to conversational engagement, could shed light on how task-demands interact with performance along the parameters of interest. These developments have potential practical implications for the assessment and intervention for pragmatic disturbances in schizophrenia as discussed in Chapter Thirteen.

While language history was controlled as much as possible in a diverse context, the heterogeneity of the participants in this regard imposed a limitation on the generalisability of the findings. Future research should constrain this aspect more specifically. An interesting and potentially fertile area for further exploration would be to investigate multilingual and monolingual participants. All the participants in the current study were multilingual, given the socio-cultural context. There are early indications that multilingual children show precocious development of ToM, thought to be related to greater inhibitory control, metalinguistic awareness and sociolinguistic experience (Goetz, 2003). It is possible that this 'multilingual advantage' persists into adulthood. Recent research into aging and dementia has suggested that multilingualism may in fact offset age-related cognitive changes, and even be a protective factor in the disorder of dementia (Bialystok et al., 2007; Bialystok et al., 2004). While much of the current understanding of schizophrenia points to it as a neurodevelopmental (e.g. Condray, 2005; Nicolson et al., 2000; O'Connell, Woodruff, Wright, Jones, & Murray, 1997), rather than a neurodegenerative disorder, it is possible

that multilingualism facilitates increased metalinguistic skill and an associated robustness in communicative ability.

The current study was limited by its reliance on audio- rather than video-taped data, which is recognised as superior in the analysis of communicative encounters (McCabe, 2008). The suggestions around the modularity of metarepresentational abilities which have emerged from this study warrant further investigation. One direction for future research in this regard would be further investigation of the attitudinal aspect of verbal communication. Exploring the prosodic interpretation and interpretation of facial expression in people with schizophrenia during communicative exchanges may shed further light on the nature of the nuanced disturbances which were seen in the participants' conversational performance. For this exploration, video-taped data is essential.

## 14.4 Conclusion: Methodological challenges

The application of novel theories and approaches, such as pursued in this thesis, have limitations. Acknowledging these limitations and further pursuing such application has the potential to contribute to our understanding of the complex area of pragmatic disability, and specifically pragmatic performance in people with schizophrenia. When these are conducted alongside other studies, or triangulated against related studies using different methodologies, the outcome is likely to help to move forward this important field.

# **Final Thoughts**

This study began as a search for an explanatory theory of pragmatic disturbances in people with schizophrenia. As a clinician, my own frustration with cursory treatment plans based on limited theoretical foundations, in the context of individuals seeking support in this regard, prompted the questions that drove this qualitative study. I suggested at the outset that such an explanatory account should link the pragmatic features of the communication with the cognitive underpinnings of the disorder.

While (1992)mentalizing models of the disorder, such Frith's metarepresentational model, predict certain impairments in pragmatic performance, there has been limited consideration of on-line conversational performance. This study has demonstrated that the disturbances in pragmatics are far more nuanced than predicted by Frith's model. In fact, the individuals who participated in this study demonstrated clear evidence of deploying metarepresentational abilities in sophisticated ways. Such evidence supports that which has emerged in a previous study by McCabe and colleagues (2004) which revealed evidence for intact Theory of Mind (ToM) abilities in conversations between people with schizophrenia and clinicians. I have argued that the pattern of performance revealed by a Relevance Theoretic approach to the data provides hints towards an alternative view of the disorder. This novel application of Relevance Theory (RT) to this type of clinical data and set of research questions has potential implications for the theory itself. It not only clearly demonstrates the utility of the theory to discourse data and clinical pragmatics more broadly, but also provides tentative support for the modularity thesis of metarepresentational abilities. My own 'journey' through the process of exploring and applying RT has been both challenging and rewarding and has left me a desire to further pursue the implications of the powerful theory for the domain of clinical pragmatics.

Although this study takes a theoretical stance on clinical data, it may have clinical implications. In particular, it provides potential routes of action of clinical engagement with individuals with schizophrenia, forcing us to consider the importance of on-line tasks in both the assessment and intervention processes. Speech and language therapy is a relative newcomer to the field of psychiatry and is steadily developing. There is a move towards considering outcomes of intervention programmes, a development which indicates the growth of the field. At the same time, clinical practice should continuously seek to ground treatment in a clear understanding of the nature of the disorder and its consequences. This study has focused very specifically on exploring some of the 'predictions of impairment' which arise from models of the disorder, and, as such, the implications for practice are focused on findings in this regard. It is recognised as paramount, however, that the 'voice of

the person' is also heard in the process of service provision and intervention planning. Indeed, what has emerged is a significant profile of ability, compared to that which would be predicted on the basis of theoretical modelling of the schizophrenia. This profile suggests that it is not only an individual's pragmatic disturbances which impact on successful social engagement, but also the skills and responses of the communication partner and the presence of barriers to successful interaction which are likely to exist in the environment of the individual with schizophrenia.

It is hoped that by building towards an explanatory account of conversational function this thesis will be a part of developing a science of intervention, allowing for clinicians to better serve this population. This study is a call to look beyond 'symptoms' or cursory presentation in language and communication performance. It is even a call to look beyond what is linguistically manifest at the level of discourse. As Myers (1999, p. 7) points out, "[e]ffective treatment is, of course, as dependent on understanding the why of behaviour as it is on understanding the what". An explanatory theory, which must by its nature account for more than just the superficial presentation of symptoms, will allow us to understand the 'why' of pragmatic behaviour in people with schizophrenia. Relevance Theory has proved fruitful in this regard, enabling the analysis to consider both the features of conversational engagement and tackle the underlying cognitive processes hypothesised to be involved. The 'natural habitat' of pragmatic processes – conversational interaction – has emerged as a central consideration. Not only does it appear that performance in on-line tasks is distinct from that predicted by performance in isolated experimental paradigms, but conversation is also the domain in which the social impact of the disorder is most acutely felt. More effective intervention thus surely requires the pursuit of increasingly powerful explanatory theories to enable clinicians to support people with schizophrenia to navigate the conversational terrain of their lives, so central to their social wellbeing.

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**Appendices** 

# Appendix A

Letters of approval from relevant ethics committees

#### SCHOOL OF MEDICINE

#### **FACULTY OF HEALTH SCIENCES**

Trinity College, Dublin 2, Ireland Tel: +353 1 896 1476 Fax: +353 1 671 3956 email: medicine@tcd.ie

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Professor Dermot Kelleher, MD, FRCPI, FRCP, F Med Sci Head of School of Medicine Vice Provost for Medical Affairs

Ms Fedelma McNamara School Administrator

> Caroline Jagoe 4 St. James Sovereign Parks 27 Smith Road Bedfordview 2047 South Africa

26 July 2007

Study: Language in Schizophrenia: The performance of patients on language assessment batteries

Dear Ms. Jagoe,

Further to a meeting of the Faculty of Health Sciences Research Ethics Committee 2006 - 2007, we are pleased to inform you that the above project has been approved without further audit.

Yours sincerely

Dr. Orla Sheils

Chairperson

Faculty of Health Sciences Research Ethics Committee

cc. Supervisor – Dr. Irene Walsh, Clinical Speech & Language Studies, Trinity College Dublin

### UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

# HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL) R14/49 Jagoe

CLEARANCE CERTIFICATE PROTOCOL NUMBER M070317

PROJECT Language in Schizophrenia: The Performance

of Patients on Language Assessment

Batteriess

INVESTIGATORS Ms C Jagoe

**DEPARTMENT** Speech Pathology

DATE CONSIDERED 07.03.30

**DECISION OF THE COMMITTEE\***APPROVED UNCONDITIONALLY

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE

07.04.18

CHAIRPERSON .....

(Professors PE Cleaton-Jones, A Dhai, M Vorster,

C Feldman, A Woodiwiss)

\*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor:

Dr I Walsh

#### **DECLARATION OF INVESTIGATOR(S)**

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. I agree to a completion of a yearly progress report.

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

# **Appendix B**

Participant information leaflet and consent forms

Appendix B: Participant information leaflet and consent forms

## INFORMATION LEAFLET

CTUDY MIIMPED.	1/1070217	(Mitc HDEC)	١

STUDY TITLE: Language performance in schizophrenia

**INVESTIGATOR:** Caroline Jagoe

**INSTITUTION:** XX Psychiatric Hospital

**DAYTIME AND AFTER HOURS** 

TELEPHONE NUMBER(S): Can be contacted via the staff in the ward

**To the Participant**: This consent form may contain words that you do not understand. Please ask the investigator or the study staff to explain any words or information that you do not clearly understand. You may take <u>an unsigned copy of this consent</u> form to think about or discuss <u>before making your decision</u>.

Protocol: English Information Leaflet Version: 07.03.2007

Investigator's name: Caroline Jagoe

Approved by Wits HREC

Participant Initials: \_\_\_\_ \_\_\_

Participant Number: \_\_\_\_\_

Hello, my name is Caroline. I am a speech-language therapist doing research in communication in mental illness and I invite you to take part in this study. Your participation is entirely voluntary.

- 1. Before agreeing to participate, it is important that you read and understand what this study is about, the activities you would be asked to do, and your right to withdraw from the study at any time. This information leaflet is to help you to decide if you would like to take part.
- 2. If you have any questions, do not hesitate to ask me.
- 3. You should not agree to take part unless you are satisfied about all the procedures involved.
- 4. If you decide to take part in this study, you will be asked to sign to confirm that you understand the study. You will be given a copy of this agreement to keep.

### PURPOSE OF THE STUDY

We are conducting a study on language and communication in patients who have been diagnosed as having schizophrenia. We are interested in the way that communication may be affected in patients who have schizophrenia and we invite you to take part in this study. We hope that the information gained from this study will lead to the development of useful materials and guidelines for staff working in mental health settings with people with schizophrenia (e.g. nurses, doctors, speech and language therapists).

## **LENGTH OF THE STUDY AND NUMBER OF PARTICIPANTS**

- The study will be performed in xx Hospital
- Approximately 30 individuals will take part.
- The participants will be between the ages of 18 and 50 years .
- The total amount of time required for your participation in this study will be no more than 3 hours with lots of breaks within this time period.
- You will be asked to visit me only once during the study.

### THE ACTIVITIES YOU WILL BE ASKED TO DO

If you agree to take part in this study

- you will asked to take an English language test
- you will have a brief interview with a psychiatrist
- you will be asked to do some other language activities. These should take about 2 hours but there will be lots of break with refreshments. In these tasks you will need to follow instructions by pointing to pictures. You will also need to answer some questions. The tasks and interaction will be audio-taped.
- none of the procedures will cause any discomfort or involve any risk.

Participant Initials:
Participant Number:

### **BENEFITS AND RISKS**

- □ There are no risks involved in this study.
- □ After the activities you will be told how you did and if necessary, be invited to be on a waiting list for communication therapy.

### CONFIDENTIALITY

- All information obtained during the course of this study, including hospital records, personal data, research data and the audio-taped material will be kept strictly confidential.
- □ This means that the information will not be seen by anyone other than the investigators in the study and their supervisors. You will not be identified in any way in any reports or publications following this study. The information will not affect your treatment in any way.
- □ The audio-tapes will be kept safely by the researcher. If you would like to view the transcript of the taped material (the written form of what was taped), you may do so. After the study, all taped material will be destroyed.

Your ward doctor and consultant will be aware of your participation in the study.

### PARTICIPATION IS VOLUNTARY

- Participation in this study is voluntary.
- □ You have the right to stop taking part in the study at any time, without stating reasons.
- ☐ If you decide to stop the study, this will not affect your access to other medical care.

I will give you any additional information that becomes available during the study, which may affect your willingness to continue on the study. I, or your ward doctor, may decide withdraw you from the study if it is considered to be in your best interest.

### ETHICAL APPROVAL

- □ This clinical study protocol has been submitted to the University of the Witwatersrand, Human Research Ethics Committee (HREC) and written approval has been granted by that committee.
- □ Approval has also been granted by xx Hospital and the University under which the study is being conducted (Trinity College, Dublin).

### SOURCE OF ADDITIONAL INFORMATION

For the duration of the study, you will continue to be under the care of your ward doctor. If you have any questions about the study, please do not hesistate to contact me. The telephone number through which you can reach me, is known by the ward staff and you may contact them if necessary. If you want any information regarding your rights as a research participant, or complaints regarding this research study, you may contact Prof. Cleaton-Jones, Chairperson of the University of the Witwatersrand, Human Research Ethics Committee (HREC), which is an independent committee established to help protect the rights of research participants at (011) 717 2229.

articipant Initials:
articipant Number:

## INFORMED CONSENT

We are conducting a study on language and communication in patients who have been diagnosed as having schizophrenia. If you agree to take part in this study, you will be asked to take a brief English language test and you will have a brief interview with a psychiatrist. We would like to do a few other language tasks with you, this should take about 2 hours and there will be a break with refreshments. None of the procedures will cause any discomfort or involve any risk.

All information, including the audio-taped material will remain confidential. None of the participants in this study will be identified in any way in any reports or publications following the completion of this study.

- I hereby confirm that I have been informed by the investigator, Caroline Jagoe about the nature, conduct, benefits and risks of the clinical study "Language performance in schizophrenia"
- I have also received, read and understood the written information (Participant Information Leaflet) regarding the clinical study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- I may, at any stage, stop my participation in the study and I understand that this will not affect my treatment in any way.
- I have had an opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

I, and understood the contents of the irreport but understand that there will be	, agree to take part in this research. I have rean information form. I agree that my response may be used in the nothing to identify me personally.
PARTICIPANT:	
Signature / Mark or Thumbprint	Date and Time
Protocol: English Informed Consent Version: 07.03.2007 Investigator's name: Caroline Jagoe Approved by Wits HREC	Participant Initials:Participant Number:

# Consent to participate in audio-recording

searcher and destroyed after	tand that the audio tapes will	be audio-recorded for participation in be kept in the possession of the re- e that my response may be used in a e personally.
PARTICIPANT:		
Signature / Mark or Thumbprint	Date and Time	
WITNESS:		
Printed Name	Signature / Mark or Thumbprint	Date and Time
Protocol: English Informed Consent Version: 07.03.2007 Investigator's name: Caroline Jagoe	Participant I	nitials:
Approved by Wits HREC Date approved:	Participant N	lumber:

## Appendix B: Participant information leaflet and consent forms

I, Caroline Jagoe, herewith confirm that the above participant has been fully informed about the nature, con-

ons. I believe that the participa			
IVESTIGATOR:			
Printed Name	Signature		Date and Time
VITNESS:			
Printed Name	Signature		Date and Time
Protocols English Informed Consent			
Protocol: English Informed Consent Version: 07.03.2007 Investigator's name: Caroline Jagoe Approved by Wits HREC		Participant Initials:	

# **Appendix C**

Language assessment profiles: Summary data

Appendix C: Language assessment profiles

# C1. Participants performance on the 'Pyramids and Palm Trees': a test of semantic access (Howard & Patterson, 1992)

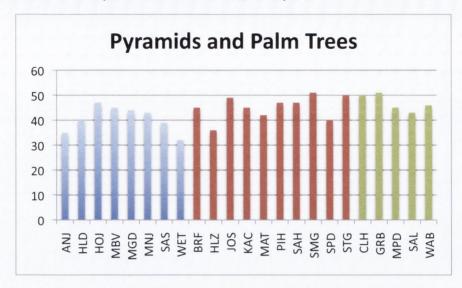


FIGURE C1. PARTICIPANTS TOTAL SCORES ON THE PYRAMIDS AND PALM TREES ASSESSMENT

The version of this assessment measure carried out is designed to "assess a person's ability to access detailed semantic representations from [...] pictures (Howard & Patterson, 1992, p. 5). In the normative sample reported by the authors, no subject made more than 3 errors. This would mean that all scores below 49 would be considered atypical. On these criteria, only STG, SMG and JOS from the group presenting with predominantly positive symptoms, and CLH and GRB from those with mixed symptoms, perform at typical levels.

# C2. Participants' performance on The Test of Reception of Grammar Version 2 (TROG-2)(Bishop, 2003)

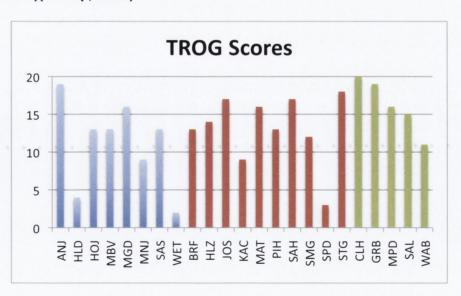


FIGURE C2. PARTICIPANTS' TOTAL SCORES ON THE TROG

Although the interpretation of bilingual performance against monolingual normative data is problematic, these descriptive data are presented only to contextualise the performance of the individuals within the context of an English-medium conversation. With the exception of ANJ, CLH and GRB all the participants fell below the 50% percentile in this assessment, according to normative data on monolingual populations. While individual performance on the TROG was variable, the average performance was relatively comparable across symptom groups with the predominantly negative symptom group scoring an average of 11.1, the predominantly positive symptom an average of 13.2 and the mixed symptom group and average of 12.1.

## C3. Performance on the Right Hemisphere Battery (Bryan, 1995)

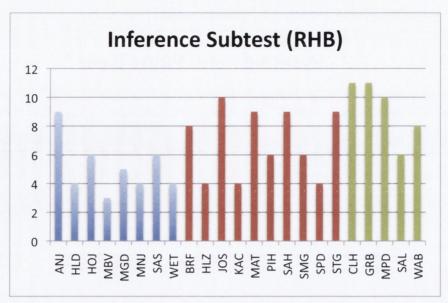


FIGURE C3. PARTICIPANTS' TOTAL SCORES ON THE RHB SUBTEST 'COMPREHENSION OF INFERRED MEANING' The Inference subtest (Comprehension of Inferred Meaning) purports to assess the individuals ability to comprehend "material not made explicit in the passage" (Bryan, 1995, p. 14). With the exception of JOS, CLH, GRB and MPD, all participants displayed significant difficulty with this task, falling below the 50<sup>th</sup> percentile.

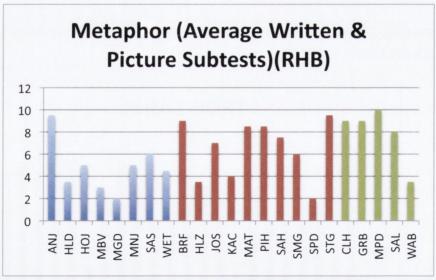


FIGURE C4. PARTICIPANTS' AVERAGE SCORES ACROSS THE RHB 'METAPHOR COMPREHENSION' SUBTESTS Metaphor comprehension was tested in two forms, with picture distracters and written distracters. The average across the two presentations is presented here. The performance of those with predominantly negative symptoms is worse than that of the other groups, with ANJ the only participants with pNS to achieve above the 50<sup>th</sup> percentile. From the pPS and MS grouping BRF, MAT, PIH, SAH, STG, CLH, GRB, MPD and SAL all achieved above the 50<sup>th</sup> percentile.

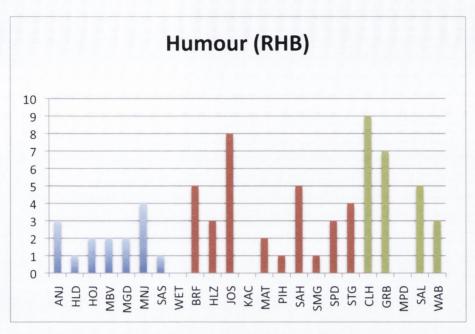


FIGURE C4. PARTICIPANTS' TOTAL SCORES FOR THE RHB 'APPRECIATION OF HUMOUR' SUBTESTS In this subtest the participant is required to choose the correct punchline for a joke, relying on the ability to draw on contextual knowledge, identify sarcasm and irony. Only JOS and CLH achieved a score above the  $50^{\rm th}$  percentile.

Appendix C: Language assessment profiles

# Appendix D

Text of the Fable Task and language operation probes

Appendix D: Fable Task and language operation probes

A certain old woman suffered from a disease of the eyes. She called the doctor. The doctor came every day and rubbed some ointment on her eyes. When the old woman had her eyes closed, the doctor secretly carried all her belongings out of the house. When he finished his treatment, he demanded a payment. The old woman refused. The doctor took her to court. In court, the old woman said that her worse because before vision was treatment she saw all of her belongings. But after the treatment, she could not see any of them. That is why she refused to pay.

## Language operations: Fable Task

**Retell:** With as much detail as possible, tell me the story.

**Summary:** Give me a summary of the story

**Gist:** What is the main idea or gist of the story?

**Main character:** Who is the central or main character of the story? Why?

**Moral:** Is there a moral or a lesson? What is it?

Title: Give a short title which tells what the story is about

# **Appendix E**

Transcriptions of the responses to the Fable Task

Appendix E: Transcription of responses to the Fable Task

	Retell	Summary	Gist	Main Character	Moral	Title
ANJ	Uh, the old woman visited the doctor and the doctor [laughs].  [prompt by researcher]  she visited the doctor to have her eyes checked and the doctor took, carried all her belongings out. And she she refused to pay the doctor because she couldn't see her stuff anymore. She claimed that she couldn't see her stuff after the doctors treatment. she could see less of her stuff so she didn't want to pay.	I think that was a summary, like I said [prompt by researcher] Um, um the doctor wanted to take her to court to court but he seemed to have taken her stuff. [laughs]	It's just the irony of blindness and um um something like noble and ignoble.	The old woman is. Cos she 's served on her noble side, she just wants to have her eyes checked and the doctor does the crime.	It's got something to do with what I've said, Noble and Ignoble.  [prompt by researcher]  Um, Um. It would be ## be wary of sort of crime.	A lady's visit to the doctor.
BND	Is the girl a suffer about the disease of the eyes. He tell the I don't know he tell what {R} He tell the doctor to say he tell the doctor he say he must rub him with a oil oil oilmoment ointment, ja. Tho they they ai I forgotten.  [Fable repeated]  Uh Uh I can't I don't know English very well but I know it. Is a woman, was suffer with the eyes. Now when he suffer with the yes he tell the doctor must come and rub him with uh with uh what is it, medicine. The doctor came, he rub him uh. That he say uh why you come so you say you must and with your what is the the thing? you come with the uh hard heart the hard, Uh, I can say that I cannot remember.	I don't know them	Uh, I don't know. It is talking about the woman who was sick.	Is the woman. He's he's the right one. [prompt by researcher] I don't know. Ja, the woman.	He tell the doctor come and rub him with the medicine. We must obey the treatment, you must go with the treatment. That's why that's why the woman said he wish the doctor must come and visit him.	Uh, I don't know.  [prompt by researcher]  Uh, uh, the health education.

	Retell	Summary	Gist	Main Character	Moral	Title
CNJ	Um, its like this, it's got to do with the concept of um um um illusions, some illusions, some illusions, something if I can used that word. [prompt by researcher]  That lady there was a lady that had a problem with her eyes and she called the doctor to help her and the doctor came every day and rubbed some ointment on her eyes. And while she couldn't see, while she had the ointment on her eyes, carried all her belongings away. And when she had to pay she said that he didn't help much because she had, she, because her problem became worse, so she refused to pay.	Um, it's I don't know, its like, I can't explain it.  [prompt by researcher]  I don't really know.  [prompt by researcher]  Like misdirections somehow. Basically like Kul jou heir, kul jou daar. Kul jou heir [fool/trick you there: phrase used by an Afrikaans tv magician] like abracadabra stuff.	Um, the main idea is that I can't explain cos I can't get to the word. It's uh, the concept of, uh, [laughs] I really don't know, I can't get to the word to explain it but there is something there, but to explain I just don't know what it is now, I can't even guess really.	Furniture, her belongings. Because its got to do with her belongings.	Uh, the lesson is that uh, uh, I just got to it now, it's like a figure of speech, or something like that. It's probably the lesson is that. Uh, um it's a tricky question, tricky tricky in that its got to do with almost like a what do you call it? metaphors and stuff. Something like metaphors and stuff. Something like metaphors and stuff.  [prompt by researcher]  Um, specific lesson is that I don't know, I don't know. It's kinda trying to tell us that that people are so devious sometimes, not devious but like uh like uh, okay you can say devious is that, Like they they do something and the wrong they're doing but they did something else wrong through that through the one problem but then again some person somehow that's what they did for you in such a way that you were doing something for them and they get back at you because they think that they still like um, like betray you and stuff like that and they make you believe that they're wrong that you're wrong that you're right and stuff and certain aspects of of of stuff.	Um I don't know.  Some Something similar to magic, like people who play play play around with magic. The whole story behind it is like with magic books they tell you you can do something like this and like that but it's it's not real magic but sometimes the magic works and the fact that you're not really doing any magic but you are.  Manipulation.

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	Retell	Summary	Gist	Main Character	Moral	Title
DNV	In fact, a doctor it was not supposed to steal it was supposed to heal a woman but instead of healing a woman he stealing. Now he want a woman to pay back for this whereas he's a thief. Now in court a woman tell a magistrate that he that he's a thief, that the doctor is a thief. That's all.	Hmmm. A woman have eyesight problem. And uh, a doctor is cruel and unfair. A woman is truthful. That's all.	It's to trick a woman.	A woman. Because she call a doctor for his eyesight.	Is, hmm, don't call someone which is not good to help you.	Cruel doctor.
END	The old woman was sick with her eyes and she called a doctor and the doctor came and rubbed his eyes and while she was closing her eyes the doctor took his things out of the house and the old women refuses to pay because they put the furniture out of the house. And the doctor took it to court and the old woman, because the old women refuses to pay.	The old woman has called a doctor for her eyes and the doctor the doctor took her clothes out of the house and he refused to pay and the doctor took it to court.	Is that she refuses to pay.	The old woman. Because she called the doctor.	We can learn that someone can call a doctor when she is not feeling good.  [prompt by researcher]  Is that the woman refused to pay.	The granny and the doctor.
FNJ	The woman was suffering from eyes disease. Then he call the doctor. Then the doctor arrive rubbing every day. Then the doctor wants his money then the woman refuse. Then the doctor take him to court then the woman say he he stealed his vision then he refused to pay.	The woman was very sick then he call the doctor then the doctor came to him and rubbing everyday then he refused to pay money to the doctor and the doctor take him to court and then the woman refuse to pay the money.	The main idea is that the woman doesn't want to pay.	The woman. Because he was sick then he call the doctor.	Yes, you can learn that if you are sick you must call the doctor.	A patient woman.

	Retell	Summary	Gist	Main Character	Moral	Title
GNS	The doctor robbed her whole belongings.  [prompt by researcher]  Because she got a problem with the eyes and was putting something on her eyes and after that he took some of her belongings and he hide it outside. So the doctor took her to court for paying for his eyes for his eye job that he'd done and she couldn't pay cos her belonging is mos gone.	Her eyes was closed and the doctor took her belongings.	They want to tell you about people that's is is die, thieves.	The doctor. He help her first with her eyes and after that he took her things. [prompt by researcher]  Because they were only two of them. I choose the doctor cos he also make a court case.	No, there's nothing. [prompt by researcher] Nothing.	It's about stealing.  [prompt by researcher]  Some doctor stealing all the woman's things.

	Retell	Summary	Gist	Main Character	Moral	Title
нит	We are relax and then we talk about sense. Think deep in our stomach and come along some provise (needs that are) qualified.  [prompt by researcher]  The woman needs a money so she did not do mistake (at the big horizon)  {Fable repeated]  In terms about sickness. The pressure, pressure of the woman. Then she she, she's uh she she's in the mood of her being in the struggle of of I do understand madam, I try, I want to explain it more. It says, it says she was kind of being asking so the so the mother doesn't agree.	It was about it was about something that was not satisfactory.  [prompt by researcher]  I want to tell you more.  [prompt by researcher]  I would say the broken mother in its saying that it is it is in a high form she was in high form of of sickness so the doctor came and then see him as he see him she find she's asleep and then woke him up and then want and then left him.	Sickness.	Mother. [prompt by researcher] Because she stays sick.	We can learn that we have to be humble	Winnie [laughs]  [prompt by researcher]  I was attending for one Winnie in Voslorus.

	Retell	Summary	Gist	Main Character	Moral	Title
IPF	An old woman with problems with her eyes called the doctor the doctor came he saw her. Ah with sitting or laying down the doctor put some ointment on her eyes. Uh during that which time he carried out all of her stuff. The old lady then, ooh, I can't tell you any more. Brain freeze.  [prompt by researcher]  Brain freeze. Just wait for a couple of seconds. After which then the lady- the doctor took the lady to court because she refused to pay because she said that when-before the treatment the treatment she was well but after the treatment she couldn't see anything so the old lady refused to pay him, the doctor.	An old lady was done in while siting and waiting, while sitting uh uh with the doctor for personal medication. She got robbed, she went to court. The doctor sued her instead of her suing the doctor. The medication didn't work and he used the medication for, excuse me, he used the medication just so he could rob the old lady.	An old lady was robbed.	The old lady. Due to the fact that the doctor was just a doctor.	Don't judge, don't judge a book by it's cover. First uh let's see. Know your doctor. Don't just call any doctor, call call a close personal friend GP that you've been seeing for a long time. And make sure that whilst being treated you are acknowledging of all your surroundings.	Old woman and the doctor.
KPS	Okay. The woman suffered from her eyes. She called the doctor. The doctor came to rub ointment on her eyes everyday. Um, he started removing her belongings and then after treatment he ask her to pay him. She refused to pay him and he took her to court. In court she said that that before treatment she could see all her belongings but afterwards she couldn't see any of the belongings, her eyes were worse. So she refused to pay.	The doctor was a crook and he was stealing her things. And removed her things.	It is that the woman was um suffering from her eyes. And it's, it's better to not trust somebody.	The woman. Because she was the one that got sick.	Well not to trust anybody in your property.	Belongings.

	Retell	Summary	Gist	Main Character	Moral	Title
JPZ	I have the problem, my mind is not okay, I don't know why.  [prompt by researcher]  The woman [sighs] can't see and the the man the man come and help the woman to his eyes but when he he he help the woman the woman before helping the woman the woman was see pictures but when he help the woman the woman doesn't pictures. He was angry cos she's not seeing pictures but before she's seeing pictures. The man want his money. The woman doesn't give his money she she go with him- she open the court the woman told them that she see the pictures when when she she's not coming to her but now she's not seeing the pictures.	The story was about the woman and the man.  [prompt by researcher]  He was a doctor.	The main thing is the is the woman who is sick. who does not see see who is sick about eyes. She's sick but now when the man put his medicine into his eyes, she doesn't see.	The woman. Because she she she end up angry and she end up in court.	Yes, there is something. Because if the woman, if the man doesn't put the medicine into his eyes then the woman will see the pictures. But now she put the medicine, she doesn't see the pictures. We learn that if the doctors put a medicine to him to to our eyes without checking them that that the medicine will be alright to the eyes I'll become blind because they put the medicine to me.	The name of the story is a man and a woman.
LPC	Its the story about an old woman who had a problem with his eyes. Then he went to the doctor, the doctor gave her a treatment for the eyes. Then he came blind again and then as the doctor asked he said here's the treatment but the treatment didn't take him into a good. and then he he stop using the the treatment.	It's a woman who's suffering from blindness.  [prompt by researcher]  There's an old woman who's suffering from eye eye blindness. He went to the doctor, the doctor saw him, Gave another one. He told him that my eyes don't go with that treatment and I stopped using it and then he went blind.	Eye problem.	The woman, old woman. Because the story started with saying the old woman.	Ja, the old woman went to the doctor, If you've got a problem you're supposed to go to the doctor.	Eye problem.

	Retell	Summary	Gist	Main Character	Moral	Title
МРТ	It's about the doctor who actually was treating the patient whose got a problem with her eyes. And she had had things, you know her belongings and the doctor took, while he was treating her you know the patients eyes were closed, so she took some of her things. And after the treatment probobviously the patient's eyes were open, so after she put some ointment and she saw some of her things gone that means she could see properly. so uh The doctor wanted payment right, for the treatment and she refused. So so the doctor maybe sent her to court because she was refusing to pay because, for a excuse that before the treatment she saw her things now after the treatment she didn't see them. It's like she's blocking you know something there.	Hmmm, just trying to put it into one sentence.  [prompt by researcher]  Oh a shorter version. Hmmm. I'll put it in a different way. Not the actual story but to just state what is actually what message is given. Oh summary. You didn't say a theme. Summary. The patient had eye problems right and she went to see the doctor and she had her belongings there, her things you know, I don't know what that was. So the doctor asked her to close her eyes and she took all of her things while she was treating her, af-while she was treating her and after she finished tooking, taking all of her things she asked her to open her eyes and said she said its finished and she wanted the money and she refused to take it she refused to pay and the doctor took her to court because she's refusing to pay because of the things that are missing.	It's like to tell you about a trick, when you trick somebody. It was just to explain that.	It's the doctor. Because he has he does something in the story, there is something that he does and. Uh, let me think properly. Quite tricky. Ja, because they speak a lot about him you know, about the things that he did. He was treating a patient so if you say the main character for instance in a movie you look at the person that the concentrate on, so I think they were concentrating on the doctor.	Yes. Um, try to be careful, don't trust too much you know, just watch yourself, be on the alert.	Doctor's Appointmen t

	Retell	Summary	Gist	Main Character	Moral	Title
NPH	Once upon a time there was an old woman and this old woman had poor eyesight and she decided to get a doctor. Unfortunately for her she didn't count on the doctor taking all her belongings away and later found out that she couldn't really see anything because she didn't know that the doctor had taken her belongings away. And that's the end of the story. And he asked for payment and there wasn't any.	I would say that there was an unforbidden payment to be due that was not due.	The eyesight.	The old woman. Because she's mentioned so many times as an old woman.	Don't trust what you see.	An old woman.
SPG	An old woman went to a doctor for a prescription because there was something wrong with her eyes and the doctor after treating her stole things from her house and the doctor gave her a bill and she refused to pay the bill and so the doctor took her to court and um, ja that's all I remember I don't know what happened in court.	The doctor was a criminal he poisoned the lady and made her eyes weaker um and then stole stole from her home and then took her to court.	Gist of the story is that there there are deviant people in this world that are out only for themselves that that that are malicious and and we need to be careful.	The main character is the thief because he goes around to people and he he he does deviant things to them.	The moral is you shouldn't trust everybody and and and make sure that when you do trust people that you you dealing with the correct people.	The demonic doctor.

	Retell	Summary	Gist	Main Character	Moral	Title
ОРН	Ah. Ja well this woman she she said well strange actually, she had her eyes tested but after testing her eyes she couldn't see she had a blurred vision of what was around her so with the result is she decided not to pay the doctor cos she felt that that since she went to doctor for help, doctor had actually made her eyes worse which was actually not true. But the point is she was looking it from a different direction, from a different angle. The same way as I was watching you as you were reading I noticed that you added whole words a now and then, you know. So I can't say that your eyes are bad it's because that paper was upside down, you were looking at it from a different angle to the way I was looking at it. The way I read it I read it's-you've explained it so beautifully but yet you rephrased it in such a way that it made more sense to me. Straighten the fact that I'm listening to a person that is not robotic, she's actually explaining it to me in her own creative mind she's using her own creative talent and explaining this paragraph to me and I can read it I can see it with my eyes but because it's such large print I don't have to stand right over the paper to read it I can be at quite a distance so that my eyes can focus more clearly. And uh that's the reason why she didn't want to pay the doctor because she felt that her eyes were blurred and she was worse off before the treatment.	Uh, shorter version. I think it's about the, if there's not enough light in the room, the paper that you're reading on, the paper's white the ink is white so if your curtains are closed then the lights are on the image will read much better but if you have lights from all directions coming in on that paper the white shines so much so that you can hardly see the black unless it's in bold print.  [prompt by researcher]  Well I would say uh the old woman's is she's got a point but the doctor he uh he did what is best he could and he deserves to get his money.	I think the main idea of this story is to actually test a person's eyes as to whether this person can really see or not see and uh.	The old woman. Well I can identify with her.	I think the moral of the story is once you read too much, because especially when you- when the page is too close to you when in bold print is doesn't necessarily need to be right in your face.	The wise old eyes.

	Retell	Summary	Gist	Main Character	Moral	Title
PPG	There was an old woman that had trouble with her eyes, She called the doctor and the doctor rubbed some ointment in her eyes. And then her eyes got uh, uh uh then the doctor carried away her belongings and then uh uh the court case and she refused to pay. Just in brief.	Um, the doctor cheated the old woman. He had a plan to uh uh take her belongings away from her. And his intention was to rub ointment in her eyes so that she couldn't see uh what he was up to. He had all intentions of taking her belongings away from her so he he knew he couldn't do anything to better her eyes, he wanted her not to see what he was going to do with her belongings. He had all intentions of taking her belongings away from her and uh now when uh it went to court, I say she refused to pay. And I do say that you know.	The main idea is that he wanted payment for the eyes to be uh uh, he wanted payment for treating her eyes he wanted payment for treating her eyes and meanwhile he stole her belongings. He wanted payment for treating her eyes and uh he took her belongings. That's what I understand about the story.	The main story is the woman. Because she has the problem. The doctor is uh, The doctor is uh- she called the doctor but she is that one with the problem. She has the problem.	There's a lesson to be uh, that you cannot just let anybody uh just do things to you. Uh. You must first uh ask why. Why are you putting the ointment in my eyes and what will the ointment do and uh, why is it doing this to my eyes. You must ask uh questions. You must enquire. you can't just put ointment. Because ointment, the eyes are the most delicate function of one's body. Once you blind, I would say any ointment can blind you for the rest of your life.	Confusion reaches a state of mind. She was confused you see about what was happening to her belongings, you see. She was confused because she saw her belongings gone. You now, now she's confused where are her belongs. That's why I'm calling it confusion.

	Retell	Summary	Gist	Main Character	Moral	Title
RPD	The story goes, about a girl whose eyes was sore and then there was a doctor came in to rub her eyes everyday and so this one day the doctor did steal all her belongings and then she got frightened and I don't know what happened to her at that time.  [prompt by researcher]  She got frightened and then called the police and they locked him up. [laughs] you must tell me.  [prompt by researcher]  The doctor took her belongings and then she got frightened and then she run away from her house.	Okay, it's just- it was a woman, she was sick and the doctor took care of her.	The main idea it goes about a woman's sickness.	The doctor. Cos the doctor is supposed to be looking after her eyes. So she has to go for treatment.	You can learn to never trust the doctor. Because doctors (are really uncivilized) cos sometimes doesn't like the patient and then they gave them just drugs to drink and other drugs to drink. And if you are not careful as a person and look at the things what is going around you then you will neverif you smoke to much if drink too much you drink tablets. Obviously you are not going to have a future live. But at the end of the day you have to look at yourself. I said its not to trust doctors but doctors sometimes they're doing the wrong stuff at the wrong time.	Healthcare.

	Retell	Summary	Gist	Main Character	Moral	Title
тмн	There was an old woman and uh she had a had vision problems so she asked a doctor to come and see her and every day he rubbed ointment on her eyes. While she was sleeping he took he started taking stuff from her house until there was nothing left. And then once he'd done that he asked her for payment. And she refused to pay him because she oh and then he oh she refused to pay him so he took her to court. In court she told him that um she refused to pay him because her eyes were worse than when than what they were before he started rubbing ointment on her eyes. After his treatment there was she couldn't see anything in her flat anything in her house and um before the treatment she could still see things in her house.	It's a story about an old woman who is ripped off by an eye-doctor um, who takes her to court for not paying him.	A quack.	The old woman, um because it's her she's got the vision the vision problems, she's got the house, she it's her possessions that are taken away, she's the one who is being exploited by the doctor.	Don't trust eye doctors [laughs].	Eye trouble.

	Retell	Summary	Gist	Main Character	Moral	Title
ИМВ	Alright it's about a doctor and an old woman. Um, Uh, it starts with the blind idea that the lady is sick meaning her eyes are not good, eyes are not well. The doctor is there to treat her um. It's also not said that - wait, the doctor is there to treat her and he then treats her but he sort of worsens the situation because she keeps phoning him back and says that her eyes are sort of sore again even though he's put ointment on after a day. Um, But she doesn't mention straight off that her eyes are worsened she just remembers that her eyes are giving her trouble. So, and then in the end when her things are carried out or when she finds uh her things empty she only reveals in court that she couldn't see her belongings due to the doctors ointment or either whether her hiding f- ferential attitude towards the court in trying to get back her belongings.	doctor old lady um eye problems. Um, belonging lost, uh, intelligently referring to reacquire belongings.	The main idea might be about honesty and trust. Might be that um in general if someone is a doctor we find them trustworthy but many things are lies and important decisions and stuff they have to make for us. So it's best we don't believe they should betray us. Concerning our belongings.	The old lady, it centered around her belongings and her eyes. So she's the main character.	Always be on your toes and always be on your toes concerning everything. Be wide awake and mindful of others.	Where what belongs before and after

Appendix E: Transcription of responses to the Fable Task

	Retell	Summary	Gist	Main Character	Moral	Title
VMD	An old woman an old woman asked for a doctor. Right. She had problems with her eyes. And the doctor came every day to treat her. He rubbed ointment on her eyes and eventually her eyes closed. When her eyes closed the doctor carried all her belonging. Then he came back and asked for a payment. The woman refused to pay and he took her to court. She explained that before before she came to treat her eyes she had a better vision because she could see all of her belonging she could see her belongings. but when he finished treating her she could not see her belongings. That is why she refused to pay.	Summary of the story is that this woman asked for a doctor the doctor didn't do the work properly and the doctor actually made her made her vision worse and he he he actually he actually was a thief in another sense and when he demanded payment she refused to pay him and she took her to court and he lost the case	The main idea of the story is not just to trust. No it not really is not just to trust. Maybe the gist of the story is that you are supposed to trust your doctor but then this doctor was a different doctor all together, he was a thief of a doctor. So	The main character then is two people. The main one I think it is the old woman,. Because she's the one that looks for looks for the doctor and the doctor takes her further. He works with her takes her further even takes her to court and thats when she wins her case so she becomes the main character.	Yes. The lesson is that don't just trust anyone that you meet. And not to take people for granted.  [prompt by researcher]  Because when you see a doctor you think that the doctor's going to heal you, you take him to granted. I've come to the doctor and whatever I tell the doctor it's going to happen. And the next thing it doesn't happen. the way you think.	The woman. I had it just now. Um. Problematic Vision.

	Retell	Summary	Gist	Main Character	Moral	Title
WML	I remember the doctor rubbing the old woman's eyes. And then after stealing for the old woman and then coming back to the old woman for money and then the old woman refused and then the doctor took the old woman to the court. And then the old the old woman refused to go to court because she had something against the doctor. Uh, that like uh, the doctor-before before the doctor rubbed the eyes of the old woman she could see everything but after the doctor rubbed her eyes she never saw all her belongings because the doctor maybe the old doctor blinded the old woman.	The story its about a doctor and the old woman. The old woman had trouble with his eyes, with her eyesight so she went to the doctor, for help. The doctor offered help by rubbing her eyes. And then the doctor stole from the older woman and then the older woman noticed that the doctor stole from from her, from him, from her and then the doctor came again to the old woman for money so that the old woman can pay him the money. And then the older woman told the doctor that she is aware that everything she had is gone so the doctor took the older woman to court because she doesn't want to pay the money.	The main idea. Hmm, what can I say is the main idea? The main idea is to  [prompt by researcher]  Uh, the story is about a dishonest (diapparent) doctor who was not honest to the patient.	Is a doctor and the old woman.  [prompt by researcher]  It's the old woman.  Because its the one who is sick and the one again who is taken to court.	Ja. Ja, like. Ja, we learn that some people can also- you mustn't trust everybody. Even if they are doctors. There can be doctors who are bad. As this doctor was bad to the old woman.	A dishonest doctor.

	Retell	Summary	Gist	Main Character	Moral	Title
ΥМВ	That story told the old woman called the doctor to her and she she had her eyes seen to. And the doctor was in other words skelm. He took her belongings and all of that. He took all of her belongings and sold it and I mean a doctor doesn't do such a thing. I mean a doctors there to look at you and then get the money, get the payment and then go. He can't steal other people's stuff.	A summary. Uh. An old lady called the doctor. she- I don't know how she called her, him called her or whoever. She called her, called him and tried and uh she took the m- she took the doctor to court or the doctor took her to court or something and then uh she got blind afterwards.	No I can't tell you the main thing on the story. Uh.  [prompt by researcher]  Well the main, I think the main thing that's going on in that story. The doctor stole stole uh uh the the lady's clothes for the payment. That's what I think	The doctor. Because he had to look at the patient and the patient uh, now let me think straight. Now you caught me there.  [prompt by researcher]  The main cause of that problem was that the doctor put ointment in her eyes that wasn't right	Well to leave other people's belongings alone.	I can't think of it.  [prompt by researcher]  I can't think of the right and wrong thing there. Uh Uh. I've got no idea.  [prompt by researcher]  Uh. I got no idea. My minds not thinking now.

Appendix E: Transcription of responses to the Fable Task

# Appendix F

Transcription conventions

## Appendix F: Transcription conventions

### **Obligatory headers in CLAN**

@Begin marks the beginning of a file

@Languages the principal languages of the transcript

en: transcription in English

CA: using Conversation Analysis font

@Participants lists actors in a file

@ID code for a larger database @End marks the end of the file

#### **Utterance terminators**

periodquestionexclamationtrailing offinterruption

### Within and between utterance markers

non-final contour
top begin overlap
bottom begin overlap

≈ latching

+, take-up after interruption

+^ quick uptake text word emphasis

[/] retracing without correction

[//] retracing with correction or reformulation
@n special form marker indicating neologism
<text>[?] best guess transcription of bracketed text
xxx unintelligible speech, not treated as a word

### Local events

&=text simple local event (scream, whistle, groan, sigh etc.)

hhh laughter

# pause between words
## long pause between words

#0.34 used for pauses greater than 20 seconds, (minutes, seconds)

sound link marker from 'sonic mode' transcription

### **Dependent tiers**

%act: actions

%com: comments by investigator

%eng: English translation

%exp: explanation

## Appendix F: Transcription conventions