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The Beauty of the Grotesque

A history and semiotics
of serifless typefaces



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Languages, Literatures
& Culture

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Introduction

0.1 General Overview

This is a study of a style of typeface — the Grotesque — and a way of thinking about this style that was central to twentieth-century typographic discourse. It traces both the development of Grotesque styles, and the development of thought on the Grotesque as manifested in the writings of typographers and writers on typography.

The Grotesque emerged in nineteenth-century England in the context of a general explosion in typeface styles, and matured into a sophisticated style of type by the dawn of the twentieth century. Although initially relegated to particular marginal uses, in the 1920s the Grotesque was elevated by modernist designers as the one style of typeface to replace all others — the Grotesque was viewed as a letter without style, and therefore the antidote to stylistic pluralism.

Despite the objectives of modernist typographers, from the interwar period on, as typeface styles continued to proliferate, the Grotesque itself diversified into a variety of sub-styles, and in the process undermined the idea that the Grotesque was the antidote to stylistic pluralism. Although the Grotesque failed to achieve the universal hegemony desired by modernist designers, it did achieve ubiquity in the narrow area of transport signage. But even this area of Grotesque hegemony only further contributed to the stylistic diversification of the Grotesque.

While typographers throughout the twentieth century have debated over the superiority or inferiority of the Grotesque, neither side has convincingly or definitively argued their case. From outside of typographic discourse, attempts have been made to scientifically determine whether or not the Grotesque is the most functional letterform. Here also, no definitive answers have been found. Yet this has not prevented ‘accessibility policy’ from, once again in the twenty-first century, asserting the universal validity of the Grotesque.

0.2 Detailed Outline

This thesis is divided into five overarching sections, subdivided into chapters. Section 1, 'Theoretical Preliminaries', establishes the core theoretical concepts which direct later analysis. Section 2, 'The Rise of the Grotesque', charts the development of Grotesque design from the nineteenth century to the 1920s, and the early twentieth-century development of Functionalist typographic design theory. Section 3, 'The Language of the Grotesque', maps the expansion of Grotesque styles, from the 1930s to the 1970s, and simultaneous developments in and reactions to, modernist typographic design theory. Section 4, 'The Legibility of the Grotesque', analyses attempts to objectively determine the superiority or inferiority of Grotesque typefaces. The fifth section, 'Towards a Semiotics of the Letter', as a coda to the main structure of the thesis, proposes a fundamental semiotics of the letter.

Section 1: Theoretical Preliminaries

Throughout this study we will be interrogating the ways in which the relationships between typography and language have been figured in typographic discourse. In order to do this, it is necessary to first establish a theoretical grounding on the relationship of typography to writing and speech. Chapter 1.1 'Writing, Speech and Typography', compares and contrasts ideas on these topics found in linguistics, grammatology (the study of writing systems), and typographic discourse. It is demonstrated that in all three of these areas, the idea that writing is subservient to speech has been dominant throughout much of the twentieth century. This conception of the relationship of writing and speech is then argued against with the aid of more recent linguistic and grammatological theories.

To understand the advent of the idea of the Grotesque as a universal letter and an antidote to stylistic pluralism, a critical understanding of the broader context of the development of design and design theory in the nineteenth and twentieth centuries is necessary. The quest for a universal type to replace all others is understood as a manifestation of the Functionalist tendency in design which originated in the first decade of the twentieth century. In Chapter 1.2, 'Baudrillard and Functionalism', the Functionalist philosophy of design and its design-historical context are critiqued from a perspective informed by the earlier writings of Jean Baudrillard.

Section 2: The Rise of the Grotesque

The nineteenth-century explosion of stylistic diversity fundamentally changed the nature of typesetting. The increase in available styles was not simply a case of addition, but of a 'mutation of status', which opened up the possibility of endless multiplication of stylistic variation. This development is described in Chapter 2.1, 'The Proliferation of Styles'. Already in the early twentieth century, ideas broadly in line with the general Functionalist tendency were being applied to typographic design, as typographers theorised the need to replace the multiplicity of styles with an 'authentic' singular style.

Chapter 2.2, 'The Past and the Future', describes the development of Grotesque design in the context outlined in Chapter 2.1. Initially 'revived' by Neoclassicists in the late eighteenth century, the Grotesque was first cast as type in the early nineteenth century. By the dawn of the twentieth century, the Grotesque had matured into a sophisticated style of type available in families of weights and sizes. However, it was not until the 1920s that the idea of the Grotesque as the antidote to stylistic profusion was developed. The Grotesque was heralded by the modernist typographic movement — The New Typography — as uniquely adapted to the needs of the twentieth century. It was believed to betray no origin, no style, and (potentially) to have letterforms reduced to their absolute and necessary forms.

The Grotesques available in the 1920s were seen by the New Typographers as imperfect realisations of the universal type. Informed by a philosophy of design that declared geometric shapes to be 'objective', and a theory of writing as subordinate to speech, the New Typographers experimented with 'orthographically-reformed' geometric letters. Chapter 2.3, 'Geometry and Grammatology', brings together the themes explored in previous chapters — Functionalism, the trajectory of typography history, the relation of writing to speech — in analysis of the experimental alphabets of Weimar New Typographers, including Herbert Bayer, Josef Albers, Jan Tschichold and Kurt Schwitters. These designs are then compared to the reformed writing systems developed by British phoneticians in the nineteenth century.

The quest for a universal style of letter was bound to a more general interwar interest in transnational alternatives to natural language. Chapter 2.4, 'Universal Communication', analyses several attempts at universal communication, including C.K. Ogden's Basic English, Otto Neurath's Isotype, and the radical sense of László Moholy-Nagy's 'typophoto'. Like the geometric alphabets of the New Typographers, these projects were attempts at a semiotic streamlining — seeking to minimise, or erase, the necessity of cultural training, in pursuit of modes of communication immediately and universally intelligible.

Section 3: The Language of the Grotesque

The New Typographers failed to establish the Grotesque as the one style to replace all others. Instead — as detailed in Chapter 3.1, ‘The Fate of the Geometric Grotesque’ — they provoked the type industry to develop a new style led by Paul Renner’s Futura, known as the Geometric Grotesque. This in turn provoked rival Grotesque styles, notably Eric Gill’s ‘Humanist Grotesque’. The establishment of these stylistic variants set the scene for future developments in Grotesque design, as an art of combination and reference. As the New Typography and its goal of establishing a singular typographic style was unravelling, in Britain a pluralistic attitude to typeface design developed, celebrating the inevitable diversity of types.

Faith in the Grotesque as the antidote to style was given new impetus in post-war Switzerland, as detailed in Chapter 3.2, ‘The Apostles of Modernism’. Swiss modernists rejected the Geometric Grotesques of the 1920s, in favour of a return to the Industrial Grotesques of the turn of the twentieth century. However, once again, this very attempt at stylistic limitation provoked the development of a new variant of Grotesque — the Neo-Industrial — increasing the complexity of the Grotesque language of style.

Neither the New Typographers nor the Swiss succeeded in limiting typefounding’s rapacious pursuit of difference. However, as Swiss theories spread internationally, a small area of hegemony for the Grotesque was established in the area of signage for transportation, as described in Chapter 3.3, ‘Travel by Grotesque’. Nevertheless, this once again encouraged a further expansion of Grotesque style.

Section 4: The Legibility of the Grotesque

Chapter 4.1, ‘Legibilities’, contrasts the ways in which the term ‘legibility’ has been used in typographic discourse and empirical legibility research. The agenda of empirical legibility research is to find objective and scientific answers on how best to design types and typography. Attempts to scientifically resolve the typographers’ debate over the function of serifs have failed. It will be argued that the failure to arrive at conclusive answers in this area is not accidental but inherent in the mode of questioning utilised in comparative typeface legibility studies.

In the twenty-first century, typographers have generally abandoned the quest for the one true style of type, and accepted the inevitable diversity of style. The modernists’ universalist paradigm, which sought to erase difference, has been replaced with a philosophy of ‘inclusion’ of difference. Chapter 4.2, ‘The Accessible Grotesque’, demonstrates the way that this shift in philosophy is visually manifested in types which are said to be more legible for people with

special needs. However, at the same time — despite a poverty of evidence — increasingly the Grotesque is endorsed as ‘accessible’ in the publication guidelines of public institutions. Here the modernist utopian faith in the Grotesque is given its final resting place.

Section 5: CODA: Towards a Semiotics of the Letter

Having critically engaged with theories of how types communicate throughout the thesis, the final section, functioning as a coda, proposes a fundamental semiotics of the letter. The aim is to demonstrate that the grammatological understanding of the letter as differential and the visual-semiotic understanding of the letter as a carrier of connotations, are not in contradiction. Each describes the letter in a different semiotic context. Yet both contexts, it will be argued, rest on fundamental semiotics of the letter that is independent of both language and graphic realisation.

Notes and Illustrations

References indicated in the text are provided at the end of each chapter and a full bibliography is provided at the end of the thesis. Illustrations, referenced as ‘plates’ in the text, are provided following the endnotes for each chapter. In addition to plates, occasional figures embedded in the body of the text occur.

0.3 Aims, Subjects and Scope

The aims of this thesis are to provide a theoretical understanding of developments in Grotesque design from the nineteenth century to today (with an emphasis on developments from the 1920s to 1970s); and to provide a critical appraisal of the philosophies of typography which have motivated and responded to such developments.

This thesis does not attempt an exhaustive account of Grotesque designs. Instead key moments in the development of the Grotesque are highlighted, in order to discuss the patterns and design-historical motivations which have contributed to such developments.

Those who championed the Grotesque — New Typographers, Swiss Modernists, and later, representatives of the ‘International Style’ — tended to present their approach and philosophy of design as the culmination of a teleological development, placing themselves at the apex of design history. It is therefore necessary to counterbalance analysis of these movements with analysis of others who consciously rejected the modernists’ agenda. British typography provides the perfect counter examples; not only in the ‘New Traditionalism’ of the earlier twentieth century, but also in the consciously pluralistic attitude to type which developed in the interwar to mid-century period. This ‘New Pluralism’ resulted, in part, from an

engagement with, and rejection of, the Grotesque doctrines of European modernists.

The subject matter and the structure of this thesis are historical, but the goals are theoretical and critical. The aim is to interrogate the design-historical factors and theoretical underpinnings that facilitated the development of the idea of the Grotesque as a neutral and universal letterform. An account of the philosophy of design that sought to replace stylistic diversity with the Grotesque (Functionalism), is countered with a theoretical account of the artform of type design as it developed in the twentieth century. Typeface design, it will be argued, is fundamentally at odds with any attempt to limit the production of types to the one ‘true’ style. Following the nineteenth-century explosion of type form there develops, in the twentieth century, an increasingly nuanced language of style, accelerating the process of production of difference unleashed in the nineteenth century; tending increasingly towards marginal difference. Every attempt at stylistic limitation becomes absorbed into this process, and only contributes further to the diversity of styles.

On the one hand, in this thesis typographic discourse is analysed from a theoretical distance. Yet at the same time, this is intended as both a discussion of and contribution to typographic discourse. As such, the boundaries between the texts which are the subject of the writing and the texts which inform the writing are blurred. The idea sometimes presented, that typography lacks theory (or worse still, that legibility research might provide typography with a much-needed theoretical foundation)¹ is not borne out by a review of typographic literature. What fills the pages of journals such as *The Fleuron*, *Neue Grafik*, and *Typographica*, is not simply lists of factual occurrences or practical instructions. More often than not, the writings are intensely theoretical, as we will see throughout this thesis. This thesis aims to offer a contribution to typographic discourse’s ongoing conversations.

0.4 Terminological Clarifications

As the terminology used in discussion of typeface design and typography is not entirely stable, it is necessary here to clarify some of the terms used before proceeding to the first chapter.

Minor Clarifications

In the anatomy of typefaces the term ‘terminal’ is sometimes reserved for stroke-ends which feature a specific detail, such as the rounded swellings that occur in Roman types at the end of the curved strokes in r and f. As the types primarily discussed in this thesis often lack such features, terminal is here used to designate the point at which all strokes end.

The term ‘Roman’ has two independent uses in today’s typographic discourse. The first

use is in reference to the style of letter descended from the Humanist Minuscule, cast in type by Jenson and developed through a series of stylistic stages throughout the centuries. The second use, more recent, arose from the tendency in twentieth century design to produce types in large families of weights, expansions, and with sloped or italic partners to each variant. In this context Roman is used as the upright, standard weight (neither light nor bold, nor condensed nor expanded). In this thesis Roman will be used exclusively in the first sense, to incorporate all types in the tradition from Jenson, to Baskerville to Bodoni, as well as later developments along such lines. Grotesque will be treated as a separate category. One could, and some do, argue that the Grotesque belongs in the general category of Roman, if Roman is considered broad enough to embrace Jenson and Didot and used to contrast with other broad typographic groupings such as Blackletter. However, as we will be analysing design-ideological debates in which the Grotesque and Roman were pitted against each other as adversaries, treating the Grotesque as a separate category is more useful.

One final terminological issue, not relating to typography. The words semiotic and symbolic will be used in two ways, the first as generally understood in semiotics, and the second in a more narrow sense which relates to the theory of Jean Baudrillard. While context of usage will make the intended meaning clear, an additional clarification will be provided by using capital initials when the terms are intended in Baudrillard's sense. This will be further clarified in Chapter 1.2.

Typeface Classification as Argument

The terminology of typeface classification is not stable, nor should it be. The classification of types is not a scientific enterprise, and typefaces do not fall into groupings of natural kinds. As such, there is an inevitable argumentative component to any system of classification. The terminologies of typeface classifications are propositional theories of how typefaces relate to one another. The use of the term Grotesque in this thesis is somewhat idiosyncratic, though not without historical precedent. It is therefore necessary here to pre-empt some of the discussion of types that occur in later chapters to clarify 'Grotesque' as it is used in this thesis, as well as the sub-classifications of Grotesque which are introduced throughout.

Grotesque is here used for the general category of typefaces which first appeared in the nineteenth century, characterised by a lack of serifs and a lesser degree of stroke contrast than is found in typical Roman types. This is then subdivided into Industrial Grotesque for the style originating in Germany at the turn of the twentieth century and American Gothic for designs from the same period from the United States (both of which are detailed in Chapter 2.2).

Geometric Grotesque refers to the style of types which followed from the interwar modernist movement, a movement preoccupied with Geometric reduction, although (as will be demonstrated in Chapter 3.1) such types are not strictly geometric. Humanist is used to refer to Gill Sans (also described in Chapter 3.1). Finally, Neo-Industrial Grotesque is used to refer to the variant of the Industrial Grotesque, which emerged in the late 1950s (described in Chapter 3.2). This taxonomy is inexhaustive, not least of all because each of these categories is porous. Many other typefaces will be described in terms of hybridisation. Although it is not standard practice (nor is it unique to this thesis), all such stylistic categories will be given capital initials, in order to ensure that the terms are recognised as the names of styles and are not mistaken for descriptive terms. At the same time, when citing other authors (for reasons which will become clear below), their terms, spelling and casing will be preserved.

As will be demonstrated in Chapter 2.2, the terminology for ‘Grotesque’ or ‘Sans-serif’ typefaces was initially very unstable. The first such type, manufactured in the second decade of the nineteenth century, was named ‘Egyptian’. However in Britain, ‘Egyptian’ ultimately came to designate types with thick slab serifs (despite the fact that the first such type was named ‘Antique’), and Grotesque became the more common (but by no means exclusive) term for the serifless style of letter by the close of the nineteenth century. At the same time ‘Grotesk’ became the most common term in Germany, ‘Antique’ in France (whilst the slab was there called ‘Egyptienne’), and, confusingly, ‘Gothic’ became the norm in the United States. Unlike ‘Egyptian’, which had been used to refer to both slab and serifless types, ‘Grotesque’ does not seem to have ever been used to describe slab serif faces.² However, one does occasionally find ‘Grotesque’ used in reference to types other than the serifless kind; for example, certain late nineteenth-century typographers refer to unusual and elaborate faces as ‘Grotesques’.³ Moving to the middle of the twentieth century, an examination of the Swiss journal, *Neue Grafik* (1958–1965) (analysed in detail in Chapter 3.2) in which articles are presented in French, English and German, shows a consistent use of ‘Sans Serif’ for English text, while in French both ‘Linéale’ and ‘Antique’ are used, and German retains ‘Grotesk’. Other less prevalent German terms used in the same period include ‘Endstrichlose’ (meaning without terminal strokes, i.e. serifs), *Linearschriften* (Lineal) and ‘Serifenlose Linear-Antiqua’ (serifless linear Roman). Confusingly again, while ‘Antique’ is the French Grotesque, Antiqua is the German equivalent to Roman.⁴

The first type to be called ‘Sans Surryphs’ was produced in the 1830s, by the foundry of Blake and Stephenson. Oddly, James Mosley notes that the word ‘serif’ was rarely used prior to the adoption of the term ‘sans serif’. Throughout the nineteenth century, serif was spelt in various ways including seriff, ceriph, seraph, seryph, surryph.⁵ Throughout the twentieth

century, most British authors used the one-word spelling 'sanserif'.

Typically today, 'Sans serif' (or the same but hyphenated) is the term for the general category of typefaces, and 'Grotesque' is used for the sub-category of types in the late nineteenth-century style. The other categories typically presented under the heading of 'Sans-serif' are 'Geometric' for types such as Futura and Kabel (and sometimes also later, less obviously related types such as Microgramma), 'Neo-Grotesque' which refers to the nineteenth-century influenced types of 1950s, and also 'Humanist sans', a more fluid category which includes Gill Sans as well as types not directly informed by Gill, but which feature an open aperture and (sometimes) a humanist axis to stroke contrast. The Maximilien Vox system of classification, which was adopted by British Standards in 1967, follows the above breakdown, more or less, with 'sans serif' replaced with the term 'lineale'.⁶

There are others who treat the relationship of Sans-serif and Grotesque in the opposite manner to the above. Alan Bartram, in *The English Lettering Tradition* (1986), describes the Sans-serif as a 'sub-division' of Grotesque, which 'has proportions based on the more classical Roman system'.⁷ In an earlier book, Bartram similarly, though slightly differently, treats 'sans-serif' as a stylistic development from the Grotesque:

[sans-serif] letters tend to be rounder in feel, more geometric in construction, and with proportions more similar to roman (hence the term sans-serif). They generally have little or no variation of thickness of line; and are rarely as bold as the boldest of grotesques.⁸

Under the term 'sans-serif', Bartram unites the 1920s designs Futura and Gill, which are more commonly today separated into 'Geometric' and 'Humanist'. Bartram is not unique blurring this line. Gill is often classified as 'Humanist' owing to the relationship of its proportions to renaissance Roman types; while Futura, owing to its single story a, lack of curve on t and generally having curves that are near (though not quite) perfect circle arcs, is classified as 'Geometric'. Yet, as has been pointed out by Christopher Burke, Futura too has many features derived from Humanist types which distinguish it from the early Grotesques, including the relationship of its ascenders to its cap height.⁹ P.M. Handover's use of the term 'aesthetic sans' to refer to the typefaces of the 1920s, including both Futura and Gill, which were (unlike the tight-apertured Industrial Grotesques) designed by artists steeped in Arts and Crafts calligraphy, seems just as valid an idea as does that of separating Gill and Futura.¹⁰ Harry Carter also draws a similar family tree, in which there is a sub-category of the 'sans' which he calls the 'Old Style sans-serif' (meaning following the proportions of fifteenth-century Venetian Romans), in which

he includes Gill, Futura and Kabel.¹¹ All of these ways of arranging things more or less align with Bartram's use of the term 'sans-serif' as a subcategory of (or perhaps even a brief interruption in the development of) the 'Grotesque'.

As will be returned to in Chapter 2.1, in the typologies of typefaces presented in British printing manuals from the late nineteenth century, the fundamental distinction given was one according to use — 'book' and 'jobbing' — after which subcategories based on physical similarities of types follow. Other taxonomies attempt to focus more strictly on physical characteristics of letters, and in so doing they tend to focus on the design of serifs as the most obvious and easy way to distinguish styles of type. Yet at times this can be problematic. An extreme example of this approach is provided by the classification system given in Lucien Alphonse Legros and John Cameron Grant's *Typographical Printing Surfaces* of 1916 — a book which attempts to provide a scientific account of various aspects of typography. Rejecting industry terminology (presumably in an attempt to arrive at an objective alternative), Legros and Grant focus exclusively on serif design in determining their classifications, resulting in a classification that is arguably overly complicated, and blind to issues of history and usage.¹² Vox's system attempts a balance: providing a taxonomy based on the physical characteristics of typefaces, yet also using terms that reflect the historical origins of the styles (at least in the case of serified types). One attempt to avoid the possible limitations of a serif-based taxonomy is that proposed by Robert Bringhurst, which includes categories such as 'realist' — uniting both nineteenth-century Clarendons and Grotesques — and 'modernist geometric' — uniting both types such as Futura and structurally similar types with serifs such as Memphis.¹³

The point in describing these areas of overlap and divergence in various authors' type typologies is not to suggest that Vox's system, or any other of the systems of classification discussed, are objectively wrong and must be replaced with another more accurate system. The point is to demonstrate that any such system can never be exhaustive nor definitive, and can only ever be used as a general guide for helping to organise how we think of typefaces rather than as a final and objective system of how typefaces are related (this point would of course be accepted by Vox, Bringhurst or any of the other authors cited here). Any such system inevitably brings with it certain values. The inescapable incompleteness of any system of classification is exacerbated by the very nature of the art of typeface design, which often involves a conscious appropriation and combination of prior models in a manner that leads to the blurring of stylistic boundaries.

As noted above, 'sans serif' is most often today the general category of which 'Grotesque' is a sub-category, but this is by no means a natural fact, and we have shown that

quite recently writers such as Bartram have thought of things in another manner (and of course, Victorians would have grouped certain serified and unserified types as 'Jobbing' if that was their most common context of use). A difficulty with the term 'sans serif' is that it appears to describe this style of letter according to its fundamental objective characteristic: the absence of serifs. Taken as a literal and objective description, 'sans serif' seems as valid a term to apply to any letter lacking in serifs. And in fact doing so has a good pedigree — not only Mosley, but other important typography scholars, including Stanley Morison and Nicolette Gray, refer to incised letters of classical Greece and certain inscriptions of the Italian Renaissance as 'sanserif'.¹⁴ In Morison's case, at least, his use of the term 'sans serif' served an ideological polemical end. Morison, like many of his compatriots, was hostile to the pro-Grotesque agenda of European modernists and liked to undermine the modernists' description of the Grotesque as the '*Schrift unserer zeit*' (typeface of our time) by emphasising that the 'sanserif' was the 'most primitive' letter of 'Greek origin'.¹⁵ Likewise, Denis Megaw insisted that the 'sans serif' was 'one of the earliest' styles of letter already found 'in pre-Christian inscriptions'.¹⁶ This argument certainly does not arise from typeface classification, but it is facilitated by the use of a term that seems to exhaust the physical characteristics of a letter — *without serifs*. This argument would have been less easy to make, and less persuasive, had Grotesque remained the standard term in English, as it did in Germany. One could write of similarities between Grotesque typefaces and classical letters, but one could not say that Greek or Renaissance epigraphers used 'Grotesques'. That monoline unstressed letters can be found in distant pre-typographic history is not hugely significant in attempting to trace the dialectical unfolding of Grotesque styles since the nineteenth century.

A further problem with the term 'sans serif' is that it potentially naturalises the idea that presence or absence of serifs is the fundamental issue in typedesign. In chapters 4.1 and 4.2 we will demonstrate that the increasing centrality of the presence or absence of serifs used in the categorisation of types, has led to this distinction being naively naturalised by those who attempt to scientifically determine the 'most legible' style of type. As will be demonstrated throughout this thesis, Grotesque is a category of typefaces with several defining characteristics, containing several subcategories with characteristics of their own. As the diversity of types united under a classification is inevitably varied, we prefer terms which are in the same spirit (though not in the same nomenclature) as Bringhurst's. That is, associative general terms with a historical origin or reference, rather than terms which focus solely on the physical attributes of letters.

Morison and Megaw show that the terminology used to classify types is always

ideological and always argumentative. Use of the term Grotesque in this thesis is not an attempt to avoid this inevitability; it is itself an argument.

- 1 Cf. Ole Lund, 'Knowledge Construction in Typography: the case of legibility research and the legibility of sans serif typefaces' (unpublished doctoral thesis, University of Reading, 1999), p. 9; Ellen Lupton, 'The Science of Typography', *Typotheque* (2004) <https://www.typotheque.com/articles/the_science_of_typography> [accessed 25 September 2015].
- 2 James Mosley, *The Nymph and the Grot* (London: Friends of St Bride Printing Library, 1999), pp. 55–56.
- 3 Charles Thomas Jacobi, *Printing: a practical treatise on the art of typography as applied more particularly to the printing of books* (London: George Bell And Sons, 1890), pp. vi, 96.
- 4 Christopher Burke, *Active Literature: Jan Tschichold and the New Typography* (London: Hyphen Press, 2007), p. 150 n. 7.
- 5 Mosley, *Nymph and Grot*, p. 53.
- 6 W. Pincus Jaspert, W. Turner Berry and A. F. Johnson, *Encyclopedia of Type Faces*, 4th edn (London: Cassell & Co., 2001), pp. xiv–xv.
- 7 Alan Bartram, *The English Lettering Tradition: from 1700 to the present day* (London: Lund Humphries, 1986), p. 146.
- 8 Bartram, *Lettering on Architecture* (London: Lund Humphries, 1975), p. 173.
- 9 Burke, *Paul Renner: the art of typography* (London: Hyphen Press, 1998), p. 105.
- 10 P.M. Handover, 'Letters without Serifs', *Motif* 6 (1961), pp. 66–81, pp. 76–77.
- 11 Harry Carter, 'Sanserif Types', in *The Curwen Press Miscellany*, ed. by Oliver Simon (London: The Curwen Press, 1931), pp. 35–45, p. 42.
- 12 Lucien Alphonse Legros and John Cameron Grant, *Typographical Printing Surfaces: the technology and mechanism of their production* (London: Longmans Green, 1916), pp. 30–31.
- 13 Robert Bringhurst, *The Elements of Typographic Style*, version 3.2 (Vancouver: Hartley and Marks, 2008), pp. 12–15.
- 14 Nicolette Gray, 'Sans Serif and Other Experimental Inscribed Lettering of the Early Renaissance', *Motif* 5 (1960), pp. 66–76.
- 15 Stanley Morison, *Politics and Script* (Oxford: Oxford University Press, 1972), pp. 318, 330.
- 16 Denis Megaw, '20th Century Sans Serif Types', *Typography* 7 (1938), pp. 27–35, pp. 34–35.

1.1 Writing, Speech and Typography

1.1.0 Introduction

In the classic typography manual, *The Elements of Typographic Style*, Robert Bringhurst writes, ‘type is visible speech, in which gods and men, saints and sinners, poets and business executives are treated fundamentally alike’.¹ Though put in Bringhurst’s idiosyncratic poetic manner, this statement intimates two important beliefs which can be found throughout twentieth-century typographic discourse. The first belief is that the purpose of typography (or writing in general) is to graphically express spoken language; and the second, which follows from the first, is the belief that the graphic expression of speech constitutes a moral good. From this there often follows the view that instances in which the graphic expression-form of language is not a direct analogue with the audible, are instances of moral failure.

This chapter examines fundamental questions pertaining to the nature of writing and its relationship to speech, the ways in which this subject has been theorised historically, and the relevance of this topic to typographic discourse. We will begin by briefly demonstrating the way this topic has been addressed in the writings of typographers. We will then undertake a critical reading of the account of writing in two foundational texts in the study of writing and language: I.G. Gelb’s *A Study of Writing* (1952), which introduced the term ‘grammatology’ as the study of writing systems, and Ferdinand de Saussure’s *Course in General Linguistics* (1916). It will be demonstrated that both Saussure and Gelb regarded writing as subservient to speech, as did many typographers. This idea is then challenged with the aid of later linguists and grammatologists.²

1.1.1 Is Grammatology Relevant to Typography?

The simplest answer to the question ‘what is the relevance of the study of writing to typographic discourse?’ is that typographers themselves have insisted on the continuity of the two subjects. Discussion of the nature of the world’s writing systems and the relation of writing to speech can be found throughout twentieth-century typographic discourse. Accounts of writing systems are frequently presented in the form of an ‘evolutionary’ narrative of the development of the alphabet. Within such texts, this grammatologico-historical account varies in detail and accuracy.

Schematic versions of this account can be found in British typography journals, from the interwar New Traditionalist publication *The Fleuron* (1923–1930), to the more modernist-

leaning post-war *Typographica* (1949–1967). In the third issue of *The Fleuron* (1924), P.J. Angoulvent uses the evolutionary account of the alphabet as having developed from pictures — described as move from ‘feeling’ to ‘reason’ — to support an argument that ‘advanced’ books should lack illustration and be purely typographic.³ In the first issue of *Typographica* (1949) the German type-designer Konrad F. Bauer discusses the development of the alphabet from pictures in metaphysical terms, describing a transition from pictographic ‘sacred signs’ to ‘phonetic signs’. This, according to Bauer, instigates a shift in humanity: [there is a] ‘clear indication that [alphabetic characters] sprang up from a different spiritual realm’: a shift from ‘the first magic circle in order to enter another one which is no less full of secretive mystery’.⁴ Although Bauer’s esoteric language is unusual, the idea that the alphabet instigated a new stage in mankind, one which separates humanity from an older magical conception of the world, is entirely orthodox.

In-depth and scholarly examples of this narrative can be found in *Signs and symbols: their design and meaning* (originally published in German as *Der Mensch und seine Zeichen* from 1978 to 1981) by the Swiss typesigner Adrian Frutiger, and *An Illustrated History of Writing and Lettering* (first published in German as *Geschichte der Schrift in Bildern* in 1940) by the German typographer, Jan Tschichold.⁵ Although he goes into much greater detail throughout the book, in the following passage Tschichold gives the basic structure of the evolutionary account of writing:

Four stages can be distinguished in the histories of most writings. On the *preliminary stages of writing* (mnemonic or memory signs) follow the *pictorial signs* (pictographs), *the signs for ideas* (ideograms) and finally *the signs for sounds*, or letters (phonograms). As writing in phonograms is only adapted to some, but by no means to all languages, many cultures, even important ones, such as the Chinese, have remained in the stage of ideographic writing.⁶

Tschichold’s final statement above demonstrates an important aspect of the evolutionary account of writing: although chronologically various forms of writing may co-exist, and although China may have, according to Tschichold, ‘the most highly developed pictorial writing of all ages’, *evolutionarily* China has ‘remained in the stage of ideographic writing’ [emphasis added]. Tschichold makes this point more explicitly when he describes a nineteenth-century Crow Indian cowhide record as belonging to the stone age ‘from the evolutionary point of view’.⁷

More typical than Tschichold’s and Frutiger’s scholarly investigations are brief, passing accounts of the ‘evolution of writing’ along the lines of the examples from *The Fleuron* and

Typographica cited above. The second edition of Eric Gill's *An Essay on Typography* (1936) added a chapter in which Gill reflected upon the history and function of letters. Gill provides the following evolutionary schema which he describes as 'obvious and guessable and common gossip':

I think it is generally agreed that picture writing was the beginning of our lettering. You might wish to communicate something to someone at a distance. If you have no letters or none common both to you and your correspondent, what else can you do but draw a picture? — the language of pictures is common to all. After a time your pictures are used to signify *words* and not simply *things*, and as the system develops and communications become more precise, the pictures become simpler and simpler, more and more conventional, and they come to signify single sounds rather than whole words. And the pictures, by now, have ceased to be pictures. They are, by now, hardly recognisable as representations of *things*; they are conventional signs, and their pictorial origin is forgotten.⁸

This basic story of the evolution of writing — from 'pictures' standing for 'things', to 'simpler' pictures standing for 'sounds', until finally abstract signs stand for 'single sounds' — is to be found not only in the writings of typographers, but also in the writings of linguists and grammatologists. Such histories describe writing as following an evolutionary development which reaches its conclusion with the allocation of symbols to the units of speech which linguists refer to as 'segments', the units we generally think of the alphabet as standing for. Such an alignment of symbols and sounds is known as the 'alphabetic principle'.

Gill ends his very brief history of the alphabet at the moment of its inception. The idea that writing had reached its apex with the invention of the alphabet is often further emphasised by typographers who present as a continuous narrative the supposed stages towards the evolution of the alphabet (which involves discussion of the structural grammatological functioning of writing systems), through to an account of the various letter styles in which the alphabet has been rendered throughout history (an issue essentially independent of grammatological function). An example is provided by a 1970 book from the British design firm Crosby/Fletcher/Forbes. It begins by condensing Gill's account further:

The history of letters and alphabets as we know them today began with the modification of early pictograms, and the abstraction of recognisable images and drawings into signs. To quote Eric Gill, 'letters are signs for sounds'.⁹

From here they continue through to evolutions of alphabetical form, through palaeographic and typographic history. Again, a more detailed account is to be found in Tschichold's *Illustrated History*, which, like Crosby/Fletcher/Forbes, presents a linear development from pictographs through to the various palaeographic and typographic stylings of letters — from Insular Uncial, to Carolingian minuscule, to Humanist hand, etc.¹⁰ Another well-informed text which presents as a continuous narrative the 'evolution' of segmental writing and the stylistic development of renderings of the alphabet is Jock Kinneir's *Words and Buildings* (1980).¹¹

Both versions of this account, whether ending at the invention of the alphabet or continuing through to scribal styles (and regardless also of whether the text is as rich as Tschichold's or as succinct as Gill's), share an assumption about writing which has frequently provoked a particular response from typographers. The assumption is that writing was perfected with the alphabetic principle, and that there has been no real development in writing since. This has provoked typographers (as well as linguists and grammatologists), when comparing their own orthographies (English or German for example) with the alphabetic ideal, to view orthography as a degenerate and faulty application of the alphabetic principle. Thus, it is often concluded that orthography must be 'reformed' to adhere precisely to the principle that individual symbols directly correspond to individual segments. This, in fact, is precisely what Gill does in the pages following the above cited passage. In terms that make explicit the view described in the introduction (implicit in Bringhurst), that to graphically represent speech is a moral good and to not do so is a moral failing, Gill writes

there is no correspondence between talking and writing it down. Writing is not written talk [implicitly, as it *should be*]; it is a translation of talk into a clumsy and difficult medium [...] It is in fact an entirely outworn, *decayed and corrupt* convention whose chief and most conspicuous character is its monumental witness to conservatism, laziness and irrationality of men and women [emphasis added].¹²

In the face of this Gill argues that we need 'a system in which there is a real correspondence between speech, that is to say the sounds of language, and [the written form of] the means of communication.'¹³ (We will see in Chapter 2.3 how Gill is here repeating a demand already made by the New Typographers in the 1920s).

Demand for orthographic reform is by no means universal in typographic discourse, but it is significant to note that this idea does follow logically from the evolutionary account of writing typically found in writings on typography. Arguments against the idea that writing should be reformed to be a direct analogue of speech can also be found in the writings of

typographers. A 1974 book by the Swiss typographer Karl Gerstner, entitled *A Compendium for Literates* (originally published in German two years prior) is, like Frutiger and Tschichold's books, commendable in its scholarly approach to the subject of writing, albeit in a different manner. Gerstner approaches writing from a number of angles, citing the views of linguists (including Saussure) as well as anthropologists (Claude Lévi-Strauss), media studies scholars (Marshall McLuhan), and many other academic perspectives. Gerstner makes it clear that the aim of his book is not to provide an argument on writing but precisely to be a 'compendium'. On reaching conclusions he writes, 'I have deliberately refrained [...] you, the reader, are left to sort out the assets from the liabilities'.¹⁴ As a result Gerstner's view is often difficult to decipher.

Gerstner again provides a sketch of the development of the alphabet from pictures.¹⁵ Significantly, his account extends beyond the initial invention of segmental-writing, not only into a formal history of letterstyles but into an (albeit brief) discussion of how alphabet-utilising systems evolve beyond an initial adherence to the alphabetic principle. Gerstner cites arguments against a purely phonetic mode of writing from a 1930s 'philologist' Hans Robicsek, who points out that in speech consonant sounds vary according to their occurrence in relation to other segments (although, from this Gerstner oddly concludes that a syllabic script would 'describe language more efficiently. i.e. faster' than alphabetic writing).¹⁶ Gerstner provides further argument in favour of the independence of writing from spoken language with a description of Luther's New Testament of 1522 as having invented with might be called, although Gerstner does not use the word, a 'grapholect': a form of written language which unites by transcending the dialectical differences found in spoken language. Gerstner even goes so far as to argue that one who learns to write 'has to learn a new language, the literary language'.¹⁷ Such examples show that writing makes distinctions, and ignores others, made in speech, and that a standard orthography's lack of phonetic acuity can allow it to transcend dialectical variation. These points suggest, firstly, that strict adherence to the 'alphabetic principle' is not the optimum mode of writing, and secondly, that the alphabetic principle can not be said to be the final stage in the development of writing — orthographies which use the alphabet have clearly developed to do more than simply allocate symbols directly to segments. This is not simply 'decay' as Gill puts it, but a form of graphic efficiency.

Despite having demonstrated this, Gerstner returns to an account of standard orthography as being essentially broken, as having a 'disorder' which was not present in the 'original Greek alphabet' but 'came about only in the course of development'.¹⁸ He then — seemingly forgetting his preference for syllabic script stated only a few pages prior — concludes in favour of reforming orthography to adhere to the alphabetic principle, asserting

that 'there is every reason to spell "correctly" "korrektly"'.¹⁹ In the end then, Gerstner's account of writing fits with those of Gill and Tschichold: Gill's culminated with the invention of the alphabet; Tschichold's continued into a discussion of formal variation in the style of letters; Gerstner's final comments cited above describe the structural (as opposed to graphic) changes in writing after the alphabet's invention, however he ultimately concludes that such changes are not development but 'decay'. Again, it is clear that the view that writing should be reformed follows the view that the alphabet is the most highly 'evolved' form of writing.

In the following sections we will challenge the idea that writing systems should be compared to one another in terms of their degree of 'evolution' and that the alphabetic principle accounts for, or should ideally account for, orthographies which use alphabetic symbols. Alphabetic orthographies often involve a greater degree of phonetic analysis than the simple isolation of segments and allocation of symbols to such segments, and involve strategies to indicate morphological aspects of language. It has been an oddly unscientific aspect of twentieth-century reflections on writing that often first the alphabetic principle has been accepted as the norm and then orthography has been discussed in terms of deviation, rather than beginning with studying the actual functioning of living orthographies. Yet, this view has been orthodox, not only in typographic discourse but also in the study of language and writing for much of the twentieth century.

Returning to the question of the relevance of grammatology to typographic discourse: when we reflect upon typographers' statements in which they describe their craft as 'visible language' or a virtuous 'visible speech', we are lured from the history of typography into the domains of linguistics and grammatology. At first, it might seem that each of these three disciplines can be arranged as fitting one within another like Russian dolls. Linguistics as the study of language must contain grammatology as the 'science of writing' if writing is taken to be the graphic manifestation of language. And typography as a particular means of expressing writing should, perhaps, fall under the domain of grammatology. As we will see below, how exactly these disciplines relate is less certain.

1.1.2 Is Writing Language?

Ferdinand de Saussure's *Course in General Linguistics* (posthumously published in 1916), is credited with having set the agenda for the science of linguistics in the twentieth century as the study of language as a *synchronic* system. Prior to Saussure the study of language is said to have been dominated by philological and etymological research into the *diachronic* development of language and languages: a field centred on the study of written texts.

Writing, insists Saussure, is not a manifestation of language in itself, but rather a semiotic system that ‘exists for the sole purpose of representing’ language.

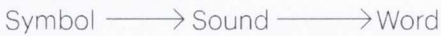
Language and writing are two distinct systems of signs; the second exists for the sole purpose of representing the first. The linguistic object is not both the written and the spoken forms of words; the spoken forms alone constitute the object.²⁰

Writing, for Saussure, as elegantly expressed in Wade Baskin’s translation, is ‘not a guise for language but a disguise.’²¹ The sole function of writing is to represent speech, yet in fulfilling this task writing errs. Writing is a potential obstacle to the linguist’s understanding of language: indexing false etymologies and corrupting language’s natural development. Despite his distrust of writing Saussure did not advocate orthographic reform. Writing was already an interference with the natural development of language. Rather than interfere further the linguist was to be conscious of the ‘teratological cases’ which writing engendered, and should keep such mutants in a ghoulish menagerie, ‘a special compartment for observation’.

By ‘language’ Saussure meant ‘spoken language’; but spoken language is not speech. Fundamental to Saussurean linguistics is the distinction between language as system (*langue*) and speech as a manifestation of language (*parole*). This distinction becomes tricky when we discuss the place of writing in, or in relation to, language, as it is often necessary to use the term ‘spoken language’ to distinguish from writing when *langue* is what is meant. What we need to keep in mind is that spoken language, as Geoffrey Sampson has put it, ‘paradoxically, is something that is not necessarily spoken’.²²

How, according to Saussure, does writing represent language? Saussure states that ‘there are only two systems of writing’ — ideographic and phonetic.²³ A phonetic writing system is one which ‘reproduces the succession of sounds that make up a word’ with graphic symbols. The sounds to which symbols are supplied can be syllables or they can be the sounds Saussure describes as the ‘irreducible elements used in speaking’ — segments. Of phonetic writing Saussure writes, ‘here the Greek alphabet is noteworthy. Each simple sound is represented in Greek by a single graphic sign, and each sign always stands for the same simple sound’.²⁴ In contrast to phonetic writing Saussure defines ideographic writing as supplying a symbol ‘for the whole word and, consequently for the idea expressed by the word’.²⁵ Saussure asserts that this is the case with Chinese writing. A few lines later Saussure’s definition of Chinese ‘ideography’ is slightly modified: he writes, ‘to a Chinese [person], an ideogram and a spoken word are both symbols of an idea’.

PHONETIC WRITING



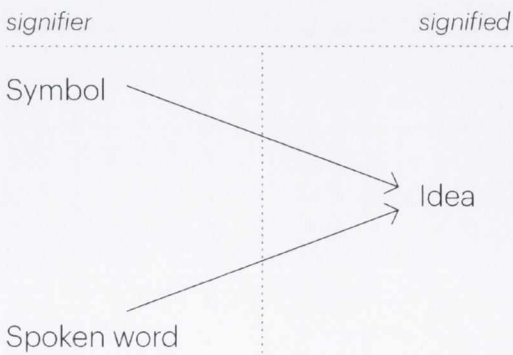
IDEOGRAPHIC



Saussure's writing systems

Already we encounter a problem with Saussure's description of writing. There seems a disparity — or at least a lack of clarity — in the account of the structure of each member of Saussure's grammatological typology, centred on the ambiguity of the term 'word'. As stated above phonetic writing is defined as writing in which symbols are allocated to sounds which make up *words*. 'Word' being the end of the chain, we might assume that by 'word' he means a complete sign of both signifier and signified, both sound and concept. Yet, the initial description of ideography is that it is a system that supplies symbols to words, and thereby ideas. If ideas are a stage in the chain after words, we must take words here to mean sound-images, units of speech — *signifiers* — with 'idea' as the *signified*. If so, then such 'ideography' must be a type of 'phonetic writing', which supplies symbols not to syllables or segments, but to 'words' as units of speech (even though such units, unlike syllables and segments, are delineated in 'size' not by their phonic substance but by their coincidence with semantic units). Yet, the second definition — 'ideogram and a spoken word are both symbols of an idea' — is contradictory as it implies that ideographic symbols and spoken words both take direct paths to a common 'idea'.

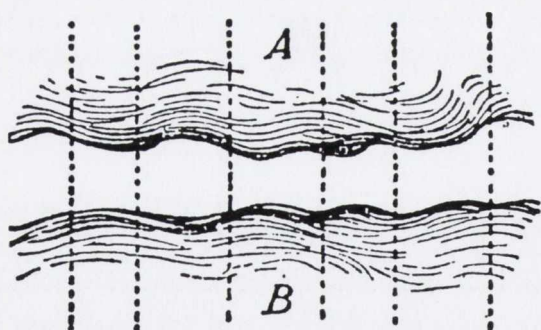
IDEOGRAPHIC



Saussure's second definition of 'ideographic'

If the above figure accurately depicts Saussure's conception of ideography, then his statement that there are two types of writing is coherent, as such writing would not ascribe symbols to sounds. But his more fundamental statement, that writing exists for the sole purpose of representing spoken language is problematised. If ideographic writing involves symbols which point independently towards 'ideas', and not via speech sounds, then this type of writing must be taken to be on a par with, and not subsidiary to, speech.

Saussure asserts that language is not simply a naming system; not simply a set of words standing for things or meanings existing outside of language. Rather, language is both the system of expression and the system of meanings. From a plane of undifferentiated ideas and a plane of undifferentiated sounds, language establishes 'a link between thought and sound, under conditions that of necessity bring about the reciprocal delimitations of units'.²⁶ Such a bond formed by mutual delineation of sound and thought, or *signifier* and *signified*, forms Saussure's basic unit of language, the *sign*. This bond is said to be arbitrary in that there is no natural reason for a particular sound to have a particular associated content; the relationship only exists in so far as it is observed by convention. Just as the sounds of language function in differential contrast from one another, so too, claims Saussure, do meanings. Saussure, therefore, enshrines language as the site of meaning, rather than as a means of representing meanings (or *things*) exterior or prior to language.



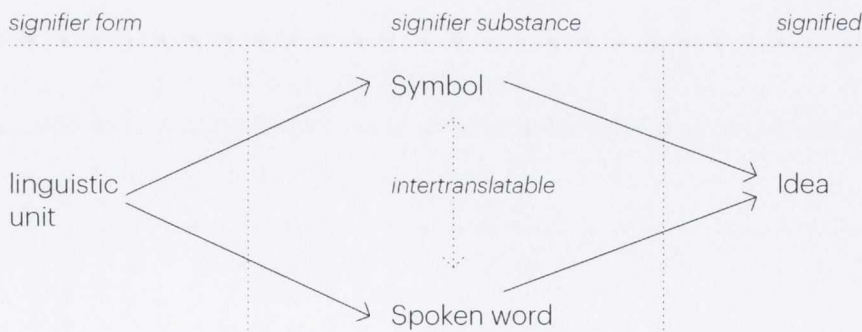
Saussure's diagram of 'reciprocal delimitation of units'.

A is the plane of undifferentiated thoughts and *B* is the plane of undifferentiated sounds. According to Saussure's second definition of ideography, ideographs would also have to belong to plane *B*, but how? Saussure defines language as form, rather than substance — a linguistic sign is defined not by its positive material attributes, but by its functioning differentially within the abstract pattern of language. Thus the signifier in language, as *form*, can emerge as

substance as sound-image or ideographic symbol, neither having priority over the other. Is it possible, then, to extend this notion — of formal identity but substantive difference between speech and writing — from ideography to alphabetic writing? Several of Saussure's followers have done precisely this. I quote David Abercrombie (1967),

If we compare a piece of written English with a piece of spoken English, regarding them simply as physical objects or events and forgetting for the moment the fact that they convey meaning to us, it is apparent at once that they bear no resemblance to each other whatever. [...] However we have only to recall the fact that both of them convey meaning, to be in no doubt that [...] they are both equally English [...] the piece of spoken English and the piece of written English are the same language embodied in different mediums [...] Language itself lies in the patterns which the mediums form, and not in the physical objects or events.²⁷

Abercrombie concludes, 'language is *form* while the medium', be it speech or writing, 'is *substance*'. Abercrombie's view is shared by other linguists including Hans Jørgen Uldall. In the 1966 essay 'Speech and Writing', Uldall argues that although 'Saussure himself did not live to draw the full theoretical consequences' of his distinction between form and substance, it is 'through this concept that we can explain the possibility of speech and writing existing at the same time as expressions [i.e. signifiers] of one and the same language'.²⁸ This conception of the relationship of speech and writing in language might be represented by adjusting the models implied by Saussure as follows:



A nuanced variation on this idea is provided by Sampson, who takes into account that spoken and written languages have structural differences. He describes the written and the spoken versions of a language as 'closely-related dialects' descended 'from a single ancestor language'.²⁹ The written language inherits, among other things, the phonology of the ancestor language — the phonology being the *relational system* of phonetic difference rather than the

particular realisation of that difference as sound. In this way Sampson provides a definition of writing somewhat like that of Abercrombie and Uldall cited above, in which writing is the realisation of a spoken language *form* in graphic *substance*, yet with the (seemingly tautological) specification that writing is a system for notating a dialect of a spoken language which only exists in written form.

1.1.3 Did Writing Evolve?

In a wonderful turn of phrase Gelb describes the aim of his *Study of Writing* as to 'lay a foundation for a full science of writing, yet to be written'.³⁰ If Saussure instigated the synchronic study of language, Gelb, in a certain sense, attempted the same for the study of writing — to shift the study of writing from an area of historical investigation into an examination of the structure of writing systems. However Gelb's theory of writing can only be described as synchronic with qualification. Gelb proposed that there was a definite *structure to the evolutionary development* of writing systems, and therefore attempted a synchronic account of diachrony (in that sense Gelb's theory is somewhat analogous to Thomas Kuhn's *Structure of Scientific Revolutions*, in so far as both give a structural account of historical change).

As for Saussure, for Gelb writing means a notation system for spoken language. Gelb calls systems of notation that record or document information but do not relate to spoken language, *semasiography*, from the Greek *semasia* — meaning-writing. Semasiography is of relevance to the grammarologist, but only as a 'forerunner' to writing. Writing in full begins with the advent of *phonography* — sound-writing, the use of graphic symbols to stand for specific sounds. Gelb claims that there is a strict law determining the direction of the evolution of writing which he calls 'the principle of unidirectional development'.³¹ This 'law' dictates that writing develops from pictures, to semasiographic pre-writing systems, and then through three phonographic stages — word-syllabic, syllabic and finally alphabetic.³² Thus for Gelb, a typology of writing systems is also an evolutionary chronology. That some of the world's writing systems are not alphabetic means that they are not fully developed.

Logography, according to Gelb, could never develop into a full system of writing as it would require far too many symbols. So logography develops syllabic signs, wherein a logograph is used not for the object it stands for, but for its phonetic value according to the 'rebus' principle (a hypothetical example of this principle provided by Gelb is the word *mandate* being indicated by a symbol for man and a symbol for a date). 'This is phonetisation, the most important single step in the history of writing', as this begins the allocation of symbols to sounds separate from semantic values.³³ The evolution of writing reaches completion with the

Greek alphabet as a system of writing which isolates ‘the single sounds of language’.³⁴ For Gelb there can be no greater degree of phonetisation, and therefore no further evolution. The final chapter of his *Study*, which speculates upon possible future developments for writing, imagines only greater international institutional agreement regarding the use of segmental writing, not greater acuity of phonetisation.³⁵

There are several problems with Gelb’s conception of writing systems as existing on a continuum of evolutionary development according to their degree of phonetic acuity. As Roy Harris has pointed out, if Gelb defines language as ‘visible speech’ and only accepts systems of notation ‘after’ the development of phonetisation as writing, he would have to exclude as non-writing both musical and mathematical notation.³⁶ It seems difficult to accept that mathematical notation is not a developed system of writing, but a ‘pre-cursor’, less ‘evolved’ than phonographic systems, as Gelb’s evolutionary theory would insist. In fact, Gelb cannot consistently sustain this view. In one passage Gelb writes,

just as there are occasions when the spoken word is more powerful, more expressive, than its written counterpart, so there are others when writing serves its purpose more effectively than [spoken] language.³⁷

As evidence Gelb writes, ‘there are sciences, such as mathematics, so full of complicated symbolism that only writing is able to express it in a short and efficient way’. Thus, in contradiction to his fundamental theory that the greater the degree of phonetisation involved, the more advanced the system of writing, Gelb presents mathematical notation, a semasiographic system not tethered to speech, as writing at its most powerful.

A more fundamental problem with the evolutionary theory of writing is that it does not find support in historical facts. As John S. Juteson and Laurence D. Stephens have pointed out, although ‘[Gelb’s] sequence does correctly capture the overall appearance of the types [of writing system] in world history [...] one of the most striking inadequacies of this evolutionary proposal is that [opposing Gelb’s structure] syllabic scripts *never* evolve into non-syllabic scripts’.³⁸ Peter Daniels has also demonstrated that Gelb’s insistence on unidirectional development forces him to misdescribe systems to fit his theory. For example, Daniels argues, contra Gelb, that both the Sanskrit and Ethiopic syllabic writings developed from a West Semitic script that was not syllabic, as Gelb states, but was rather what Daniels calls an ‘abjad’, meaning its symbols denote (consonantal) segments.³⁹

We can of course, given the flexibility of the term, state that writing systems ‘evolved’,

in the sense that, both due to deliberate intervention and due to the continued use of systems over time, writing systems have changed in structure. However, from this one should not expand to a biological sense of evolution, as Gelb does, implying that there is a natural principle behind writing's development.⁴⁰ While it is true that within the history of certain writing systems a development of phonetic characters can be observed over time — for example the increasing adoption of the acrophonic principle (when a pictorial sign represents not the object depicted but the first sound in the name of the object) in ancient Egyptian writing, or the use of phonetic determinatives in Chinese. Nevertheless, there is not sufficient evidence to derive a theory of a natural course of evolutionary stages that writing must go through. In the first instance, this is because writing, as something which has only independently emerged a handful of times in human history, is better thought of as an invention than a natural organism subject to evolution. The strongest evidence against the notion that writing follows a unidirectional evolution towards the alphabetic principle is the simple fact that, as Daniels puts it, 'the progression to an alphabet took place *once only*, through West Semitic and Greek, and hardly deserves to become the model for a universal law' [emphasis added].⁴¹

Daniels writes that the 'unidirectional development' theory of writing became orthodox because of the 'prestige' of Gelb's scholarship. This may go some way to explaining it, but there are other reasons why the idea is hard to shake, as the superiority of the alphabetic principle (and the idea that its invention is also a moral achievement) often plays a central role in the way Western culture is figured in relation to the other cultures. A Gelb-like view of the story of writing is to be found in a 1977 text by the literary critic E.D. Hirsch Jr: 'the usual pattern of writing systems is to pass from pictographic, to ideographic, thence to syllabic, and ultimately alphabetic modes of representation'.⁴² Hirsch writes that writing follows a 'natural evolution towards a phonetic script'. The enduring appeal of Gelb's idea is perhaps in how it chimes with a view of European superiority. Hirsch continues:

The conservatism of Chinese culture, coupled with its religious conception of writing as inherently sacred [...] may explain why writing failed to follow its natural evolution in China.

Here Hirsch inadvertently exposes the eurocentrist appeal of Gelb's theory. The various writing systems which use segment-symbols are most certainly not the result of writing being allowed to follow unfettered its natural development, unlike superstitious and conservative China, which bound and thereby stunted (like maidens' feet, perhaps Hirsch imagines) the rightful growth of writing. The world's segmental writing systems did not spurt like a mountain spring hurried by a

natural principle. More plainly, they are the result of peoples' *adopting the invention* of the alphabet. China did not inhibit the natural development of writing, it simply did not adopt this invention. Why it did not has probably less to do with conservatism than with the extent to which China had already a well-developed and widely-spread writing system at the time at which it encountered segmental writing. The spread of the alphabet in European countries, in contrast, was aided by the fact that no prior competing systems stood in the way.

The typology in Sampson's *Writing Systems* (1985), like Gelb's, begins with a distinction between systems of notation related to speech and those not, which Sampson labels, respectively, *glottography* (in reference to the glottis and thereby speech) and *semasiography*.⁴³ He then focuses on glottography which is further subdivided into *logography* and *phonography*. Phonography is the assignation of symbols to non-semantic units of speech. Logography (and morphemic writing as a subcategory of logography) assigns symbols to semantic units of speech — words or morphemes. This is distinct from assigning symbols to ideas in general separate from any one language, which would be semasiography. The division of semantic units (as Saussure described) is as much an aspect of language as the phonology; this is the important distinction between logography and semasiography which is often blurred in the older term, ideography.

Unlike Gelb, Sampson does not categorise writing systems according to their degree of evolutionary advancement; nevertheless phonetisation as a means of organising systems typologically remains useful. Phonographic systems are classified by Sampson according to the 'size' of sounds the symbols stand for: *syllables*, *segments* or *features*. In the study of the sounds of language, segments can be subdivided into *features*. For example the first segment in the spoken word 'boy' has the following *features*: it is bilabial (meaning produced with action by both lips), it is voiced (meaning it involves vibration of the glottis) and it is plosive (meaning it involves a closure of the vocal tract followed by a sudden release). The first segment in 'potato' has identical features except that it is unvoiced rather than voiced. The only language in the world with a featural system as standard orthography is the Korean Hangul system.⁴⁴

Like the world's segmental systems, Hangul did not 'evolve'. Rather it was an invention, provoked by a frustration with the misalignment of Chinese writing with the structure of Korean, and an analysis of speech.⁴⁵ Many similarly featural systems were proposed by British phoneticians in the nineteenth century (as will be discussed in Chapter 2.3). Gelb makes only passing reference to Korean writing in his *Study*, but he does include detailed description of certain nineteenth-century featural systems. It is striking that Gelb, and many others familiar with featural systems, maintained that in terms of phonetic representation, segmental systems

were optimum. Again, one is tempted to suggest that the centrality of the alphabet in the myth of European supremacy must play a role in the difficulty authors such as Gelb (who believed phonetic acuity to be the mark of advanced writing) had in recognising the superiority of featural systems according to their own terms.

1.1.4 The Primacy of Writing

In discussion of Gerstner's *Compendium for Literates*, we noted that alphabetic orthographies involve strategies beyond the 'alphabetic principle', and that such evidence should discourage the demand for 'orthographic reform' (despite the fact that Gerstner went on to advocate it). Another source from within typographic discourse for such arguments is Sigfrid Henry Steinberg's *Five Hundred Years of Printing* (1955). Steinberg, as would be expected of a historian of typography, does not discuss writing systems and language in the same degree of technical detail as Gelb and Saussure. Nevertheless he frequently discusses topics that are linguistic and grammatological. Gelb speculated that the next development in the history of writing might be the adoption of a mode of alphabetic writing equipped to deal with all the world's languages, maintaining a one-to-one correspondence of symbol to sound.⁴⁶ Steinberg is quite certain that the Latin alphabet is best qualified to, and should be encouraged to, replace the various writings of the world, but he is less clear than Gelb on the precise way that the alphabet should be used. Steinberg believes that we are already moving in the direction of adopting a single international alphabet:

it is rather one of the most wholesome consequences of the world-wide expansion of the printing press that the one Latin alphabet should have become the one medium in which every human thought can find adequate expression.⁴⁷

But what Steinberg is celebrating is the use of a certain set of designed alphabetic characters rather than adherence to the alphabetic principle:

It was the penetration of western Europe by the spirit of humanism that brought about the victory of 'roman' and 'italic' types; and it was the resistance of the spirit of humanism that made the Germans, Russians, and Turks cling to the isolationism of the Fraktur, Cyrillic and Arabic types.⁴⁸

Steinberg celebrates the demise of the use of Blackletter types in Germany, as well as unique printing types for the Irish language. At the same time he laments that Russian uses the Cyrillic, rather than Latin, alphabet. Thirdly, he celebrates the replacement of Arabic script with

the Latin alphabet in the writing of Turkish. Steinberg fails to distinguish the differences between these situations. The change in German and Irish printing was primarily a change of visual appearance, and not orthographically significant (although minor orthographic changes followed, such as the replacement of the *séimhiú* accent in Irish with the character h). The Cyrillic alphabet is, naturally, used to indicate segments, yet for Russian to be written in the Latin alphabet would be of greater orthographic significance than the changes in Irish and German. The change from Arabic (an ‘abjad’ in Daniels terminology) to alphabetic writing was a fundamental orthographic change, not comparable to Germany’s rejection of Blackletter.

Steinberg’s view is somewhat superficial, and results from an ambiguity often found in typographer’s writings on grammatology: a conflation of, or a failure to clearly distinguish, issues of the graphic design of symbols with the grammatological function of symbols within an orthographic system (this ambiguity is also, of course, at work in the historical accounts discussed above which present as continuous the ‘evolution’ of the alphabet and the varieties of scribal and typographic letterstyles). Yet, despite Steinberg’s celebration of a visual typographic hegemony, he does not propose a universally-applicable writing system based on the alphabetic principle. Steinberg explicitly rejects the idea that English orthography needs to be reformed based on a ‘rational’ correspondence of symbols to sounds. He argues against such a reform on the grounds that English is spoken with many accents and dialects the world over, yet is intelligible to all in its printed form. The ‘fundamental fallacy’ of would-be spelling reformers is, so Steinberg argues, a belief that the purpose of writing is to represent speech rather than to be understood. He writes,

The Times, although it is spelt in the language as spoken by King Henry VIII, may be read and understood by millions of people whose pronunciation varies from Pidgen English, American, and Cockney to Broad Scots and the Queen’s English.⁴⁹

Steinberg’s point demonstrates that the English language is not simply a spoken thing. Its strength, in large part, resides in its existence in writing and print. As was noted above, Saussure was aware that writing altered language — that speech (*parole*) was influenced by writing.⁵⁰ But the influence of writing on language is apparent in more than the production of occasional mutants — writing has also altered *langue*. English, for example, is not first and foremost a spoken language, rather it is a ‘grapholect’ — a language which has evolved through writing and print, to become a common dialect for a much larger community than the communities united by any exclusively spoken language.⁵¹ A grapholect such as English has a

vast lexicon than no exclusively spoken language can match.

The term 'segment' used thus far is a relatively neutral term for speech sounds, as it does not distinguish between formal function and phonetic substance. Segments function as *phonemes* — as non-semantic differential units of speech. Again, phonemes are not defined by their positive substantial qualities (even though there are certain phonetic consistencies), but by their function. A phonetic transcription of two accents speaking the same language would be different, as the phonetic notation would aim to faithfully transcribe the individual sounds; however a phonemic transcription might show that the same phonemes were in use despite the difference in sound. By analogy with phonological terminology, the symbols used in a graphic notation system can be referred to as *graphemes*.⁵² As with a phoneme, a grapheme is not defined by its substance but by its differential function. In linguistic writing systems, graphemes do not necessarily correspond directly to particular phonological units, but according to the ideal of the alphabetic principle there should be one-to-one correspondence of grapheme to phoneme. 'Each simple sound' as Saussure said of the Greek alphabet, 'represented [...] by a single graphic sign.'

In English orthography, as we all know, even when a one-to-one correspondence occurs, it is not one that is fixed in stone. For example, the letter ⟨c⟩, frequently used for [s] and [k], seems redundant when ⟨s⟩ and ⟨k⟩ already exist. In other contexts ⟨c⟩ can indicate [ʃ] as in ⟨precious⟩. The [ʃ] sound is also indicated with the digraph (two letters for one sound) ⟨ch⟩, as in ⟨machine⟩. The same digraph also indicates the affricate [tʃ] in ⟨change⟩. With vowels there is even greater variation. In ⟨hat⟩, ⟨a⟩ corresponds to [æ]; but in ⟨hall⟩, ⟨a⟩ corresponds to [ɑ:]. The same letter can be used to spell the diphthong (two vowel sounds in one syllable) in ⟨angel⟩ and ⟨atonal⟩ — [eɪ]. And in other combinations ⟨a⟩ corresponds to other sounds, such as in ⟨air⟩ and ⟨augment⟩.

One could continue providing such examples, however a full inventory of symbols and the segments that they can be associated with will not provide an exhaustive account of English orthography. It has been demonstrated that alphabetic writing systems, such as English, increasingly develop logographic strategies, refuting the claim that there is an evolutionary teleological principle directing the course of writing from logographic to segmental.⁵³ Although it is useful to use a broad typology to define writing systems in relation to whether they use symbols for words or syllables or segments, in reality all writing systems deploy hybrid strategies.

Valid arguments against the reform of orthography were formulated already by Henry Bradley in the early twentieth century (as Hirsch has noted). Bradley's 'Spoken and Written English', originally presented as a paper to British Academy in 1913, argues against not only the

reform of orthography, but the underlying assumption on the relations between writing and speech which motivate such a demand. Bradley refutes the following three conceptions: firstly, that the purpose of writing is solely the representation of speech; secondly, that the 'alphabetic principle' does or should describe how (English) orthography functions; and thirdly, that writing reached its full development with the alphabetic principle and subsequently-developed deviations are 'nothing but blundering and stupid and indolent conservatism'.⁵⁴

Bradley sets out his objectives thus:

My chief aim has been to discover and set forth, to the best of my ability, the nature of the relations that exist between spoken and written language in general [...] The subject to me is full of interest as part of the science of language [...].⁵⁵

The final point is crucial: rather than *a priori* assume orthography to adhere to the alphabetic principle save 'deviations', Bradley approaches writing with a scientific curiosity regarding its actual, not ideal, functioning. Bradley contends that 'it has come to pass that the written languages of Europe, which were once purely phonetic, are now to a certain extent ideographic'.⁵⁶ As is often the case, the term ideographic here is not perfectly precise. In Sampson's terminology what Bradley proposes would be termed 'logographic', as Bradley describes writing as referring directly to the semantic, rather than phonetic, units of language. Whereas musical notation can only be interpreted by translation into sound, the translation of writing into sound is only a means: 'we use visible symbols for sounds of speech because spoken sounds are symbols for meanings.'⁵⁷ Bradley's argument is that writing is essentially, regardless of the inter-translatibility of writing and speech, 'ideographic' to the fluent reader. A reader does not necessarily first translate graphic symbols into sounds and then to meanings, but is sufficiently fluent to move directly from graphic symbols to comprehension.

Significantly, Bradley argues that European alphabet-utilising orthographies are not simply functionally logographic for the fluent user, but that such systems are logographic in structure. Among the logographic non-phonetic features of writing he lists are punctuation marks (a particularly good example is the apostrophe to indicate possessive, not symbolised in speech). As Sampson does, Bradley asserts that deviation from the alphabetic principle can be beneficial in the case of homophones, as the use of different spellings serves to make distinctions which speech does not. Spellings not only distinguish homophones, but indicate morphemic distinctions that a phonetic notation would mask. For example, Bradley writes:

The unphonetic spelling *missed* has been re-established. Why? 'Sheer perversity', says the ardent spelling reformer. But mankind do not make changes out of sheer perversity, but because they somehow feel them to be convenient. In this case *miss* is the accustomed symbol for a certain verbal concept, and *ed* for the notion of past tense. When the two symbols are put together unaltered, the combined meaning is more vividly suggested than it is by the phonetic spelling, which moreover is associated with a different word ['mist'].⁵⁸

Similarly, spelling is clear in cases in which proper names takes the adjectival form (Canada – Canadian / Bacon – Baconian). Graphically it is clear that a proper name has been turned into an adjective with the addition of (the morphograph) 'ian'; phonetically the nouns change in a manner that makes the adjective form less discernible. In light of such distinctions made in orthography, Bradley argues that

the existing ('partly ideographic') spelling, for those who are thoroughly familiar with it, fulfils the chief end of written language better than a purely phonetic system if equally familiar could fulfil it.⁵⁹

Bradley further concludes that the above criticism of the notion of the superiority of phonetic notation when compared to the actually existing orthography of English reveals that in such languages it is writing rather than speech that provides the norm: 'among peoples in which many persons write and read much more than they speak and hear, the written language tends to develop more or less independently of the spoken language'.⁶⁰ Against the notion that the influence of orthography on speech produces exceptional mutants (as Saussure claimed) Bradley argues that in fact it is altogether an integral fact of our language that the written form frequently influences the spoken: 'the English language [...] is to a considerable extent a creature of its written form, it follows that an extensive change in the written form cannot leave the substance of the language unaltered'.⁶¹ He supports this view with an interesting argument based on a hypothetical situation in which a phonetic reform of orthography has occurred. At present orthography is superior to speech and phonetic spelling in that it distinguishes homophones. However, it is hypothetically plausible that the adoption of a phonetic orthography would encourage the spoken language to abandon homophones. This does not discount the primacy of writing, rather the hypothetical phonetic-orthography for a homophone-less spoken language can only follow from an assumption of the primacy of writing: the assumption that writing will influence the structure of spoken language.⁶²

Bradley's views went against what remained orthodox for decades. Leading linguists

such as Leonard Bloomfield, like Saussure, held that ‘writing is not language, but merely a way of recording language’.⁶³ Increasingly, from around the late 1960s, linguists have arrived at similar conclusions to those of Bradley.⁶⁴ In *Linguistic Speculations* (1977), Fred W. Householder, with greater empirical and theoretical tools than were available to Bradley, asserted the *logical* primacy of writing in literate cultures: ‘we learn first to speak, and then to read and write, *after which we must go back and correct all the errors we made by learning to speak first*.’⁶⁵ That our culture is structured around the priority of writing is evident in law:

If I change the pronunciation of my name, the law does not care (nor, indeed, is anyone bound by my decision); but if I change the spelling [...] then I must go to court to make it legitimate.⁶⁶

Again, like Bradley, Householder argues that spelling-influenced pronunciations are not simply ‘teratological cases’ but ‘so numerous’ as to be the norm.⁶⁷

logical priority has nothing to do with temporal priority [...] Obviously children speak long before they write [...] and obviously our human ancestors spoke for millions of years [...] before the first crude systems of writing were devised. But this is not the question. The question is this: in literate communities, by and large, does orthography influence pronunciation or does phonology influence spelling?⁶⁸

Conclusion

Returning to the questions posed in the first three sections of this chapter. The relevance of grammatology to typographic discourse is proven by the fact that the topic has frequently been raised by typographers. More than this, it has been demonstrated that certain ideas regarding grammatology have been commonly held by typographers (notably, belief in the evolutionary superiority of the alphabet and the virtue of the alphabetic principle), resulting in a sort of typographic-grammatological ideology. It is therefore necessary to engage with linguistics and grammatology to address typographers’ writings on these and related subjects (as will be demonstrated in Chapters 2.3 and 4.1).

The question of whether writing is language, which is uncontroversial to the layman, has been (and remains) a subject of controversy in linguistics and grammatology.⁶⁹ Although Saussure explicitly argued that writing was not language, Abercrombie and Uldall demonstrate that by his own reasoning writing must be accepted as a legitimate expression-form of language.

The question of whether writing evolved is in a sense a question of definition of the term ‘evolve’. In a loose sense, writing most certainly evolved, as systems changed over time,

and were adopted and subsequently adapted to different ends by different cultures. While it is true that this historically did, in the broadest schematic sense, follow a move from non-phonetic to segmental systems, it is not necessary or valid to extrapolate a quasi-biological theory of the evolution of writing. The main argument against such a theory is the poverty of evidence: writing has only been invented a handful of times, and alphabetic writing (in the sense of isolating and attributing symbols to both vowel and consonant segments), according to Daniels, was invented only once. Further the idea that the most ‘advanced’ writing is segmental is undermined not only by the existence of featural systems, but more significantly by the fact that alphabet-utilising orthographies develop strategies which render orthography more efficient than a strictly segmental system could be.

Typographers have often described their craft as visible speech or visible language: is this a valid definition of typography? Typography has most frequently served, and in fact was invented for, linguistic expression. Yet as a technology, typography can be defined as having two aspects. One is two-dimensional design through the use of pre-designed re-usable combinable components. The other aspect is the design of such re-usable components. This technical definition is suitably broad yet precise enough to encompass the printing press and desktop publishing software. It also appropriately excludes other forms of design with letters, such as calligraphy and other hand-rendered lettering, all of which could also qualify as ‘visible language’. The components used in typographic design are often designs of alphabetic characters. Yet design with such components does not make typographic design inherently linguistic. Such components can, and frequently are, used in ways not typically thought of as linguistic, for example in concrete poetry, or in the abstract composition of Dieter Roth (also spelled ‘Diter Rot’) constructed from typographic rules and printed with a press.⁷⁰ Other forms of non-linguistic ‘writing’, including mathematical and musical notation, have also been rendered with the technologies of typography.

Nevertheless this technical definition is also, of course, entirely insufficient in accounting for the art of typography — typography and its accompanying discourse have been pre-occupied with the presentation of language. Typographer, typesetter and typography historian Walter Tracy argues that, as such, concrete poetry, no matter how it is produced, is not proper to typography.⁷¹ ‘The common element in all typographic work’, writes Tracy, ‘is the word.’⁷² This assertion is in a certain sense very obviously empirically wrong (as the printing press or Adobe Indesign can use typographic materials for whatever end is pleased). But it is true if we take Tracy to mean ‘the subject that has most interested typography and typographic discourse has been the graphic presentation of language’. One could make no sense of the history of

typography and texts on typography if one did not accept typography was a means of reproducing linguistic information. We thus are better served by (at least) two definitions of typography, one that is technical in a strict and limited sense, and one that accounts for the preoccupations of typography as an art. We can then accept (without also accepting the moralising way in which it is often put) that typography is, sometimes, in a certain sense, visible language.

- ¹ Bringhurst, p. 49.
- ² The sense in which the term ‘grammatology’ is used in this thesis, is in the sense of what is also known as ‘writing systems research’ — a sub-discipline of linguistics (more or less), which aims at exhaustive descriptions of the world’s writing systems. The term was adopted and modified by Jacques Derrida in *De la grammatologie* (1967), translated into English as: *Of Grammatology*, trans. by Gayatri Chakravorty Spivak (Baltimore, MD: Johns Hopkins, 1974). Derrida does not write in a manner easily summarised, but briefly, Derrida’s sense of the term arises from a recognition of the opposition between writing and speech as it has been typically understood in Western thought, as involving a description of writing as an inferior copy of speech. Derrida argues that this relationship be reversed, that speech follows the logic of writing. However, from this observation, Derrida’s project is not to replace an inexhaustive account of the functioning of writing systems with a more accurate one, but rather to undermine the philosophical bases which have historically underpinned attempts at a science of writing. As such, Derrida’s *grammatologie* is of limited use when trying to understand the details of how it is precisely that writing works. Although similar territory will be covered, the analysis here will be more directly informed by ideas originating in linguistics and grammatology. As regards his rejection of Saussure’s description of writing as subservient to speech, Derrida pre-empted later linguist/grammatologists including Roy Harris, who acknowledges Derrida’s priority in *The Origins of Writing* (London: Duckworth, 1986), p. 158. However, as is detailed in this chapter, this (one) point had also been made by linguists in the 1960s operating within the lineage of Saussure prior to Derrida, including David Abercrombie and Hans Jørgen Uldall, and remarkably, by Henry Bradley in the 1910s .
- ³ P.J. Angoulvent, ‘The Development of the Book’, *The Fleuron* 3 (1924), pp. 61–88, pp. 62–63.
- ⁴ Konrad F. Bauer, ‘Magic and the Art of Writing’, *Typographica* 1 (1949), pp. 5–12, p. 5.
- ⁵ Adrian Frutiger, *Signs and Symbols: their design and meaning*, trans. by Andrew Bluhm (London: Ebury Press, 1998).
- ⁶ Jan Tschichold, *An Illustrated History of Writing and Lettering* (London: A. Zwemmer, 1946), p. 6.
- ⁷ Tschichold, *Illustrated History*, plate 3.
- ⁸ Eric Gill, *An Essay on Typography*, 2nd edn (London: Sheed and Ward, 1936), pp. 119–120.
- ⁹ Theo Crosby, Alan Fletcher and Colin Forbes, *A Sign Systems Manual* (London: Studio Vista, 1970), p. 8.
- ¹⁰ Tschichold, *An Illustrated History*, p. 9.
- ¹¹ Jock Kinneir, *Words and Buildings: the art and practice of public lettering* (London: The Architectural Press, 1980), pp. 23–35.
- ¹² Gill, p. 121.
- ¹³ Gill, p. 123.
- ¹⁴ Karl Gerstner, *A Compendium for Literates*, trans. by Dennis Q Stephenson (Cambridge, MA: MIT Press, 1974), p. 30.
- ¹⁵ Gerstner, *Compendium for Literates*, pp. 18–19.
- ¹⁶ Gerstner, *Compendium for Literates*, pp. 26, 28.
- ¹⁷ Gerstner, *Compendium for Literates*, p. 47.
- ¹⁸ Gerstner, *Compendium for Literates*, p. 50–512.
- ¹⁹ Gerstner, *Compendium for Literates*, p. 51.
- ²⁰ Ferdinand de Saussure, *Course in General Linguistics*, trans. by Wade Baskin, (London: Peter Owen, 1974), pp. 23–24.
- ²¹ Saussure, p. 30–32.
- ²² Geoffrey Sampson, *Writing Systems* (Stanford, CA: Stanford University Press, 1985), p. 27.
- ²³ Saussure, pp. 25–26.
- ²⁴ Saussure, p. 40.
- ²⁵ Saussure, p. 26.
- ²⁶ Saussure, p. 112.
- ²⁷ David Abercrombie, *Elements of General Phonetics* (Edinburgh: Edinburgh University Press, 1967), p. 1.
- ²⁸ Hans Jørgen Uldall, ‘Speech and Writing’, in *Readings in Linguistics II*, ed. by Eric P. Hamp, Fred W. Householder and Robert Austerlitz (Chicago, IL: University of Chicago Press, 1966), pp. 147–151, p. 147.

- ²⁹ Sampson, *Writing Systems*, p. 27.
- ³⁰ I.J. Gelb, *A Study of Writing*, 2nd edn (Chicago, IL: Chicago University Press, 1963), p. 23.
- ³¹ Gelb, p. 200.
- ³² Gelb, p. 191.
- ³³ Gelb, p. 194.
- ³⁴ Gelb, p. 184.
- ³⁵ Gelb, pp. 236–247.
- ³⁶ Harris, ‘Speech and Writing’, in *The Cambridge Handbook of Literacy*, ed. by David R. Olson and Nancy Torrance (Cambridge, Cambridge University Press, 2009), pp. 46–58, p. 46–7.
- ³⁷ Gelb, p. 228.
- ³⁸ John S. Juteson and Laurence D. Stephens, ‘The Evolution of Syllabaries from Alphabets: transmission, language contrast, and script typology,’ in *Writing Systems*, III, ed. by Christopher Moseley (London: Routledge, 2014), pp. 3–44, pp. 3–4.
- ³⁹ Peter T. Daniels, ‘Fundamentals of Grammatology’, *Journal of the American Oriental Society* 110/4 (1990), pp. 727–731.
- ⁴⁰ Gelb, p. 201.
- ⁴¹ Daniels, ‘Fundamentals of Grammatology’, p. 728.
- ⁴² E.D. Hirsch, Jr, *The Philosophy of Composition* (Chicago, Ill.: Chicago University Press, 1977), p. 15.
- ⁴³ Sampson, *Writing Systems*, p. 29.
- ⁴⁴ Sampson, *Writing Systems*, pp. 120–144.
- ⁴⁵ Daniels suggests the development of Hangul may have to some degree been influenced by acquaintance with the Monogolian writing system devised in the thirteenth century by a monk named ‘Phags Pa: Daniels, ‘Grammatology’, in *Cambridge Handbook of Literacy*, ed. Olson and Torrance, pp. 25–45, pp. 31–32. Others, including Sampson, suggest it was a sheer invention. Either way, ‘Phags Pa isolates only segments (it is a partial ‘abugida’ in Daniels’s terminology), and does not precedent Hangul’s isolation of features.
- ⁴⁶ Gelb, pp. 246–247.
- ⁴⁷ Sigfrid Henry Steinberg, *Five Hundred Years of Printing* (Harmondsworth: Penguin, 1955), pp. 126–127.
- ⁴⁸ Steinberg, p. 29.
- ⁴⁹ Steinberg, p. 90.
- ⁵⁰ Saussure, pp. 30–31.
- ⁵¹ Walter J. Ong, *Orality and Literacy: the technologising of the word* (London: Routledge, 1982), p. 106.
- ⁵² The term ‘grapheme’ is controversial among scholars of grammatology, I introduce it here simply to make a basic analogy. Cf. Daniels ‘The Study of Writing’, in *The World’s Writing Systems*, ed. by William Bright and Daniels (Oxford: Oxford University Press, 1996), pp. 3–17.
- ⁵³ cf. Sampson, *Writing Systems*, pp. 194–213.
- ⁵⁴ Henry Bradley, ‘Spoken and Written English’, in *The Collected Papers of Henry Bradley* (Oxford: The Clarendon Press, 1928), pp. 168–193, p. 187.
- ⁵⁵ Bradley, p. 181.
- ⁵⁶ Bradley, p. 172.
- ⁵⁷ Bradley, p. 169.
- ⁵⁸ Bradley, p. 176.
- ⁵⁹ Bradley, p. 182.
- ⁶⁰ Bradley, p. 188.
- ⁶¹ Bradley, p. 183.
- ⁶² Bradley, pp. 183–185.
- ⁶³ Leonard Bloomfield, *Language* (New York, NY: Henry Holt, 1933), p. 21.
- ⁶⁴ Cf. David W. Reed, ‘A Theory of Language, Speech and Writing’, in *Readings in Applied Transformational Grammar*, ed. by Mark Lester (New York, NY: Holt, Rinehard and Winston, 1970), pp. 284–304.
- ⁶⁵ Householder, *Linguistic Speculations* (Cambridge: Cambridge University Press, 1977), p. 248.
- ⁶⁶ Householder, p. 253.
- ⁶⁷ Householder, p. 252.
- ⁶⁸ Householder, p. 251.

⁶⁹ Daniels maintains that writing is not language. Cf. Daniels, 'Introduction to Part 1: Grammatology', in *World's Writing Systems*, ed. by Bright and Daniels, pp. 1–2.

⁷⁰ Cf. Richard Hamilton, 'The Works of Diter Rot', *Typographica*, n.s. 3 (1961), pp. 21–40.

⁷¹ Walter Tracy, *The Typographic Scene* (London: Gordon Fraser, 1988), p.11.

⁷² Tracy, *Typographic Scene*, p. 9.

1.2 Baudrillard and Functionalism

1.2.0 Introduction

Although not always acknowledged as such, Jean Baudrillard's writings from the late 1960s and early 1970s can be read as providing a vital contribution to twentieth-century design theory, and as a way of making sense of the diverse outputs of twentieth-century design. Baudrillard's theorisation of consumer society was informed by a critical engagement with the themes that pre-occupied twentieth-century design practice and theory. Rejecting the designer's testimony as evidence, Baudrillard insisted that design be understood within the broader sociological context of consumer society. At the close of the 1960s, as the universalist project of Functionalism was coming under attack from a variety of sources, Baudrillard uniquely claimed that Functionalism had not simply failed in attempting to establish a singular mode of design in opposition to the varieties of fashion; rather Functionalism was, according to Baudrillard, the system of fashion's progenitor and perfect exemplar.

Design theory may ask 'what is the role of design within society?', or it may ask 'how should we design?'. The pursuit of each of these questions may not produce complementary results. When theorising the sociological function of design, a prioritisation of the methods, goals, and intentions of the designer potentially produces a myopic and distorted view of design's role in society. In his earliest major works, published between 1968 and 1972 — *Le Système des objets*, *La Société de consommation*, and *Pour une critique de l'économie politique du signe* — Baudrillard situated an account of design within a theory of consumer society, rejecting the prioritised perspective of the designer.

The quest for a singular universal mode of design for the age of the machine dominated much thought and research on design in the early twentieth century. Around the late 1960s, as architecture theorists were rejecting the universalist vision of a singular course for design history, celebrating a 'plurality of approaches' and 'complexity and contradiction',¹ Baudrillard developed his critique of Functionalism, often in *Utopie*, a journal featuring contributions from architects including Jean Aubert and Jean-Paul Jungmann.² However, Baudrillard did not champion 'pluralistic' design against modernist universalism. Baudrillard offered a more radical perspective: an all-consuming universal system — *fashion* — had already irrevocably been imposed.

The aims of this chapter are twofold. Firstly, a general design-historical context will be provided, in which assessments of Grotesque typodesign will be situated in later chapters.

Secondly, salient aspects of Baudrillard's theory will be outlined, which will inform later analysis of Grotesque typefaces and typographic discourse.

A note on terminology: Baudrillard's use of the terms 'symbolic' and 'semiotic' are idiosyncratic as they relate specifically to a distinction he makes between consumer society and earlier cultures. These terms will be defined as they arise below. As announced in the introduction to this thesis, as Baudrillard's usage of its terms is sometimes at odds with how these terms are used elsewhere in the thesis (particularly 'semiotic'), when used in Baudrillard's sense Symbolic and Semiotic will be given an initial capital.

1.2.1 The Birth of Function

It is not handcraft, but rather machine work which prevails in our life today, which surrounds us at every step, which is economically decisive [...] Through its scientifically clarified, everywhere identical and thus everywhere appropriate form, it helps direct thoughts in the same direction, to unify forms of life.³

Functionalism, as it developed in the early twentieth century, was not a coherent movement subscribed to by designers and artists along the lines of Futurism or Dadaism. Rather, it was a tendency that ran through the writings and works of a variety of designers and artists. The basic tenet of functionalism — that form should adhere to function, technology and materials — was already expressed by several architects during the nineteenth century, but it came to dominate design discourse in the twentieth century (whether being advocated or disavowed). The notion that form should follow function was presented by its advocates as a rational, transhistorical and transcultural approach to solving design problems. Nevertheless, Functionalism was an historically-contingent tendency, formed as a consequence of specific issues that faced architects, designers and artists in the early twentieth century.

For many European designers at the turn of the century, the commonly-held diagnosis was that industrialisation had sped-up production to a rate which artists and craftsmen had failed to match. In order to sustain increased production, products needed to be continuously re-presented to the consumer market. Thus fashion, in the stylistic presentation of objects, had developed as a means of facilitating the continuous sale of objects.⁴ As artists and designers could not keep up with the demands of industry to create ever new ephemeral fashions, industrialised commodity production had plundered historical styles. The eclecticism of styles

this brought about was viewed as a loss of a coherent culture.⁵ Earlier historical periods were commended for having a coherent Style (with a capital 'S' as the unified Style of historical period) distinct from the multiple styles of fashion. This perceived descent from singular Style to proliferation of stylistic idioms was frequently equated with the confusion of tongues at the Tower of Babel.⁶

The ambition of the German Jugendstil designers, and other generally Art Nouveau movements throughout Europe, had been to create an authentic Style for their own time. However, the distinctive forms of Jugendstil design were just as easily appropriated by industrial commodity production as historical ornament. As early as 1902, Jugendstil motifs were emulated in mass-produced retail products, often combined with historicist styles.⁷ The problem that faced designers at this time, as they perceived it themselves, was to design a form that could escape this endless absorption into a mode of production that they felt was superficial. As Frederic J. Schwartz has described it, the proliferation of styles was viewed as a 'semiotic chaos'.⁸ Objects were re-presented with external alterations to signify difference. No longer were objects valued for their intrinsic worth, but ornament, as (second-order connotative) sign, gave the object its value as a commodity.

Already in 1902, Hermann Muthesius had written critically of the Jugendstil attempt to generate new form, arguing that its absorption as fashion was inevitable. For him the new forms of the modern age were already visible in engineered constructions such as railway stations, steamships and bridges. These were designed with *Sachlichkeit* — objectivity/sobriety — and avoided external decoration as 'design strictly following the purpose that the work should serve'.⁹

For Muthesius, the use of industrialised production to imitate styles previously created through handcraft was a misuse of technology. He argued that the native mode of the machine arose from the precision of its technology and the uniformity of the objects it produced. Thus, the forms produced by the machine should adhere to uniformity and precision and therefore be the simplest — the cylinder and rectangle. Such forms would escape being absorbed into the semiotic chaos of fashion, and further still, 'universal' forms without connotative signs of difference, mass produced for all, could play a role in levelling class inequality.¹⁰

1.2.2 The Nature of Functionalism

The defining design theory of the twentieth century was that of Functionalism. This remains the case, it will be argued, despite the fact that a certain conception of Functionalism and its role in the history of architecture and design was already in 1960 convincingly refuted by Reyner

Banham in *Theory and Design in the First Machine Age*. It is useful then to first address Banham's arguments in order to clarify what is meant here by a Functionalism still central to twentieth-century design discourse.

Banham's critique of Functionalism has a particular design-historical context. As Banham puts it, 'in the fifties we were all revisionists, and spoke sneeringly of our elders and betters who still clung to the "tired certainties of the Thirties"'.¹¹ Of his own generation, Banham wrote 'we believed, passionately, that Functionalism was not enough'. Banham's arguments were part of a generational rebellion against an architectural orthodoxy: an orthodoxy present not only in practice and theory, but in an historical narrative of design history, which charted the inevitable rise of a singular modernism taken to define twentieth-century design. This was the narrative put forward by Banham's mentor Nikolaus Pevsner in *Pioneers of the Modern Movement* (1936). In *Theory and Design*, Banham would challenge Pevsner's account by demonstrating the varieties of practices, interacting with and opposing one another, at work in the development of twentieth-century architecture and design. 'Functionalism' — often presented as 'Functionalist Determinism' or paired with 'Rationalism' — in Banham's use is a narrow conception of design that holds to the Functionalist tenet 'form follows function' in the strictest, most literal and exclusive sense. In order to undermine the idea that such a Functionalism accounts for twentieth-century architecture and design, Banham exposes conflicting influences. For example, Banham claims that 'technological utopianism' as found in Futurism — the envisioning of a humanity entirely altered by technology — was as central a force in the development of the International Style as were attempts to logically address the demands of function.¹² This, argues Banham, is representative of an 'irrationalism' that was as much, or perhaps more, important to the development of modern architecture than was the 'rationalism' of Functionalism.

Defined as that which excludes concern for the aesthetic, or any other force beyond function, as a motivating factor in form, Banham is quite clearly able to demonstrate that those who are often thought of as central to the development of Functionalism — Muthesius, *De Stijl*, Le Corbusier, Gropius — were no adherents to a Functionalism so defined. Muthesius's support for geometric shapes was on the grounds that he believed such forms to be 'authentic' to machine production. The preference for rudimentary geometric form was often argued for on other grounds. Banham demonstrates that elementary geometric shapes were believed to be transcendent fundamental forms, which would evade the accrument of fashionable ornament.¹³ For Le Corbusier, as Banham writes, geometry was 'not only [...] the thumb-print of modern technology, but [...] also the manifestation of perennial laws governing art, justified by the past

not the present'.¹⁴ Geometry was to provide an authentic aesthetic, transcending the subjective choice of form. Whether geometry is of value as the transcendent aesthetic, or as the machine aesthetic, the intentional contrivance for any aesthetic must oppose Banham's 'Deterministic' sense of Functionalism.¹⁵ For example, of J.J.P. Oud (a Dutch *De Stijl* architect), Banham writes that owing to his interest in an 'aesthetic of illusion', Oud was not a Functionalist even though he 'probably saw himself as one'.¹⁶ More commonly Banham highlights how figures associated with the development of modernist architecture were prone to renounce 'mere function' as the means by which to arrive at a new form for the age of the machine.¹⁷

It is unclear whether any designer or architect could possibly qualify as a Functionalist in such a strict sense. Banham seems to include the informal group of architects, designers, and artists associated with Hans Richter's journal *G: Material zur elementaren Gestaltung* as representative of a 'Functionalist and Rationalist direction in the middle of the Twenties'.¹⁸ However, *G* was too diverse and loose a grouping to unite under so precise a label as Banham's understanding of 'Functionalism'; and certainly Richter, as his abstract Malevich-like films demonstrate, adhered to an 'elementarist' geometric aesthetic unrelated to any 'fulfilment of function' in a sense which Banham would allow.¹⁹ Similarly, Hannes Meyer is given the rare appellation of Functionalist by Banham, or implicitly so, when Banham declares that the 'Bauhaus had no Functionalist phase until Hannes Meyer'.²⁰ It is quite true that Gropius did explicitly renounce 'functionalism' as a 'false slogan inspired by plagiarism'.²¹ Banham cites Gropius on the purpose of Bauhaus education being to enable its students 'to understand the world in which they live, and to create forms symbolising that world'. For Banham, 'this again shows how far Gropius stood at the time from any Functionalist idea of formal Determinism'.²² It is clear then that by Functionalism — or Functionalist Determinism — Banham has in mind a strict faith in the core Functionalist tenet 'form follows function'; a belief that the correct form is the *inevitable* (hence 'determinism') result of attention to function. Banham's work is to constantly point out that those architects who did advocate (at least in part) an aesthetic borne of functional considerations in place of ornamental ones, also held opinions on issues of aesthetics (the 'aesthetics of space' for example) and ideas about the progress of society and technology (such as a Futurist 'irrational mechanolatory').

Such an exclusive, restrictive Functionalism, then, as Banham demonstrates, never really existed, and does not account for the diversity of motivations in twentieth-century architecture, which was more concerned with aesthetic, more under the sway of irrational impulses, and more plural, than certain accounts may imply. Banham's book — and several others that followed, including Robert Venturi's *Complexity and Contradiction in Architecture*

(1966), and Banham's pupil Charles Jencks's *Modern Movements in Architecture* (1973) — served an important function at a particular moment in twentieth-century design theory when it was necessary to undermine the pedagogical domination of a particular design ideology, and the domination of a particular design-historical narrative, in order to clear the way for new conceptions.

Nevertheless, in place of the restrictive (and elusive) Functionalism of Banham, a more diffuse conception of Functionalism is useful for us in understanding twentieth-century design history: there are particular consistencies in twentieth-century design thought for which Functionalism is a good name. A restrictive Functionalism of the sort Banham refutes — a design unconcerned with form — is unlikely or impossible. Functionalism, as the term is used in this thesis, contra Banham, is not the name of a rational (or an attempt at a rational) approach to design — which is opposed by 'irrational' or 'symbolic' or 'aesthetic' or 'illusionistic' concerns. It is rather an ideology centred on the goal of arriving at a 'true' aesthetic for the twentieth century. It is further not an approach to design, but a particular form of justification — an *alibi* — used to conceal the nature of design development in the twentieth century.

From Hermann Muthesius to Herbert Read to Victor Papanek, and beyond, we find time and again some variation of the following view: the authentic design of the modern age will result from the rejection of the coexistence of multiple styles of design and ornament, in favour of a mode of design whose forms result from the instrumental purpose of the designed object (or, at the very least, form arising not from a 'subjective' aesthetic preference). That is to say, Functionalism is not simply the slogan 'form follows function', but a belief in the necessity of a coherent design culture for the twentieth century, and the belief that the path towards this begins with the rejection of ornament, historicism and fashion, and attention to function. In this light, Gropius's 'aesthetic of space' is not fundamentally opposed to our understanding of Functionalism: it is a consequence of the search for a universal non-ornamental new aesthetic, which comes into being only having purged architectural surfaces of signifying ornament. Gropius's explicit disavowal of 'functionalism' was also presented in the context in which he argued that his approach to design was not a 'style', to be adopted as fashion, but was an approach to design which opposed the 'morphology of dead styles'.²³ Nor is the belief in the transcendence of geometry opposed to such a Functionalism. Faith in the transcendence of rudimentary geometry is often a part of the same cluster of ideas, as it arises from the attempt to strip design of extrinsic signifiers of fashion, by replacing the transient with the 'eternal'. But the transcendence of geometry is not a necessary component of Functionalism, and is often explicitly disavowed as a pseudo-functional formalism. Thus, when Papanek disavows

'functionalism', what he in fact opposes is what he perceives as geometric formalism in 1920s modernist design, precisely on the grounds that he believes such forms are not truly in accord with function.²⁴

Other authors reject the term 'Functionalism' in order to allow in the aesthetic, only to immediately re-introduce Functionalism in their very definition of aesthetic. This usually involves either asserting the 'function' of the aesthetic, or describing the aesthetic as recognition of the accord of form and function. Papanek does both, describing the view that aesthetics and function are separate tasks in design as resulting from 'barricades erected between what are really just two of the many aspects of function'. Bruno Munari, writing in the 1960s, allowed that the 'decorative' be 'psychologically' functional. But the decorative now is only a consequence of our appreciation of an object with 'formal coherence' and 'created in its exact form by its function'.²⁵ Jan Tschichold, in the 1920s was the most vocal proponent of Functionalist typography, during which time he frequently renounced the 'subjective', the 'artistic' and the 'aesthetic'. Softening in his later writings, Tschichold's 1935 *Typographische Gestaltung* (translated into English as *Asymmetric Typography* in 1967), allows that

decisions of a purely visual and aesthetic nature have to be made. A work of typography must be not only suitable for its purpose and easy to produce, but also beautiful.²⁶

However, aesthetic 'effect' must now be conceived of as a valid 'function', and the aesthetic satisfaction to be found is of-a-piece with the Functionalist rejection of historical ornament:

Since the freeing of typography from ornament, every element in a job has taken on a new importance; and the interaction of their visual relationships has taken on a new importance for the general effect than before. The harmonious relation of the parts, being always different, will give every job an individual, yet pleasing appearance, and one which is integrated with its meaning and purpose.

1.2.3 Signs, Symbols and Objects

In the twentieth century, Baudrillard argues, human ecology underwent a profound change, as for the first time in history our interactions became chiefly with 'objects' rather than fellow human beings — the objects that fill the domestic living space, the work environment, street furniture, etc.²⁷ A theory of design that holds that such objects can be explained in terms of function cannot accurately describe our relationships with these objects.²⁸ To take a concrete example, a toothbrush nominally exists to brush teeth, yet a theory of design that prioritises

function — and excludes that which is not ‘functional’ as not proper to design — can in no way account for the fact that there are hundreds of different designs of toothbrushes available to the consumer. In such cases, Baudrillard’s argument is not that function has ceased to exist, but rather that function serves as an ‘alibi’ for the true function of the object, which is as a sign in a language-like system.²⁹

In defining the object as ‘sign’, Baudrillard draws on the structuralist linguistic theory of Saussure. As detailed in the previous chapter, Saussure argued that language is better understood when analysed as a synchronic system. Meaning in language, argued Saussure, is a result of an arbitrary convention associating sounds to meanings — therefore etymology cannot uncover the nature of linguistic meaning. Secondly, meaning arises not directly between sound-image and thing/meaning designated but through differential contrast with other signs.³⁰

Baudrillard’s claim is that the consumer objects that fill supermarket shelves and the domestic interior function as arbitrary signs in a differential communicative system. The meaning of the object lies not in its direct relationship with reality — its instrumental purpose, or its singular relationship to its owner — but in its distinction from other signs within the system of objects. Through consumption, we speak the language of sign-objects, a language determined by fashion and class aspiration:

You never consume the object in itself (in its use-value); you are always manipulating the object (in the broadest sense) as signs which distinguish you either by affiliating you to our own group taken as an ideal reference or marking you off from your group by reference to a group of higher status.³¹

Despite Baudrillard’s borrowing of aspects of structuralist analysis, he should not be mistaken for a structuralist in any typical sense. The ambition of structuralism was to develop semiology as an objective, scientific — and transhistorical — method of analysis for language, communication and culture. Baudrillard appropriates the terminology and methods of structuralism in order to undermine its pretensions to transhistoricity (we will see below that Baudrillard similarly adopts the analyses of design theorists only to undermine the Functionalist project). Semiology, in Baudrillard’s work, becomes the name of an epoch. Semiological analysis describes contemporary consumer society, and this form of society alone, because a ‘fundamental mutation in the ecology of the human species’ has occurred as we have transitioned from a ‘metallurgic into a semiurgic society.’³²

Prior to the Industrial Revolution culture was not Semiological but Symbolic. In ‘pre-

industrial' societies, objects (or more properly 'things' or 'commodities', as 'objects' in Baudrillard's sense are uniquely of consumer society), did not have arbitrary meanings: they were 'mediators of a real relationship or a directly experienced situation'.³³ In feudal periods, the furniture of the ruling class did not simply express the idea of nobility, but was an actual instance of the lived experience of nobility. With the Industrial Revolution and the emergence of class mobility, the object became unhinged from its obligatory traditional role and liberated to perform as signifier of an imagined or aspired-to social or class position.³⁴ Consequently, the aspiring lower middle class may surround themselves with furniture in the style of an historical aristocracy — something which would have been simply impossible in feudal times — in order to express an aspired to position of nobility or wealth. But it is not so simple that an object can be determined as an index of a particular class. The meaning of an object is not fixed, it is not only relational, but determined by the constantly shifting discourse of fashion. A member of the upperclasses may decorate their house with 'peasant' furniture, but this does not upset the object's function as a sign of class — a signification of 'peasantness' would be avoided by someone in a situation of genuine economic insecurity, therefore the table becomes fashionable to a privileged elite. The meaning of object moves, as fashion shifts and expands, absorbing all statements into its frame of reference, as objects develop ever more baroque complexes of connotation, objects begin to seem to speak to one another in their own formal language of microstylistics. Every object — every toothbrush! — is layered with an encrustation of signifiers, marginally differentiating it from others.

In *Design for the Real World*, Papanek distinguishes between 'the genuine needs of man' and 'wants inculcated by fad and fashion'.³⁵ Baudrillard dismisses the distinction between authentic needs and false needs generated by advertising, as presupposing a naive anthropology of mankind, naked facing the world in an equality of need, deploying objects according to 'the "natural" anthropological needs of the individual' in his relation to the environment.³⁶ Needs — just like Papanek's 'wants' — are produced in consumer society. From access to means of mechanised transport, to access to the internet, that which was once the privilege of an elite — and therefore a signifier of class distinction — trickles down to all levels of society and becomes naturalised as need. Needs and utility are the alibi for consumption, not the natural base upon which it is built. That is not to say that we are without needs and that objects are without uses. Saussure argued that although historically language most likely began as the simple appending of names to things, nevertheless in fully developed language, meaning needs to be understood in terms of difference with a system. Similarly, use and need may be the etymologically distant origin of our relations with objects, but continued focus on this

diachronic fact masks the synchronic functioning of objects within consumer society.³⁷

1.2.4 Baudrillard versus Functionalism

As has been demonstrated by Schwartz, Baudrillard's analysis was, in certain respects, prefigured by the designers associated with the Deutsche Werkbund in the early twentieth century, including Muthesius.³⁸ Specifically, Baudrillard's contrast of 'Symbolic' pre-industrial societies in which design was bound to, and an expression of, a broader culture, with twentieth-century 'Semiotic' consumer society in which objects signify in the discourse of fashion, will be familiar to the student of design theory.

In *Stilarchitektur und Baukunst*, published in 1902, Muthesius distinguishes earlier periods during which architecture and design were 'an essential part of the cultural endowment of the time', from the nineteenth century, which replaced coherent design with a 'great stylistic confusion'.³⁹ In *Art and Industry* (1945), Herbert Read celebrates the Ancient Greek and northern European Medieval as periods during which design was a natural product of culture, opposing the nineteenth century as a period which applied 'irrelevant' aesthetic values to designed objects.⁴⁰ Two years later in *Pioneers of the Modern Movement*, Pevsner describes the nineteenth century as a period which replaced the coherent design of earlier periods with an industrial-production induced 'profound artistic dishonesty'.⁴¹ Again, Sigfried Giedion's *Mechanisation Takes Command* (1948), describes — in terminology strikingly similar to that of Baudrillard — the 'strong and personal bonds' between man and object, lost as mechanisation called forth an abundance of objects and a 'devaluing of symbols'.⁴²

One could continue reciting similar examples of this theoretical distinction — a theoretical distinction which is often presented as a simple historical fact — a distinction between the authentic design of pre-industrial societies, and the inauthentic design unleashed by mass production. For each of these authors — Muthesius, Read, Pevsner, Giedion — the 'inauthentic' state of design at the dawn of the twentieth century demanded remedy. And for each author, the solution was roughly as formulated by Muthesius in 1902:

Wherever possible we should for now ban completely the notion of style. When the master builder clearly refrains from any style and emphasises that which is required of him by the particular type of problem, we will be on the correct path to a contemporary art, to a truly new style.⁴³

It is vital to note here that attendance to function is the 'path', rather than the final goal.

Through attendance to function, the stylistic multiplicity of fashion would be replaced with a singular design culture (or, attendance to function would open the way towards an aesthetic of 'space' or an aesthetic in accord with the 'spiritual' demands of the twentieth century).

It is in this third part of their analysis — the prescription for remedy — that Baudrillard departs from the design theorists. Just as Baudrillard adopts the analytical distinctions of structuralist linguistics only to undermine the project of a transhistorical science of signs, Baudrillard adopts the design theorists' distinction between pre- and post-Industrial Revolution design, only to undermine the project of creating a coherent design culture for the twentieth-century.

His first argument is historical. Baudrillard claims that the very institution founded to restore coherence to design — the Bauhaus — in fact fully unleashed the object as sign. In Baudrillard's description, the Bauhaus, in rejecting the kitsch of the nineteenth century, theorised an equation of use and beauty: insisting that it is only through the accord of form and function that an authentic aesthetic could be realised. In so doing, the Bauhaus eroded the distinction between the useful and the beautiful, bringing everything — from the toothbrush to the towerblock — into the domain of aesthetic speculation. This instigated a 'universal semantisation of the environment'.⁴⁴ It is this bringing of all into a system of signification which, ironically, fully liberates the object from its traditional role. Functionalism inaugurates the condition wherein everything in the lived environment attains a semiotic status and partakes in a system of communication. Therefore the Bauhaus is the accelerator of, and not the antidote to, the fully-developed system of fashion.⁴⁵

Baudrillard's second attack on Functionalism is structural: concerning the function of Functionalism in consumer society. Functionalist design claims to oppose the superficial styling of objects, through the direct address of need and use, developing successive 'innovations' in fulfilment of function. Functionalism wages battle with a kitsch supported by industrial production; whilst designers have, as Baudrillard caustically notes, 'only their virtue'.⁴⁶ This, according to Baudrillard, is sheer hypocrisy. Far from 'solving design problems' or any such Functionalist justification, Baudrillard argues that innovation in design is identical to innovation in fashion — both exist to produce distinctive signs to be consumed.⁴⁷ What qualifies as a functional 'design solution' shifts, as does fashion. Just as the peasant table shifts in semiotic status, motifs of Functionalist design shift in meaning following the logic of semiotic distinction. Bare concrete, moves from an index of poverty to signifier of sophistication, opposing the polished and lacquered aesthetic of the lower middle class.⁴⁸

In the 1960s, as designers explored expanded notions of function in reaction to the

restrictions of the International Style, the continued justification of design in terms of function remained, according to Baudrillard, an ideological obfuscation. For example, ephemeral dwelling — advocated by Baudrillard's *Utopie* colleague Jungmann — was presented as a solution to modern urban living.⁴⁹ For Baudrillard the ephemeral also served to distinguish class: ephemeral design was for an elite to whom the lack of a permanent, durable dwelling was not a threat.⁵⁰

In order to avoid taking this ideological process into account, designers exhaust themselves in popularising audacious 'rational', 'functional' forms, being all the while surprised that these forms do not spontaneously seduce the mass public [...] these 'popular' creators direct their unconscious strategy: beautiful, stylised, modern objects are subtly created in order not to be understood by the majority — at least not straight away. Their social function first is to be distinctive signs, to distinguish those who distinguish them.⁵¹

Conclusion

Functionalism, as it is here understood, although centrally involving the claim that attention to function can help avoid lapsing into transient fashion, is primarily an ideology of design which believes it necessary to locate a singular coherent design culture, in opposition to the multiplicities of fashion. In the sense in which Baudrillard uses the terms, it seeks to re-establish a Symbolic order in opposition to the Semiotic. As we will see in later chapters, this has been of central concern throughout twentieth-century discourse upon Grotesque typefaces. In typographic discourse, arguments recalling those made in the early twentieth century against nineteenth-century stylistic pluralism have been revived recently following the birth of desktop publishing and typeface design software. For example, Massimo Vignelli, whose writings are littered with the clichés of Functionalism — 'we are definitively against any [...] design fashion', 'we are for a design [...] that responds to people's needs not to people's wants', 'we like the use of primary colours because their formal values are timeless', 'we like a typography that transcends subjectivity and searches for objective values' — describes the computer-induced explosion of typefaces as 'a cultural pollution of incomparable dimension'.⁵²

Throughout this thesis, Baudrillard's analysis of the consumer object will inform assessment of developments in Grotesque design. However, this is not a Baudrillardian thesis. The aim is neither a doctrinaire adherence to Baudrillard's theory, nor to perform exegesis on Baudrillard's texts. Baudrillard's writings on design lack design-historical nuance, being painted with the broadest of brushstrokes (not least of all, his precise historical location of the advent of the 'complete semantisation of the environment' to a subject he names 'the Bauhaus').

Nevertheless, as the above citations from Vignelli make clear, Baudrillard's early writings provide distinctions which are useful in attempting to make sense of typographic discourse and the diversity of types. Vignelli is calling for a Symbolic coherence to replace the Semiotics of fashion. Much like the modular and ephemeral furniture of Baudrillard's colleagues, the ever diversifying range of Grotesque typefaces often come with a 'functional' rationale provided by their designers. The 'functional solution' to Grotesque typedesign in both the late 1920s and late 1950s, to different extents, was thought to be an imposition of greater regularity in form. More recently (particularly, but not exclusively, in the areas of signage and 'accessible' Grotesques), the 'functional solution' given is one of greater *irregularity*. Are we witnessing, at last, a true functionalism in the design of typefaces, or simply, as the logic of fashion necessitates, an inevitable oscillation from regular to irregular? Do we live in a world filled with typefaces which address more and more 'needs', or do we live in a world with, simply, more and more typefaces?

As we will see in later chapters, Baudrillard's description of the development of the design of consumer objects as being one of endless production of marginal difference, and his insistence on ignoring the functionalist rationalisations provided by designers as insufficient in making sense of overall tendencies in design, are crucial insights when we examine Grotesque design.

- 1 Charles Jencks, *Modern Movements in Architecture* (New York, NY: Anchor Press, 1973); Robert Venturi, *Complexity and Contradiction in Architecture* (New York, NY: The Museum of Modern Art, 1966).
- 2 Craig Buckley and Jean-Louis Violeau (eds), *Utopie: texts and projects, 1967–1978* (London: Semiotext(e), 2011); Jean Baudrillard, *Utopia Deferred: writings from Utopie, 1967–1978*, trans. by Stuart Kendall (London: Semiotext(e), 2006).
- 3 Hermann Muthesius, *Handarbeit und Massenerzeugnis* (Berlin: Zentralinstitut für Erziehung und Unterricht, 1917), pp. 29–30, trans. and citation from Frederic J. Schwartz, *The Werkbund: design theory and mass culture before the First World War* (New Haven; London: Yale University Press, 1996), p. 101.
- 4 F.J. Schwartz, pp. 29–30.
- 5 F.J. Schwartz, p. 18.
- 6 Cf. F.J. Schwartz, p. 19.
- 7 F.J. Schwartz, p. 30.
- 8 F.J. Schwartz, p. 42.
- 9 Muthesius, *Style-Architecture and Building-Art: transformations of architecture in the nineteenth century and its present condition*, trans. by Stanford Anderson (Santa Monica, CA: Getty Publications, 1994), p. 79.
- 10 F.J. Schwartz, p. 101.
- 11 Reyner Banham, *Design and Theory in the First Machine Age*, 2nd edn (Oxford: Architectural Press, 1962), p. 10.
- 12 cf. Banham, *Design and Theory*, p. 123.
- 13 cf. Banham, *Design and Theory*, p. 142.
- 14 Banham, *Design and Theory*, p. 210.
- 15 Banham, *Design and Theory*, p. 152.
- 16 Banham, *Design and Theory*, p. 164.
- 17 Cf. Banham, *Design and Theory*, pp. 73, 226.
- 18 Banham, *Design and Theory*, p. 272.
- 19 Cf. Edward Dimendberg, 'Towards an Elemental Cinema: film aesthetics and practice in *G*', in *G: an avant-garde journal of art, architecture, design and film, 1923–1926*, ed. by Detlef Mertins and Michael W. Jennings (London: Tate Publishing, 2011), pp. 56–59.
- 20 Banham, *Design and Theory*, p. 280.
- 21 Walter Gropius, *The New Architecture and The Bauhaus*, trans. by P. Morton Shand, (Cambridge, MA: MIT Press, 1965), p. 23.
- 22 Banham, *Design and Theory*, p. 283.
- 23 W. Gropius, p. 19.
- 24 Victor Papanek, *Design for the Real World* (London: Bantam, 1973), pp. 24–25.
- 25 Bruno Munari, *Design as Art*, trans. by Patrick Creagh (London: Penguin, 2008), pp. 30–31.
- 26 Tschichold, *Asymmetric Typography*, trans. by Ruari McLean (New York, NY: Reinhold, 1967), p. 26.
- 27 Baudrillard, *The Consumer Society*, trans. by Chris Turner (London: Sage, 1988) p. 25.
- 28 Baudrillard, *For a Critique of the Political Economy of the Sign*, trans. by Charles Levin (St. Louis, MO: Telos Press, 1981), p. 29.
- 29 Baudrillard, *Political Economy of Sign*, p.75.
- 30 Saussure, pp. 101–103.
- 31 Baudrillard, *Consumer Society*, p. 61.
- 32 Baudrillard, *Political Economy of Sign*, pp. 25, 183.
- 33 Baudrillard, *The System of Objects*, trans. J. Benedict (London: Verso, 2005), p. 218.
- 34 Baudrillard, *Political Economy of Sign*, p. 49.
- 35 Papanek, p. 32.
- 36 Baudrillard, *Political Economy of Sign*, p. 29.
- 37 Baudrillard, *Political Economy of Sign*, p. 75.
- 38 F.J. Schwartz, pp. 7–8.
- 39 Muthesius, *Style-Architecture and Building-Art*, pp. 50, 69.
- 40 Herbert Read, *Art and Industry* (London: Faber and Faber, 1934), pp. 1–3.
- 41 Nikolaus Pevsner, *Pioneers of the Modern Movement from William Morris to Walter Gropius*

- (London: Faber and Faber, 1936), p. 20.
- 42 Sigfried Giedion, *Mechanisation Takes Command* (New York, NY: Oxford University Press, 1948), pp. 344–345.
- 43 Muthesius, *Style-Architecture and Building-Art*, p. 81.
- 44 Baudrillard, *Political Economy of Sign*, p. 185.
- 45 Baudrillard, *Political Economy of Sign*, p. 189.
- 46 Baudrillard, *Political Economy of Sign*, p. 195.
- 47 Baudrillard, *Political Economy of Sign*, p. 47.
- 48 Baudrillard, *Political Economy of Sign*, p. 46.
- 49 Buckley and Violeau, pp. 72–89.
- 50 Baudrillard, *Political Economy of Sign*, pp. 48 n28, 52.
- 51 Baudrillard, *Political Economy of Sign*, p. 48.
- 52 Massimo Vignelli, *The Vignelli Canon* (Baden: Lars Müller, 2010), pp. 30, 68.

2.1 The Proliferation of Styles

2.1.0 Introduction

In later chapters we will be analysing modernist movements in typography which championed the use of Grotesque types. The aim of this chapter is to establish aspects of the typographic-historical context from which modernist typography emerged. The two issues to be highlighted in this regard are, firstly, the ‘mutation of status’ in the semiotics of typedesign which occurred with the advent of the Modern style of typeface. Secondly, it will be demonstrated that proto-Functionalist theorisations of typography are to be found prior to the avowedly Functionalist modernist typographers of the nineteen twenties.

In accounts of the historical development of both interwar ‘New Typography’ and post-war Swiss modernist typography (especially the accounts written by the modernist typographers themselves, as will be demonstrated in Chapter 3.2) it is often presented as if the New Typography emerged as a radical break from then dominant ideas on typography. The story put forth is that conventional typography was in a state of stasis, if not decline. The avant-garde movements — including both Italian and Russian Futurism and international Dada — had liberated typography from the shackles of history and convention, leaving the New Typography free to create, for the first time, a systematically functional approach to typography. While it is true that the New Typography introduced many radical ideas to typography, it is also true that many of the ideas of Functionalist design were already being applied to typography from the beginning of the twentieth century.

As in other areas of design, the nineteenth century had introduced a vast array of stylisations of the alphabet manufactured as type. Prior to the nineteenth century the evolution of typeface styles was slow, and new styles of letter tended to replace rather than co-exist with previous styles. The increase in production and consumption of manufactured goods in the nineteenth century brought typefaces to new territories beyond the book — magazines, labels of goods, advertisements — and unleashed an historically-unprecedented creative outburst in the design of letters. Opposing this stylistic profusion, Jugendstil designers applied their attempt at ‘true’ form to the design of types. For the New Traditionalist typographers, attempts at novel typefaces simply added to the stylistic confusion. The most functional letterforms, they argued, were those that brought least attention to themselves by adhering to historical models. As is demonstrated below, both Jugendstil and New Traditionalism — as attempts to limit the profusion of styles, and to restore coherence and order to typeface use and production — were

failures. Both in fact contributed more stylistic variation, continuing the process of production of difference in typeface style unleashed at the dawn of the nineteenth century.

2.1.1 Alphabetical Abundance

Oh! sacred shades of Moxon and Van Dijke, of Baskerville and Bodoni! what would ye have said of the typographic monstrosities here exhibited, which Fashion in our age has produced?¹

In *Mechanick Exercises*, Joseph Moxon's manual of typographic printing from the late seventeenth century, little space is devoted to the varieties of typefaces required by the 'master-printer'. Moxon lists only, 'Roman, Italica and sometimes an English Face', plus typefaces for 'Musick' and 'the Greek, The Hebrew and The Syriack' languages.² Moxon's brief inventory of types is not a list of 'styles', as the categories of face he lists have strictly defined relationships to the sort of printing work to which they are applied. In the sense in which Baudrillard uses the terms, the categories of typeface Moxon lists are Symbolic — as opposed to Semiotic — as they are not commutable optional styles, but bound to a particular context. Although Moxon believed the best Roman typefaces then available were those of the Dutch typefounder Christoffel van Dijck, there is not the sense that Roman is a category in which several optional choices exist, but rather that van Dijck has achieved the best realisation of the (one, and only one) Roman.³

By the close of the eighteenth century, an inventory of types such as Moxon's would typically have been augmented with an additional division of Roman types into 'Modern' and 'Old Style'. The Modern style, as executed by Giambattista Bodoni and Firmin Didot in the late eighteenth century, was characterised by a geometric severity: a strict vertical axis, an exaggeration of stroke contrast and hairline, unbracketed serifs (Plate 2.1.1). The significance of the appearance of a second stylistic option was more than a simple addition to the typographic repertoire. The Modern destabilised the Symbolic coherence of the field of typesetting, such that, no longer did letters simply signify the linguistic content which they were used to express, they signified their own formal language of style. As such it unleashed the possibility of endless multiplication of stylistic difference.

One could argue on several fronts that this claim is overstated. Firstly, one could demonstrate that the development of the Modern can be charted in stages, as not a sudden novelty but a stylistic development initiated by John Baskerville's straightening of axis and flattening of serif. Between Baskerville and Bodoni stand other incremental developments such as the types of John Bell. And beyond Bodoni and Didot stand other modifications of the

Modern, such as the Scotch Roman which retained the Modern's contrast and axis, but elongated the serifs and re-introduced bracketing.⁴

Secondly, one could challenge the idea that the Modern unleashed a semiotics of style in typesetting by highlighting historical instances of the expressive use of letters. Letters being used as more than a simple conduit of information has a long history, for example the decorated pages of Insular manuscripts such as the Chi Rho page of the Book of Kells. Ornamental initial letters, which have a palaeographic origin even earlier than Kells, are present in typographic works from the dawn of printing: first as hand-applied 'rubrications', and quickly thereafter (already in the late fifteenth century) pre-cut ornamental initials became part of the typographic repertoire.⁵ In the late seventeenth century, more than isolated initials, full types of decorated letters were used for the setting of full words and titles, a practice which became increasingly prevalent in the eighteenth century prior to the advent of the Modern (Plate 2.1.2).⁶

While it is true that Didot and Bodoni's types were anticipated in many regards by Baskerville, prior to the turn of the nineteenth century it was not the norm for a printer to have options regarding letter style. And while it is true that various stylings of letter existed beyond the printing press, the use of both ornamental initials and decorated types was limited to narrow contexts (initials and title pages). The Modern was used for entire books. Further, decorated types adhered to the paradigm forms of existing types: they simply added embellishment. The Modern introduced something new to Roman typesetting. No longer were the letters of typefaces individual realisations of idealised paradigm forms. The modern introduced a stylistic programme through which each letter was processed: a precise geometry of thicks and thins. The letterdesigns' relations to one another trumped each individual letterdesign's relation to its own paradigm form, bringing stylistic presentation to the forefront by giving the full alphabet a dramatic stylistic homogeneity. As Ellen Lupton and J. Abbott Miller have put it:

Bodoni and Didot [...] polarised letterforms into extremes of thick and thin and reduced serifs to wafer-thin slices. While the humanists had hoped to discover the absolute proportions legislating the forms of letters [...] Bodoni and Didot reduced the alphabet to a system of oppositions — thick and thin, vertical and horizontal, serif and stem. Typography was no longer compelled to refer back to an ideal canon of proportions: instead, letterforms were understood as a set of elements open to manipulation [...] The break initiated by Didot and Bodoni triggered a population explosion in nineteenth-century commercial typography.⁷

Even if it is somewhat an historical simplification to attribute the precise moment of this event to the advent of Bodoni and Didot's types, a change took place which cannot be explained in

terms of incremental development. To re-purpose Baudrillard's words, the Modern was not 'a question of simple extension and differentiation'; rather it brought about a 'mutation of status'.⁸ By way of analogy, we can relate this to Claude Lévi-Strauss's argument that language, as a system in which elements attain value by contrast with other elements in the system, 'can only have arisen all at once [...] a shift occurred from a stage when nothing had a meaning to another stage when everything had meaning'.⁹

This change had already been observed by Nicolette Gray in 1938. Other British commentators in the 1920s and 1930s tended to describe the Modern as just another stage (often a negative development) in the history of typesetting.¹⁰ In contrast, in *XIXth Century Ornamented Typefaces*, Gray writes that 'the first step in the break away from the Renaissance tradition in typography was the invention of the modern face'.¹¹ Gray recognises that 'the introduction of the modern face is important [...] as a gesture proclaiming the freedom of the designer to invent and experiment'.¹² Thus, the Modern was exaggerated by Robert Thorne in 1830, by emphasising further the contrast between thick and thin, producing the Fat Face — a design generally detested by Gray's peers (Plate 2.1.1).¹³ In Gray's account Fat Face was one of the most important moments in the history of typesetting, as it fully unleashed the process begun by the Modern: 'with the invention of the fat face the stage is set for the development of the new art'.¹⁴

Gray did share the orthodox view that as regards book printing, the Victorian period was one of a decline in standards. Yet regarding typefaces used for display purposes (advertisements, posters, title pages, etc) Gray directly opposed the idea that stylistic profusion was 'inauthentic' and a loss of culture:

Suddenly, without warning, the insular English craftsman began to use a complicated and sophisticated artistic medium in a way totally foreign to his culture, and used it with verve and subtlety. It is a remarkable phenomenon [...] The changing moods which are recorded in Victorian typesetting are not those of the individual artist, but a reflection of the mood of his society.¹⁵

It is extraordinary that at a time when so much intellectual reflection on design was pre-occupied with the disavowal of the reality of industrial production as unreal — when the material world was seen to be a counterfeit, laden, as Pevsner put it, with objects produced from 'sham materials and sham techniques'¹⁶ — Gray recognised that it was the very proximity of nineteenth-century typefaces to consumption that proved them to be the 'authentic' expression of their time. The 'true style of the age' did not need to be discovered in opposition to stylistic

profusion, but was already visible in the continuous morphing of style, directed by consumption:

The typefaces were designed by the anonymous employees of commercial firms of foundries, supplying commercial printers. The aim of both founders and printers was continuously to supply the public with novelties which would attract and please; to succeed in this they had to keep in exact touch with the mood of the moment. Their businesses being purely commercial, considerations of scholarship, individual personality or typographical principle do not blur the contact. The result is a communal art as pure as that of any primitive society.¹⁷

Two hundred years after the publication of *Mechanick Exercises*, the typographic world would have been unfathomable to Moxon. This is attested to in the inventories of typestyles in late nineteenth-century printers' manuals (Plate 2.1.3). The taxonomy of typefaces provided in John Southward's *Practical Printing* of 1884, first distinguishes between 'Book' and 'Job' types, defined respectively as follows:

Book Type includes Roman and Italic letters, the body, or text, of all works in this country being printed on those characters; Job Type includes a multitude of fanciful forms of letters, chiefly founded on the shape of the Roman and Italic letters. The variations are intended to give the characters greater prominence, lightness, elegance, etc.¹⁸

Both Book and Job types are then broken down into subcategories of general style. For Job types, Southward writes, this is no easy task as 'additions to them are being constantly made, and styles once popular are constantly going out of fashion and disappearing from the type-founders' specimen books'. Further, the names given to types by foundries do not indicate the style of the letter but are given according to 'an entirely arbitrary principle'.¹⁹ Nevertheless, Southward attempts to group together Job types according to the following subcategories: 'a. Romans, condensed, expanded, and of ordinary width. b. Antiques. c. Sans-serifs or Grotesques. d. Ornamented. e. Blacks/Scripts'. Increasingly types departed from historical models as attempts at sheer novelty. Southward writes, 'A particular form might be the special design of one founder, and no other founder is able or disposed to imitate it'.

Charles Thomas Jacobi's *Printing: A Practical Treatise*, of 1890, provides the following list of categories of typeface — 'Old Face', 'Old Style', 'Modern', 'Old Roman', 'Latin Elongated', 'Clarendon', 'Egyptian', 'Antique Old Style', 'Antique', 'Sans Serif', and 'Ornamented'.²⁰ The first four categories are described as suitable 'Book Faces'. Here it is vital

to note that it is not just display types, but Romans which have been fragmented into a diversity of styles. The remainder of Jacobi's categories are 'Jobbing Types', ranging from 'plain, fancy, [to] grotesque or fantastic'.²¹ As with Southward, Jacobi finds it difficult to categorise these new typefaces because 'unfortunately the fanciful names applied to these types cannot be always relied on, for some letter-founders may have the same or similar characters in their specimen-books, but designated by an entirely different name'.²²

The 1902 edition of *The Practice of Typography*, by American printer Theodore Low De Vinne, provided a far more comprehensive overview of available types than either Southward or Jacobi, devoting several chapters to the subject. In a chapter dealing with one general category of new types alone — those misleadingly labelled 'Antique' — De Vinne lists several sub-categories, including 'Doric', 'Grecian', 'Ionic', 'Runic', 'Celtic', and 'Old Italian' (Plate 2.1.3). These nineteenth-century Antique faces are united, as De Vinne notes, in opposing the 'feeble with protracted hair-lines and frail serifs' of the Modern style of typeface, which dominated the early nineteenth century.²³ The Antiques De Vinne shows, generally, continue the Modern tendency for small aperture and vertical axis, yet dramatically reduce the contrast between stressed and unstressed strokes. The serifs are often either heavy 'slabs', or else the serifs taper in a subtle continuity from the main strokes (as in the case of the 'Celtic' face). The names by which they are categorised give no indication to their style — Grecian, Ionic and Doric bare no obvious connection with classical Greek letters; Celtic is not, as one might expect, based on the Insular hand (although such typefaces were then being created for use in Ireland)²⁴ and Runic has no similarity with Runic inscription. 'Old Italian' — an entirely novel invention — defies tradition by placing stress on normally unstressed lines.

Echoing Southward and Jacobi, De Vinne writes

the names given to many [typefaces] are fanciful and not at all descriptive. When made by different founders, the same face may be labelled by each founder with a different name. The antique of the United States is the egyptian of Great Britain; the antiqua of Germany is the roman of England and the United States.²⁵

and further

What one founder names celtic, another calls romanesque ; one calls caledonian what another calls ionic. Sometimes the same face has a different name given to it by each of three or more founders.²⁶

The above authors, despite their attempts, find it increasingly difficult to divide the diversity of typefaces into discrete categories. The process unleashed by the Modern is not one in which simply ever-new styles appear, but, as the process becomes more complex over time, one in which styles crossbreed, and stylistic differences become often less dramatic and more often marginal. A terrain of stylistic continuum emerges, as typefaces claim new positions between one another, and the smallest of difference become Semiotically pertinent. The attempt to restrain typefaces into a taxonomy is an attempt to make order out of this stylistic diversification, an attempt which is continuously undermined by the very process of type production. By 1938, John C. Tarr observed that ‘the classification of every existing typeface — there are probably about ten thousand — would fill a large volume [and] it would, in any case, be out of date in six months’.²⁷

2.1.2 Jugendstil types

Every few months, during recent years, some literary or typographical Knight Adventurous has started on the quest of the New Type — the type which is to be perfectly original, or, at the least, altogether unhackneyed, and yet which is to be so normal that no one will be able to object to the form of any of the letters as fantastic or unfamiliar. The quest is no new one, though an unusual number of people are interested in it just now.²⁸

The incomplete typologies of typefaces described above, illustrate more than simply the impossibility of keeping up with the products of typefounders. More importantly, the attempt to constrain typefaces into general categories can be viewed as an attempt to retain some Symbolic coherence, to impose stable meanings on the profusion of faces separated by arbitrary signifiers of distinction. It could only fail.

In Germany the situation was particularly complicated. The fact that Germany retained a unique set of typestyles for the printing of its language multiplied the varieties of types, and rendered Germany a nation particularly conscious of the shapes of letters. Arguments for and against maintaining Germany’s unique typo-orthography were frequent and vociferous in the late nineteenth and early twentieth century.²⁹ Not only were all the varieties of Roman and Jobbing type available, but so too were traditional German styles of Blackletter — Fraktur and Schwabacher — as well as numerous novel interpretations of these styles. Frequently a new fashion for Roman letter would be emulated in Blackletter. Already in 1790 Unger Fraktur had transposed the precision of form and maximum contrast of Bodoni to Fraktur letters.³⁰ Just as the high contrast of the Modern faces was exaggerated into a display style known as ‘Fat Face’,

so too were these exaggerated proportions applied to Blackletter.

In the early twentieth century, added to the alphabetical cornucopia were ‘artist’ faces, marketed with the name of their designers as types that ‘maintain the imprint of his artistic intentions’.³¹ The Jugendstil-dominated *Vereinigten Werkstätten*, helped establish the practice whereby the designer was not involved directly in the manufacture of objects, but a source of artistic ideas to be employed by industry.³² In the case of typedesign the figure of the ‘designer’ — and therefore the designer- (or artist-) typeface — emerges with the new patterns of production and consumption established in the nineteenth century. Although certain typefounders throughout history were known by name and celebrated by bibliophiles, the use of a designer’s name to market a typeface is a product of industrially-induced stylistic diversification, a means of distinguishing one product from another, to mark-out certain products as superior or of greater cultural value.

Central to this phenomenon was the typefoundry of the Klingspor brothers in Frankfurt am Main established in 1892 (initially known by the inherited name Rudhard’s Gesserei, it was renamed as Klingspor Gebr after 1906).³³ According to Julius Rodenburg, Klingspor was the first foundry to deliberately employ artists already reputable in other areas to design typefaces.³⁴ In the first years of the twentieth century, Klingspor released three typefaces in a Jugendstil manner: Walthari by Heinz König, Eckmann-Schrift by Otto Eckmann and Behrens-Schrift by Behrens (Plate 2.1.4). As Christopher Burke has demonstrated, these Jugendstil typefaces were part of a more general tendency in early-twentieth-century German typedesign of Hybrid types, synthesising aspects of Roman and German Blackletter styles.³⁵ As in other areas of design, the perception that the co-existence of historical styles was a crisis — proof that culture had become unhinged — provoked the Jugendstil to attempt to replace historically-derived styles with an authentic and new style for their own age. In the specimen for his Behrens-Schrift of 1902, Behrens wrote

One of the most eloquent means of expressing the style of any epoch is through letterforms. After architecture, they probably give the most characteristic picture of a time and the best evidence of the state of a nation’s spiritual development.³⁶

Behrens-Schrift retains some of the calligraphic appearance and heaviness of traditional German-Blackletters, yet is less condensed, giving it a more Roman appearance. The terminals at the top and bottom have a slight calligraphic flick — a reduced version of the diamond terminals of the German Blackletter styles. Certain distinctive German letterforms are present

— including the ‘V’, ‘W’, and ‘d’ — yet in general the letters are closer to Roman models. Today Behrens’s type may appear fluid and organic. However, it was described very differently by his peers. Writing in 1905, Gustav Kühnl described Behrens-Schrift as having a ‘logical severity of style’.³⁷ Fritz Helmuth Ehmcke compared it to a steel framework.³⁸ Behrens’s letters were all created with the same limited number of shapes, re-arranged for each letterform. His approach in designing this type followed his approach to architecture which was, in the first years of the twentieth century, becoming increasingly ordered and simplified. Rodenburg described the type as being like the architecture of Behrens A.E.G factory, regarding its ‘clear methodical structure’, ‘its austerity, fitness and proportion’ and ‘the rigid geometrical order which gives an appearance of glistening metal to his letters’. As we will see in Chapter 2.3, such qualities were the goal of the Bauhaus designers in the design of their Geometric Grotesque alphabets. But an approach of reductive modularity was already present in many German ‘artist-’/‘designer-’ types in the early twentieth century, including Behrens’s later Antiqua (1908), F. W. Kleukens’s Ingeborg Antiqua (1910), and Vincenz Cissarz’s Latein (1912) (Plate 2.1.4). Behrens himself placed his type in the context of the reaction to the ornamental polyphony of his day, writing in the specimen for Behrens-Schrift, that it was necessary to ‘throw off superficial trinkets and replace them with practical objects of high quality, which clearly display their utility and indicate their usability and efficiency’.³⁹

Despite its novel appearance, Behrens-Schrift was not intended as a ‘Job’ type, but a type for all uses — for ‘the majestic language of Nietzsche [...] as well as magazine articles’.⁴⁰ Not only was it used as the body text in the Gustav Kühnl’s *The Psychology of writing* (published by Klinckschroth in 1905), it was also used for the Festschrift of the Darmstadt Colony (1902) and a 1914 German edition of the Upanishads.⁴¹ Eckmann’s type — arguably even more novel and expressive than Behrens — was also initially used for book work in the first years following its release. Rodenburg claimed that Behrens’s and Eckmann’s types ‘prepare[d] the way’, rather than fulfilled, the achievement of a style of type for the age.⁴² The idiosyncratic appearance of both Eckmann- and Behrens-Schrift, and the fact that they were marketed as the output of one artist’s vision, conspired to undermine arguments that these types opposed stylistic pluralism. They seem rather intentionally unique ‘high-end’ consumer projects, designed to ‘distinguish those who distinguish them’.⁴³

2.1.3 A New Tradition

In 1923, Stanley Morison criticised German typography for using ‘offensively new’ types.⁴⁴ The quest for a new form and thereby the departure from convention in types such as Behrens-

Schrift was felt to have led to an excess of individualism. Julius Meier-Graefe in a 1924 essay in *The Fleuron*, wrote that in early twentieth-century Germany ‘our book had been suffering from the ubiquitous mono-stylists who tried to introduce their pet arabesques into every possible production without having themselves serious knowledge’.⁴⁵ In the same issue of *The Fleuron*, the American printer Daniel Berkeley Updike rejected ‘the tendency to strive for undue originality’, arguing

most experiments, wise and otherwise, have already been tried, and the sure way — which is not very original now — is on the whole the best way, unless it can be so much improved that its utility can be recognized at once.⁴⁶

This ‘traditionalist’ outlook did not arise simply from a belief in the aesthetic superiority of prior periods of typography, but from a recognition that function in typography and typesetting is in many ways dependent upon adherence to tradition. Function and historically-established form are irrevocably intertwined in typefaces, which only function owing to their recognition. This argument had been put forth already in 1902 by De Vinne.⁴⁷

So-called ‘traditionalist’ typographers of early twentieth-century Britain, rejected, equally, the novelty of commercial and ‘artistic’ typefaces and what they perceived as ‘archaism’. The aim of what is better given the contradictory name, New Traditionalism, was not to emulate historical typography, but to preserve and develop the traditions of typography to guard against the onslaught of transient novel styles.⁴⁸ William Morris — although generally acknowledged by the New Traditionalists as having revived interest in quality printing — was frequently criticised for being guilty of such ‘archaism’.

In Britain, New Traditionalism was given voice in the nineteen-twenties through the journal *The Fleuron*. In its first issue (1923), then editor Oliver Simon commended Morris for having ‘printed books whose compelling beauty awakened Europe’, yet wrote that Morris’s printing ‘appear[s] today somewhat precious’.⁴⁹ In the following issue of *The Fleuron* (also 1923) Holbrook Jackson was less diplomatic:

I am not alone in my weariness of those revivals which are merely epidemics of theft: ‘period’ printing is just as tedious as ‘period’ furniture and, ultimately, as worthless — with this difference: you may contrive to be comfortable in a mock Jacobean dining-room, but you cannot read with comfort the mock gothic pages of a book even though it had been fabricated by a William Morris.⁵⁰

In Jackson's analysis Morris's work is no less ludicrous than any kitsch historical design, despite its superior quality. In certain regards, Morris's work was perceived in much the same light as the Jugendstil artistic printing which followed, in that both were seen as excessively carrying the stamp of their creator, and in so doing departing from typography's true function: the purpose of typography was not to be decorative nor beautiful, but to be informative.

On the one hand, it was believed that excessive novelty should be rejected, yet on the other, adherence to tradition was not the same thing as imitating a preferred period. It is in this sense that the New Traditionalists can be understood as modern — traditional styles of typography were not valued for their own sake, but were valued for their perceived ability to communicate with clarity. Jackson argued that 'design is fitness to purpose [...] It will be excellent as it is free from pose, preciousness, or conceit'. For Jackson, typography was a slowly evolving tradition, refining and ridding itself of superfluity over time — 'the real progress of printing is an evolution from the complex to the simple, from the ornamental to the plain'. In the first issue of *The Fleuron*, Percy J. Smith, argued, against the ornament-heavy work of the private presses:

In the recent past artists have often imposed illustration and decoration upon printers' work, and have carried the embellishment of the book as far, it appears, as it can go in that direction. Its success is questionable. The final verdict when Truth, the 'Daughter of Time', makes her wide survey will, one thinks, be adverse. The best decoration grows from within and cannot be imposed from without.⁵¹

In order to stay true to its function, typography must minimise ornament and utilise, as tradition dictates, a minimum of typestyles. The arrangement of the design should follow from the textual content as opposed to a preconceived aesthetic. Simon instructs that the design of a title-page should be led by the wording of the content, and further that 'mixture of type families' and 'indiscriminate use of red or other colours' should be avoided.⁵²

One of the principal differences between New Traditionalism and the Kelmscott-led private press movement related to the use of technology. Morris had advocated the return to handcraft in printing. The designers associated with *The Fleuron* — including Morison, Jackson and Francis Meynell — first came together as 'The Fleuron Society', with the express intention of elevating the standards of machine produced books.⁵³ The products of the private presses were art objects, rather than useful books. As Jackson put it:

The show book, in the early stages of the printing revival of our own time served the excellent

purpose of making an indifferent age sit up and take notice of its typographical shortcomings. The best books of that impulsion towards good printing are protests of beauty against ugliness rather than precepts and examples for ordinary practice. They bear much the same relation to books in general as monuments do to life in general. In the last resort they serve the same purpose as the table books of Victorian days, but in a more exalted manner. One bows before the beauty of the Kelmscott *Chaucer*, but one reads the Father of English Poetry in small pica and octavo. Nothing could be more appropriate than the Doves Bible. Its typographical austerity, its monumental simplicity, are the supreme compliment of the printing art to our 'well of purest English undefiled'; but you would not read the Doves Bible even if you could afford to.⁵⁴

The idea that the products of commercial printing were inherently inferior to the artistic output of private presses was rejected. Updike wrote that genuinely 'artistic' printing was that which was 'exactly and agreeably suited as possible to the object for which it is to be used — commercial printing being just as capable of possessing this excellence as any other variety'.⁵⁵ Morison, in *A Review of Recent Typography* (1927), praised the Nonesuch Press (directed by Meynell) for abandoning handcraft and embracing industrial methods. He commends Meynell for 'proving to many of us that the future of fine-print lies in the hands of those who are prepared to follow his lead' in the use of modern machinery.⁵⁶ Echoing the views of Muthesius, Morison accepts the Arts & Crafts critique of the *products* machine production as evidence of a loss in aesthetic induced by rampant commercialism, yet maintains that the future belongs in the appropriate use of the machine. Handcraft will only ever be the preserve of an elite, machine production offers the possibility of high quality goods (in Morison's case, books) in every home. The use of machine methods by Meynell, 'one of the ablest modern typographers', writes Morison, 'has [resulted] in the extension of interest in typography to a much wider public than could afford the works of Victorian private presses'.⁵⁷

2.1.4 Towards the Past

The twin dangers of the 'archaic' and the 'offensively new', left the Traditionalists in a difficult position when trying to conceive of the future of typography. This was particularly pronounced in the area of typesetting. Although the contributors to *The Fleuron* frequently wrote critically of 'archaism' in typography, and were concerned with uncovering a mode of typography true to the twentieth century, in the area of typesetting their deference to tradition inhibited their ability to conceive of, or even allow for, any novel style of letter. Morison and Holbrook lamented simultaneously the 'vast array of bad novelties to embarrass the choice of the printer' with 'the constant imitation and adaptation of the ancients'.⁵⁸

Nevertheless, the future of typesetting, it was believed, was to be found in the past, through the revival of letterforms deemed superior to those then in general use. As to which exact typefaces deserved revival, this was not something universally agreed upon. For Bernard Newdigate, writing in 1923, the future of typography lay not in the revivals of the Venetian-based Nicolas Jenson's fifteenth-century types (a revival which Morris had initiated), but with the mid-sixteenth century Garamond types which had then recently been manufactured for use with Monotype machines. The superiority of the Garamond for contemporary use, according to Newdigate, is due to its originating 'some three-quarters of a century nearer to our own time than the type of the great Venetians [...] For that reason, even apart from its own excellence, the revived "Garamond" is likely to satisfy modern taste more than the earlier type-forms of Jenson and Aldus'.⁵⁹ In the pages of *The Fleuron*, Meier-Graef also rejected Morris's revival of Jenson, and praised the German designer of Roman and Blackletter faces, Emil Rudolf Weiss, for basing his designs on letters of the eighteenth century 'which adapt themselves most naturally to contemporary feeling, and which can best satisfy modern demands'.⁶⁰

The above are but two of many such arguments presented in the pages of *The Fleuron*, asserting one or other historical style as more suited to the present than others. There is often something undeniably comical in the weakness of this line of argument. In *Four Centuries of Printing* (1924) Morison asked,

If we are acting against the highest interests of typography by remaining content with resurrected Garamond, Aldus, Jenson, and period usages thereof, what is the next step? We must have new types, new ornaments (perhaps even new conventions of display can be worked out), by the living rather than copies from the illustrious dead; therefore it is proper, indeed necessary, to study the history of printing, not as an end in itself, but as a means, an inspiration, towards the typographical task before us.⁶¹

Morison and Jackson, in 1923, warned against plundering the history of types for styles, yet sought inspiration in even more distant history. They argued that as the early Romans of Jenson and Aldus derived from the Humanist hand, that perhaps the future of typeface design should also be informed by pre-typographic calligraphy.⁶² Here they saw hope in the 'renaissance of calligraphy' begun by Edward Johnston, as did Newdigate, who wrote, 'I am always hoping that some disciple of the Johnston school will give us a formal book-hand which may serve as a model for the ideal modern book-type'.⁶³

One might hope then, that the essay Morison's essay 'Towards an Ideal Type' (1923), would offer a more progressive outlook for the future of typeface design. However, as we will

see, it demonstrates most perfectly the difficulty the New Traditionalists faced, in trying to avoid the frivolously novel and the archaism of Morris. 'Towards an Ideal Type', is perhaps best known as part of a series of essays Morison wrote for *The Fleuron* — including 'The Chancery Types of Italy and France', co-authored with A.F. Johnson from issue three, and 'Towards an Ideal Italic', from issue five — in which Morison developed what is known as his 'Aldine Hypothesis'. Very briefly, Morison's Aldine hypothesis is that Aldus Manutius was not influenced by Jenson in the design of his types, but drew influence directly from Humanist scribes. Morison argues that the French types of the early sixteenth century were derived from Aldus, rather than Jenson. With this argument, Morison's aim is to demonstrate that Jenson is not the father of all Roman types.

Were the essay simply historical, Morison's research could only be commended, and his hypothesis could only be argued for or against on the basis of historical evidence.⁶⁴ However, 'Towards an Ideal Type', as the title makes clear, is far from a straightforward historical investigation and has a pronounced polemical agenda regarding the function and future of typesetting. Morison argues that 'the extremes in Roman typesetting to which the German *Buchkünstler*s have recently gone' prove that the typographer is 'apt to be more keen than even the theologian or the lawyer in ferreting out precedent'. Nevertheless, over slavish adherence to tradition, Morison prioritises the functional requirement of designing letters which 'compose agreeably into words'. At the same time, the fact that, as Morison perceives it, types which adhere to certain historical models do not 'compose agreeably', provokes Morison to question the 'purity' of tradition: 'it may prudently be doubted whether our traditions are as pure as they are powerful'.⁶⁵ In these opening statements of his essay there are two questions at stake. The first asks whether a functional requirement allows departure from tradition, which opens a progressive possibility for the future of typesetting. The second question — whether our traditions are 'pure' — asks whether our tradition is false, an invented tradition that has supplanted an authentic one. It is in fact the second of these questions that is the primary concern of Morison's essay, although the two issues are dealt with as intertwined.

The central argument of Morison's essay is that upper- and lowercase letters lack homogeneity in most typefaces. Morison believes the height of the uppercase to be excessive, as they 'assert themselves far in excess of their true function'.⁶⁶ Morison further makes a claim that tall capitals inhibit the function of printing as they 'spot the page' and 'do not compose well'.⁶⁷ Morison believes Jenson's types of the 1470s to have initiated such over-sized capitals, and that the reverence for Jenson's types has led to the continuation this error. Morison argues that the Roman of Aldus was more faithful to the 'ideal' proportion of upper to lowercase, as practised

in the Humanist manuscript hand. In essence, Morison argues that typesetting has been under the influence of a false tradition since the turn of the late fifteenth century (which is, of course, almost the very beginning of typography).

In search of justification for his claim that uppercase letters have grown ‘in excess of their true function’, Morison delves even further into the history of letters, to the Carolingian minuscule of the ninth century. Morison argues that it was the Carolingian hand that first combined two styles of letter — majuscule and minuscule — and that in this combination, the majuscules were not significantly larger than the minuscules. As to why Morison believes that the script of ninth-century monks should determine the height of letters in twentieth century printing, he writes,

We are entitled to assume, I think, that the Tours calligraphers, in their consideration of the aesthetic side of the reform, would have used larger capitals had they judged that this would improve the appearance of the composition or was necessitated by their view of the purpose of capitalization. In this connection we must also remember that the caroline minuscule is due not to a dilettante demand for a new hand by a set of modish young calligraphers, but to a serious appreciation of the importance of accurate transcription. The reformers possessed equally a sound understanding of the fundamentals of fine writing, secured, we must believe, after a thorough examination and practice of the previously current forms. It is fair, I think, to conclude that the Tours preservation of a modest capital represent the considered judgement of experts alike in calligraphy as in transcription.⁶⁸

In brief, he argues that the proportion of majuscule to minuscule determined in the ninth century was made by calligraphers whose expertise was beyond reproach.

As described above, Morison hoped that the calligrapher Johnston might be able to point the typesetter in the correct future direction, not because of any innovation of Johnston’s, but because of Johnston’s fluency in historical hands. Despite this, and in seeming complete contradiction with his argument, Morison cautions against the ‘archaism’ of Johnston and his disciples. With no intended irony, he writes ‘I beg them to bring their art into kinship with the *Zeitgeist*. At present time calligraphers give us the floral evolutions of the Middle Ages’ only to announce within the same paragraph that, regarding humanist script, ‘a serious study of the MSS. in this hand is an essential to fine letter design and its development’.⁶⁹

Despite this inability to conceive of a new direction in typesetting, Morison in fact contributed greatly to the ever-increasing array of types in the twentieth century. We have already shown above, that among the New Traditionalists who rejected ‘novelty’, there was

nevertheless a lack of consensus regarding which historical typefaces were the most functional to use in place of the 'excessively new'. As typographical adviser to Monotype, Morison was responsible in the 1920s and 1930s for overseeing the production of an array of 'revivals' (including Garamond, Baskerville, Bembo, Bell, Walbaum and Van Dijk) sufficiently broad to appease the diverse tendencies of New Traditionalism and beyond.⁷⁰

Conclusion

New Traditionalism shared many of the views and dealt with the same issues that gave rise to Functionalist design. They can be considered as part of the general development towards Functionalism in the early twentieth century, as an attempt to curb stylistic pluralism and assert the priority of 'function' in the search for a coherent mode of design for their age.

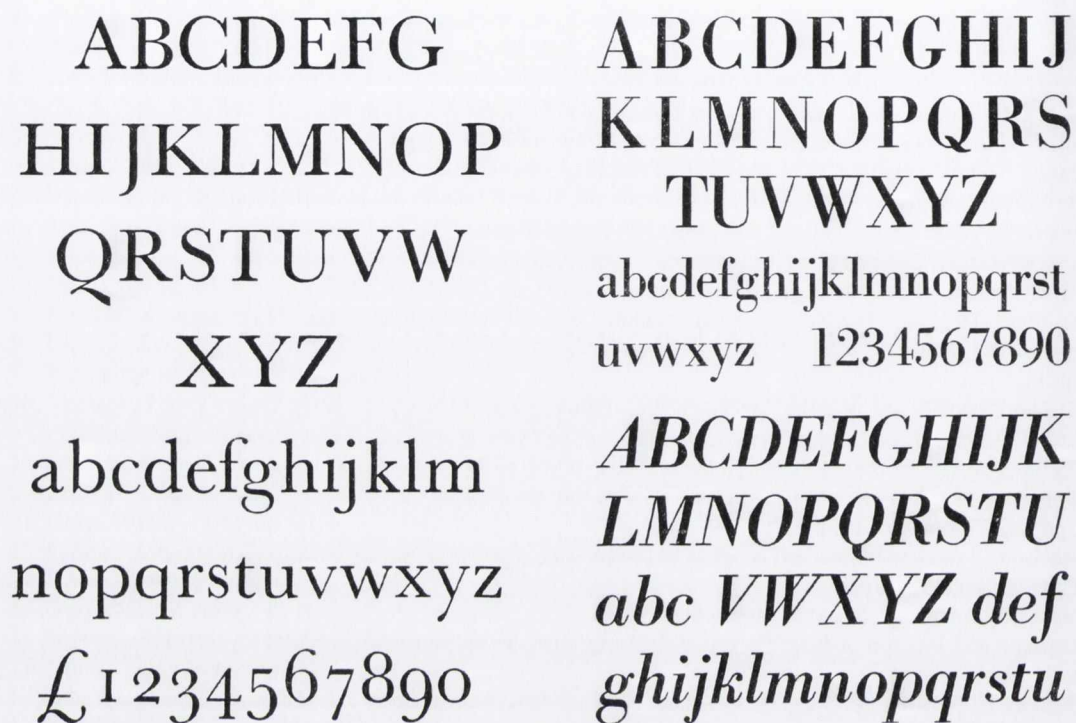
Yet, the process of stylistic differentiation and multiplication unleashed by the Modern could not be halted. Even New Traditionalism, a movement which resisted the production of new types, could only add to the typeset design's stylistic array. Gray, in her account of the explosion of style, focuses primarily on jobbing faces. However the 'mutation of status' occurred in all areas of typeset design. Even Monotype's 'revivals' were new, not only in that their design for machine-setting demanded changes in form, but, more significantly, they were new as *options*, presented all at once in the vast catalogue of Monotype. Such types could not defeat the diversity of styles available, they could only add more specialist, sophisticated options, and in so doing multiply the Semiotic complexity of the language of typeface style.

In the next chapter we will see that the Grotesque was adopted by the New Typographers as the solution to archaism, excessive stylisation and the profusion of types. The New Typographers shared with both the Jugendstil and Traditionalist typographers a desire to oppose stylistic pluralism, and with the Traditionalists they rejected the novel and personal designs of the Jugendstil. Just as the Traditionalists thought expressive style interfered with the communicative function of typography so too did the New Typographers. For the New Typographers the future of typeset design was in 'rational' and geometric alphabets.

In later chapters we will show how modernist attempts to elevate Grotesque types in opposition to typestyle pluralism, to restore a Symbolic order opposing fashion, inevitably failed. Every attempt at stylistic limitation (as it was for the New Traditionalists also) is absorbed into the system of fashion, the system of difference, and leads only to complexification of the Grotesque language of style.

- 1 Thomas Curson Hansard, cited in: Theodore Low De Vinne, *The Practice Of Typography*, 2nd edn (New York, NY: The Century Co., 1902), p. 333, n1.
- 2 Joseph Moxon, *Mechanick Exercises: or, the doctrine of handyworks applied to the art of printing* (New York, NY: The Typothetae of New York, 1896), p. 13.
- 3 Moxon, p. 15.
- 4 John C. Tarr, *How to Plan Print* (London: Crosby Lockwood, 1938), p. 34.
- 5 Percy Smith, 'Initials Letters in the Printed Book', *The Fleuron* 1 (1923), pp. 61–91.
- 6 Morison, 'Decorated Types', *The Fleuron* 6 (1928), pp. 95–130.
- 7 Lupton and J. Abbott Miller, 'Laws of the Letter', in *Design, Writing, Research* (London: Phaidon, 1996), pp. 52–61, pp. 55, 57.
- 8 Baudrillard, *Political Economy of Sign*, p. 183.
- 9 Claude Lévi-Strauss, *Introduction to the Works of Marcel Mauss*, trans. by Felicity Baker (London: Routledge and Kegan Paul, 1987), pp. 59–60.
- 10 Morison, *Type Designs of the Past and Present* (London: The Fleuron, 1926), p. 42; Tarr, *How to Plan Print*, p. 35
- 11 Nicolette Gray, *XIXth Century Ornamented Types and Title Pages* (London: Faber and Faber, 1938), p. 21.
- 12 Gray, *XIXth Century*, p. 21.
- 13 Cf. Morison, *Type Designs of Past and Present*, p. 45; Tarr, *How to Plan Print*, p. 34.
- 14 Gray, *XIXth Century*, p. 21.
- 15 Gray, *XIXth Century*, p. 16.
- 16 Pevsner, *Pioneers of Modern Movement*, p. 21.
- 17 Gray, *XIXth Century*, p. 16.
- 18 John Southward, *Practical Printing: a handbook on the art of typography* (London: J.M. Powell & Son, 1884), p. 21.
- 19 Southward, p. 22.
- 20 Jacobi, p. 14.
- 21 Jacobi, p. 96.
- 22 Jacobi, p. 13.
- 23 De Vinne, *Practice of Typography*, p. 323.
- 24 cf. Dermot McGuinne, *Irish Type Design: a history of printing types in the Irish character*, 2nd edn (Dublin: National Print Museum, 2010), pp. 86–119.
- 25 De Vinne, *Practice of Typography*, p. 183.
- 26 De Vinne, *Practice of Typography*, p. 328 n1.
- 27 Tarr, *How to Plan Print*, p. 19.
- 28 Alfred W. Pollard, 'On Some Manuscripts and Early Types', *The Printing Art*, June 1904; cited in Gustav Kühn, *On the Psychology of Writing*, trans. by John Bernhoff (Offenbach: Rudhardsche Gießerei, 1905), pp. 36–37.
- 29 cf. Gerald Newton, 'Deutsche Schrift: the demise and rise of German black letter', *German Life and Letters* 56/2 (2003), pp. 183–204.
- 30 Burke, 'Peter Behrens and the German Letter: type design and architectural lettering', *Journal of Design History* 5/1 (1992), pp. 19–37, pp. 32–37.
- 31 Julius Rodenberg, 'Karl Klingspor', trans. by Anna Simons, *The Fleuron* 5 (1926), pp. 1–25, p. 1.
- 32 John Heskett, *Design in Germany: 1870–1918* (London: Trefoil Books, 1986), pp. 46–47.
- 33 Rodenberg, pp. 1–4. Hereon the foundry of the Klingspor brothers, both pre- and post-1906, will be referred to as Klingspor for simplicity.
- 34 Rodenberg, p. 2.
- 35 Burke, 'German Hybrid Typefaces 1900–1913', in *Blackletter: type and national identity*, ed. by Peter Bain and Paul Shaw, (New York, NY: Princeton Architectural Press, 1998), pp. 32–39.
- 36 Peter Behrens, 'Behrens-Schrift und Zierat', trans. by Burke, *Journal of Design History* 5/1 (1992), pp. 34–36.
- 37 Kühn, p. 18.
- 38 Rodenberg, p. 9.
- 39 Behrens, p. 35.
- 40 Behrens, p. 36.

- 41 Rodenberg, p. 10.
- 42 Rodenberg, p. 11.
- 43 Baudrillard, *Political Economy of Sign*, p. 48.
- 44 Morison, 'Towards an Ideal Type', *The Fleuron* 2 (1923), pp. 57–75, p. 72.
- 45 Julius Meier-Graefe, 'Emil Rudolf Weiss', *The Fleuron* 2 (1923), pp. 3–10, p. 4.
- 46 Daniel Berkeley Updike, 'The Planning of Printing', *The Fleuron* 2 (1923), pp. 13–27, p. 23.
- 47 De Vinne, *Practice of Typography*, p. 359.
- 48 The term 'New Traditionalism' was coined by Robin Kinross, *Modern Typography: an essay in critical history*, 2nd edn (London: Hyphen Press, 2004), p. 64.
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- 50 Holbrook Jackson, 'The Nonage of Nineteenth-Century Printing in England', *The Fleuron* 2 (1923), pp. 87–98, pp. 87–88.
- 51 Smith, 'Initial Letters', p. 77.
- 52 O. Simon, p. 97.
- 53 Grant Shipcott, *Typography Periodicals Between the Wars: a critique of The Fleuron, Signature and Typography* (Oxford: Oxford Polytechnic Press, 1980), p. 9.
- 54 Jackson, p. 88.
- 55 Updike, 'Planning of Printing', p. 19.
- 56 Morison, *A Review of Recent Typography in England, the United States, France & Germany* (London: The Fleuron, 1927), p. 6.
- 57 Morison, *Review of Recent Typography*, p. 9.
- 58 Morison and Jackson, *A Brief Survey of Printing: history and practice* (London: Kynoch Press, 1923), p. 54.
- 59 Bernard H. Newdigate, 'Respite Prospice: a chronicle and a forecast', *The Fleuron* 1 (1923), pp. 111–116, p. 114.
- 60 Meier-Graefe, p. 7.
- 61 Morison, *Four Centuries of Fine Printing* (London: Ernest Benn, 1924), p. 50.
- 62 Morison and Jackson, p. 59.
- 63 Newdigate, pp. 114–115.
- 64 cf. Kay Amert, 'Stanley Morison's Aldine Hypothesis Revisited', *Design Issues* 24/2 (2008), pp. 53–71.
- 65 Morison, 'Towards an Ideal Type', pp. 57–58.
- 66 Morison, 'Towards an Ideal Type', p. 70.
- 67 Morison, 'Towards an Ideal Type', p. 67.
- 68 Morison, 'Towards an Ideal Type', p. 62–63.
- 69 Morison, 'Towards an Ideal Type', p. 72.
- 70 Tarr, *Printing To-day* (London: Oxford University Press, 1945), p. 70; Tracy, *Typographic Scene*, p. 21.



Above left: Baskerville (c. 1760). Above right: Bodoni (c. 1798).
 From Tarr, *How to Plan Print*, pp. 33, 36.

**In the year 1483 no
 more than *FOUR*
*Printing Presses***

Left: Thorne's Fat Face
 (1830). From: Morison,
*Type Designs of Past
 and Present*, p. 46,

ABCDEFGHIJKLMN OPQ
 RSTUVWXYZ
 abcdefghijklmnoprstuvwxyz

Left: Scotch (1837).
 From Tarr, *How to Plan
 Print*, p. 37.

| | | |
|---------------|----------------|----------------------|
| ABCDEFGHIJKLM | <i>HIJLMNO</i> | ABCDEFGHIH |
| ABCDEFGFG | <i>MRŒ</i> | ABCDEFGHI |
| ABCD | <i>LP R</i> | ABCDE |
| KŒH | <i>YJR</i> | FGHK |
| MFN | <i>S E</i> | JMLN |
| NUI | <i>GB</i> | <i>N O P R S T U</i> |
| NI | <i>IG</i> | <i>B L M N O P Q</i> |
| FJ | | <i>M</i> |
| | | <i>M</i> |
| | | <i>M</i> |

Fournier's decorated types (1764). From Meynell and Simon (eds), *Fleuron Anthology*, p. 345.

J. F. ROSART.

Rosart's decorated types (1759–1768). From Meynell and Simon (eds), *Fleuron Anthology*, p. 348.

*JACQUES FRANÇOIS
ROSART.*

MATTHIAS ROSART.

LA VEUVE DECELLIER.

THE DORIC ANTIQUE
has features of roman

No. 3.

THE IONIC ANTIQUE
has large face, open counters

THE EXPANDED ANTIQUE
has no overhanging descenders

No. 6.

A CELTIC OF LIGHT FACE

No. 7, on long-primer body.

BROAD-FACED CELTIC
with lower-case complete

No. 8, on pica body.

A RUNIC OF CONDENSED FORM

No. 9, on pica body.

RUNIC OF SQUARE FORM
has crescent-shaped serifs

No. 10, on pica body.

OLD ITALIAN FACE

No. 24, on pica body.

MODERN ITALIAN CONDENSED
has nine sizes, nonpareil to canon

No. 25, on pica body.

ITALIAN ANTIQUE
provided with lower-case

No. 26, on pica body.

ANTIQUÉ CONDENSED, OF OLD FORM
with square and clean-angled serifs

No. 11, on pica body.

A LIGHT ANTIQUÉ CONDENSED
of a larger and more open face

No. 13, on pica body.

ANTIQUÉ EXTRA CONDENSED, VERY LIGHT FACE
made on brevier, long-primer, pica, and larger bodies

No. 19, on pica body.

THIS LIGHT FACE OF CAPITALS ONLY

No. 20, on great-primer body.

THIS GRECIAN TYPE IS MADE ON EIGHT BODIES

No. 21, on great-primer body.



Above: Jacobi's typeface classification.
From Jacobi, *Printing*, p. 14.

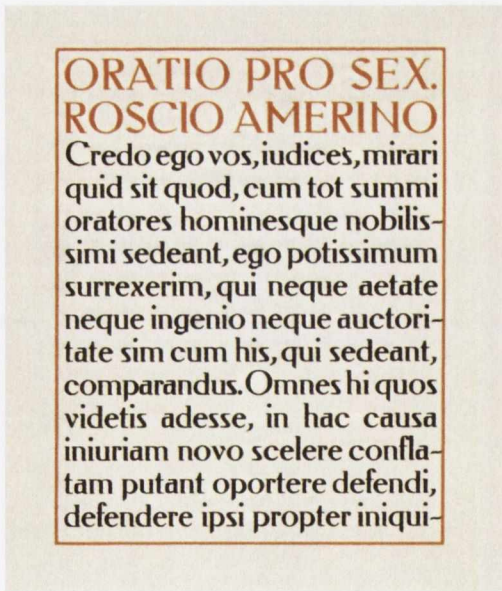
Left: Various 'Antiques'. From De Vinne,
Practice of Typography, pp. 324-332.



Behrens-Schrift (1901).
From Kühl, *Psychology of Writing*, p. 38.



Eckmann-Schrift (1900).
From Kühl, *Psychology of Writing*, p. 36.



Clockwise from above: Behrens Antiqua (1908);
Vincenz Cissarz's Latein (1912); F.W. Kleuken's
Ingeborg Antiqua (1910). From de Jong,
Purvis, Tholenaar (eds), *Type: visual history*, II,
pp. 37, 150, 202.



2.2 The Past and the Future

2.2.0 Introduction

The previous chapter demonstrated that attempts to limit the stylistic profusion of typefaces unleashed in the nineteenth century were inevitably absorbed into the expanding reach of typeface style, contributing to, rather than opposing, the diversity of types. Semiotic potential resided not only in the newer more expressive typefaces, but also the traditional faces: never again could a typeface lack stylistic significance and be a neutral means of presenting textual information. In this chapter we will chart the development of a new style of typeface, the Grotesque, which first appeared in the second decade of the nineteenth century, and came to be, just over one hundred years later, championed as the type to restore Symbolic coherence.

The Grotesque was first 'revived' as a letter claimed to have a classical pedigree, a connotation that was quickly lost as Grotesques proliferated and diversified. The production of Grotesques led not only to diversification, but refinement, attaining a level of sophistication in design by the start of the twentieth century. In the 1920s such letters were viewed by the Functionalist New Typographers not as one style among many, but the one form of letter that could transcend style. The Grotesque, viewed as a letter reduced to the essential, and therefore lacking signifiers of style, was to be the universal letter for the age of technology.

2.2.1 The Egyptian Past

Historians of typography agree that the first Grotesque typeface was created in the second decade of the nineteenth century. However, similar letters were current in architectural and signwriting contexts for several decades prior to their being cast as typefaces. While many authors in the early decades of the twentieth century alluded to the inscriptional and classical origins of Grotesque typefaces (including De Vinne, Harry Carter and John Tarr)¹ it was James Mosley who pursued the origins of this style in the greatest depth. In *The Nymph and the Grot* (originally published as an essay in *Typographica* in 1965, and later revised and published in book form in 1999) Mosley demonstrates that the serifless letter was first 'revived' by English neo-classical architects and artists — particularly the architect John Soane and the sculptor John Flaxman — at the close of the eighteenth century.² Although the intentions of such designers was to connote antiquity, the letters were not directly modelled on historical sources. The use of such letters was, according to Mosley, continuous with the mid-eighteenth century revival of interest in the Doric style of architecture as having a 'primitive and elemental simplicity'.³

Letters lacking serifs and having a uniform (or near uniform) stroke weight were seen as ‘a natural or elemental letter’.⁴ Geometrically simplistic, unstressed and serifless letters appear on Soane’s architectural drawings from around 1784 (Plate 2.2.1). In maintaining a classical connotation, albeit a Latin one, Soane’s U and V are given in V form. Soane’s distinctive G (lacking a crossbar) can be found emulated in typedesigns and building inscriptions several decades later.⁵

Although Mosley locates examples of this style of letters being used by leading British figures of neoclassicism, Alan Bartram argues that their use was in fact quite rare, as serifless letters appear on none of the major neoclassical buildings. By the time serifless letters become commonplace in inscriptions, it is in a context divorced from the Greek revival.⁶ From its initial Greek association, this serifless style of capitals spread to a more general use in signwriting and engraving, and its historical association became less specific. Among signwriters of the early nineteenth century, such letters were often referred to as ‘Egyptian’ (and this in fact remained the case up to the early twentieth century), possibly owing to the general fad for all things Egyptian in the early nineteenth century, and possibly also owing to the then current idea that Egyptian architecture was even more ‘elemental’ and ‘primitive’ than Doric.⁷ Continuing the historical association with these letters, but again shifting it, from 1816 the British Ordnance Survey used such ‘Egyptian’ characters to mark Roman antiquities.

Having existed in signwriting and epigraphy for several decades, the first typeface produced in this style appeared in a type-specimen dated 1816 (though Mosley suggests it is possibly from 1819) from the foundry of William Caslon IV, the grandson of the renowned William Caslon (Plate 2.2.1). This specimen also named the style of letter Egyptian, and much like Soane’s letters it was uppercase only and geometrically reduced. Robin Kinross describes it as ‘a kind of ur-letter, ancient and elemental, and thus, in the context of early nineteenth-century neoclassicism it possessed a kind of modernity’.⁸ As we will see as we follow the progress of the style of type which the ‘Egyptian’ initiates, ultimately the connotation of the ‘ancient’ will be abandoned, and the geometric elegance of Caslon’s Egyptian will be usurped (for the time being) by a relative complexity and heaviness.

2.2.2 A Grotesque Flowering

Rather than to the conscious endeavours of neoclassicists, the flowering of Grotesques is to be attributed to the nineteenth-century profusion of styles. As Harry Carter notes, ‘sanserif types made their appearance in England between 1820 and 1830, to which decade indeed we may trace the rise of “jobbing faces” as a class’.⁹ Whether Caslon’s Egyptian had any direct influence

on other type-designs is unclear, as there are no known uses of it in the 1810s or 1820s, and it does not reappear until it is shown on an 1838 type specimen from the firm that by then owned the stock of Caslon's foundry, Blake and Stephenson. By this point, Caslon's Egyptian had many competitors.

Figgins's 1830 specimen shows samples of 'sans-serif' types in uppercase only.¹⁰ This type is not quite monoline and shows a definite variation in stroke weight following Roman convention (more specifically it follows the Modern vertical axis of Bodoni and Didot). More types in this style were released in the 1830s by foundries including Caslon and Livermore (no relation to William Caslon), Thorowgood, and Blake and Stephenson. The above foundries named these types not Egyptian but, respectively, 'Condensed', 'Grotesque' and 'Sans Surryphs'.¹¹

The first such type to feature a lowercase was Thorowgood's Grotesque, of 1832.¹² Bartram notes that lowercase Grotesques did not become widely available in Britain until the 1870s, decades after their popular use in the United States and Germany (Plate 2.2.2).¹³ Thorowgood's upper- and lowercase Grotesque was bold and condensed, and again, like the Figgins type, featured variation in stroke weight. Yet unlike the Figgins type, the variation was not quite conventional. The lowercase letters more or less follow Modern stress, having a strict vertical axis. However in the uppercase the variation in stroke weight is not so systematic — for example the N reverses convention, placing stress on the outer rather than inner strokes. The overall effect is of a confused and unresolved design which sacrifices well-drawn characters for the sake of visual density.¹⁴

Mosley demonstrates that while there are occasional occurrences of lowercase serifless letters in minuscule form in inscriptions from earlier in the nineteenth century, they were very rare. With the invention of the upper- and lowercase serifless typefaces, it might be fair then to announce the beginning of a new tradition in letter design, descended from, though more or less independent of, the neoclassical of Soane. Divorced from any conscious neoclassical programme, the Grotesque was absorbed into the combinatory aesthetic of the period: Caslon's specimen of 1841 shows not only a Grotesque (named 'Condensed') in variations of size and weight as well as a 'shaded' version, but also another Grotesque (named 'Rounded') with rounded terminals, which also comes as 'shaded', and a series of variations on a Grotesque named 'Doric' (Plate 2.2.3).

P.M. Handover's survey of 'sans serif' types of 1961 de-emphasises the role of the neoclassical, and accounts for the Grotesque in terms of the nineteenth-century explosion of styles of letter. While Gray argues that the dramatic style of the Fat Face unleashed a general

stylistic liberation which allowed the development of other styles, Handover (in a subtle but significant difference) describes the Fat Face as a *formal* antecedent to the Grotesques of the 1830s: 'the fat faces partly inspired both the slab serif and the sans serif, for unbracketed, hairline serifs of Thorne's design were so rudimentary that they could either be expanded or eliminated'.¹⁵

Mosley, following Georg Kurt Schauer, maintains that the serifless letter of the late nineteenth century, though no longer directly linked to the Doric revivalism of Soane, does nevertheless express a particular artistic mentality of the age, namely Romanticism. He cites the following text from Schauer in his own translation:

It may well be that the immediate reason for the making of sanserif and slab serif 'linear' printing types lay in the requirements of publicity, in striving for sensation, and in commercial quest for novelty; but that is a superficial observation, which obscures rather than reveals the true underlying cause. The rejection of classical smoothness and harmony is a romantic impulse. The romantic spirit admires stark simplicity as a positive value. Barbaric strength is admirable, and so is the absence of superficial ornament. The essence of Romanticism is a longing for purity and strength. These qualities which cannot be found in the present are sought in primitive movements.¹⁶

Despite the quality of Mosley's scholarship, this hypothesis, unfortunately, is unconvincing. A review of founder's specimens from the nineteenth century would not encourage one to believe that the designers and producers of the Grotesques were motivated by a 'romantic impulse'. Of the vast array of styles produced, are we to believe the 'romantic impulse' kicked in only when designing the Grotesques, and disappeared again when the task was to design an open Fat Face with drop shadow, or a typeface in which the letters are constructed from illustrations of fruit? Thorowgood, Figgins and the like were not artist-designers, producing types informed by deeply-held views. As has already been cited from Gray, 'the aim of both founders and printers was continuously to supply the public with novelties which would attract and please'. The nineteenth-century founders were businessmen, whose policy was to release as many styles of type as possible and to see what would take. The same foundries that produced types of 'stark simplicity' produced types that were grotesque in the sense meant by Jacobi, that is, highly-ornamented and complicated. Nor can we say that the users, as opposed to the producers of the Grotesques were a coherent group with clear motivations. Mosley shows that in some contexts the Grotesque was used in a manner that adhered to the idea of it as a primitive or classical letter. But in general we have to accept that the Grotesque was not bound to any particular

meaning, and if one use in particular is to be associated with the Grotesque in the late nineteenth century, it is in the context of jobbing print. As Harry Carter put it:

The nineteenth-century sanserif won itself a permanent place in every composing-room. Its earlier monumental associations were discarded as it came to be increasingly used for the humblest purposes. Its legibility and durability in wear fitted it for the printing of cartons, wrappers, labels, and similar trade purposes, and thus it earned a certain discredit among those who cared for fine printing and fine types.¹⁷

Yet, even to limit the Grotesque to the diverse activities of commercial jobbing work — as a letter thoroughly divorced from conscious artistic endeavour — is somewhat artificial. Hand-drawn serifless monoline capitals show up on the famous title page to *Wren's City Churches* by Arthur H. MacMurdo, a design which is often credited with heralding the beginning of the Art Nouveau. In the graphic works which fit within the general tendency of 'Art Nouveau', particularly in Glasgow and Vienna where the flowing lines of Parisian Art Nouveau were restrained into spare rectangular forms, hand- and lithographic-rendered serifless letters abound. While such handletters certainly betray Art Nouveau style, Behrens, whose career path encapsulates Art Nouveau's transition from flowing lines to austere geometry, used a Grotesque text type for his 1900 book *Feste des Lebens und der Kunst*.¹⁸ In the 1910s Wyndham Lewis's journal of his Futurist-inspired Vorticist movement, *Blast* (1914–1915), presented its aggressive manifesto in the appropriately ugly Grotesque 9 from Stephenson Blake. In the late 1910s and early 1920s German Expressionists utilised serifless letters in a manner that perhaps fits with Schauer's description (cited by Mosley) of the Grotesque betraying a 'primitive' and 'barbaric strength', not only in the rough letters of expressionist woodcuts, but also, in at least one instance, in type (Plate 2.2.4). Yet, none of these various associations would stick. For now, no artistic movement could claim the Grotesque as its own.

2.2.3 Gothics and Grotesks

The march of the Grotesque continued, and through successive iteration its design attained greater sophistication. As Grotesques were produced in both upper- and lowercase, in smaller sizes and used for continuous text (albeit still most often in jobbing work) a greater harmony of design followed. At the same time Grotesques were increasingly issued in expanded families of sizes and weights. For example, an 1894 specimen from American Type Founders showcases a Grotesque named 'Philadelphia Lining Gothic' in a vast range of weights, sizes and

expansions.¹⁹

American Type Founders (ATF) was formed in 1892 from an amalgamation of twenty-five foundries.²⁰ ATF's chief designer was Morris Fuller Benton, a designer versed in type history who, in the 1910s, also designed several 'revivals', including a Garamond and a Bodoni. Upon forming, ATF inherited from its member foundries approximately fifty 'Gothics' (the American term for Grotesque).²¹ Although ATF would continue to market these, often crude, types into the twentieth century, in 1902 Benton was tasked with creating a new Gothic to improve on ATF's existing designs.²² The type that resulted, first issued *circa* 1907 and expanded into a family of weights over the following decade, was Franklin Gothic (Plate 2.2.5). Though indebted to Grotesques of the late nineteenth century, such as Stephenson Blake's Grotesque 8 of 1898, Franklin imposed a greater regularity and harmony. In addition to adding family members to Franklin, Benton designed other types along the same lines. Alternate Gothic (1903), based on Franklin, was condensed and of a regular, almost modular, design. News Gothic and Monotone Gothic, essentially a light and lighter Franklin, introduced a delicateness and subtlety absent in Victorian Grotesques, discernible in the carefully-drawn bowl of the a, the gentle angularity of the arches in m and n, and the near circular top bowl of g. With these designs, Benton did more than simply regularise and harmonise earlier Grotesques, he introduced a new stylistic idiom — the American Gothic. It established a stylistic theme upon which later designers would produce variations, such as Robert Hunter Middleton's Record Gothic of 1927 (although later-added members of Record were hybridised with other styles) and Jackson Burke's Trade Gothic of 1948.²³

But it was in Germany that the Grotesque was to reach its greatest level of sophistication at the turn of the twentieth century with the Industrial Grotesque style. That it was Germany at the forefront of the development of this new style of letter, rather than England where it had originated, is perhaps an accident of history. However, Germany's typographic culture may also serve as an explanation. Germany had a uniquely creative culture of typesetting at the turn of the twentieth century, and a unique seriousness about the task of designing new styles of letter. In the early decades of the twentieth century, German typesetting, stimulated by the fact that German typography straddled both Roman and Blackletter traditions, was often characterised by a search for new forms. We have already seen that this encouraged the development of Jugendschrift and hybrid types. Whilst the designers of Grotesques were uncelebrated (in contrast to Behrens and Eckmann), it may not be unreasonable to suggest that the instability brought on by the dual use of Roman and Blackletter, and the climate of innovation evident in Klingspor's early outputs, were also factors contributing to Germany's

lead in the design of Grotesques.

Berthold's Akzidenz Grotesk, of uncertain origins, appeared at the close of the nineteenth century and would go on to become the most influential of these newer more precisely-designed Grotesques (Plate 2.2.6). Akzidenz has a large x-height, a tight aperture, and a straight legged R, features typical of many earlier Grotesques. Yet, it has an elegance and evenness of design absent from its predecessors, as well as contemporaneous designs from other countries. British attempts, such as Stephenson Blake's Grotesques 8 and 9 (from 1898 and 1906, respectively), are infinitely less considered. In both Stephenson and Blake Grotesques, while generally stroke contrast follows the Modern axis, in detail the strokes are highly irregular. The upper bowl of R extends horizontally beyond the base of the diagonal, and the C has an underbite. The upper curve of the a and the lower curve of the e are uneven, erratic and abruptly terminated in a manner unrelated to the flow of the stroke. In contrast Akzidenz seems to retain an even colour throughout its design and its uppercase is of a refined geometric simplicity, particularly evident in the simple G constructed from a near circle and simple horizontal and vertical. However, despite appearances, Akzidenz is not purely monoline: where curved lines join verticals, there is a subtle lightening. This becomes more pronounced in heavier weights, revealing that Akzidenz too, when required, follows the Modern axis. This is one of the defining features of both the American Gothics and Industrial Grotesques — adherence to the Modern axis (though often subtle) is, from early stages, a universal aspect of such designs.

Many other German foundries produced similarly refined Industrial Grotesques. These included the appropriately named Reform Grotesk issued by D. Stempel AG in 1904 and Bauer's Venus Grotesk of 1907. The stylistic idiom of the Industrial Grotesque was developed further in Germany than the Franklin descendents were in the US. Examples included the expanded type, Industria from Schriftgießerei Emil Gursch from the early 1910s, and in the 1920s Edel Grotesk from Ludwig Wagner AG and Koralle from J.G. Schelter & Giesecke. All of these designs were released in large families of weights and sizes making them adaptable to all sorts of uses. Handover provides a typical description of such typefaces: 'they were all industrialised Groteskschriften with no more academic pretensions than a steelworks chimney'.²⁴ Bartram writes, 'it seems to us now the almost inevitable progeny of the clanging, crashing, smoking world in which it grew up'.²⁵ As we will see below, it will be precisely this notion of the Grotesque as an industrial style — a proletarian style for the 'humblest purposes' as Carter described it — that would lead to it being adopted and attributed with a precise value by modernist typographers.

2.2.4 The Grotesque and the Future

What is the authentic mode of design for the age of the machine? As we have already seen in Chapter 1.2, this question preoccupied modernist designers in the early twentieth century. Industrial production, it was believed, had unleashed a stylistic chaos, arbitrarily combining motifs from historical periods and spitting forth new ornamental vulgarities. In face of this plurality of styles, modernists sought purification — a debabelisation was required in order to restore coherency to design and bring it in line with the spirit of the age. Yet the twentieth century was an age like no other. ‘Our times’, wrote Kurt Schwitters in 1928, ‘are essentially different from earlier periods because of the enormous increase in communications and the improvement of the means of communication and technological methods’.²⁶ The culture of the twentieth century was scientific and transnational. The authentic mode of design for the twentieth century would arise from the use of technology in the logical solution of problems. As such, design would betray no national origin and would, as far as possible, exist outside history, operating according to fixed laws revealed by science. The stylistic preferences of the individual would have no bearing on form; design would be objective and universal. The paradoxical view held was that a coherent design culture would be achieved only by allowing technology and science to replace culture as it was previously understood.

In the field of typography, Functionalism gave rise to a largely (but not exclusively) German-centred movement known as the New Typography, the principles of which were given their fullest expression in Jan Tschichold’s *Die neue Typographie* (1928). Although some figures of this movement, such as Tschichold, worked exclusively in typography, many others including Schwitters, the Dutch Theo van Doesburg, the Russian El Lissitzky, the Hungarian László Moholy-Nagy and the Czech Karel Teige, worked across art and design disciplines. Theo van Doesburg, through his journal *De Stijl*, and El Lissitzky, through the journals *Vesch*, *G*, and countless other typographic projects, were early catalysts for the new typography, and both had come to typography from a primarily fine art background. László Moholy-Nagy, who was key in instigating the study of typography in the Bauhaus, was from a similar background. With Moholy-Nagy, several Bauhaus masters, including Herbert Bayer, Josef Albers, and Joost Schmidt, were central to the New Typography. Bayer had studied at the Bauhaus before typography or lettering were part of the syllabus; he then briefly worked in advertising design.²⁷ However his work with lettering was for posters and packaging, and did not involve typesetting, typedesign nor book design. Schmidt and Albers had similar backgrounds to Bayer. All three became teachers at the Bauhaus in the areas of typography and lettering following the Bauhaus’ move to Dessau in 1925. Tschichold aside, the majority of the leading figures of the New

Typography were uneducated in (and often uninterested in) the centuries-long history of typography and typeface design. More important to them, were the more recent typographic experiments of the Futurists and Dadaists, and Constructivist principles of design. Despite the diverse backgrounds of those involved, the New Typographers were in overwhelming agreement on issues of typography, as evinced by the similarities in their writings on the subject and their frequent collaborations in exhibitions and organisations such as the Schwitters-led *ring neue werbegestalter* (circle of new advertising designers).

In a 1927 article entitled 'Modern Typography', Teige described the New Typography as opposing the archaism of William Morris's private-press movement, the eccentric stylings of Art Nouveau typefaces, and the printing of luxurious books for 'snobbish' bibliophiles.²⁸ Yet this is not what was 'new' about the New Typography. As has already been shown, each of these tendencies was also criticised by New Traditionalist typographers. From De Vinne to Morison, many typographers had opposed the ever-increasing varieties of typeface styles. For the likes of Morison new styles of letter and new styles of typographic arrangement were superfluous to the function of typography. The function of typography was the transmission of information, and new styles which drew attention to their form inhibited the fulfilment of function. Typography, in this view, functioned through adherence to established convention.

Where the New Typographers departed from the traditionalists was in the belief that new techniques of typographic arrangement could function without the requirement for cultural training in interpreting a conventional system of communication. Traditionalist typographers had taken the symmetrical and even pages of the book as the paradigm of typography. Yet, in the 1920s as Albers observed, 'the majority of printed materials are no longer books'.²⁹ Advertising, for the New Typographers, became the paradigm; and in advertising, the established conventions of symmetrical typographic layout were deemed redundant. Schwitters proposed that in the typographic design of advertisements one should 'use a regular industrial designer [...] rather than relying on [...] received wisdom'.³⁰ Inspired by non-figurative painting, such as that of Kazimir Malevich, the New Typographers believed that typography could communicate directly through the manipulation of innate human faculties of optical and cognitive reception. Teige wrote that 'modern typography is visual communication, its rules must therefore be based on optical rules'.³¹ 'Human beings', argued Schwitters, 'perceive things with their senses and not with their intellect', therefore typography should aim for 'impact on the senses by concentrating individual charms into a composition that can be grasped by the eye'.³²

In October 1925 Tschichold acted as guest editor and designer for the *Typographische Mitteilungen* — the journal of the left-leaning organisation of compositors and typesetters,

Bildungsverband der Deutschen Buchdrucker.³³ The special edition was named *Elementare Typographie*. In it Tschichold brought together the work of Russian and German typographers, with particular emphasis on El Lissitzky and the Bauhaus designers Moholy-Nagy and Bayer. Tschichold contributed a ten-point manifesto outlining the principles of the New Typography. It opens with the bold Functionalist statement, ‘The New Typography is orientated towards purpose’.³⁴ Earlier typography is derided as ‘formalistic’, in contrast to the new *elementare typographische Gestaltung* which is compositionally arranged according to communicative function. Traditional centred typography is rejected as ‘formalism’, in favour of asymmetry. Tschichold would later write that ‘asymmetry is the rhythmical expression of functional design’.³⁵ The new typography ‘excludes the use of any ornament’. Ornament, as utilised in Buchkunst, is condemned as superficial and subjective — ‘*dekorativ-kunstgewerblich-spekulative*’. In contrast the extra-typographical devices of the New Typography — ‘elemental forms’ such as squares, circles and triangles — are described as having a functional role in ordering content. We will return to the New Typographers’ ideas on the universal value of geometric shapes in Chapter 2.3, and the New Typographers’ speculations on the possibility of inventing new modes of graphic communication in Chapter 2.4, but for our present purposes we will turn to an analysis of the attitudes of the New Typographers to the design of typefaces.

A literate German in the early twentieth century needed to be fluent and proficient in reading and writing several styles of letter. This state of affairs had already provoked the development of hybrid and Jugendschrift types by designers who wanted to both advance German typographic culture, yet maintain its unique identity. The internationalist New Typographers had no such respect for German culture: to use the alphabet as an expression of national identity was an irrational and regrettable provincialism. The New Typographers were highly conscious of the fact that designed letters inevitably convey more information than that which they are overtly used to transmit. A page of Fraktur conveys not only textual information but also connotations of German identity. A page set in a Jugendstil typeface carries the impression of the personality of the designer of the typeface, ‘because of their strongly individual character which is in direct opposition to the spirit of our age’.³⁶

Typographic design, as opposed to typeface-design, was the principal occupation of the New Typographers. For this reason they had to depend on existing typefaces for their work, and all agreed that Industrial Grotesques were the typefaces best suited to the modern technological age, and most capable of achieving direct communication, unadulterated by extra-alphabetical stylistic connotation. Harry Carter, writing in 1931 of a movement with which he was not particularly sympathetic, describes well the New Typographer’s preference for the Grotesque:

With regards to the objects of our daily use we like to feel that form has been dictated by functional considerations: let them be so designed as to serve their purpose with maximum efficiency and to proclaim themselves for what they are. Ornament, the appearance of costliness, are no longer prized. This modern sentiment has singled out the sans from Victorian job-founts for preservation and condemned all the rest.³⁷

The Grotesques were impersonal and anonymous — the designers of Industrials were generally unknown and uncelebrated. As a style of type defined by lack of serifs and minimum of stroke variation — the Grotesque fitted with the Functionalist preference for the formally reduced: as Bayer put it, ‘its clear forms were seen to correspond with the image of modern times’.³⁸ Further, as a relatively recent style of type the Grotesque was free not only of German national connotation but free also of deep association with historical styles or artistic movements (the neoclassical origins of the serifless letter revealed by Mosley’s research had by then, it would seem, been forgotten). Its uncertain origins allowed a history for it to be in part forged: Tschichold described the Grotesque as having developed from the rationalising approach that gave rise to the Modern types; the Grotesque, he claimed, was ‘a logical development from Didot’.³⁹ However the true sense in which the Grotesque was a consequence of Didot lies not in incremental formal development, but in the fact that it was the introduction of the Modern that cleaved apart the Symbolic order of letters, opening the way for the kaleidoscopic plethora of nineteenth-century styles of which the Grotesque was but one.

In *Die neue Typographie*, Tschichold provided a detailed hierarchy of existing types and their suitability for use.⁴⁰ Other than in satire, Fraktur was never to be used. The Jugendschrift types were the worst available. Just as the New Traditionalists also believed, Jugendschrift types were, for Tschichold, excessively individualistic and expressed the idiosyncratic tastes of their designers. Humanist revival fonts of the twentieth century were preferable. Better still were the Egyptian slab-serifs of the late nineteenth century, because they had strokes with lesser weight variation and therefore looked more ‘machine-like’. However the future of typefaces lay in the Grotesque. Grotesques had not, until then, been generally used for book or newspaper continuous text-settings. The New Typographers proposed that the Grotesque should be used in all areas of printing, and *Die neue Typographie* was itself printed in an Industrial Grotesque face.

What is important about Tschichold’s instruction on type selection is that all the designs he favoured were not traceable to individual living designers. Egyptian slab-serifs, Grotesques and even in a sense twentieth-century Humanist revivals, had all emerged as commercial

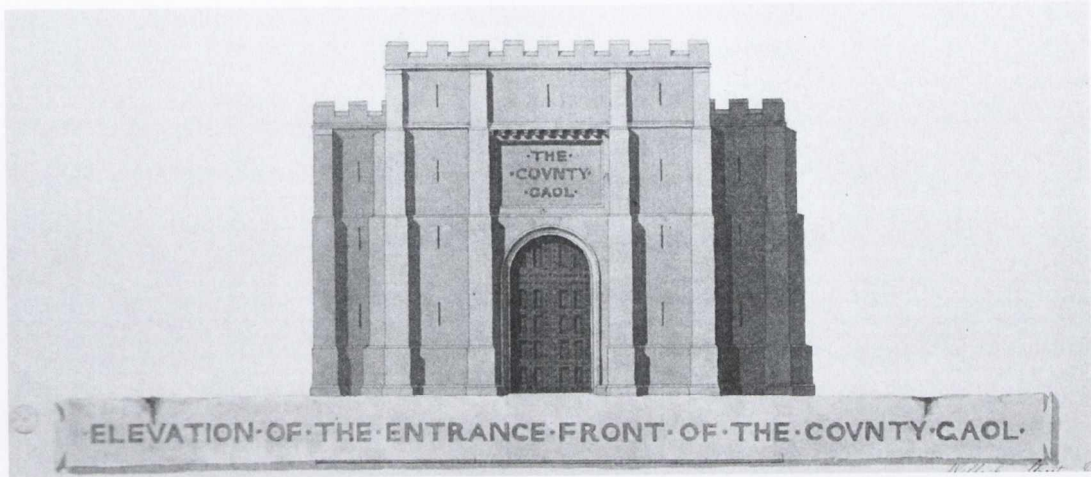
products from typefoundries and were available in endless variations. Again, as much as form, anonymity — or lack of established connotation — was vital. The New Typographers were not at all times in perfect agreement about which exact Grotesques were to be used: both Moholy-Nagy and Schmidt endorsed Venus Grotesk, about which Tschichold had reservations.⁴¹ The future lay in the Grotesque; although it had yet to be perfected. In the interim, a host of Industrials — including Akzidenz, Französische, Venus and Victoria — stood in for the elusive one Grotesque to replace all types (Plate 2.2.7).

Conclusion

By the close of the nineteenth century, along with the ever-proliferating eccentric Grotesques, two stylistic idioms emerged: the American Gothic and the Industrial Grotesque. The process of typeface proliferation was not only one of wild abandon, of ever new ostentatiously different varieties, but also one of refinement. As the rate of typeface production increased, the stylistic language of Grotesque design became more nuanced and sophisticated. The emergence of particular sub-styles of Grotesque set the scene for future development. Soon, as we will see in later chapters, Grotesque design will wonderfully turn in on itself, as Grotesques become not simply attempts at improvement on prior types, but, through their design, discussions of prior models — an artform in constant conversation with itself about itself. The precise opposite of what the New Typographers had hoped.

Up until the 1920s, the Grotesque had been a ‘floating signifier’, having no deep association with any particular design ideology. The New Typographers changed this. They adopted the Grotesque as a letter supposedly unburdened with style and personality, and therefore liberated to fulfil function. In the next chapter we will analyse New Typographers’ attempts at arriving at the elusive perfect Grotesque. Elemental geometry will be called upon as a bulwark against individualism — and, inevitably, idiosyncratic designs will follow.

- 1 De Vinne, *Practice Of Typography*, p. 315; H. Carter, p. 37; Tarr, *How to Plan Print*, p. 48.
- 2 Mosley, *Nymph and Grot*, p. 33.
- 3 Mosley, *Nymph and Grot*, p. 20.
- 4 Mosley, *Nymph and Grot*, p. 30.
- 5 Mosley, *Nymph and Grot*, p. 26.
- 6 Bartram, *Lettering on Architecture*, pp. 84–85.
- 7 Mosley, *Nymph and Grot*, pp. 38–39.
- 8 Kinross, *Modern Typography*, p. 38.
- 9 H. Carter, p. 37.
- 10 Mosley, *Nymph and Grot*, p. 42.
- 11 Handover, 'Letters without Serifs', p. 69.
- 12 Mosley, *Nymph and Grot*, p. 43. Handover (among others) attributes the first lowercase Grotesque design to Schelter & Giesecke foundry of Leipzig. Mosley argues that this date is 'wholly unconvincing' (p. 43, n1).
- 13 Bartram, *English Lettering Tradition*, p. 12.
- 14 H. Carter, p. 40. Amusingly, Carter describes such improvised stroke variation as 'subterfuge'.
- 15 Handover, 'Letters without Serifs', p. 69.
- 16 George Kurt Schauer, 'Über die Herkunft der Linearschriften', *Börsenblatt für den Deutschen Buchhandel* (19 March 1959), pp. 294–298. Cited and translated by Mosley, *Nymph and Grot*, p. 51.
- 17 H. Carter, p. 40.
- 18 Burke, 'Peter Behrens and the German Letter', pp. 19, 21. Burke suggests that the choice in type may not have been Behrens decision, pp. 31–32 n. 7.
- 19 Alistair Johnston, *Alphabets to Order: the literature of nineteenth-century typefounders' specimens* (New Castle, DE: Oak Knoll, 200), p. 124.
- 20 Sebastian Carter, *Twentieth-Century Type Design*, 2nd edn (London: Lund Humpries, 1995), p. 25.
- 21 Lewis Blackwell, *Twentieth-Century Type* (London: Laurence King, 1992), p. 38.
- 22 Cf. *American Specimen Book of Type Styles* (New Jersey, NJ: American Type Founders, 1912), p. 752; Blackwell, *Twentieth-Century Type*, p. 38.
- 23 Tracy, *Typographic Scene*, p. 38; S. Carter, p. 119.
- 24 Handover, 'Letters without Serifs', p. 75.
- 25 Bartram, *English Lettering Tradition*, p. 146.
- 26 Kurt Schwitters, 'Designed Typography (1928)' *Design Issues*, 9/2 (1993), pp. 66–68, p. 69.
- 27 Arthur A. Cohen, *Herbert Bayer: the complete work* (Cambridge, MA: MIT Press, 1984), pp. 191–193.
- 28 Karel Teige, 'Modern Typography' trans. by Alexandra Büchler, in *Karel Teige 1900–1952: l'enfant terrible of the Czech avant-garde*, ed. by Eric Dluhosch and Rostislav Švácha (Cambridge, MA: MIT Press, 1999), pp. 93–105, pp. 96, 100.
- 29 Josef Albers, 'Zur Ökonomie der Schriftform (1926)', in *Bauhaus: Drucksachen, Typografie, Reklame*, ed. by Gerd Fleischmann (Stuttgart: Oktagon Verlag, 1995), pp. 23–24, p. 23.
- 30 K. Schwitters, 'Designed Typography', pp. 66–67.
- 31 Teige, 'Modern Typography', p. 100.
- 32 K. Schwitters, 'Designed Typography', p. 66.
- 33 Burke, *Active Literature*, p. 29.
- 34 Tschichold, 'Elemental Typography', trans. by Kinross, in Burke, *Active Literature*, p. 311.
- 35 Tschichold, *The New Typography*, trans. by Ruari McLean (Berkeley, CA: University of California Press, 1995), p. 68.
- 36 Tschichold, *New Typography*, p. 74.
- 37 H. Carter, p. 41.
- 38 Herbert Bayer, 'typography and design at the bauhaus (1971)',s in *Herbert Bayer*, ed. by A.A. Cohen, pp. 352–354, p. 353.
- 39 Tschichold, *New Typography*, p. 20.
- 40 Tschichold, *New Typography*, pp. 73–76.
- 41 Tschichold, *New Typography*, p. 74; László Moholy-Nagy, 'Contemporary Typography', in Krisztina Passuth, *Moholy-Nagy* (London: Thames and Hudson, 1987), pp. 294–295; Joost Schmidt, 'schrift? (1929)', in *Bauhaus*, ed. by Fleischmann, pp. 30–32.



Soane, drawing for Norwich County Gaol (1789).
From Mosley, *Nymph and Grot*, p. 27.



Caslon IV's specimen including 'Egyptian', (c. 1819).
From Mosley, *Nymph and Grot*, p. 40.

FIVE-LINE PICA, SANS-SERIF.
FREEMAN

BRIDCENORTH
Communicate

MENINGHURNE
mountainous

RQENbaegn
CRQENbaegnpr

Above: Figgins's 'Sans-serif' (c. 1830). From Mosley, *Nymph and Grot*, p. 41.

Left: Thorowgood's upper and lower case 'Grotesque' (1832). From Mosley, *Nymph and Grot*, p. 43; Bartram, *Atlas of Typeforms*, p. 105.

Below: Stephenson Blake's Grotesques 8 (top) and 9 (below). From Bartram, *Atlas of Typeforms*, p. 108.

**BRISTOL
FIELDING**

SEVEN-LINE PICA, CONDENSED.

**RICHMOND
HOMERTON**

FOUR-LINE PICA ROUNDED.

**ON SALE BY AUCTION
LEASEHOLD ESTATES.**

GREAT PRIMER TWO-LINE ROUNDED.

**THEATRE ROYAL BRIGHTON,
HOUSEHOLD FURNITURE &c.**

EIGHT-LINE PICA, CONDENSED, No. 1.

**HERTFORD
UXBRIDGE**

FOUR-LINE PICA CONDENSED.

**CHRONONHOTONTHOLOGOS
MUCH ADO ABOUT NOTHING**

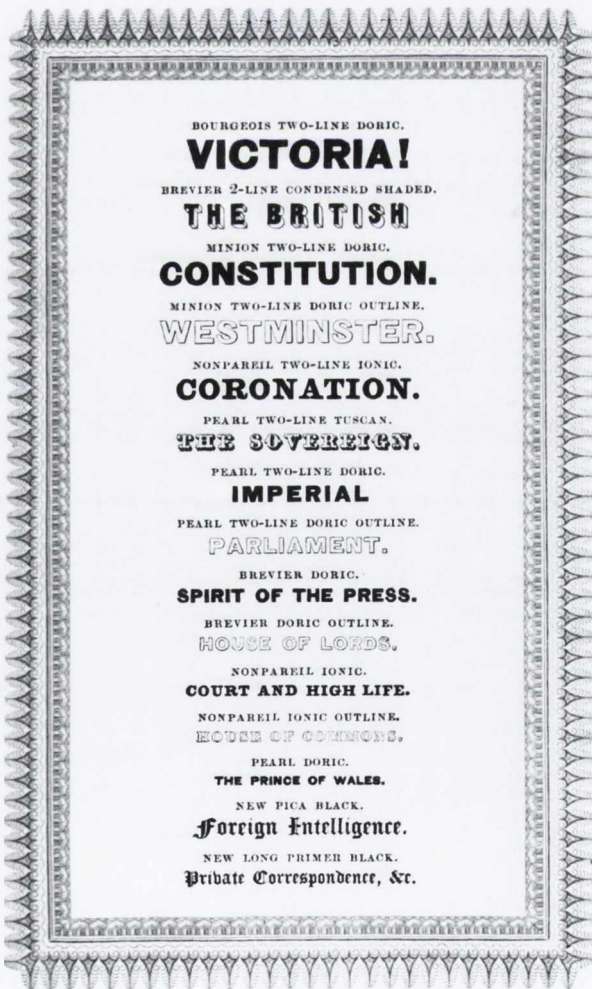
FOUR-LINE ROUNDED, OPEN.

**ON SALE BY AUCTION
LEASEHOLD ESTATES.**

GREAT PRIMER TWO-LINE ROUNDED, OPEN.

**ALDIBORONTIPHOSCOPHORNIO, &c.
ISABELLA, OR THE FATAL MARRIAGE.**

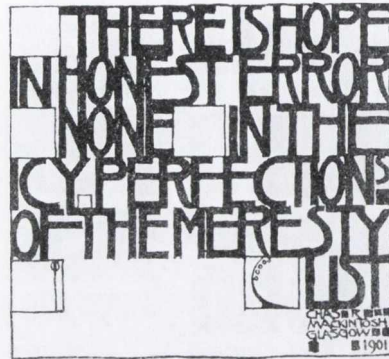
**THEATRE ROYAL BRIGHTON,
HOUSEHOLD FURNITURE &c.**



Caslon, *Specimen of Printing Types* (1841).

Above: various types named 'Condensed' and 'Rounded'.

Left: Specimen showing various versions of a Grotesque named 'Doric'.



Above: Lettering by Rennie Mackintosh (1901). From Crawford, *Charles Rennie Mackintosh*, p. 90.

Left: Mackmurdo's title page (1883). From Pevsner, *Sources of Modern Architecture*, p. 43.

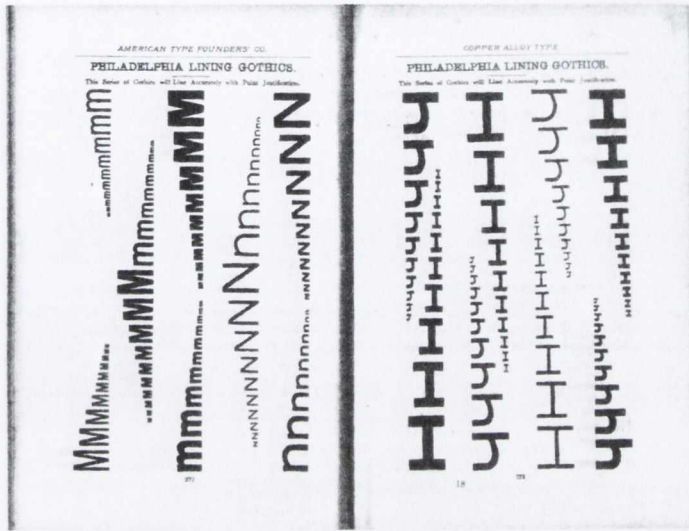
Below left: Woodcut by Heckel (1919). From Weller, *German Expressionist Woodcuts*, p.35.

Below right: Stephenson Blake's Grottesque 9 combined with woodcut by Kirchner (1924). From Bartam and Sutton, *Typefaces for Books*, p. 58.

DERANBRUCH



Mit den fahrenden Schiffen
Sind wir vorübergeschweift,
Die wir ewig herunter
Durch glänzende Winter gestreift.
Ferner kamen wir immer
Und tanzten im inslign Meer,
Weit ging die Flut uns vorbei,
Und Himmel war schallend und leer.



ATF's Philadelphia Lining Gothic specimen showing a range of weights and widths (1894). Not a true American Gothic. From Johnston, *Alphabets to Order*, p.124.

Prominent Incorporator Linguist Bought Stones

Franklin Gothic
(c. 1907). From
*American Specimen
Book of Type Styles*,
p. 739.

Honest Merchant Seizes Determine Householder

News Gothic
(c. 1908). From
*American Specimen
Book of Type Styles*,
p. 698.

GRAND SCENERY Interesting Methods

Monotone Gothic
(c. 1907). From
*American Specimen
Book of Type Styles*,
p. 694.

ABCGJKLMOPQRSTU abcdefghijklmnopqrs

Record Gothic (1927).
From S. Carter,
*Twentieth-Century
Type Designers*, p. 119.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Akzidenz (1890s). From Jaspert, Berry, Johnson (eds), *Encyclopedia of Typefaces*, p. 339.

Nr. 1686. Doppelmittel (28 Punkte) Satz ca. 12 Ko. 10 A 24 x
Romane und Novellen von Zola
Nr. 1689. 3 Cicero (36 Punkte) Satz ca. 14 Ko. 8 A 19 x
Die Industrie in Westfalen

Reform (c. 1904).
From de Jong, Purvis,
Tholenaar (eds), *Type:
visual history*, II, p. 206.

Nr. 1687. 3 Cicero (36 Punkte) Satz ca. 14 Ko. 8 A 19 x
Burg Hohenzollern
Das Kind im Hause
Nr. 1687. 3 Cicero (36 Punkte) Satz ca. 14 Ko. 8 A 19 x
Deutsche Rheinburgen
Gartenkunst in England

Industria (c. 1914).
From de Jong, Purvis,
Tholenaar (eds), *Type:
visual history*, II, p. 215.

Praktische deutsche Möbel,
aus massiven Hölzern nach
Entwürfen von Prof. Richard
Riemerschmidt, A. Niemeyer
u. and. hergestellt. ■ Wer sich
bei mäßigen Preisen wirklich

Edel (1920s). From de
Jong, Purvis, Tholenaar
(eds), *Type: visual
history*, II, p. 271.

Sonntag, 19. Aug. BAUHAUSWOCHE 11 Uhr vormittags
Deutsches Nationaltheater Weimar

M A T I N É E

Dirigent: Hermann Scherchen, Frankfurt a. M.
 Orchester: Weimarsche Staatskapelle

PROGRAMM

Ernst Krenek: Concerto grosso für sechs Soloinstrumente (Flöte, Klarinette, Fagott, Violine, Viola, Violoncello) und Streichorchester

Igor Strawinsky: Die Geschichte vom Soldaten
 Text von O. F. Remus, szenische Ausstattung von Renée Aubertjoris
 Wiederaufholung der Filmmusik-Einstudierung

PERSONEN

Der Vortrager: Karl Ebert, Berlin, Staatskapelle
 Der Sopran: Fritz Osenar, Frankfurt a. M., Schauspielhaus
 Der Tenor: Hermann Bahmann, Frankfurt a. M., Schauspielhaus
 Die Primadonna: Jiska Petersen, Frankfurt a. M.
 und Mitglieder der Weimarschen Staatskapelle


Kassenöffnung: 10 Uhr Vorverkauf: Theaterräucherer Buchhandlung, Weimar, Schillerstraße 15

Dienst- und Freikarten sind ausgetauscht

DIE ERSTE BAUHAUS-AUSSTELLUNG IN WEIMAR

JULI BIS SEPTEMBER

1923



Left: Bauhaus-Woche programme using Victoria (1923). A poor example of New Typography. From Fleischmann (ed.), *Bauhaus*, p. 87.

Above: Schlemmer using Venus (1923). From Fleischmann (ed.), *Bauhaus*, p. 73.

das bauhaus in dessau

lehrplan

zweck:

1. Auszubildende bildnerisch begabter menschen in handwerklicher, technischer und formaler beziehung mit dem sie gemeinsam arbeit am bau.
2. praktische versucharbeit für hausbau und hausanrichtung, einrichtung von wohnräumen für industrie und handwerk.

lehrgänge:

1. werklehre für
 - a. Holz (Dachstuhl)
 - b. Metall (Latten- und Kupferblechbau)
 - c. Farbe (Anstricharbeiten)
 - d. Gips (Gipsarbeiten, Stuckarbeiten)
 - e. Buch- und Konstruktiv
2. formlehre (plastisch und bautechnik)
 - a. anschauung: werkstoffkunde, naturstudium
 - b. darstellung: projektionslehre, konstruktionslehre, zeichnungslehre und modellbau für alle räumlichen gealter
 - c. gestaltung: plastische fertigkeiten

ergänzende lehrgänge:

modellbau und werkstoffkunde
 grundbegriffe von bauführung, projektionslehre, zeichnungslehre

lehrgänge:

1. grundlehre:
 - dauer: 2 halbjahre, elementarer formunterricht in verbindung mit praktischen übungen in der handwerklichen werkstatt für die grundlehre im zweiten halbjahre
 - prozessweise aufnahme in eine werkschule, ergebnis: anfertigung auftragsarbeiten.

ausbauform stellt die geschichte des bauhauses, dessau museum, 28

DRUCKSACHE!

Herrn Kurt Schwitters
MERZVERLAG

HANNOVER

Waldhausenstraße 5"

Deutschland
 Allemagne
 Germany




Left: Bayer using Schelter & Giesecke's Breite halbfette Grotesk (also known as Französische) (1925). From Fleischmann (ed.), *Bauhaus*, p. 107.

Above: Schwitters using Akzidez (1923). From Helms and others (eds), *Typographie kann unter Umständen Kunst sein*, p. 122.

2.3 Geometry and Grammatology

2.3.0 Introduction

In the previous chapter we saw that the New Typographers elevated the Grotesque as the letter of the machine age. The Fraktur and Schwabacher type styles and German handwriting style made German typographic and scribal culture unique in twentieth-century Europe. This, in part, explains the hyper-sensitivity to, and the reaction against, the inevitable connotations styles of letters carry — the attempt at transcultural letterforms was, somewhat paradoxically, a peculiarly German phenomenon. Beyond this, the Grotesque represented in typography the hope of arriving at an authentic Symbolic non-style. Styles of typeface smuggled in extra-linguistic connotations, believed by the New Typographers to be illogical superfluity to the *function* of printed language. Letters, like bridges and aeroplanes, needed to be designed according to the demands of function; letterforms without style were required, and in the spare forms of the Grotesque, the New Typographers believed they had found the beginnings of such a letter.

In this chapter we will look at the alphabet designs of several German and German-based designers from the 1920s, none of which went into production as typefaces in their time; instead they were presented with accompanying essays in various avant-garde journals. Many of these designs did not simply propose a new geometric graphic form for the alphabet, but also involved attempts at ‘rationalising’ the orthographic function of alphabetic characters. Bayer, Tschichold and several others, demanded that the alphabet be redesigned in order to represent speech more faithfully. In so doing they conflated the graphic reduction of letterforms and the elimination of redundancy in orthography.

Schwitters’s *Systemschrift* was the only such experiment that pursued to the end the modernist typographers’ rally cry of ‘one sound, one symbol’, and displayed a serious attempt at applying knowledge from phonetics. To achieve this, Schwitters rejected the standard characters of the Latin alphabet and designed entirely new symbols informed by phonetic analysis of speech sounds. Further, *Systemschrift* included aspects of non-arbitrary signification through imagery: the characters can be interpreted as depictions of the articulatory positions of the vocal organ. In so doing, Schwitters emulated the alphabets of nineteenth-century English phoneticians.

2.3.1 Transcendence Through Geometry

As was demonstrated in Chapter 1.2, the origins of Functionalism and its association with spare geometric forms was already theorised at the turn of the century in the writings of Muthesius.

Although the specific theories of avant-garde groups of the 1920s varied in many important ways, the idea that basic geometric shapes were not only the appropriate forms for mechanised production but were also universal and could therefore escape ephemerality (that they were at once modern and eternal) was current throughout the avant-garde of the 1920s. Le Corbusier and Amédée Ozenfant, founders of the French journal, *L'Esprit nouveau*, demanded an art based on 'logic' to protect against the 'capricious march of intuition'.¹ They sought an art of 'mathematical order', created through 'universal means'. Ozenfant and Le Corbusier argued that both *nature* and *the engineer* operated economically and functionally through the use of 'primary' forms. 'Primary forms and colours have standard properties [...] universal properties'. Such forms were viewed as outside of the transient realms of culture, taste and fashion and capable of producing an art 'free of conventions'. Simultaneously, similar ideas — that both *nature* and *the engineer* operated according to transhistorical laws, and that this was to be emulated in art — were arrived at by the Russian Constructivists. In 1920 Naum Gabo and Anton Pevsner wrote: 'the plumb-line in our hand, eyes as precise as a ruler, in a spirit as taut as a compass [...] we construct our work as the universe constructs its own, as the engineer constructs his bridges'.²

Writing in the Dutch journal *De Stijl*, J.J.P. Oud argued that modern art must be created by *the machine*, because 'the machine is the best means of manufacturing products which will be of more benefit to the community than the art products of the present time, which reach only the wealthy individual'.³ Just as *the engineer* was more notional than particular, so too *the machine* referred not to any particular machine, or mode of machine production, but an ideal of rational production. Both the machine and the engineer were viewed as potential catalysts of political emancipation. This idea was made explicit by Oud's colleague, van Doesburg, who wrote that, the 'proper tendency for the machine is [...] social liberation'.⁴ Van Doesburg connected the formal elements of his art — straight lines, primary colours, rectilinear shapes — with machine production. Simple geometric forms were believed to transcend the 'subjective choice of forms' by being the 'objective universal formative means' of art.

The German journal *G: Material zur elementaren Gestaltung*, founded by painter and film-maker Hans Richter in 1923, also championed elementary geometric forms. Its first issue was designed by Lissitzky and its production was funded by the architect Mies van der Rohe. Although *G*'s editorial scope was diverse — including architecture, design and film, among other topics — it linked its topics with the notion of *elementare Gestaltung*.⁵ In *G*, 'elemental construction' was intractably linked to the idea of Functionalism. Although elemental construction almost invariably meant the use of reduced geometric forms, its adherents sought

continuously to define themselves in opposition to formalism. In issue two, Mies wrote:

We know no formal problems, only building problems. Form is not the goal but the result of our work. The most truly formed thing is conditioned, grown together with the task. Indeed, it is the most elemental expression of the solution of that task. Form as a goal is formalism; and we reject that. Nor do we strive for style. The will to style is also formalistic. We have other concerns.⁶

Nevertheless, circular, triangular and square forms seemed to inevitably ‘follow function’. Whilst a tendency towards geometric reduction could be observed in various broadly Art Nouveau movements of the turn of the century (Plate 2.3.1), it was in the 1920s that the particular view of geometry as both transcendent and thoroughly modern really took hold. Writing in 1988, the typographer Otl Aicher (a modernist of a later generation) well summed-up the 1920s faith in geometry and how it differed from the turn of the century view, as follows:

a bench plane produces flat surfaces, a lathe cylindrical forms. Transposition and rotation were the basic techniques of production. The identification of primary geometric forms with social movement and production technology freed them from the psychologism of Art Nouveau. The square, circle and triangle were the symbols of a new era, a new culture, a total renunciation of historical values. Klimt’s circles and squares had basically been elegant decoration. Now, the fundamental elements of being and the world came to symbolise technological production, the industrial society, proletarian solidarity, internationalism. They became aesthetic standard-bearers in the fight against redundancy and irrelevance.⁷

Aicher draws too precise an historical division between the geometricism found in Art Nouveau and the ‘elementare gestaltung’ of the 1920s (a definite continuity in thought can be traced from, for example, Rennie Mackintosh to the Bauhaus). Nevertheless he captures well the modernists’ own sense of elementary geometry allowing a complete break with the past.

The idea of an engineer-like nature to be emulated in design practice — designing through geometric *urforms* as ‘the fundamental elements of being’, influenced a great span of creative activity in the first decades of the twentieth-century, including, perhaps surprisingly, nature photography. Karl Blossfeldt taught sculpture at the Berliner Vereinigten Staatschulen at the turn of the century, when already the perceived Babel of styles was viewed as a problem that needed remedy. In rejection of the direct revival of historical styles, Blossfeldt believed an investigation of plant forms could revive architecture and design. To this end, between the years 1896 and 1930 he amassed a collection of approximately 6,000 photographs of plants, to be

used as instructional materials in his classes (Plate 2.3.2).⁸ A collection of these images was released in 1928 as *Urformen der Kunst*. Blossfeldt's carefully selected images (selected both at the moment of creation through framing, and selected editorially in compiling the book) aimed to demonstrate that historical styles of architecture and ornament had all derived from urforms which the technology of close-up photography could reveal. The solution to Babel, the style for the modern age, could be found directly in natural urforms, not in historical styles which were but partial and inexact manifestations of underlying universals. In the foreword to a second series of *Urformen der Kunst*, Blossfeldt wrote,

Every sound expansion in the realm of art needs stimulation. New strength and stimulus for its healthy development can only be derived from Nature. [...] The plant [...] compelled in its fight for existence to build in a purposeful manner [...] constructs the necessary and practical units for its advancement, governed by the laws familiar to every architect, and combines practicability and expediency in the highest form of art.⁹

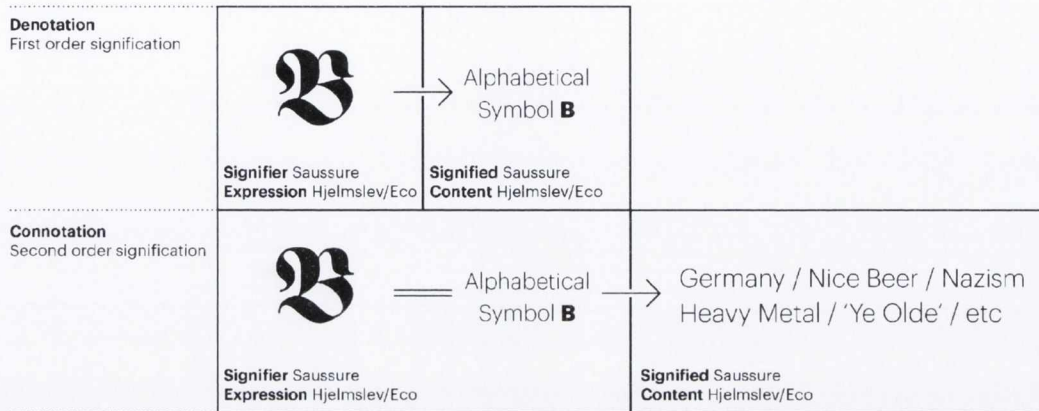
The idea that nature was the source for the applied arts had already been expressed to the previous generation of designers, Art Nouveau and Jugendstil, by Ernst Haeckel in *Kunstformen der Natur* (1889).¹⁰ Haeckel's nature was one of undulating and complex structures of organic lines, which he depicted in meticulously detailed and elaborate prints. For the modernists, Haeckel and the Jugendstil had misrepresented nature by describing it in their own image — a creator of complexity and beauty, to be appreciated by the cultivated mind. In *Die neue Typographie* Tschichold scorned Haeckel for attributing 'artistic intentions to nature'.¹¹ The modernists' nature held a compass and a set square, had no interest in beauty only in the fulfilment of tasks. Natural forms were imagined to be the result of a quasi-intentional design: 'in the process of giving form, both technology and nature use the same laws of economy, precision, minimum friction'. In the preface to Blossfeldt's *Urformen*, Karl Nierendorf wrote that 'natural forms are governed by some fixed and eternal force, and shaped, as a result, by constant repetition of a flow of events'.¹² Nature, so imagined, was not a source of style but a source of method.

2.3.2 Towards a Geometric Alphabet

We have already discussed the New Typographer's belief that Grottesque types were superior due to their relative simplicity in design. Yet the Grottesques in existence were only the least historical, most *sachlich*, letters then available. 'No single designer can produce the typeface we need', wrote Tschichold, 'which must be free from all personal characteristics; it will be the

work of a group, among whom I think there must be an engineer'.¹³ In lieu of such a scientific-typographic committee, the New Typographers' individually attempted Grotesque letters free from subjective adulteration. 'The reason for the continuing production of still "another" typeface', claimed Bayer, 'is the consistent policy of type foundries to make more sales through new designs'.¹⁴ We will see in Chapter 3.1 that the New Typographers would soon be not so adverse to contributing to the stylistic pluralism of commercial typefounding. Nevertheless, for now, they theorised a new form of letter which they described as opposing the commercial production of ever-new styles of typeface; which would replace, rather than add to, the Babel of typeface styles. The view held was that basic geometric shapes could produce ultimate and definitive letterforms, purged of historically-accumulated ornament and reduced to the 'essential'. Bayer argued that historically types were 'formed freely according to the style and the calligraphy of the type-designer, and it is just this freedom which has been responsible for so many mistakes'.¹⁵ Geometric letters would avoid such personal connotations, because, according to Tschichold, 'such shapes must by necessity transcend individualism and nationalism'.¹⁶

In semiotic terms, what was sought was an alphabet of pure symbols. In Peircean terminology, letters are defined as symbols — their meaning is established through convention. Yet symbols are pure abstractions that exist outside of any real instance. A realised letter (on page or on screen, for example) in a particular graphic form is what is known as a token of the symbol. The symbol only demands of its token that certain properties be present — or in the case of the alphabet, that certain properties from a range of options be present (as letters come in various paradigm forms). Yet clearly, each graphic embodiment allows the token to communicate more than its alphabetic content. This is due to semiotic connotation. A connotative sign, as defined by Louis Hjelmslev, is a sign that is the consequence of a prior sign.¹⁷ To give a typographical example: that a particular Blackletter design of B is the signifier (or expression, in Hjelmslev's terms) of the signified (or content) 'alphabetic-symbol-B', becomes itself a second-order sign. That is to say, the full sign (the combination of the graphic expression and the signified 'alphabetic-symbol-B') is itself a signifier of, for example, Germany or Heavy Metal, or numerous other potential signifieds, depending on the context in which it is used, and what Peirce calls the readers 'collateral knowledge'.



In Geometric Grotesque alphabets the New Typographers sought letterforms without connotative elements — graphically embodied letter-tokens that were pure symbols. This was a natural consequence of extending Functionalist ideas into the domain of letter design. Functionalism was to provide design with a tabula rasa: the designer would be liberated from the inherited language of style, from the use of formal details to express notions of history, class and fashion, and would be allowed a pure and semiotically-mute denotative mode of design. Yet this notion is not so easily translated to the design of letters. A letter, after all, must signify, and it must do so through its form; its form being, of course, historically-evolved. What part of a letter can remain that is its pure functional kernel, that betrays no historically- or culturally-inflected formal preference? Designers including Albers, Bayer, Schmidt, Schwitters and Tschichold tackled this problem in their experiments with Geometric Grotesque letters, each arriving at different results. Using a restricted range of geometric shapes to achieve the letters of the alphabet exposed the difficulty in applying anti-conventional Functionalist ideas to letters. Letters function precisely through their adherence to historically-established forms: function and convention are inexorably intertwined in the alphabet.

Bayer's 'universal alphabet', first shown in the Bauhaus journal *Offset: Buch und Werbekunst* in 1926, was designed according to the principles of geometric elemental construction (Plate 2.3.3). Bayer removed all the remnants of calligraphy found in typical Roman and Blackletter types, constructing his alphabet with compass and ruler. His aim was to create a logical impersonal design, that was not 'formed freely' according to the whim of the typedesigner.¹⁸ In the version of 'universal' shown in *Offset* as 'Abbildung 2', the letter o — a perfect circle — is the basis of each letter. The a, b, d, p and q simply add vertical lines to the circle. The c and e are modified circles. This limited system creates problems with several characters. The m and w maintain the same width as the o, by combining verticals with two

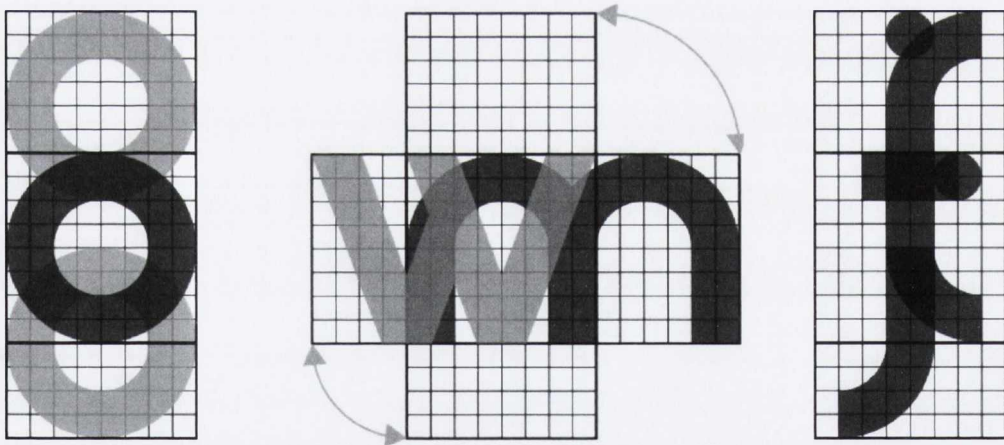
semi-circles of half the o's diameter. The s uses the same half-diameter circle as the m and w, resulting in a letter half the width of the others. The result of the 'pure' geometric approach is of an uneven appearance, like an accordion opening and closing, stretching at open letters like u and n, and contracting at m and s.

Bayer's alphabet serves as a demonstration of an issue that is both fundamental to the semiotics of the alphabet and also fundamental to the practice of typesetting. A more-detailed account of the semiotics of the alphabet will be provided in the final chapter of this thesis, however it is necessary here to provide a brief sketch of certain issues in the semiotics of letter design. We have discussed already the relation of symbols to tokens. Alphabetic symbols come in certain paradigm forms which mediate the relationship of token to symbol (for example, lowercase a has two common paradigms in use today, the single- and double-storey versions). A typeface or alphabet design is not simply a collection of approximations of such paradigms: letter-tokens do not independently adhere to such paradigms but come in alphabetic groups (such as in typefaces or lettering styles) which establish their own conventions as regards how the token stands to the paradigm. For example the a's of both Times and Gill Sans are of the same paradigm, but the specific differences in realisation of the letter in each type is governed by each type's own native conventions. In essence, each typeface establishes rules about how its letter-tokens fulfil their paradigms. What these rules are will often be too subtle or unsystematic to make a full inventory of. The Geometric Grotesque alphabets, in contrast, provide a useful example of this as they are attempts at producing letters with a minimum of conventions. What Bayer's design demonstrates is that, far from reducing letters to their pure and essential forms, his restrictive geometric programme (i.e. his application of strict conventions such as the use of a particular circle-diameter as the basis for all letters) is such that it at times over-rides the obligation to fulfil a letter paradigm, producing letters with distorted or overly-dense forms such as the x and s.

A design by another *Bauhäusler*, Schmidt, again provides the opportunity to explore the role of native conventions in detail, as the simplicity of his design allows for an enumeration of its rules. As with Bayer's Universal, Schmidt's 1925 alphabet lacks the slowly-evolved and subtly-crafted nuances found in conventional typefaces (Plate 2.3.3). In an attempt to avoid emulating historically-established styles, Schmidt imposes a handful of rudimentary geometric conventions. In Schmidt's alphabet the letters follow lowercase paradigms, with lowercase a and g following italic paradigms. With these letters he experiments with excluding features which could be argued to be non-distinctive (or not integral to the paradigm) by showing them half-shaded. These include the lower terminal of the the vertical stroke on the d, the equivalent

points on p and q, and the top left terminals on n and m. The same logic is not applied to the top right stroke of the g nor the top right terminal of the a.

One circle diameter is the basis for the letters, providing not only the width for the majority of letters, but also the limits of the baseline and the x-height. With this move Schmidt defies tradition (as did Bayer): typically curved letters such as o extend above the x-height and below the baseline slightly, as do the bowls in letters such as b and p. If we take the outer perimeter of the stroke of the principal circle to be 8 units in diameter we can place this in a square grid of 8×8 units, showing the stroke to be two units thick, leaving an inner counterform circle of a four-unit diameter. All ascenders are of equal height, extending 6 units above the x-height — the result of repeating the principal circle above with overlapping stroke. This ascender height also determines the position of the dot on the i and j, which again breaks with tradition. The descenders extend 4 units below the baseline — the result of repeating half the principal circle below.



The majority of the letters are formed exclusively from circle arcs and vertical and horizontal lines. The exceptions to this are the k, v, w, x, y and z, which feature angled lines. Schmidt does not impose a regularity on the degree of the angled lines, rather the lines are angled as necessary so as not to exceed the 8-unit width (this is true also of the w as it is based on the v). In these letters, regardless of the angle of the stroke all terminals are cut either perfectly horizontally or vertically. This is true of all other letters, except the c and the e which have terminals cut radially from the diameter at 45 degrees. The widths of the letters in Schmidt's design adhere to the circle diameter except m and w which are wider, and f, i, j, l, t, r and the long s (a surprising inclusion), which are narrower than the circle. The c is also slightly

narrower as a result of being derived from the principal circle with a one-quarter slice removed. There is an interesting way in which the proportions of the ascenders and descenders are repeated horizontally in the two letters which exceed the 8 unit width. The m is based on repeating the n so that it extends 6 units forward, the same extension as the ascenders. The w is based on doubling the v so that it extends four units backwards, the same extension as the descenders. The narrower letters are built around a sort of sub-system in which quarter circle arcs of the principal circle are used.

In principle, any typeface's alphabet could be provided with an inventory such as that provided above for Schmidt's — even the alphabet of a serified booktype (Gill's Joanna, for example). However, types such as Joanna are governed by an almost inexhaustible cluster of micro-paradigms, in both the areas of paradigm form and paradigm convention. To design a serified booktype requires judicious navigation of such conventions. Schmidt's geometric programme liberates him from such concerns.

Albers's *Schablonenschrift* provides an extreme example of native conventions trumping the obligation to fulfil paradigms (Plate 2.3.4). Albers's alphabet was presented in issue seven of the Bauhaus journal *Offset: Buch und Werbekunst* in 1926 along with an article 'Zur Ökonomie der Schriftform'.¹⁹ The letters are all composed from three basic geometric solids — a square, a right-angled triangle formed by diagonally slicing the square, and a quarter circle equal in width to the square. As these letters were intended for use as stencils, they lack enclosed counterforms. Instead they are composed of two vertical columns separated by a thin margin. The result is that many letters, viewed out of context (consider the c) would not be recognisable as tokens of their respective paradigms. Albers's design demonstrates that native conventions can function more than as a simple stylistic filter over a paradigm letterform; recognition of the conventions can be vital to recognition of the paradigm. It is only when we apprehend Albers's alphabet in full that the letterforms become clear.

All three of these designs are interesting exercises in designing an alphabet with a minimum of geometric options. Yet they serve to demonstrate a fallacy in the theoretical impetus which informed their design. The part of the letter that is superfluous historical style and the part that is 'essential' are not easily distinguished. Teige, in 1929, took Bayer's universal and attempted to develop and refine it.²⁰ However, for the most part the search for the Geometric Grotesque urform was a subjective investigation. Rather than 'elemental' geometry allowing the New Typographers to avoid forming letters 'freely', as Bayer claimed, elementary geometry had, in fact, precisely the opposite effect: adherence to the geometric systems of their own invention allowed the designer to *freely* reject the historically-established forms of letters and

arrive at thoroughly idiosyncratic designs. The most extreme example of this is Albers's *Schablonenschrift* which at times renders its letters barely recognisable outside the context of the complete alphabet. Geometry not only did not lead to purified letterforms: it failed to purge an individual's design of individual decisions.²¹

2.3.3 From Geometry to Grammatology

The alphabets of Albers, Bayer and Schmidt, discussed above, all lacked an uppercase. For such Functionalist typographers, superfluity was found not only in the graphic form of letters but in the co-existence of upper- and lowercase. The attempt to design 'rational' letterforms soon had the designers in question asking whether the function of letters within orthography, and not just the stylistic presentation of letters, was sufficiently rational. Perhaps surprisingly for a movement that so greatly advanced the visual and spatial nature of communication through typography by abandoning symmetrical composition in pursuit of graphic arrangements that were in themselves meaningful, a central theme of the New Typographers' writings was the argument that the function of writing was the faithful transcription of speech. 'Writing', stated Schwitters, 'is the image of speech, the image of sound'.²²

The Viennese architect Adolf Loos already in 1921 had renounced Fraktur as a 'false' script and with it the German orthographic practice of capitalising nouns, stating 'it is impossible to utter a capital letter'.²³ Moholy-Nagy cited Loos on these subjects in a 1925 essay.²⁴ However a more decisive influence on the New Typographers was a 1920 book from Verlag des Vereins Deutscher Ingenieure (the imprint of the Association of German Engineers), *Sprache und Schrift* by Dr Walter Porstmann. Porstmann was a man of science, an *engineer*! From the mid-1920s there are frequent references to Porstmann in the writings of Tschichold, Moholy-Nagy and Bayer. In *Sprache und Schrift*, Porstmann demanded not only that Fraktur be abandoned and the use of capitalised initials be reformed — Porstmann called for the complete abolition of the use of uppercase, in favour of a single lowercase alphabet, arguing that this would make typography more rational, efficient and economical. Porstmann's slogan for *Kleinschreibung* (small writing) — 'one sound, one sign' — is repeated throughout the writings of the New Typographers' and their supporters. 'Why', asked Bayer, 'do we write and print with two alphabets? A large sign and a small sign are not necessary for one sound'.²⁵ The critic Franz Roh wrote 'why write big if it is not possible to talk big'.²⁶ Thus the alphabets discussed above lacked an uppercase and at Bayer's instigation, from 1925 *Kleinschreibung* became official Bauhaus policy.²⁷

Again, there were issues specific to Germany that influenced the movement towards

Kleinschreibung. For Tschichold, the German orthographic practice of capitalising every noun made explicit, more than French or English orthography, the redundancy of the uppercase.²⁸ Idiosyncrasies of German orthography, such as the ‘esszet’ ligature and the long, short and terminal forms of ‘s’ in the German handwriting style, were said to be irrational by Schmidt.²⁹ It was claimed that the use of a single lowercase Grottesque alphabet would be both educationally and economically beneficial. Schmidt claimed that the education of children was stunted by the necessity to learn eight alphabets — the upper and lowercases of Fraktur, Roman, Grottesques, and the German handwriting style. ‘Our lettering’, wrote Moholy-Nagy, ‘would lose nothing if written with lowercase initials’, rather, ‘it would become easily legible, more easily learnable, and would become significantly more economical’.³⁰ Bayer argued that single-case typewriters would have economic advantages.³¹ Likewise, Tschichold wrote that *Kleinschreibung* ‘would be of great advantage to the national economy’.³²

That the Latin alphabet, once reduced to its ‘essential’ forms, was the appropriate starting point for a universal alphabet was taken as a given by Bayer and Tschichold. Tschichold lumped the writing systems of the world, including Arabic and Chinese, together with Fraktur (which is a particular styling of the Latin alphabet independent of orthographic function), labelling all as illogical provincialism — ‘NATIONALISMUS!’ — best replaced by Grottesque Latin characters.³³ If the Latin alphabet was taken as the best writing system, and most appropriate for universal communication, it nevertheless needed improvement as regards the attribution of orthographic function.

Porstmann advocated, with the abolition of the uppercase, a reform in orthography to achieve the principle of ‘one sound, one sign’. By ‘one sound’ the New Typographers and Porstmann meant the units of speech referred to as segments in phonetics. As in English, such sounds are in some instances represented in German orthography with more than one symbol, and in reverse, as Schwitters notes, in German ‘one has the luxury of representing double consonants such as ts and ks with single letters (z and x)’. This, according to Schwitters, is ‘an arbitrary arrangement that has nothing to do with logic’.³⁴ Schwitters’s description of the use of a single symbol to indicate two segments conveys the moralising sense in which departure from the alphabetic principle, as extravagant and wasteful decadence, was considered.

In an article published in 1930 entitled ‘noch eine neue schrift’, Tschichold presented two versions of an alphabet design, the first a geometric *Kleinschreibung* alphabet (but using the uppercase forms of N and K), and the second featuring ‘phonetic reform’ (Plate 2.3.4).³⁵ As with Bayer and Schmidt’s designs, the characters are composed from circle arcs and straight lines only. However, Tschichold’s design was not based on one particular circle diameter, allowing

him greater flexibility in the design of each letter. Tschichold also presented his designs as simple line drawings, liberating himself of the task of working-out precisely the relationship of stroke width to letter size. The reformed version included new symbols for segments usually represented with more than one character — including the two ‘ch’ sounds as in German ‘ich’ and ‘ach’ and the first segment in ‘Schwitters’ which is typically represented with three characters. ‘C’, ‘q’ and ‘w’ were discarded as the sounds they typically indicate are also indicated by other letters, as were the characters used to express double segments, ‘x’ and ‘z’. Both alphabets were used to set a fragment of text by Mondrian, in order to demonstrate that the phonetically reformed alphabet was more economical in its use of space, again asserting the decadence believed to be inherent in standard orthography.

Bayer’s Universal from the mid-1920s only went as far as abolishing uppercase. It was not until the late 1950s, by which time he was based in America, that he presented a design that applied Porstmann’s ideas with greater rigour. He called this design ‘basic alfabet’ (Plate 2.3.3). Bayer wrote:

attempts have been made to design visually improved alphabets. but redesigning will result in just another typeface unless the design is primarily guided by optics as well as by a revision of spelling. this in turn, reveals the need for a clearer relation of writing-printing to the spoken word, a reorganization of the alphabetic sound-symbols, the creation of new symbols. the type designer is not usually a language reformer, but a systematic approach will inevitably carry him to a point where he will ask for nothing less than the complete overhaul of visual sound.³⁶

What is striking about Bayer’s 1950s alfabet and the essay with which it was published is how little his views had changed since the 1920s.³⁷ One major difference between Universal and Alfabet is that the latter is not modular in its design, as Bayer intentionally exaggerates the differences between letters. For example, in Universal the h and n were identical apart from the h’s ascender, and the m and w were direct reflections of each other. In Alfabet each character is designed so as to maximise formal differences. There are indications in his writing that this choice was informed by research into the relative legibility of characters. Such formal distinctions potentially aid the recognition of characters, but are independent of the orthographic function of characters as regards their relationship to phonetic segments. In the thirty years during which Bayer published numerous essays repeating chastisements against the supposed illogical nature of the standard orthography of both German and English (and more broadly the entire alphabetic world), he seems not to have engaged in a deeper study of phonetics and writing to arrive at a thesis beyond the 1920s slogan ‘one symbol, one sound’. Alfabet betrays

no knowledge of sub-segmental features. In his essay he makes disparaging remarks regarding a design known as the Shavian alphabet on the grounds that the characters are too difficult to distinguish (a fair comment perhaps) but he seems to be entirely unaware that the Shavian alphabet is featural (like Hangul) rather than segmental. Unlike the Shavian alphabet Bayer's design proposes no attempt to visually link symbols that stand for related sounds such as the voiced and unvoiced pairs typically represented by k and g or t and d. There are several instances of error in the isolation of vowels. He also (intentionally) breaches the 'one symbol one sound' principle by proposing symbols for certain common suffixes such as 'ed' and 'ion', on the grounds that such symbols would make writing more 'economic'. Within this group of what might be called 'morphographs' (as they stand for morphemic units with semantic as well as phonetic values) Bayer includes a symbol for the sound typically indicated by the letters 'ng', which is a non-semantic single segment, demonstrating his still shaky grasp of phonetics.

We have already argued in Chapter 1.1, that it is a mistake to view existing orthographies that utilise the alphabet yet depart from the principle of one symbol one sound as simply degenerate applications of the alphabetic principle. We have demonstrated that such orthographies often involve more sophisticated relationships between alphabetic symbols and sounds as well as meanings. It is worth here returning briefly to this issue in relation to *Kleinschreibung*. Bayer's statement that we do not speak with uppercase and lowercase letters may be correct, although the intended meaning may be wrong. If it is true to say that it is impossible to utter a capital letter, and we do not speak with small and large letters, it is only true because *we do not speak with letters at all*. In arguments that appear to be chastening writing for failing to be faithful to speech, it often seems, paradoxically, that speech is thought of in the image of an idealised alphabetic writing — as strings of discrete units, arranged in rows, like letters on a page. Even if we accept the idea that the only function of writing is the representation of speech sounds, it still would not warrant an image of speech based on its notational system. That spoken language can be analysed into segments, which can be represented graphically, does not necessarily mean we speak in segments. As Abercrombie notes,

[words are] innervated from the brain as a whole, and the unpractised person finds it extremely hard to isolate any one part of a word from the rest. But if, by means of an analysis which is really artificial in the extreme, we do succeed in splitting up the various words of a language, we shall find that similar bits of sound [...] tend to recur. It must not be thought that these similar bits are elements from which the speaker builds up the words he pronounces; that, psychologically, would be quite a wrong point of view.³⁸

Roy Harris puts it more combatively,

the notion that in speaking we select the individual consonants and vowels which somehow emerge from our mouths threaded in the right order like beads on a string is simply the image of alphabetic orthography projected back on to speech production.³⁹

One conclusion would be to agree with Householder, that the primary representation of a word for a literate person in a European alphabetic culture is the orthographic. In such a case Bayer is absolutely correct to describe speech in the image of writing; however this view of the primacy of writing only undermines further the idea of a phonetic alphabet.

2.3.4 Visible Speech Before the Bauhaus

The New Typographers were by no means the first to find fault with standard orthography. From at least as early as the seventeenth century several English speakers had attempted the complete redesign of writing, born from frustration with the even greater degree that English over German departs from the 'one sound, one sign' principle.⁴⁰ The fields of linguistics known as phonetics and phonology were motivated by the same impetus to reform writing several decades prior to the advent of New Typography. Deep study of the constituent sounds of language arose in nineteenth-century England from frustration with the seemingly erratic relationship between sound and alphabetic symbol in English orthography.⁴¹ It is not the case that spoken language was understood and writing simply needed to be studied in order to match it; the constituent elements of spoken language were first seriously investigated in the context of attempts to design alphabets which systematically corresponded graphics to sounds. We could say then that in a certain sense, echoing Householder (and indeed Derrida), that writing preceded speech.

Frustration with the eccentricities and apparent inconsistencies in English spelling provoked several attempts to design improved orthographies for English in the nineteenth century (Plate 2.3.5). Just as the New Typographers sought to minimise arbitrariness in writing, several nineteenth-century English phoneticians including Alexander Melville Bell, Isaac Pitman and Henry Sweet sought a form of writing that more directly represented speech. 'The accepted mode of spelling', wrote Pitman, 'is so far removed from any apparent attempt to represent the sounds of speech, that this, its original purpose, has almost ceased to be evident'.⁴² In devising alternatives to standard writing, Pitman, Bell and Sweet invented systems that have been referred to as 'iconic' by Abercrombie.

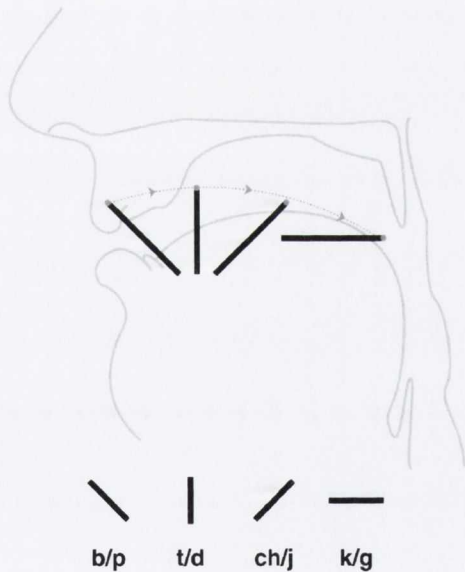
Abercrombie provides three possible definitions of iconic writing: firstly a writing that *resembles the sound* of speech would be iconic, but Abercrombie rules this out as impossible. Secondly, an iconic script *could resemble the action and position of the vocal organs*. Abercrombie provides an example of such an ‘iconic’ script from John Wilkins’s *An Essay Towards a Real Character and a Philosophical Language* (1668), in which Wilkins proposed ‘letters’ derived from depictions of the articulatory position of the mouth and tongue, producing characters barely distinguishable from one another. Thirdly, Abercrombie writes ‘much more common, and more practicable, are notations which are *iconic because they allot related shapes to related segments*, and do not aim at being directly representational’ [emphasis added].⁴³

This third iconic-analogical sense is what Abercrombie typically means by ‘iconic’ writing, and the term has been adopted by others who study writing systems. A better term, as cited from Sampson in Chapter 1.1, is featural, as what distinguishes such systems is that the symbols are not simply allocated to segments but to features.⁴⁴ Even in the idealised form of alphabetic writing, wherein each symbol indicates one segment alone, the phonetic value of each symbol must be individually learnt as there are no systematic relations established between symbols and sounds. Systems that are iconic in the analogical sense defined by Abercrombie, ensure that similar symbols are used for segments with similar features. We have already noted that Korean Hangul is the only national orthography of this sort.

In Pitman’s ‘Stenographic Soundhand’ of 1837, the symbols for consonant sounds produced by a sudden opening of the vocal tract (*plosives*) are all designed as straight lines. Symbols for consonant sounds which involve an audible friction of air passing through the vocal tract (*fricatives*) are all curved lines.⁴⁵ Unvoiced consonants have a light stroke, and voiced consonants have a heavy stroke. Thirdly the place of articulation is indicated by the angle of the stroke. The symbol for the first sound in ‘table’, an unvoiced plosive produced with the tongue placed on the apical ridge, is a vertical straight line; and the symbol for the first sound in ‘day’, which is identical in place and manner of articulation but is voiced, is the same line but heavier in weight. Thus Pitman’s very simple symbols do not only represent individual segments, but are designed so that the graphic features (straightness, angle, weight) indicate phonetic features (manner of articulation, place of articulation, voicing).

Both Pitman’s and Bell’s systems are not only iconic in Abercrombie’s analogical sense, but also include a certain amount of iconism in the more common sense of depiction, in that the symbols visually represent aspects of the position of the vocal organ. In Bell’s ‘visible speech’, for example, symbols for unvoiced sounds feature a circle in depiction of an open glottis; and symbols for voiced sounds feature a straight line in depiction of a contracted glottis.⁴⁶

The iconic-depictive aspect of Pitman's system is of particular interest because, as we will see below, it has similarities with Schwitters's *Systemschrift*. In the design of plosive consonants, those produced with the lips (sounds typically indicated by 'p' and 'b') slope leftward. Those produced with tongue behind the teeth (sounds typically indicated by 't' and 'd') are upright. The affricate sounds 'j' and 'ch', as in 'jay' and 'change', which Pitman categorises along with plosives as 'expolents', slope rightward. Finally, the 'k' and 'g' sounds, produced with the back of the tongue raised to the palate, are horizontal.⁴⁷ The allocation of the angles of these consonant symbols can be read as not entirely arbitrary but selected to indicate the place of articulation. Mapped onto a profile facing left (see below), consonants produced at the front of the mouth are appropriately indicated with a line pointing leftward. The line rotates right to be upright for the consonants produced further back, and so on, finally rotating so that the line is horizontal for the velar 'k' and 'g' sounds.



The work of the above nineteenth-century phoneticians became the bases of systems of shorthand and systems of phonetic transcription. Yet they were also initially presented as superior to, and a potential replacement for, the Latin alphabet. Moreover, they were often proposed as potential world writing systems, and, furthermore, as pathways to an international language. Bell wrote that his 'visible speech' system would ultimately facilitate 'the construction and implementation of a universal language'.⁴⁸

2.3.5 'More Consistent and Systematic'

Tschichold and Bayer took as a given the idea that Grotesque alphabetic characters should be the basis of a universal writing system. Yet (as we will discuss in detail in the next chapter) New Typography theory also led to a complete rejection of the alphabet: if the styling of letters and the historically-developed quirks of orthography rendered writing an imperfect vehicle of speech, was speech itself not also conventional, historical, illogical? The alphabet was historically-established and only understood through learning. Further, it was used to represent the equally historically- and culturally-contingent arbitrary signs of language. Such thinking provoked an interest in developing an iconic-depictive mode of writing, based on the assumption that signs so constructed would not need training to be understood. In Chapter 2.4 we will discuss projects in universal communication along these lines in more detail. In this section we will discuss a design by Schwitters which, though still conventional in the semiotic sense by which we mean it requires training, nevertheless in a Pitman-like manner combines the iconic-analogical (featural) with depictive iconism in an attempt to limit the extent to which the system is arbitrary.

Although Porstmann's *Sprache and Schrift* includes many references to earlier attempts at reforming orthography, for the most part the New Typographers do not seem to have independently investigated such projects, nor to have investigated phonetics beyond the isolation of individual segments. From Porstmann they took two quite simple ideas: 1) the uppercase was to be completely abandoned in favour of a single lowercase orthography (or one of the cases was to be abandoned, or a unicas hybrid-script was to be devised); and 2) orthography was to be reformed so that each character would have a definite and unique phonetic role (thus instances of digraphs and redundancy would be removed). Other than Porstmann, the only other source on language reform frequently cited by the New Typographers is Jakob Grimm, who, though a proponent of reforming the use of uppercase in German orthography, in fact favoured spelling reform on etymological rather than phonetic grounds.⁴⁹ It is striking how vociferous the New Typographers often were on the subject of orthographic reform, despite rarely demonstrating having completed deep research on the subject. But then again, polemics were part of the rules of the genre for writings by modernist artists.

Phonetics, and with it the graphic notation of speech, was a lively and advanced discipline by the 1920s. Experiments in reformed alphabets, akin to those of Pitman and Bell, were also conducted by Germanophone scholars in the nineteenth century. Key contributors to phonetics in German-speaking countries were Ernst Brücke and Carl Ludwig Merkel, both of whom were influenced by English phoneticians, and thus were concerned not simply with the

analysis of spoken language but with the relationship of writing to speech.⁵⁰ Brücke devised a featural notation system published in *Über eine neue Methode der phonetischen* (1863) which, like Pitman's system, allocates graphic elements to features which are combined into aggregate segment graphs. To demonstrate the universal applicability of his system Brücke showed translations from multiple languages and scripts (including Arabic and Greek) into his characters.⁵¹ By the mid-1920s, not only was the alphabet of International Phonetic Association (IPA) well-established for phonetic transcription in Europe, but there were also well-developed competing systems created by linguists and educators such as the German *Teuthonista* system.⁵²

Schmidt's 1929 essay, 'schrift?' went into greater phonetic detail than the majority of the New Typography writings.⁵³ Schmidt, though not quite in such terms, demanded that a reformed writing system should not only be based on the isolation of individual segments, but on a categorisation of segments according to featural similarities. He noted that in the teaching of foreign languages, symbols are arranged into tables according to featural similarities (most likely referring to the IPA) yet he is critical of doing so whilst sustaining standard alphabetic characters, instead of 'radical new signs'. Such new characters designed according to phonetic classification were, as Schmidt acknowledges, attempted by Schwitters.

Schwitters's experiment with a phonetic 'alphabet' was exceptional. This is perhaps to be expected; both Tschichold and Bayer were undoubtedly leaders in their fields, but each excelled primarily in typography and graphic design. Schwitters, in contrast, was a restless polymath who under the banner of *Merz* explored the boundaries and interfaces of the arts, including poetry, typography, architecture, painting and collage. Within the context of his wide-ranging creative activity, Schwitters made numerous experiments with writing and notation systems (Plate 2.3.6). Writing on poetry in 1924, Schwitters argued that letters, before sounds and meanings, were the most fundamental and objective element of poetry, precisely because unlike their associated sounds they remained unambiguously the same in print (this is, in a sense, an exploration of letters in the opposite direction to orthographic reform: letters liberated of phonetic values).⁵⁴ In a 1925 essay, Schwitters sketched a simplified language wherein single letters (taken here as both symbols and associated sounds) were attributed with semantic values. In this 'language' (which in many respects recalls seventeenth-century language experiments by Gottfried Leibniz, Francis Lodwick and Wilkins)⁵⁵ individual vowels stood for verbs, which could be combined with individual consonants standing for grammatical person.⁵⁶ Simultaneous to the development of Systemschrift, Schwitters worked with Tschichold on the typographic rendition of his phonetic poem *Ursonate* — which used spatial distribution of typographic elements and the combination of upper and lowercase to give indication of emphasis and tempo.

In addition to his own linguistic and grammatological experiments, we also know that Schwitters was fluent in the system of shorthand known as Gabelsberger.⁵⁷ Although Gabelsberger was neither iconic-depictive nor iconic-analogical in its design, it lacked an upper- and lowercase distinction and involved the allocation of single symbols to single segments.⁵⁸

Schwitters published *Systemschrift* in the journal *i10* in 1927 along with an accompanying essay entitled 'Anregungen zur Erlangung einer Systemschrift' (subsequently republished across two issues of *Der Sturm* in 1928). Here he presented six versions of *Systemschrift*, labelled 'a' to 'f' (Plate 2.3.7). Versions 'a' to 'e' were similar to other modernist alphabets in that they were single-case, Grotesque and composed from a limited number of geometric possibilities. Unlike his peers, Schwitters based the majority of his characters on uppercase forms. One circle radius was used to produce all the curved lines. Symbols without curves were narrower than this radius. The result was a (phonetically irrelevant) heightening of the visual distinction between letters with curves and letters without. With version 'b', he added an innovation; vowels were given heavier strokes than consonants so that a graphic difference reflected a phonetic difference. Schwitters wrote that 'there is a distinct lack of logic' in how letters are visually distinguished in their traditional designs. For example, Schwitters highlighted that E and F appear visually similar, when in fact the sounds typically indicated by E have more in common with those of O.

Version 'c', like Tschichold's design, addressed issues of redundancy and overlap in phonetic function of characters. Schwitters believed that the necessity of using several characters for certain segments (such as the first segment in his surname) was one of the greatest logical shortcomings of the alphabet.⁵⁹ Version 'c' also furthered the distinction between vowels and consonants, rendering all consonants with thin strokes and straight lines, and all vowels with thick strokes and curved lines. In order to achieve this, Schwitters introduced the lowercase forms of e, b, d, h, k, n and m; also the I, requiring a curve, took the form of J. Schwitters defended his combination of upper- and lowercase on the grounds that he chose the 'most characteristic' forms; nevertheless, it is likely that his hand was forced by attempting to maintain the system for distinguishing vowels and consonants. Q is given as QU in the angular consonant style presumably intended to be cast as a single character (there is a separate round U for the vowel). After C what looks like a ligatured th presumably stands for one or both of the 'ch' sounds in German — as in 'ich' (IPA /ç/) and 'ach' (IPA /x/). There is an Sch partially ligatured tri-graph. There are several versions of T but it is unclear what these stand for (for example in version 'c' the t in 'Schwitters' has only a middle bar but in 'Waldhausenstr[asse]' has two horizontal bars even though in both versions of t stand for the same sound (IPA /t/).

Versions 'd' and 'e' continue along the same path as 'c', with minor refinements.

With version 'f' Schwitters makes a complete break with the standard alphabet and develops a fully featural system. As we shall see, an analysis of the consonants in *Systemschrift* 'f' demonstrates that, like the systems of Bell and Pitman, the design is not only iconic-analogical, but also includes iconic-depictive characteristics. The tables below are recreated from Schwitters's diagrams in *i10*.⁶⁰ The table on the left shows Schwitters's Grotesque alphabetic characters, arranged according to phonetic features, and the table on the right shows the equivalent characters in Schwitters's new system. His classification of consonants is broadly in line with the phonetics of his day but includes some unusual placements. The top two horizontal bands, labelled *Knacklaute*, are all united by manner of articulation as plosives. The new characters for the *Knacklaute* are graphically united as always having one protruding horizontal stroke at the top or bottom of the vertical stroke. Voiced consonants and their unvoiced counterparts are designed as vertical reflections of each other. These are arranged so that voiced segments appear above their unvoiced counterparts.

| | | | | | |
|----------|-----------|-----------|------------|----------|----------|
| | G | | d | | b |
| | K | | T | | P |
| | | J | | S | W |
| h | ch | ch | sch | S | F |
| | NG | | | N | M |
| | R | | R | L | |

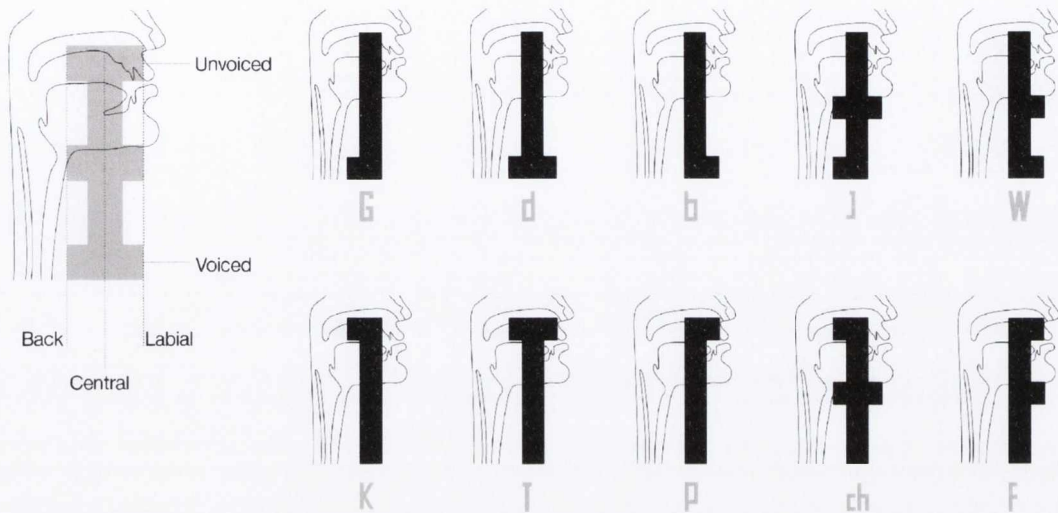
| | | | | | |
|----------|------------|----------|----------|----------|----------|
| | J | | L | | L |
| | l | | T | | r |
| | | ʃ | | t | ʔ |
| ʃ | ʃ | ʃ | ʃ | f | f |
| |]] | | | [| [|
| | l | | ʃ | ʃ | |

The next two rows, labelled *Zischlaute*, are predominantly fricatives, again with voiced segments above and unvoiced below. There are at least two correctly diagnosed voiced and unvoiced pairs, shown as *s/s* and *w/f* in the Grotesque Latin-alphabetical version. The two *s*'s refer to the voiced and unvoiced fricatives beginning the words 'zoo' and 'sound', and the *w/f* are the voiced and unvoiced fricatives beginning the words 'violin' and 'fedora'. *J* and *ch* are somewhat ambiguous. Schwitters describes the *j* as standing for the first sound in German 'jedoch', and the 'ch' below as from 'mich', which would be an incorrect pairing. However if

they stood for the post-alveolar affricates beginning ‘Jungle’ and ‘Tschichold’, which are not otherwise accounted for, the pairing would be correct.⁶¹ Elsewhere Schwitters correctly notes that the sch would be paired with the first sound in French ‘jamais’. The other ch stands for the fricative in German ‘ach’, and the h is incorrectly included in the same category as the other fricatives. The new characters for the *Zischlaute* are graphically united as always having two consecutive horizontal strokes (although h breaks this rule), and again, voiced and unvoiced pairs (whether correctly diagnosed or not) are vertical reflections of one another.

The next row shows *nasals* — consonants produced with the passage of air moving through the nasal cavity. The new symbols for nasals feature horizontal strokes at the top and bottom of the vertical stroke. The final row of new symbols are of what Schwitters calls *Schwinglaute* (all *liquids*) and all feature a central horizontal line, but are less graphically coherent than the other categories.

As regards iconic-depiction, Schwitters’s new characters are a mirror image of those of Pitman described above (see figure below). In Schwitters’s tables the symbols are horizontally arranged according to their place of articulation. All consonants produced with the lips have horizontal lines extending rightward; all central consonants have horizontal bars extending rightward and leftward, indicating centrality; and all consonants produced at the back of the mouth have lines extending leftward. The voiced and unvoiced pairs being vertical reflections of one another, it could be further argued (although Schwitters himself did not make this point) adds an extra degree of iconic-depiction in indicating manner of articulation (the idea of vertically reflecting voiced and unvoiced pairs was previously used to a lesser extent by Henry Sweet, and was later also used systematically in the Shavian alphabet).⁶² All unvoiced consonants, produced only with the mouth and therefore at the higher part of the vocal organ, are top heavy. The voiced counterparts, which use the glottis, the lower part of the vocal organ, are vertically reflected so as to be bottom heavy. With these rules in mind, as well as the arbitrary rules determining the amount and position of horizontal lines, a matrix can be placed on a diagram of the vocal organ to explain most (though there are exceptions) of the consonant characters in Systemschrift ‘f’. Schwitters at times deviates from these principles: there are some exceptions with a logic and some without, and the ‘rules’ require flexible interpretation. Yet, more or less, this extremely simple system generates all consonants.



Schwitters noted that it was impossible to altogether avoid arbitrariness in the design of a writing system.⁶³ Nevertheless, the choice to combine an iconic-analogical approach with aspects of iconic-depiction was an attempt to reduce to a minimum the arbitrary nature of supplying symbols for sounds, and therefore also reduce the amount of training required in interpretation of the symbols. Not only does Schwitters ‘allot related shapes to related segments’, but with knowledge of the physical world — the human vocal organ — one can attempt to decode the symbols.

The projects and proposals of Porstmann, Bayer and Tschichold were described as stages towards the establishment of an international language. This was also the case for *Systemschrift*. Version ‘f’ was a hypothetical projection of what a future, more rational writing system might look like. Schwitters found it inexplicable that those who no longer ride in ‘horse-drawn carriages use type that comes from the Middle Ages and antiquity’.⁶⁴ Such a rational inscription-form of a language, would in turn influence language itself, encouraging its evolution towards a more rational structure, and unite the people of the world under a common tongue.

Tschichold’s essay ‘noch eine neue schrift’ featured a survey of other modernist alphabets including Schwitters’s *Systemschrift*. However it made no mention of version ‘f’. Instead, in reference to versions ‘a’ to ‘e’, as Christopher Burke notes, ‘he criticised Kurt Schwitters’s “Systemschrift” indirectly for taking capital letters as the basis for a single-case alphabet’.⁶⁵ Ute Bruning’s landmark essay on *Systemschrift* provided a detailed analysis of *Systemschrift-f*, however, for the most part when Schwitters’s design is discussed in

typographic discourse, the authors follow Tschichold, ignoring the final featural version, commenting only on the earlier versions which distinguish vowels from consonants.⁶⁶ Such writings also (justly) negatively compare versions ‘a’ to ‘e’ to the designs of Tschichold and/or Bayer as regards formal design. However, this criticism often involves a conflation (made also by the New Typographers themselves) of the issue of the design of letters and the design of a system of representing speech sounds. Systemschrift alone displayed a deep engagement with phonetic science. Regardless of the appearance of Schwitters’s design, as an attempt to systematically allocate symbols to speech sounds, Systemschrift was, in his own words, ‘more consistent and systematic’ than the alphabets of his peers.

Bayer stated that ‘in designing a new type face we cannot set about inventing entirely new forms [...] we must stay close to the basic design’.⁶⁷ Tschichold too argued that ‘to redesign our letters completely — as in shorthand and lettering for the blind — would be quite impractical and unacceptable’.⁶⁸ This argument that it would be unpragmatic and uneconomical to replace a long-established system of writing with something new is in contradiction with Tschichold’s view, already noted, that Arabic script and Chinese writing should be replaced with the Grotesque alphabet. Schwitters’s fluency in Gabelsberger — a system visually removed from the alphabet — perhaps explains his lesser timidity in proposing a radical new system.

In a 1928 essay on advertising, Schwitters maintained that ‘a future ideal would be for visual signs to be designed to look as distinct as tones sound’, unlike ‘our historically evolved script’.⁶⁹ Nevertheless, for the time being ‘if we want to be legible, we can offer nothing different than contemporary variants of [alphabetic] script’. Despite the fact that Schwitters occasionally used exclusively lowercase letters in his typographic works, he argued that unless orthography were rigorously redesigned it remained ‘false to write all German letters in lowercase [...] for the time being, using all lowercase makes reading difficult and is an unimportant formality’.⁷⁰ Or is indeed formalism: a graphic choice connotative of, though not born from, a scientific re-evaluation of orthography.

Conclusion

The Grotesque’s lack of serifs and lack of established history, appealed to the modernist typographers because of its elemental appearance, and because it was not loaded with the particular connotations that they sought to avoid. The design of letters through elemental geometry was an attempt to further what was admired in the Grotesques. The circle and line were revered in almost religious terms as liberating forces, away from unreason towards a rational utopian future. Yet we need only look at the variety of letterforms that resulted from this

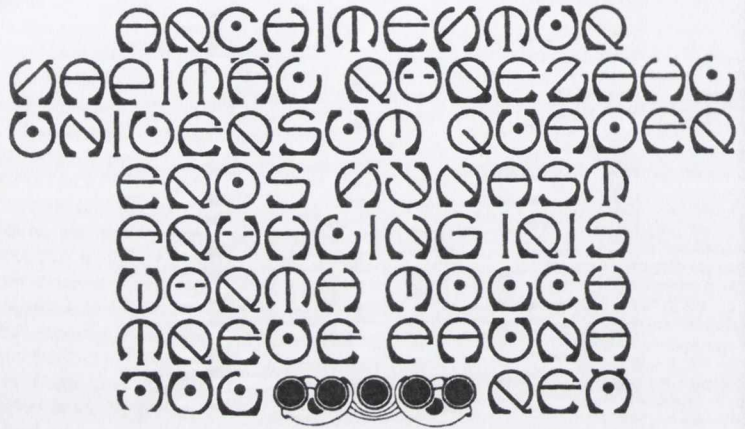
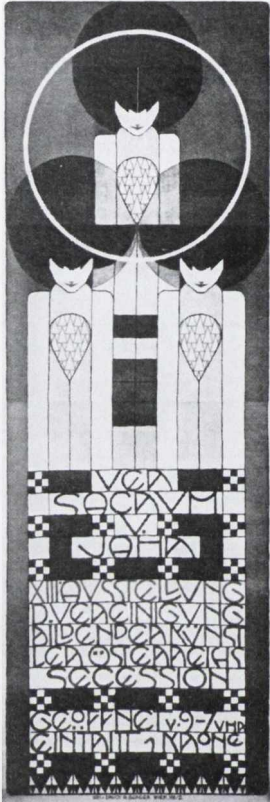
approach to see that such geometric shapes had no magical powers.

Even if it were possible to arrive at pure alphabetic symbols — with neither style nor connotation — this would still not produce a flight from culture into the domain of transcultural reason. Symbols are after all, by definition, signs that function by means of convention and agreement amongst a cultural group. This renders the alphabet corrupt to the modernist mindset. It therefore must be fixed. But how?

Firstly, a 'logical' relationship needs to be established between graphic symbols and phonemes — an economic alphabet with neither duplication nor waste. Once this had happened however — once writing/printing was put in its 'logical' place as subordinate to spoken language — there would remain the problem that language is a means of defining and distinguishing cultural groups, which would bring us back into the detested domain of cultural peculiarity. The application of Functionalist thought to the design of letters and thence language, reveals the oppressive current of its universalism: the goal of replacing the plethora of design-historical styles with an authentic non-style for the technological age, is transformed in application to language into a desire to erase, as irrational regionalism, the languages and writing systems of the world. A pure phonetic alphabet, it was hoped — as a universally-adopted writing system — would ultimately facilitate the end of the existence of the (regrettably plentiful in Bayer's view) languages of the world, leading towards a single universal a-cultural language. In 1951 Bayer wrote 'it is my own contention that we find ourselves today suffering from acute poisoning from too many words, which cruelly invade our mind every second of the day. Too many words become like a screen between us and the visible world'. In the next chapter we will discuss attempts to devise universal graphic and spoken languages.

- 1 Le Corbusier and Amédée Ozenfant, 'Purism', in *Art in Theory, 1900–2000: an anthology of changing ideas*, 2nd edn, ed. by Charles Harrison and Paul Wood (Oxford: Blackwell, 2003), pp. 237–240.
- 2 Naum Gabo and Anton Pevsner, 'The Realist Manifesto', in *Art in Theory*, ed. by Harrison and Wood, pp. 297–299.
- 3 J.J.P. Oud, 'Art and Machine', trans. by R. R. Symonds, in *De Stijl: extracts from the magazine*, ed. by Hans Ludwig C. Jaffé (London: Thames & Hudson, 1970), pp. 96–98, p. 97.
- 4 Cited in Jencks, p.33.
- 5 *Gestaltung*, frequently translated as 'design', can also be translated as 'construction'.
- 6 Ludwig Mies van der Rohe, 'Building', trans. Steven Lindberg and Margareta Ingrid Christian, in *G*, ed. by Mertins and Jennings, insert 2, p. 1.
- 7 Otl Aicher, *typographie* (Lüdenscheid: Ernst & Sohn, 1992), pp. 166–167.
- 8 Gert Mattenklott, untitled essay, trans. by Roger W. Benner, in *Karl Blossfeldt: the alphabet of plants* (Munich: Schirmer Art Books, 1997), pp. 5–23, p. 5.
- 9 Karl Blossfeldt, *Artforms in Nature*, 2nd series (London: A Swemmer, 1932), p. v.
- 10 Olaf Breidback, 'Brief Instructions to Viewing Haeckel's Pictures', in Ernst Haeckel, *Artforms in Nature* (New York, NY: Prestel-Verlag, 1988), pp. 9–18, pp. 15–16.
- 11 Tschichold, *New Typography*, p. 65.
- 12 Karl Nierendorf, preface to Blossfeldt, *Artforms in Nature* (London: A Swemmer, 1929), pp. iii–viii.
- 13 Tschichold, *New Typography*, p. 74.
- 14 Bayer, 'towards a new alphabet: the "universal type"', in *Herbert Bayer: painter, designer, architect* (London: Studio Vista, 1967), p. 26.
- 15 Bayer, 'Towards a Universal Type', in *Looking Closer 3: classic writings on graphic design*, ed. by Michael Bierut and others (New York, NY: Allworth Press, 1999), pp. 60–62, p. 61.
- 16 Tschichold, *New Typography*, p. 12.
- 17 Louis Hjelmslev, *Prolegomena to a Theory of Language*, trans. by Francis J. Whitford (Madison, WI: University of Wisconsin Press, 1961), p. 114; Hjelmslev, *Language: an introduction*, trans. by Whitford (Madison, WI: University of Wisconsin Press, 1970), p. 136.
- 18 Bayer, 'Towards a Universal Type', p. 61.
- 19 Albers, 'Zur Ökonomie der Schriftform', p. 23.
- 20 Teige, 'Konstruktivní Typografie', *Red 2/8* (1929), pp. 256–259, p. 257. See also: Polana Bregantová, 'Typography', in *Karel Teige*, ed. by Dluhosch and Švácha, pp. 73–91.
- 21 Mike Mills, 'Herbert Bayer's Universal Type in its Historical Contexts', in *The ABC's of [Triangle, Circle, Square]*, ed. Lupton and Miller (London: Thames and Hudson, 1993), pp. 38–45, p. 41.
- 22 K. Schwitters, 'Anregungen zur Erlangung einer Systemschrift', in *Internationale Revue i10 1927–1929* (Nendeln: Kraus Reprint 1979), pp. 312–316, p. 312. Also printed in two parts in: *Der Sturm* 19/1 (April, 1928), p.196; 19/2–3 (May–June, 1928), pp. 203–206.
- 23 Adolf Loos, *Spoken into the Void: collected essays 1897–1900*, trans. by Jane O. Newman (Cambridge, Mass.: The MIT Press, 1982), p. 2–3.
- 24 Moholy-Nagy, 'Bauhaus and Typography', trans. by Walfgang Tabs and Basil Gilbert, in *Moholy-Nagy*, ed. by Richard Kostelanetz (London: Allen Lane, 1974), pp. 76–77.
- 25 Bayer, 'Towards a Universal Type', p. 62.
- 26 Franz Roh, 'warum 4 alphabete ...', *foto-auge / œil et photo / photo-eye*, ed. by Tschichold and Roh (Stuttgart: Akademischer Verlag Dr. Fritz Wedekind, 1929), insert. Translation from Burke, *Active Literature*, p. 153.
- 27 Bayer, 'typography', in *Bauhaus, 1919–1928*, ed. by Bayer, W. Gropius, and Ise Gropius (London: Secker and Warburg, 1975), p. 147.
- 28 Tschichold, *New Typography*, p. 79.
- 29 Schmidt, p. 30.
- 30 Moholy-Nagy, 'Bauhaus and Typography', pp. 76–77.
- 31 Bayer, 'towards a new alphabet', p. 26.
- 32 Tschichold, *New Typography*, p. 80.
- 33 Tschichold, *New Typography*, p. 75.
- 34 K. Schwitters, 'Modern Advertising (1928)' *Design Issues*, 9/2 (1993), pp. 69–71, p. 71.
- 35 Tschichold, 'noch eine neue schrift', reproduced in Burke, *Active Literature*, pp. 157–159.

- 36 Bayer, 'on typography' in *Herbert Bayer*, ed. A.A. Cohen, pp. 350–352.
- 37 Bayer, 'basic alfabet', in *Herbert Bayer: painter, designer, architect*, pp. 78–80.
- 38 Abercrombie, *Studies in Phonetics and Linguistics* (London: Oxford University Press, 1965), p. 88.
- 39 Harris, *Origin of Writing*, p. 41.
- 40 Abercrombie, 'Extending the Roman Alphabet: some orthographic experiments of the past four centuries', in *Towards a History of Phonetics* ed. by R.E. Asher and Eugénie J.A. Henderson (Edinburgh: Edinburgh University Press, 1981), pp. 207–224, pp. 209–210; Sampson, *Writing Systems*, p. 194.
- 41 Abercrombie, *Studies in Phonetics and Linguistics*, p. 94.
- 42 Isaac Pitman, *Complete Phonographic Instructor*, revised edition (New York, NY: Isaac Pitman & Sons, 1894), p. ix.
- 43 Abercrombie, *Elements of General Phonetics*, p. 116.
- 44 One could argue that such systems are not 'iconic' at all, as they simply involve *arbitrary* assignment of symbol to sound at the featural rather than segmental level.
- 45 Pitman, p. 4.
- 46 Alexander Melville Bell, *Visible Speech: the science of universal alphabets* (London: Simpkin Marshall, 1867), p. 46.
- 47 Pitman's fricatives — or 'continuants' in Pitman's terminology — are designed according to similar, though not quite identical, principles.
- 48 Bell, p. 21.
- 49 Sally Johnson, *Spelling Trouble? language, ideology and the reform of German orthography* (Clevedon: Multilingual Matters, 2005), p. 19.
- 50 K. Kohler, 'Three Trends in Phonetics: the development of the discipline in Germany in the nineteenth century', in *Towards a History of Phonetics* ed. by Asher and Henderson, pp. 161–178, pp. 162–3.
- 51 Ernst Brücke, *Über eine neue Methode der phonetischen* (K.K. Hof- und Staatsdruckeri, 1863), pp. 57–65; Kohler, pp. 167.
- 52 *The Handbook of the International Phonetic Association* (Cambridge: Cambridge University Press, 1999), pp. 194–197; 'Lautschrift des Teuthonista', *Teuthonista* 1/1 (1924/5), p. 5.
- 53 Schmidt, p. 30.
- 54 K. Schwitters, 'Consequential Poetry', trans. by Lindberg and Christian, in *G*, ed. by Mertins and Jennings, pp. 157–158.
- 55 cf. Umberto Eco, *The Search for the Perfect Language* (Oxford: Blackwell, 1995).
- 56 K. Schwitters, 'Sprache', in *Kurt Schwitters, das literarische Werk*, V, ed. by Friedhelm Lach (Cologne: DuMont, 1981), pp. 231–233.
- 57 Ernst Schwitters, 'Kurt Merz Schwitters: ein "Familienbetrieb"', in *Typographie kann unter Umständen Kunst sein: Kurt Schwitters, Typographie und Werbegestaltung*, ed. by Deitrich Helms and others (Wiesbaden: Landesmuseum Wiesbaden, 1990), pp. 9–10.
- 58 Heinrich Rosenburg, *Lehr- und Lesebuch der kaufmännischen Stenographie (System Gabelsberger)* (Reichenburg: Verlag Paul Sollors Nachfolger, 1900), p. 2.
- 59 K. Schwitters, 'Systemschrift', p. 313.
- 60 Other illustrations included with Schwitters's essay in *i10* fill out the tables, in an attempt to demonstrate that the consonants of all languages can be accommodated by his system. There are several phonetic anomalies in Schwitters's system that are not detailed here.
- 61 Voiced post-alveolar affricates only occur in German in loan words, e.g. 'Dschungel'.
- 62 cf. M.K.C. MacMahon, 'Henry Sweet's System of Shorthand', in *Towards a History of Phonetics*, ed. Asher and Henderson, pp. 265–281. See f/v and s/z, top of page 270.
- 63 K. Schwitters, 'Systemschrift', p. 316.
- 64 K. Schwitters, 'Systemschrift', p. 312.
- 65 Burke, *Active Literature*, p. 154.
- 66 Cf. Blackwell, *Twentieth Century Type*, p. 79; Gerstner, *Compendium for Literates*, p. 18.
- 67 Bayer, 'towards a new alphabet', p. 26.
- 68 Tschichold, *New Typography*, p. 80.
- 69 K. Schwitters, 'Modern Advertising', p. 70.
- 70 For examples of Schwitters using *Kleinschreibung*, cf. Helms and others (eds.), *Typographie kann unter Umständen Kunst sein*, pp. 147, 183, 184, 188.

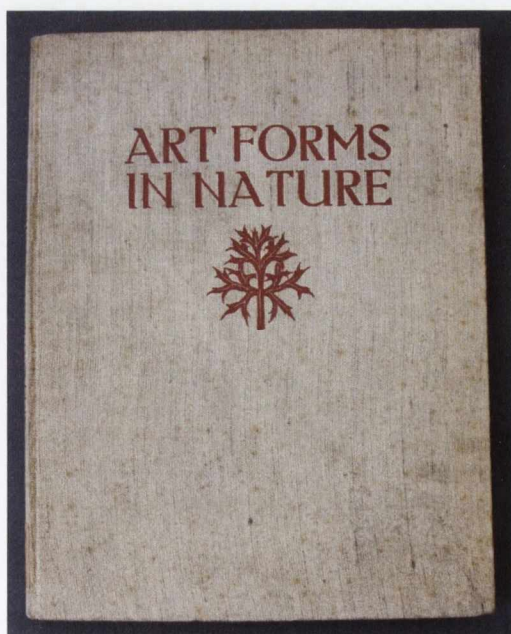
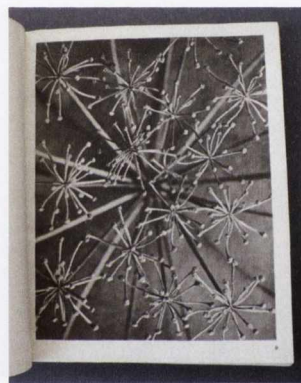
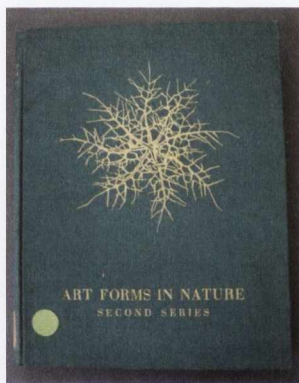
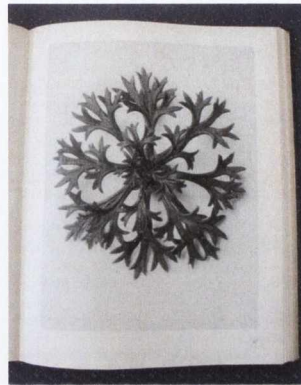
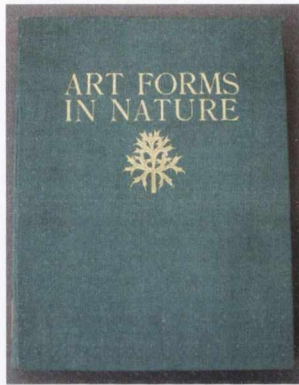


Above: Letters by Adalbf Carl Fischl (1900).
From Blackwell, *Twentieth-Century Type*, p. 35.

Left: Kolo Moser (1902).
From Gray, *History of Lettering*, p. 179.

Below: Haeckel, *Artforms in Nature*,
Plates 76 and 77.





Karl Blossfeldt,
Artforms in Nature.

Top row: first English edition
(London A. Zwemmer, 1929).

Second row: Second Series
(London: A. Zwemmer, 1932).

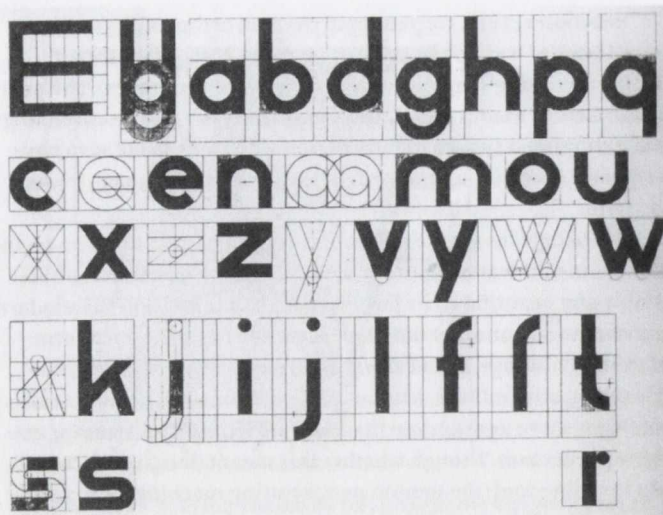
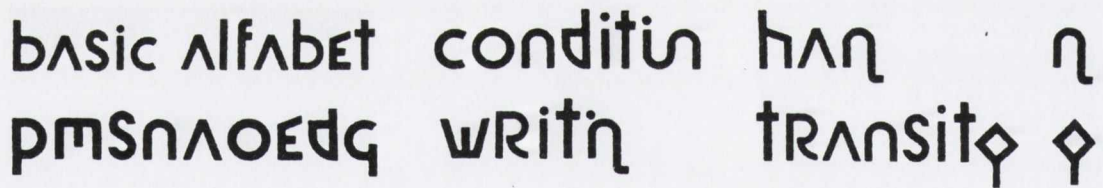
Left, 2nd edn (London: A. Zwemmer,
1935). Cover type is Behrens Antiqua.



Bayer, universal, as published in *Offset 10* (1926). Fleischmann (ed.), *Bauhaus*, p. 201.

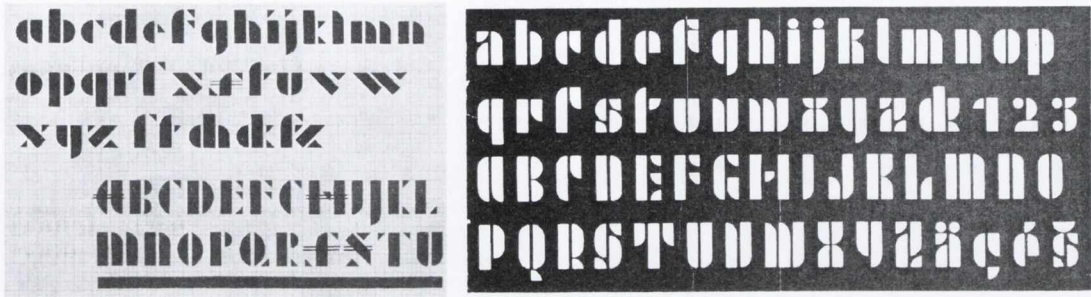


Teige's modification of universal. From *Red 2/8* (1929), p. 257.



Above: Bayer's 'basic alphabet' (c. 1958). From *Herbert Bayer: painter, designer, architect*, pp. 78–79.

Schmidt's alphabet (1925). From Kinross, *Unjustified Texts*, p. 236.



Albers's Schablonenschrift. Left: as shown in *Offset 7* (1926). Right: Albers's, *Kombinationsschrift* (1930). From Fleischmann (ed.), *Bauhaus*, pp. 259, 263.

für den neuen menschen existiert nur das gleichgewicht zwischen natur und geist. zu jedem zeitpunkt der vergangenheit waren alle variationen des alten »neu« aber es war nicht »das« neue. wir dürfen nicht vergessen, dass wir an einer wende der kultur stehen. am ende alles alten. die scheidung vollzieht sich hier absolut und

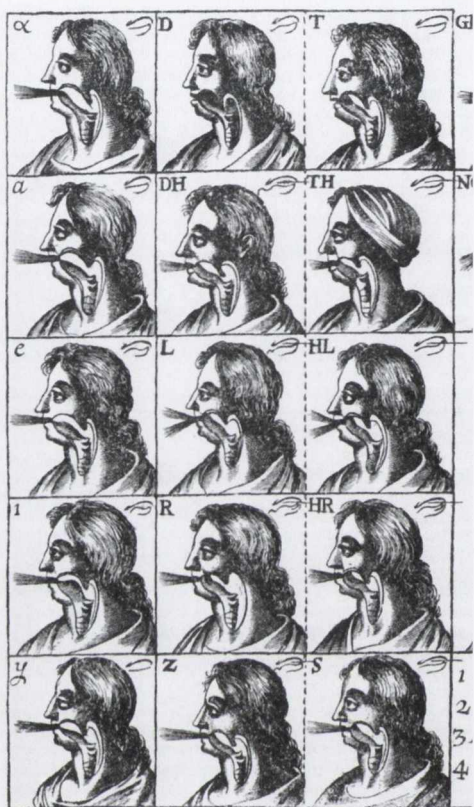
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Left: Tschichold's 'neue Schrift' (1930). Right: with reformed orthography. From Burke, *Active Literature*, p. 156.

Fraktur
 Schwabacher Gotisch
 Griechisch
 Cyrillisch
 (= Russisch und Bulgarisch)
 Türkisch (= Arabisch)
 Chinesisch (= Japanisch)
 Indisch
 Schriften der Exoten
 (Zulukaffern, Papuas usw.)

= NATIONALISMUS

Tschichold declares the world's writings 'NATIONALISMUS'. From Tschichold, *New Typography*, p. 75.



4

TABLE OF CONSONANTS.

| | Letter. | Shorthand Sign. | Name. | As in |
|--------------------|---------|-----------------|-------|-----------------|
| Explosives. | P | ∖ | pee | rope post |
| | B | ∖ | bce | robc boact |
| | T | | tee | fate tip |
| | D | | dee | fude dip |
| | CH | ∖ | chay | etch chest |
| | J | / | jay | edge jest |
| | K | — | kay | lock cane |
| Continuants. | G | — | gay | league gain |
| | F | ∖ | ef | saf: fat |
| | V | ∖ | vee | sare rat |
| | TH | (| ith | wreath thigh |
| | TH | (| theo | wreath the |
| | S |) | ess | hiss seal |
| | Z |) | zee | his zeal |
| Visals. | SH | / | ish | vision she |
| | ZH | / | zhee | vision |
| | M | — | em | seem met |
| Closures, Lipside. | N | — | en | seen net |
| | NG | ∖ | ing | long |
| | L | ∖ up | el | fall light down |
| Aspirate. | R | ∖ up | ar | for right |
| | W | ∖ up | way | wet |
| | Y | ∖ up | yay | yet |
| Aspirate. | H | ∖ up | hay | high |



- X Glottis closed, (catch.)
- I " narrow, (voice.)
- O " open, (aspirate.)
- O Super-Glottal Passage contracted, (whisper.)
- ∫ Soft Palate depressed, (nasal)
- C Back of Tongue, (contracting oral passage.)
- O Front of do. (do.)
- O Point of do. (do.)
- O Lips, (do.)

පට පාඨ ආදි පාඨ. උ පටපටක පට. පටපට
 පට පටපට. පටපට පටපට. පටපට පට
 පට පටපට. උ පටපට පටපට. උ පට පටපට
 උ පට පටපට පටපට. පට පටපටපට පට. උ
 පට පටපට. පටපට පට පට පටපට. පට
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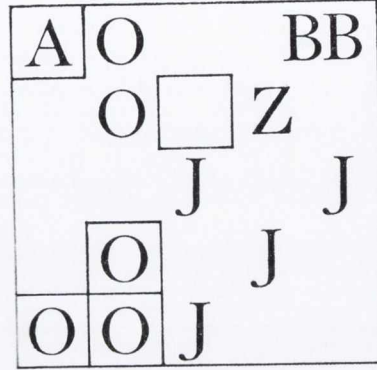
Top left: Wilkins’s iconic script (1668). From Abercrombie, *Elements of General Phonetics*, p. 115.

Top right: Pitman’s consonants (first devised 1837). From Pitman, *Complete Phonographic Instructor*, p. 4.

Left: Bell’s visible speech (1867). From Abercrombie, *Elements of General Phonetics*, p. 119.

dritter teil:

| | | |
|--|-----|-----|
| scherzo | | |
| (die themen sind charakteristisch verschieden vorzutragen) | | |
| Lanke trr gll | (M) | III |
| pe pe pe pe pe | | 8 |
| Ooka ooka ooka ooka | | |
| Lanke trr gll | | III |
| pii pii pii pii pii | | 9 |
| Züüka züüka züüka züüka | | |
| Lanke trr gll | | III |
| Rrmmp | | 4 |
| Rrnnf | | |
| Lanke trr gll | | III |
| Ziiuu lenn trll? | | 3 |
| Lümpff tümpff trll | | 10 |
| Lanke trr gll | | III |
| Rrumpff tilff too | | 4 |
| Lanke trr gll | | III |
| Ziiuu lenn trll? | | 3 |
| Lümpff tümpff trll | | 10 |
| Lanke trr gll | | III |
| Pe pe pe pe pe | | 8 |
| Ooka ooka ooka ooka | | |
| Lanke trr gll | | III |
| Pii pii pii pii pii | | 9 |
| Züüka züüka züüka züüka | | |
| Lanke trr gll | | III |
| Rrmmp | | 4 |
| Rrnnf | | |
| Lanke trr gil | | |



Above: a Schwitters poem, *Gesetztes Bildgedicht* (1922). Left: *Ursonate* with typography by Tschichold (1932). From Helms and others (eds), *Typographie kann unter Umständen Kunst sein*, pp. 37, 39.

Gabelsberger shorthand. From Gabelsberger, *Anleitung zur deutschen Redezeichenkunst oder Stenographie* (1850), plate 63.

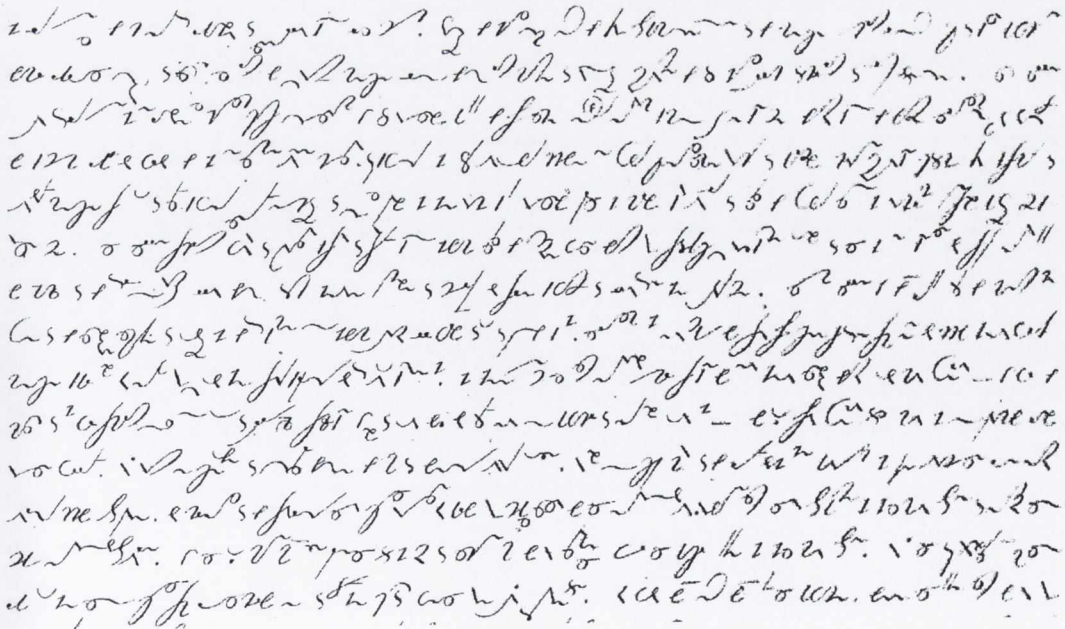


Plate 2.3.6: Schwitters's grammatological experiments

NEUE PLASTISCHE SYSTEMSCHRIFT.
 ABCDEFGHIJKLMNOPQRSTUVWXYZ
 KURT SCHWITERS
 MERZ-WERBE
 HANNOVER WALDHAUSENSTR 5.
 KURT SCHWITERS
 MERZ-WERBE
 HANNOVER WALDHAUSENSTR 5.

AAbCchdeFGhJ]klmnooPQURSShTtTTUUVW
 AAbCchdeFGhJ]klmnooPQURSShTtTTUUV
 ZYXW

KURT SCHWITERS
 MERZ-WERBE
 HANNOVER WALDHAUSENSTR 5.
 KURT SCHWITERS
 MERZ WERBE
 HANNOVER WALDHAUSENSTR 5

AAbCchdeFGhJ]klmnooPQURSTSTTtTTUUV
 NAUWAHNBHJIKLNMNOOPQRSTUVWXYZ
 99 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
 P R C 05 6 96

IJIKLMA
 [91-1919
 1910191 19119119111 5.

Kurt Schwitters, *Systemschrift*, all versions, as shown in *110* (1928). From: Helms and others (eds), *Typographie kann unter Umständen Kunst sein*, p. 99.

Plate 2.3.7: Systemschrift

2.4 Universal Communication

2.4.0 Introduction

In an essay published simultaneously in German, French, and English in 1929 entitled 'mechanism and expression', Franz Roh speculated that photography might soon replace writing, because photography 'makes use of the international language of outer environment that fundamentally neither changes after centuries nor after countries'.¹ In the previous chapter we saw that Roh supported *Kleinschreibung*; in 'mechanism and expression' he proposes something far more radical. Roh asserts that the world itself is intelligible as language and further that photography might serve as a means of inscribing such language. Despite the seeming outlandishness of this idea — photography as writing in the universal language of reality — when viewed in the context of interwar European ideas on the function of language and experiments in graphic communication, Roh's speculation is not as unfounded, or at least not as unprecedented, as it might at first seem.

In the previous chapter we saw that the Grotesque (and then the Geometric Grotesque alphabet, and then the orthographically-reformed Geometric Grotesque alphabet) was adopted in an effort towards a 'universal' means of typographic communication, as an attempt to limit the arbitrary and culturally-contingent in the graphic expression of language. We saw that Schwitters's final version of *Systemschrift*, in pursuit of such aims introduced iconic-depiction to his 'letters'. Here we will examine projects and theories of universal communication which further attempted a semiotic streamlining — attempting to minimise, or erase, the necessity of cultural training, to produce a form of communication that would be immediately and universally intelligible. Such projects were provoked by a tendency to view language with suspicion, as something which restrains understanding, as something which, in Bayer's terms, acts as a 'screen' between the mind and the world. This tendency provoked diverse responses, exposing differences in conception of language and different expectations of what could be achieved through improved languages.

C.K. Ogden's *Basic English*, Otto Neurath's *Isotype*, and Moholy-Nagy's *Typofoto*, each betrayed, to varying extents, common semiotic preoccupations. Firstly, they attempted to bring the *referent* into a closer or direct relationship with the units of expression within a system of communication. Secondly, they were motivated by dissatisfaction with the arbitrary nature of established systems of communication. Language was seen to be a veil, obscuring and distorting the view of reality. As we will see, Basic attempts to simplify the path between expression and

referent, by minimising competition in expression. Isotype goes further, attempting to refer through iconic-signification in a manner intelligible without training. Finally, Moholy-Nagy proposes that photography might allow 'reality' into graphic communication, to speak for itself.

In the 1990 essay, 'Aufbau/Bauhaus: Logical Positivism and architectural modernism', Peter Galison demonstrated that in the interwar period 'the links between art and philosophy were real, not metaphorical, as artists and philosophers were bound by shared political, scientific, and programmatic concerns'.² The aim of this chapter is to expand upon Galison's thesis by exposing the links between modernist typographer's views on the Grotesque and orthographic reform with other projects in universal communication, which, to paraphrase Galison, were not metaphorical but resulted from shared ideological goals.

2.4.1 The Linguist: biologist or engineer?

Saussure's *Course in General Linguistics* (1916) asserted the centrality of the *synchronic* study of language in face of the then dominant *diachronic* research into language's historical development. These two areas — synchronic and (historical-) diachronic — do not exhaust linguistic research. A third area which has perennially captivated Western thought has been into language's *future* development. In the period following the First World War, many, including Ogden, saw this as the most vital area of research and devoted themselves to the task of directing the development of language. A comparison of the ideas of Saussure and Ogden reveals that their differing views on the task of linguistics (respectively, whether to study language as found, or to direct language's future development) coincides with a fundamental difference in understanding of the nature of language and meaning.

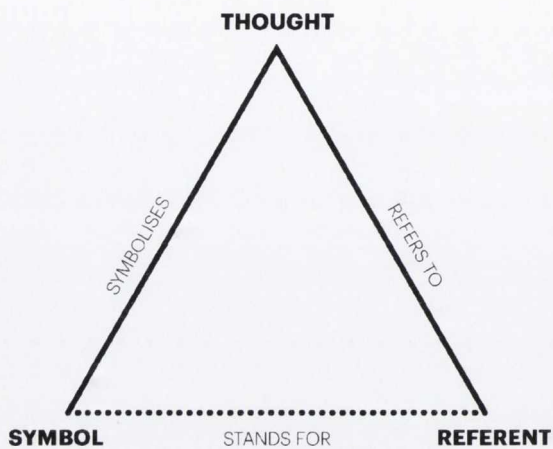
David West notes that both Ogden and Saussure were 'concerned not with specific languages at particular moments in time, but with the nature of language in general'.³ Yet, each took different views on what was relevant to the study of language-as-such in the details of particular historically-embedded languages. Saussure often described language as being akin to a biological organism.⁴ The linguist is then like a biologist: observing and describing the organism of language from a distance. In contrast, Ogden believed that 'a good language is a machine for thought'.⁵ The linguist becomes an engineer and language a tool which can be modified and improved. Saussure's biologist's approach meant that all facts of language were worthy of study. Saussure not only advanced a theory of phonetics as such, but was deeply knowledgeable about the phonetics of individual languages. Ogden's engineer approach meant that in the complexity of natural languages he saw too much irrelevant and unnecessary detail. In contrast to Saussure, Ogden seemed rarely able to muster interest in phonetics, and when he

did he sometimes erred.⁶ Ogden's most sustained writing on phonetics, despite acknowledging the 'interest and value [of phonetics] for descriptive purposes', describes phonetics as a science concerned with details 'so complex as to seem vague', and phoneticians as people 'who know too much'.⁷ For Saussure, the linguist was obliged to learn as many languages as possible, in order to determine what was universal in them through comparison.⁸ For Ogden, although he was in fact a polyglot, the learning of languages was ultimately time wasted:

The best analogy is that of a building of many floors in which there is no lift. It is not denied that the stairs are useful, even essential in order to reach the top, but the case in favour of climbing stairs (strengthening the leg muscles, promotion of digestion, view from passage windows, opportunity for reflection during pauses, cultivation of poise and deportment, character-training by trial of temper, *etc.*) is a weak one. One good lift would dispose of them all.⁹

As detailed in Chapter 1.1, Saussure asserts that language is not simply the name for the units of expression, of sounds standing for things or meanings exterior to language. Rather, both the system of expression and the system of meaning constitute language. The alignment of elements from each system — sound and thought, or signifier and signified — established by convention, form Saussure's *sign*. Thus 'meaning', for Saussure, is not expressed by language, it is part of language.

In *The Meaning of Meaning* (1923), Ogden with I.A. Richards proposed an alternative to Saussure's semiotic theory, which they named 'the science of symbolism'. Saussure's definition of the sign as coincidence of signifier and signified, excluded concern with that which falls outside the sign: 'the referent' — the external reality (or external meaning) to which language is said to refer. As with Saussure, Ogden and Richards reject the notion of language as a naming system — as 'words' standing directly for referents. Nevertheless, the referent is integral to their model of *symbolism*. In contrast to Saussure's two-part sign, Ogden and Richards's model is a three-part structure in which *symbol* (roughly analogous to Saussure's signifier) relates to *thought* (roughly analogous to Saussure's signified), and thought stands not only in relation to symbol, but also to *referent*.¹⁰ That is to say, the relationship between the symbol and the referent is always mediated by thought.



Although this model includes signifier (symbol), signified (thought) and referent, in contrast to Saussure, Ogden and Richards often use the term 'language' to refer only to the collection of symbols. In Ogden and Richards's sense, language and thought are distinct: their science of symbolism studies the influence of 'language and symbols of all kinds' on thought. Further, it 'singles out the ways in which symbols help us and hinder us in reflecting on things'. Words can be dangerous, they can 'deceive'. In Ogden and Richards's account, language is no longer the site of meaning, and further, language potentially corrupts meaning, confusing thought as it stands to referent.

In criticism of Saussure, Ogden and Richards wrote, 'his theory of signs, by neglecting entirely the things for which signs stand [referents], was from the beginning cut off from any contact with scientific methods of verification'.¹¹ This criticism demonstrates the disparity between Ogden and Richards's and Saussure's respective motivations in the study of language. The verification of which Ogden and Richards speak is not verification of the fidelity of a theory of language to language itself. Rather, it is language itself which needs verification: a language's statements must be verified as regards their fidelity to reality. Ogden and Richards mistook Saussure's lack of concern for the referent, and his (entirely valid) account of the sounds and meanings of language as being bound by convention, as an acceptance of the validity or truth of the meanings of language; as naive submission to a world view embedded in language. Saussure, they claimed, was under the sway of 'the tyranny of language', due to his 'inordinate respect' for 'what he imagined to be fixed meaning'. Such deference to convention was not only a mistaken theory of language, but a potential inhibitor of scientific progress:

too many interesting developments have been occurring in the sciences, through the rejection of everyday symbolisations [...] for any naive theory that ‘meaning’ is just ‘meaning’ to be popular at the moment.¹²

As we have seen, in Ogden and Richards’s model referents are symbolised via the mediation of thought, and in turn thought accesses the referent only once organised by language. In a footnote Ogden and Richards discuss the possibility of direct relation of symbol and referent, in cases such as gesture and images. In such *simulative languages* ‘the symbol used is more or less directly like the referent’ and thus symbolisation is of ‘immense superiority in efficiency’.¹³ Ogden and Richards state this principle is distinct from language; however as we will see below, Moholy-Nagy (and to an extent Neurath) attempt to exploit this perceived superior efficiency.

2.4.2. Basic English

Given Ogden’s view of language as machine, it is unsurprising that he attempted to improve on its design. In the 1920s and 1930s Ogden developed a reformed English which he named Basic. The Basic lexicon consisted of only 850 words (categorised as 100 ‘operations’, 600 ‘things’, and 150 ‘qualities’), a handful of affixes, and strict rules on word order (Plate 2.4.1).¹⁴ Basic was devised in order to be a language of precision and clarity, less capable of producing obscure or scientifically meaningless statements.¹⁵ Though still at base arbitrary (it is not a ‘simulative’ language), Basic is designed so that arbitrary convention is precisely and transparently organised. The frequency of arbitrariness is reduced, as each grammatical statement betrays only the handful of conventions of the reformed grammar and not the many ‘rules’ of one application found in historically-evolved languages. Further, the minimal lexicon removes synonyms and near synonyms, thereby clarifying reference.

For Ogden, the problem was not simply that natural languages were imprecise. The co-existence of the worlds’ many languages was for Odgen (much as the world’s writing systems were for Tschichold) a semiotic chaos, and a barrier to economic and scientific development. Basic could serve as an international auxiliary language — a universal means of communication for business, diplomacy and science.¹⁶ But the goal was greater still. In *Debabelization* of 1931, Ogden argued that the necessity for a universal language was an incontrovertible given. A dismantling of Babel was the only hope for a peaceful and egalitarian future. In the name of world peace Ogden cited the following ‘peace slogan’ attributed to Henry Ford, ‘make everybody speak English’.¹⁷

Ogden argued that entirely invented languages, such as Esperanto, were ill-suited to become the one international language. Such inventions merely added to Babel and failed to capitalise on existent instances of international linguistic accord. English was already adopted as a common language in large parts of the world. Therefore the ‘problem of Babel’ was best dealt with by further expansion of English. In a contradictory rhetorical strategy, Ogden claimed that English was uniquely qualified to be a culturally-unbiased international language. Esperanto and the other prominent invented languages were designed from principles derived from the study of Indo-European languages. They were thus failures at attempts at universalism and neutrality, as they could be regarded by ‘Anglo-Indians, Afro-Americans, Samurai, Mandarins and Orientals generally’ as linguistic Trojan horses, insidious vehicles of European cultural imperialism.¹⁸ In contrast, Ogden claimed (ignoring the bloody history of British colonialism) that English was spontaneously being adopted across the globe according to ‘free will, from economic or utilitarian motives’.¹⁹

H.G. Wells cast Basic in *The Shape of Things to Come* (1933) as the language of a twenty-second century Utopia. By then, as Ogden hoped, Basic was established as ‘the lingua franca of the world’, and a less ‘basic’ general English was the world language.²⁰ As Ogden predicted, English spread without force due to its ‘natural advantages’ — ‘it was simpler, subtler, more flexible and already more widely spoken’.

Basic was also cast as the language of Dystopia — the ‘Newspeak’ of George Orwell’s *Nineteen Eighty-Four*. In ‘Politics and the English Language’ of 1946, Orwell expressed Ogden-like concerns over the power of language to confuse thought and sided with the linguistic-engineer against ‘the half-conscious belief that language is a natural growth and not an instrument which we shape for our own purposes’.²¹ Newspeak has often been taken as a satire of Basic.²² There is another perhaps more plausible reading, which reconciles more easily with Orwell’s Ogden-like views on language and the fact that Orwell (at one stage at least) supported Basic.²³ In *Nineteen Eighty-Four*, Orwell describes a civilization in which egalitarian socialist politics were appropriated and redirected towards totalitarian state communism. With Newspeak he similarly shows that the project to redesign language so as to reduce its ‘tyranny’ over thought, could be re-directed to create greater tyranny. Thus Basic — a language which was to serve science — is transformed in *Nineteen Eighty-Four* into Newspeak: a language in which ‘there is no word for “Science”’, and thus, ‘the empirical method of thought, on which all the scientific achievements of the past were founded, is opposed’.²⁴

2.4.3 The Suspicion of Language

Above we contrasted two attitudes towards the study of language — that of the biologist who views language as an organism to be observed and described, and that of the engineer who sees language as a tool that can be improved in design. Ogden's view of natural language as a faulty tool was characteristic of the first phase of what Richard Rorty in 1967 labelled 'the linguistic turn'.²⁵ In Rorty's original context the linguistic turn referred to a phase in the *analytic* philosophical tradition, beginning in the 1910s, when philosophers came to 'the view that philosophical problems are problems which may be solved (or dissolved) either by reforming language, or by understanding more about the language we presently use'.²⁶ For the Logical Positivist Rudolf Carnap, traditional philosophical problems arose due to the illogical use of language. Recognition of the logical syntax of language (as opposed to the historically-evolved syntax), or the use of an ideal language constructed according to logical principles, would demonstrate the meaninglessness of many philosophical problems, and would turn philosophy into science (or erase the need for philosophy altogether).²⁷

Since Rorty's 1967 use, 'linguistic turn' has frequently been adopted to refer to a similar focus on language in the *continental* philosophical tradition in the second-half of the twentieth century. This linguistic turn begins with the spread of Saussurean semiology into the arts, humanities, and social sciences and culminates in the postmodern/post-structuralist attention to language — a phenomenon Rorty elsewhere labels 'textualism'.²⁸ Unlike the figures included in the early phases of Rorty's linguistic turn (such as the Logical Positivists), the figures in what we could call the 'textualist linguistic turn' often held, as Rorty put it, an 'antagonistic position to natural science'.²⁹ In this narrower use, the 'linguistic turn' refers to a reification of language which has, so we are told, dominated intellectual activity from the later twentieth century to today. Bruno Latour, for example, uses 'linguistic turn' in precisely this manner, as synonymous with 'semiotic turn' and involving an elevation of language into 'a law unto itself, a law governing itself and its own world', which Latour explicitly contrasts with 'modernism' and 'positivism'.³⁰ Similarly, W.T.J. Mitchell (although referencing Rorty's 1967 essay in his notes), describes the linguistic turn as the dominance of language-centred approaches to 'critical reflections on the arts, media, and cultural forms'.³¹ For Mitchell this linguistic turn is contrasted with a supposed nascent 'pictorial turn', which will free art criticism from the straight jacket of not just linguistics but language; reversing the 'attempt to master the field of visual representation with a verbal discourse'.³² It is indeed true that certain textualist scholars have reified language (or language as described by structuralist linguistics), at times in a manner that it is no longer possible to take seriously:

[O]ur era is bringing about a revolution [...] since it is replacing the latest cult, that of Man, with language, a system amenable to scientific analysis. Considering man as language and putting language in the place of man constitutes the demystifying gesture par excellence. It introduces science where ideologies and religions are (usually) established. Linguistics [...] posits language as an object of science, and teaches us the laws of its functioning.³³

However, it would be a mistake to too readily adopt the narrower use of linguistic turn (in reference to textualism only) and the suggestion that, firstly, we are coming from a phase of intellectual activity which was (implicitly unduly) dominated by a reification of language; and therefore attention to the material and the visual, or the object and the referent, is a challenge to the dominant 'paradigm'.³⁴ The danger in accepting such a view is that it would lead to a failure to acknowledge a major current of twentieth-century thought on language. The view of language as a corrupting force is common to Odgen, Carnap, Orwell, and has been an idea embedded (though not always explicitly stated) in the ideology of typography and graphic design since the New Typography. There has been an unbroken chain of thought along these lines since the 1920s: the shaping (and therefore potentially tyrannical) influence of language constantly recurs throughout the twentieth century. For example, the linguistics of Benjamin Lee Whorf asserts that language shapes our understanding of the world and therefore an English-speaker is less well-equipped than a Hopi-speaker to make sense of modern physics.³⁵ The notion that language constrains our understanding and experience of the world echoes and mutates through French post-structuralism; it is detectable in Baudrillard's description of the 'tyranny' of a society structured like language. While it is true that the likes of Baudrillard (and even Whorf), in fitting with Latour's characterisation, seem to offer no outside of 'language'; this can also be understood as just one (nihilistic perhaps) development from a more general tendency to *turn away* from natural language, in search of less-contingent, less-constricting modes of communication. And still today, the theme of rebellion against the constraints of language is repeated, as if for the first time, in recent assertions from the field of visual semiotics championing a 'new visual literacy' no longer 'subservient to language', which threatens the 'dominance of verbal literacy among [the] elite'.³⁶

The idea that language corrupts thought or conceals reality and the subsequent ambition to purify language, or to create a visual language that might be somehow be more egalitarian than existing forms of communication, quite directly relates to the project of Functionalist design, as both are attempts to arrive at a post-culture for the twentieth century which transcends the specific and is universally applicable. This idea has been handled both crudely by

some and with great technical sophistication by others, as in Carnap's *Philosophy and Logical Syntax*. Galison has described Carnap and Bauhaus architecture as attempting to establish scientific foundations for their respective projects by purging the 'decorative, mystical, or metaphysical' through 'transparent construction' from 'simples'.³⁷ We can frame this in the context of the tendency to hold language in suspicion as follows: The difference between the attempt to purify language and the attempt to purify architecture is that the former is an attempt to improve language and the latter is an attempt to purge architecture of language-like attributes. The former seeks to make meaningless statements impossible and to clarify the nature of reference; the latter seeks to cease all statements and to abolish reference entirely by purging design of the signifying encrustations of ornament.

2.4.4. Neurath's Picture of Language and Neurath's Picture Language

Neurath and Carnap, colleagues in the Vienna Circle, both collaborated with Ogden in the 1930s. Ogden published Carnap's writings in his journal *Psyche* as well as the books *The Unity of Science* (1934) and *Philosophy and Logical Syntax* (1935), through his own edited series, *Psyche Miniatures*. Ogden and Neurath collaborated closely and frequently in the 1930s: for example Neurath's *International Picture Language* (1936) was published through *Psyche Miniatures* with text written in Basic English. In turn, Neurath assisted in the design of a book promoting Basic, *Basic by Isotype* (1937), published again through *Psyche Miniatures*. Connections are also to be found between Neurath and the New Typography. Neurath was not only a philosopher: in the mid-1920s he devised a form of graphic communication for statistical information, which was later named Isotype. Tschichold was not only enthusiastic about this project, but was briefly involved with Neurath's pictorial statistics team in 1929, and from around the same time the modernist Geometric Grotesque, Futura (analysed in Chapter 3.1), became the typeface of Isotype.³⁸

Given that they were colleagues, one might expect that Neurath would sit comfortably with Ogden and Carnap, as one who demands a language free of ambiguity and historically-accumulated irrational habits. While it is certainly not the case that Neurath took a Saussurean approach to language as a thing to be observed without interference, it is also not quite the case that he viewed historically-evolved language as fundamentally flawed. Galison's account of Logical Positivism as attempting 'transparent construction' from 'simples' may account for Carnap's project; however Neurath scholars have highlighted the differences in Carnap's and Neurath's ideas on language.³⁹ Nevertheless, there are serious homologies that unite Neurath, Carnap, Ogden and currents of modernist-design thinking, and these are closely related to, if not

always identical to, those diagnosed by Galison. Despite Neurath's advocacy of ambiguity in language and rejection of Carnap's project to uncover the logical syntax of language as metaphysical foundationalism, he nevertheless was motivated, in part, by a suspicion of the supposed distorting effects of natural language.

Carnap's linguistic turn took the traditional problems of philosophy as arising from the illogical use of language. Neurath followed through further on this reasoning. For Neurath, to construct an improved language opposed the very logic of the discovery of the centrality of language in understanding, as this discovery exposed the impossibility of assessing language from an extra-linguistic standpoint. Consequently, no language could be claimed to be in greater agreement with something outside of or before language.⁴⁰ The validity of a scientific statement would be confirmed not by its agreement with 'reality', but by its agreement with other statements.

Ogden argued on pragmatic grounds for the value of 're-using old bricks' in the design of an improved language.⁴¹ Neurath asserted the value of historical-evolved language on philosophical as well as pragmatic grounds. Denying the possibility of foundationalism, Neurath described the course of the development of knowledge as being like a boat at sea: the boat is continually repaired and modified, but never returns to dry dock to be built anew.⁴² That today we use terms that were used in previous periods or cultures with different scientific understandings and different sets of associations (such as 'water', only recently given a precise chemical definition), allows, as Angela Potochnik and Audrey Yap put it, 'stability of discourse across times and places and speakers'.⁴³ The value of a term such as 'water' resides in the fact that it is general and imprecise enough to be understood across the ages. A perfectly precise referential language would lose this benefit.

Nevertheless, Neurath did advocate that changes in linguistic habits could liberate scientific discourse from unintended metaphysics. This he gave the humble label of 'universal jargon' — a jargon which would not be built from the bottom up at dry dock, but formed through the consensus of sailors already at sea.⁴⁴ Neurath also voiced encouragement for the project of 'debabelisation', commending Ogden's Basic for utilising already existent 'instruments [English] which are, or have become, international'.⁴⁵

Beyond a 'jargon', Neurath's contribution to international communication was the 'picture language' Isotype. From the outset Isotype was used to fulfil particular educational goals and was never presented as a completed visual language (although Neurath did at times express such ambitions).⁴⁶ Of the many books Ogden published on and in Basic, all primarily served to promote and explain the nature of Basic. In contrast, Isotype was used almost

exclusively to communicate information about things other than itself: Isotype's primary goal was the dissemination of economic and scientific information in an accessible form.

Quite how Isotype graphics communicate is not something that has been exhaustively explicated (Plate 2.4.2). Neurath writes that the first stage of the Isotype method is the construction of recognisable symbols, and the second is the combination of such elements to create new meanings. He demonstrates combination with an example of shoe and factory symbols combining to indicate a 'shoe factory', yet from this example one cannot extract a general rule regarding combination.⁴⁷ Robin Kinross highlights that one consistent principle in Isotype is 'greater quantities are shown by the repetition of symbols', and not by the relative scale of symbols.⁴⁸ Marie Neurath's promisingly titled *The Transformer: the principles of making isotype charts* describes the fundamental process of constructing Isotype charts as 'transformation' — translation of data into visually intelligible form — yet only provides an impressionistic account of what 'transformation' involves.⁴⁹ Christopher Burke's essay 'The Linguistic Status of Isotype', likewise, never quite gets to the bottom of what this 'status' is.⁵⁰ This is not due to any fault in Burke's writing (except perhaps in the essay's title), but is rather due to the fact that the essay is not so much an investigation of the 'linguistic status' of Isotype, but a thoroughly-researched account of Neurath's own ambivalent statements regarding the semiotics of his invention. As Burke details throughout the essay, Neurath was reluctant to fully theorise Isotype, and when he did he frequently offered contradictory accounts.

Ellen Lupton, in 'Reading Isotype', provides a useful sketch of aspects of the semiotics (as well as the rhetorical strategies) of Neurath's picture language, although it is not exhaustive.⁵¹ That Isotype has evaded such an exhaustive analysis has been asserted by some authors as evidence of Isotype's strength. Kinross believes that 'one should not make too much of this incommunicability', and points to Neurath's statements advocating variation in Isotype lest 'boring rows of numbers [turn] into boring rows of symbols'.⁵² Similarly, Michelle Henning writes that Isotype's 'flexibility and usefulness depended on this recognition of it as a practice, not a code that might be cracked'.⁵³ Yet would-be code-crackers will find encouragement in Neurath's frequent descriptions of Isotype as a system, and one in a process of refinement towards greater systematicity.

The purpose of such a 'code-cracking' semiotic investigation of Isotype is not to uncover Neurath's authorial intent or method (which is why Burke's essay is of limited use in querying the 'linguistic status' of Isotype). It is rather to ask how is it that a reader is provided with meaning by an Isotype chart, what communicative and interpretative processes stand between the work and the reading. Then the interesting question to ask is, how do the semiotic

processes involved in Isotype relate to Neurath's (and others') verbal theorisations on non-verbal communication?

Neurath acknowledged the 'far-reaching limitations' arising from the construction of a language with icons. Nevertheless, he argued 'these limitations sometimes eliminate much danger'.⁵⁴ Fundamental to Isotype was a belief in the greater intelligibility of icons. As Neurath put it (writing in Basic English), 'reading a picture language is like making observations with the eye in everyday experience [...] the man has two legs; the picture-sign two legs; but the word-sign "man" has not two legs'.⁵⁵ Iconism determines (to an extent) the *construction* of the Isotype graphic component but not always the semiotic *function* to which it is put in an Isotype composition. As Lupton demonstrates, Isotype involves a sort of semiotic layering. An initial iconically-constructed element, such as the humanoid figure (accepting for the sake of simplicity that such components are purely iconic), will be put to use for meanings not conveyed through iconism, but through a semiotic convention. Thus, a geometric reduction of a humanoid figure in front elevation, depending on context of use, will not stand simply for the semantic content 'human', but rather '100 Russian citizens', '300 adult males', etc. Such bonds, between graphic and semantic content are a result of an arbitrary convention which must be learnt (often from a textual key) to be understood. Only then can the iconic graphic component, imbued with a conventional meaning, be utilised in yet another semiotic function — as index — duplicated in rows forming bar charts to indicate relative quantities.⁵⁶

This is but a detail of the semiotics of Isotype, but it serves to demonstrate that Isotype is not exclusively iconic, nor is its iconism straightforward. Instead there is an interplay between arbitrary and iconic signification, and often this interplay is not systematic across Isotype, but established according to the communicative demands of individual compositions. Isotype is pragmatic in deployment of semiotic strategies, focusing on conveying information rather than pursuing an ideal of iconic semiosis. Nevertheless, there is a definite priority given to iconism in much of Neurath's writings, as a semiotic mode capable of transcending cultural barriers. 'Words make division,' he famously wrote, 'pictures make connection'.⁵⁷

As a child Neurath developed a fascination with Egyptian wall paintings following visits to the Kunsthistorischen Museum in Vienna.⁵⁸ He initially took the 'hieroglyphic symbols' that surrounded the paintings to be akin to the larger imagery, assuming that with effort they would be intelligible without needing to understand the spoken language of ancient Egypt. Later Neurath learnt that hieroglyphs were no such thing. Similar to Isotype graphic components, hieroglyphs are iconic in construction, yet are often attributed with non-iconic functions. Hieroglyphs involve phonography (symbols standing for sounds of spoken language), often

constructed according to the 'acrophonic' principle, meaning the symbol stands not directly for the thing pictured but for the phonetic value of the first sound in the name of thing pictured in a particular language.⁵⁹ Again, iconism is a stage in a multi-tiered semiosis.

Prior to the decipherment of the Rosetta Stone, Europeans took Egyptian hieroglyphics to be a picture-writing representing meanings without linguistic mediation, that could potentially form the basis of a pure philosophical language.⁶⁰ With Egyptian hieroglyphs, Chinese writing has also been put forward as a writing that deals directly with the world without mediation through language. Sampson notes that although Chinese writing involves some iconic construction, it nevertheless supplies symbols not to 'reality' or non-linguistic meanings, but to the semantic units of language — morphemes — which are then arranged in accordance with the syntax of spoken language, not in fidelity with 'external reality'.⁶¹

There is a desire, detectable in some of Neurath's writings and explicit in much modernist typographic discourse, to allow the referent to enter the graphic expression of language and a belief that this will help produce a more exact and universal language. Yet representational graphic communication is limited in its ability, when compared to graphic systems that are based on (or related to, or a graphic realisation of, etc.) the abstract and arbitrary construction of verbal language. To borrow a quip from Walter J. Ong, 'we have all heard it said that one picture is worth a thousand words. Yet, if this statement is true, why does it have to be a saying?'⁶²

2.4.5 The Language of Vision and the Language of Reality

Ogden's attention to the referent coincided with the view that the study of language should be directed towards improving the fidelity of language to reality. Saussure's lack of concern with the referent coincided with a view of linguistics as tasked only with observing and describing the language 'organism'. Saussure maintained his position of distanced observation even in the case of writing, which he viewed as a dangerous, corrupting influence on language.

As demonstrated in Chapter 2.3, The New Typographers, like Saussure, viewed existing orthography as a faulty representation of speech. We have already noted that it is in some ways surprising that the idea that the sole function of writing is the faithful representation of speech took hold among modernist typographers, given their other theorisations on visual communication through typography. A central aspect of New Typography was the rejection of classical composition in favour of asymmetric layouts which were, through visual arrangement, to communicate in a manner that directly stimulated innate faculties of optical reception.⁶³ In contrast to symmetrical composition, seen as an historically-established formalism which

inhibited communication, asymmetric composition would be trans-historical trans-cultural, universal. It is less surprising then that New Typographers also experimented with and theorised other conceptions of a 'visual language' which were to transcend the borders of national languages. Here, Moholy-Nagy, Bauhaus master and advocate of *Kleinschreibung*, was central. No matter what orthographic restrictions and graphic interventions were applied to typography, it remained reliant on alphabetical orthography, and therefore reliant on a historically-evolved and culturally-contingent mode of communication.

As a member of the Bauhaus faculty, Moholy-Nagy was exposed to the philosophy of Carnap and Neurath, both of whom lectured at the Bauhaus in the late 1920s, albeit after Moholy-Nagy's departure.⁶⁴ Following his exile to the United States, Moholy-Nagy became director of the New Bauhaus in Chicago in 1937, where he sustained the links between the Bauhaus and Logical Positivism, inviting Carnap as visiting lecturer.⁶⁵ Hans-Joachim Dahms notes that although Moholy-Nagy may have been influenced by Carnap, unlike Carnap, Moholy-Nagy believed that there were innate hardwired faculties of perception, and that exploitation, manipulation and expansion of such faculties should form the basis for a new scientific approach to design.⁶⁶

Man as construct is the synthesis of all his functional apparatuses, i.e. man will be most perfect in his own time if the functional apparatuses of which he is composed — his cells as well as the most sophisticated organs — are conscious and trained to the limit of their capacity.⁶⁷

The New Typographers' pursuit of objective graphic communication encouraged experimentation with non-alphabetic 'writing'. In graphic communication, photography was thought to supply the desired objectivity, being seemingly impervious to subjective adulteration.⁶⁸ Illustration, as Tschichold put it, always betrayed the 'hand' of the artist.⁶⁹ In contrast, photography was a mechanical process of image-making — the subjective preferences of the photographer would not prevent the camera from recording all that fell before its lens, and thus meaning would evade subjective adulteration. For Moholy-Nagy photography was 'a precise form of representation so objective as to permit of no individual interpretation'.⁷⁰ Tschichold wrote:

photographs, like letters, are a means of communication. The faster and simpler the means of communication the better. The development of our type from pictures to writing was intended to increase, as much as possible, understanding between people. Today there is much we can 'say' more simply with photographs than with words.⁷¹

Lissitzky claimed that photography was ‘completely comprehensible to all people,’ and that the future of writing may be in photo-hieroglyphics: ‘the hieroglyph-book is international [...] the letter-book is national [...] the coming book will be a-national’.⁷² As the alphabet was believed to be the pinnacle of writing’s development, a step backwards to ‘pictographic’ writing was rejected by Lissitzky: but a *photographic* picture writing could be a technological advancement towards universal script. Porstmann’s influence on the views of the New Typographers regarding orthography is well documented. It is interesting to note that he also expressed similar ideas regarding a photography-based picture language, describing photography as a picture-writing [*eine Bilderschrift*], a modern equivalent to the picture-writings of indigenous Mexicans and Americans.⁷³ In the design of logos and the text-and-photography compositions of magazines, Porstmann too saw the seeds of a future picture-writing.

For Moholy-Nagy the ‘real’ was unambiguously optically intelligible.⁷⁴ Faith in the universal intelligibility of images was combined by Moholy-Nagy with faith in the objectivity of photography. In the eighth Bauhaus Book, *Malerei Fotografie Film* (1927), Moholy-Nagy argued that traditional typography was but a ‘mediating makeshift link between the content of the communication and the person receiving it’. Moholy-Nagy illustrated this point with a model showing ‘typography’ standing between ‘communication’ and ‘person’. Translated into Ogden and Richards’s terms, Moholy-Nagy does not take thought to mediate symbol and referent, as Ogden and Richards do. Rather symbolisation (typography) mediates thought and referent. Moholy-Nagy’s aim is effectively to remove symbolic mediation, by making the symbol a direct imprint of the real.

To achieve this, Moholy-Nagy proposes *Typofoto* as the ‘visually most exact means of rendering communication’ (Plate 2.4.3). *Typofoto*, a combination of asymmetric typography and photography, can be understood in two senses. In the first sense, *Typofoto* is simply an early theorisation of the fluid combination of text and image typical of today’s editorial design.⁷⁵ In the second, more radical sense, the arrangement of type and image was but a stage in the development of *Typofoto* towards a new, non-alphabetical form of writing. Photography was to function not only as ‘objective’ accompanying images, but in place of text in the form of ‘fototext’. *Typofoto* was a potential revolution in writing — no longer a ‘mediating makeshift’ between communication and reader, the use of photography as text would bring the reader into direct contact with the referent. In this context the full meaning of Moholy-Nagy’s oft-cited

statement, that the illiterate of the future would be ignorant of both pen and camera alike, is revealed.⁷⁶

As cited at the opening of this chapter, Roh (a friend of both Carnap and Neurath)⁷⁷ more baldly advocated Moholy-Nagy's idea of the unambiguous intelligibility of 'the real' in describing photography as a means of inscribing 'the international language of outer environment'. Roh's remarks on the world as language, and photography as writing in the language of reality, appeared in a book co-edited with and designed by Tschichold. The text was in German, French and English, and set entirely in *Kleineschreibung*; accordingly titled *fotografie / œil et photo / photo-eye*. Included as an insert was a short manifesto by Roh extolling the virtues of Grottesque *Kleineschreibung*. In 1930 Roh produced a book, again with Tschichold as designer, dedicated to the photography of Moholy-Nagy.⁷⁸

Roh's statements on photography as potential writing should not be taken to characterise Roh's strongly or continuously held views on photography and language. Nevertheless Roh's assertion that photography may serve to inscribe the universally intelligible 'language of outer environment' is emblematic of the themes of universal language and the universal intelligibility of images as they were explored in the interwar period. Roh and Moholy-Nagy arrive at a position much like that described by Jonathan Swift in a satire of the language engineers of his day. In the School of Language at the Grand Academy of Lagado, Gulliver encounters professors working on a project designed to bring the referent directly into communication:

since words are only the Names for *Things*, it would be more convenient for all Men to carry about them such *Things* as were necessary to express the particular Business they are to discourse on [...] Another advantage proposed by this Invention, was that it would serve as an Universal Language to be understood in all civilized Nations, whose Goods and Utensils are generally of the same kind.⁷⁹

Conclusion

The aim of this chapter has been to demonstrate that the modernist conception of the Grottesque as a style of letter universal communication and transcendence of style was part of a contemporaneous more general exploration of universal modes of communication. Although in subsequent decades, as we will see, support for the Grottesque became increasingly divorced from such utopian projects, the idea that language has the potential to corrupt and inhibit our visual experience of the world will remain influential in typographic discourse (as we will see in discussion of Herbert Spencer in Chapter 4.1). In Chapter 4.2 we will see that the idea that the Grottesque is uniquely qualified not only to transcend style, but (as Moholy-Nagy believed of

dynamic abstract compositions) to stimulate (to a greater degree than other types) innate faculties of optical perception, continues into the twenty-first century, where it increasingly influences official typographic policy.

- 1 Roh, 'Mechanism and expression', in *foto-auge*, ed. by Roh and Tschichold, pp. 14–18, p. 15.
- 2 Peter Galison, 'Aufbau/Bauhaus: Logical Positivism and architectural modernism', *Critical Inquiry* 16/4 (1990), pp. 709–752, p. 711.
- 3 David West, 'Language, Thought and Reality: a comparison of Ferdinand de Saussure's *Course in General Linguistic* with C.K. Ogden and I.A. Richards's *The Meaning of Meaning*', *Changing English* 12/2 (2005), pp. 327–336, p. 327.
- 4 Saussure, p. 21.
- 5 C. K. Ogden, 'Basic English and Grammatical Reform', in *C.K. Ogden and Linguistics*, II, ed. by W. Terrence Gordon (London: Routledge/Thoemmes Press, 1994), pp. 187–226, p. 187.
- 6 cf. Ogden, *Debabelization*. *Psyche Miniatures XXXVI* (London: Kegan Paul, 1931), p. 150. Ogden writes that in the reduced vocabulary of his Basic English 'the letter z which is said to present difficulties [of pronunciation] to foreigners if of rare occurrence', overlooking that the sound typically associated with 'z' (a voiced alveolar fricative) occurs in the majority of plural nouns in his Basic vocabulary.
- 7 Ogden, 'Sound, Sense and Intelligibility', in *Ogden and Linguistics*, I, ed. by Gordon, pp. 261–353, p. 265.
- 8 Saussure, p. 23.
- 9 Ogden, 'A New Solution of the Universal Language Problem', in *Ogden and Linguistics*, I, ed. by Gordon, pp. 75–135, pp. 114–115.
- 10 Ogden and I.A. Richards, *The Meaning of Meaning*, 8th edn (London: Kegan Paul, Trench, Trubner: 1946), pp. 9–11. Ogden and Richards's triangular model of symbolism is indebted to Charles Sanders Peirce's model of semiosis.
- 11 Ogden and Richards, *Meaning of Meaning*, pp. 4–6.
- 12 Ogden and Richards, *Meaning of Meaning*, p. 13.
- 13 Ogden and Richards, *Meaning of Meaning*, p. 12 n. 1.
- 14 Ogden, *Debabelization*, pp. 10–11.
- 15 Ogden, *Debabelization*, p. 1.
- 16 Ogden, *Debabelization*, p. 9.
- 17 Ogden, *Debabelization*, p. 13.
- 18 Ogden, *Debabelization*, p. 20.
- 19 Ogden, *Debabelization*, p. 23.
- 20 H.G. Wells, *The Shape of Things to Come* (London: Penguin Classics, 2005), pp. 430–432 (Book V, Chapter 7).
- 21 George Orwell, 'Politics and the English Language', in *Orwell Essays* (London: Penguin, 2004), pp. 348–360, p. 349.
- 22 Jean-Jacques Courtine, 'A Brave New Language: Orwell's invention of "Newspeak" in 1984', trans. by Laura Willett, *SubStance* 15/2 (1986), pp. 69–74, pp. 71–72.
- 23 Gordon, 'Undoing Babel: C. K. Ogden's Basic English', *Et cetera* 45 (1988), pp. 337–340, p. 339.
- 24 Orwell, *Nineteen Eighty-Four*, centennial edn (London: Plume/Penguin, 2003), p. 198.
- 25 Richard Rorty, 'Introduction: metaphilosophical difficulties of Linguistic Philosophy', *The Linguistic Turn: recent essays in philosophical method*, ed. by Richard Rorty (Chicago, IL: University of Chicago Press, 1967), pp. 1–39, pp. 8–9. Rorty attributes the term 'linguistic turn' to Gustav Bergmann.
- 26 Rorty, 'Introduction', p. 3.
- 27 Rorty, 'Introduction', pp. 5–6.
- 28 Rorty, 'Nineteenth-century Idealism and Twentieth-century Textualism', in Rorty, *The Consequences of Pragmatism: essays 1972–1980* (Minneapolis, MN: University of Minnesota Press, 1982), pp. 139–159. Rorty uses 'textualism' to denote 'the so-called "Yale School" of literary criticism centring around Harold Bloom, Geoffrey Hartmann, J. Hillis Miller, and Paul de Man, "post-structuralist" French thinkers like Jacques Derrida and Michel Foucault, historians like Hayden White, and social scientists like Paul Rabinow', p. 139.
- 29 Rorty, 'Nineteenth-century Idealism and Twentieth-century Textualism', p. 139.
- 30 Bruno Latour, *We Have Never Been Modern*, trans. by Catherine Porter (Cambridge, MA: Harvard University Press, 1993), pp. 62–65.
- 31 W.T.J. Mitchell, *Picture Theory* (Chicago, IL: Chicago University Press), p. 11.

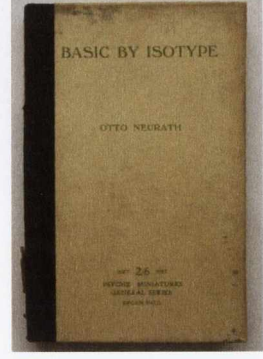
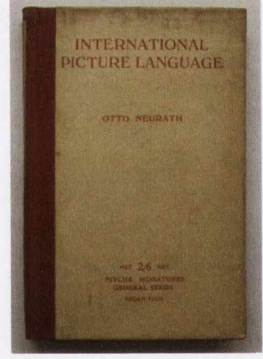
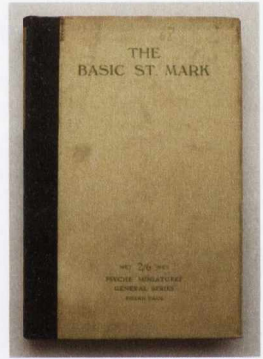
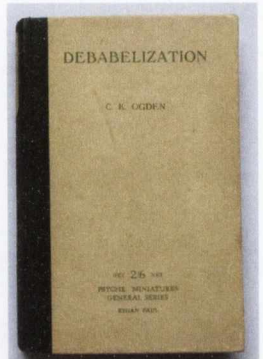
- 32 Mitchell, p. 9.
- 33 Julia Kristeva, *Language, the Unknown: an initiation into linguistics*, 2nd edn, trans. by Anne M. Menke (London: Harvester Wheatsheaf, 1989), p. 4.
- 34 Cf. Mitchell, p. 13.
- 35 Benjamin Lee Whorf, *Language, Thought and Reality* (Cambridge, MA: MIT Press, 1956), p. 55.
- 36 Gunther Kress and Theo van Leeuwen, *Reading Images: the grammar of visual design*, 2nd edn (New York, NY: Routledge, 2006), pp. 17, 23.
- 37 Galison, p. 710.
- 38 Burke, *Active Literature*, pp. 119–120; Kinross, ‘The Graphic Formation of Isotype, 1925–1940’, in *Isotype: design and contexts 1925–1971*, ed. by Burke, Eric Kindel and Sue Walker (London: Hyphen, 2014), pp. 107–177, pp. 134–135.
- 39 Nancy Cartwright and others, *Otto Neurath: philosophy between science and politics* (Cambridge: Cambridge University Press, 1996); Audrey Potochnik and Angela Yap, ‘Revisiting Galison’s “Aufbau/Bauhaus” in Light of Neurath’s Philosophical Projects’, *Studies in History and Philosophy of Science* 37/3 (2006), pp. 469–488; Thomas E. Uebel, ‘What’s Right about Carnap, Neurath and the Left Vienna Circle Thesis: a refutation’, *Studies in History and Philosophy of Science* 41 (2010), pp. 214–221; Michelle Henning, ‘Living Life in Pictures: Isotype as modernist cultural practice’, *New Formations* 70 (2010), pp. 41–59.
- 40 Cartwright and others, pp. 142, 153; Otto Neurath, ‘Sociology in the Framework of Physicalism (1931)’, in *Otto Neurath: philosophical papers, 1913–1946*, ed. by Robert S. Cohen and Marie Neurath (Dordrecht: D. Reidel, 1983), pp. 58–90, p. 61.
- 41 Ogden, ‘A New Solution’, p. 76.
- 42 Cartwright and others, p. 190; O. Neurath, ‘Protocol Statements (1932)’, in *Philosophical Papers*, ed. by R.S. Cohen and M. Neurath, pp. 91–99, p. 92.
- 43 Potochnik and Yap, p. 477.
- 44 O. Neurath: ‘Universal Jargon and Terminology (1941)’, in *Philosophical Papers*, ed. by R.S. Cohen and M. Neurath, pp. 213–229.
- 45 O. Neurath, *International Picture Language*, Psyche Miniatures LXXXIII (London: Kegan Paul, 1936), p. 13.
- 46 O. Neurath, *Empiricism and Sociology* (Dordrecht: D. Reidel, 1973), p. 217.
- 47 O. Neurath, *Empiricism and Sociology*, p. 225.
- 48 Kinross, ‘Lessons of Isotype’, in M. Neurath and Kinross, *The Transformer: the principles of making Isotype charts* (London, Hyphen: 2009), pp. 97–116, p. 103; Neurath, *Empiricism and Sociology*, p. 215.
- 49 M. Neurath and Kinross, *The Transformer*, passim.
- 50 Burke, ‘The Linguistic Status of Isotype’, in *Image and Imaging in Philosophy, Science and the Arts*, II, ed. by Richard Heinrich and others (Frankfurt: Ontos Verlag, 2011), pp. 31–57.
- 51 Lupton, ‘Reading Isotype’, *Design Issues* 3/2 (1986), pp. 47–58.
- 52 Kinross, ‘Lessons of Isotype’, p. 104.
- 53 Henning, ‘Living Life in Pictures’, p. 59.
- 54 O. Neurath, ‘Universal Jargon’, p. 218.
- 55 O. Neurath, *International Picture Language*, p. 20.
- 56 Lupton, ‘Reading Isotype’, pp. 51–52.
- 57 O. Neurath, *International Picture Language*, p. 18.
- 58 O. Neurath, *From Hieroglyphics to Iso-type: a visual autobiography* (London: Hyphen, 2010), p. 70.
- 59 Sampson, *Writing Systems*, p. 78.
- 60 Eco, *Search for Perfect Language*, p. 15.
- 61 Sampson, *Writing Systems*, pp. 148–149. Sampson’s description of Chinese writing is not universally accepted. Cf. David B. Lurie, ‘Language, Writing, and Disciplinarity in the Critique of the “Ideographic Myth”’: some proleptical remarks’, *Language & Communication* 26 (2006), pp. 250–269; Sampson, ‘Chinese Script and the Diversity of Writing Systems’, *Linguistics* 32 (1994), pp. 117–32.
- 62 Ong, p. 7.
- 63 Moholy-Nagy, ‘Contemporary Typography’.

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- 64 Hans-Joachim Dahms, 'Neue Sachlichkeit in the Architecture and Philosophy of the 1920s', in *Carnap Brought Home*, ed. by Steve Awodey and Carsten Klein (Chicago, IL: Open Court, 2004), pp. 357–375, pp. 367–368; Galison, 'Aufbau/Bauhaus', pp. 709, 710.
- 65 Galison, p. 747.
- 66 Dahms, p. 368.
- 67 Moholy-Nagy, 'Production — Reproduction', in Passuth, *Moholy-Nagy*, pp. 289–290.
- 68 Moholy-Nagy, 'Photography is Creation with Light', in Passuth, *Moholy-Nagy*, pp. 302–305, p. 304.
- 69 Tschichold, *New Typography*, pp. 181–182.
- 70 Moholy-Nagy, *Painting, Photography, Film*, trans. by Janet Seligman (London: Lund Humphries, 1967), p. 40.
- 71 Tschichold, *New Typography*, p. 158.
- 72 El Lissitzky, 'Our Book', trans. by Helene Aldewinckle, in *El Lissitzky: life, letters, texts*, ed. by Sophie Lissitzky-Küppers (London: Thames and Hudson, 1968), pp. 360–363.
- 73 Walter Porstmann, *Sprache und Schrift* (Berlin: Verlag des Vereins Deutscher Ingenieure, 1920), p. 58.
- 74 Moholy-Nagy, *Painting, Photography, Film* p. 38–39.
- 75 This is the sense in which Typofoto is most commonly used. Cf. Kinross, introduction to, Tschichold, *New Typography*, pp. xv–xliv, p. xxxiii; Ken Garland, 'Typophoto', *Typographica*, n.s. 3 (1961), pp. 2–20; Helmut Gernsheim, 'Photography: the return to realism', *Motif 2* (1959), pp. 35–48, pp. 39–41.
- 76 Moholy-Nagy expressed this idea in several writings. cf. Passuth, *Moholy-Nagy*, pp. 301, 303, 328.
- 77 Dahms, pp. 362–364; Burke, Kindel and Walker (eds), *Isotype: design and contexts*, pp. 67, 77.
- 78 Burke, *Active Literature*, p. 110.
- 79 Jonathan Swift, *Gulliver's Travels* (London: Penguin Classics, 2001), p. 172 (Part 3, Chapter 5).

BASIC ENGLISH

| OPERATIONS | | THINGS | | QUALITIES | | EXAMPLES OF WORD ORDER | |
|------------|---------|-------------|----------------|-------------|--------------|------------------------|---------|
| 100 | 250 | 400 General | 200 Picturable | 100 General | 50 Opposites | 100 | 250 |
| DOWN | DOWN | DOWN | DOWN | DOWN | DOWN | DOWN | DOWN |
| FROM | FROM | FROM | FROM | FROM | FROM | FROM | FROM |
| UP | UP | UP | UP | UP | UP | UP | UP |
| THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH |
| OVER | OVER | OVER | OVER | OVER | OVER | OVER | OVER |
| UNDER | UNDER | UNDER | UNDER | UNDER | UNDER | UNDER | UNDER |
| WITH | WITH | WITH | WITH | WITH | WITH | WITH | WITH |
| AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST |
| BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE |
| BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN |
| BY | BY | BY | BY | BY | BY | BY | BY |
| DOWN | DOWN | DOWN | DOWN | DOWN | DOWN | DOWN | DOWN |
| FROM | FROM | FROM | FROM | FROM | FROM | FROM | FROM |
| UP | UP | UP | UP | UP | UP | UP | UP |
| THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH |
| OVER | OVER | OVER | OVER | OVER | OVER | OVER | OVER |
| UNDER | UNDER | UNDER | UNDER | UNDER | UNDER | UNDER | UNDER |
| WITH | WITH | WITH | WITH | WITH | WITH | WITH | WITH |
| AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST |
| BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE |
| BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN |
| BY | BY | BY | BY | BY | BY | BY | BY |
| DOWN | DOWN | DOWN | DOWN | DOWN | DOWN | DOWN | DOWN |
| FROM | FROM | FROM | FROM | FROM | FROM | FROM | FROM |
| UP | UP | UP | UP | UP | UP | UP | UP |
| THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH | THROUGH |
| OVER | OVER | OVER | OVER | OVER | OVER | OVER | OVER |
| UNDER | UNDER | UNDER | UNDER | UNDER | UNDER | UNDER | UNDER |
| WITH | WITH | WITH | WITH | WITH | WITH | WITH | WITH |
| AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST | AGAINST |
| BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE | BEFORE |
| BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN | BETWEEN |
| BY | BY | BY | BY | BY | BY | BY | BY |

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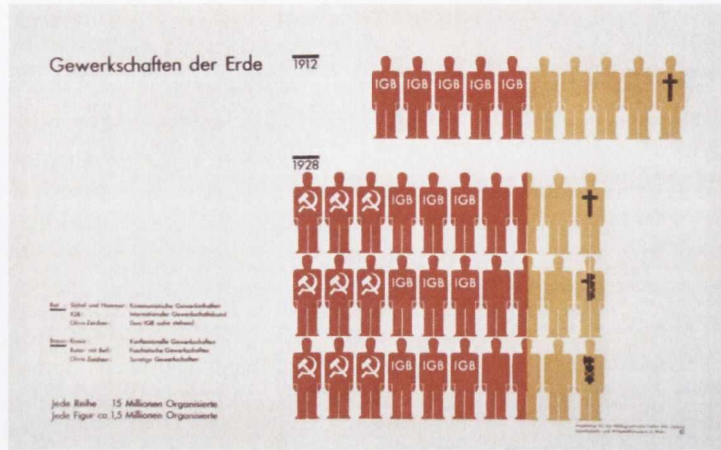
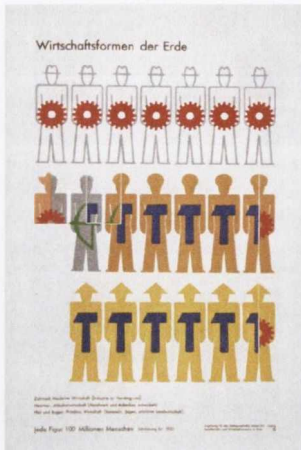


Above: The Basic English vocabulary: a fold-out sheet included with Psyche Miniatures.

Right various Psyche Miniatures written in Basic English:

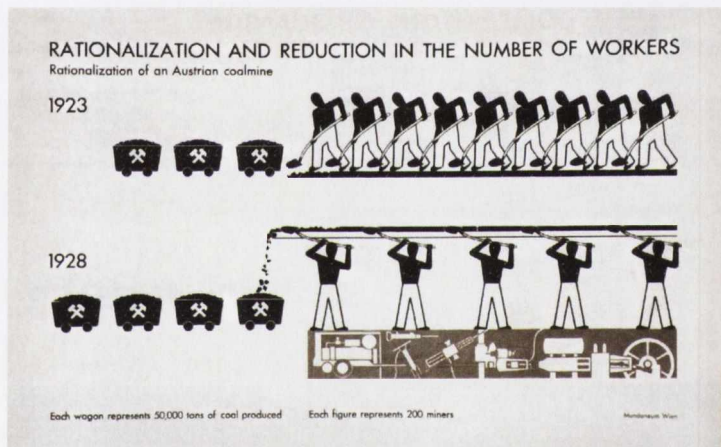
Ogden, *Debabelisation* (1931), Psyche Miniatures no. 36.
Basic St. Mark (1935), Psyche Miniatures no. 68. (To propagate his language, Ogden translated The Gospels into Basic).
 Neurath, *International Picture Language* (1936), Psyche Miniatures no. 83.
 Neurath, *Basic by Isotype* (1936), Psyche Miniatures no. 86.

Plate 2.4.1: Basic and Psyche Miniatures



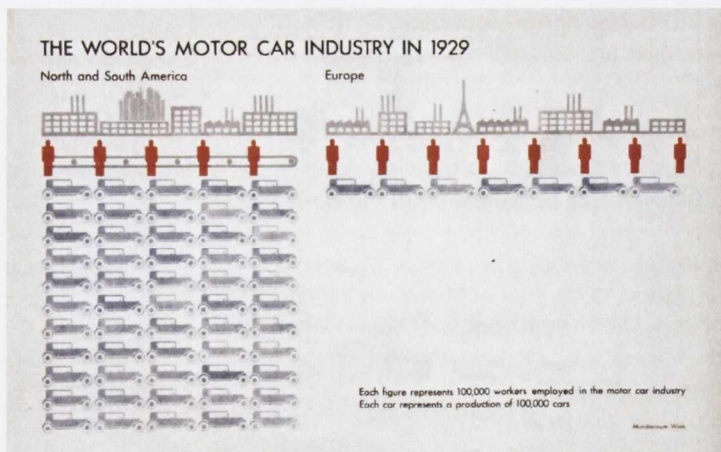
Isotype charts. From Burke, Kindel, Walker (eds), *Isotype: design and contexts*, pp. 168, 180, 214.

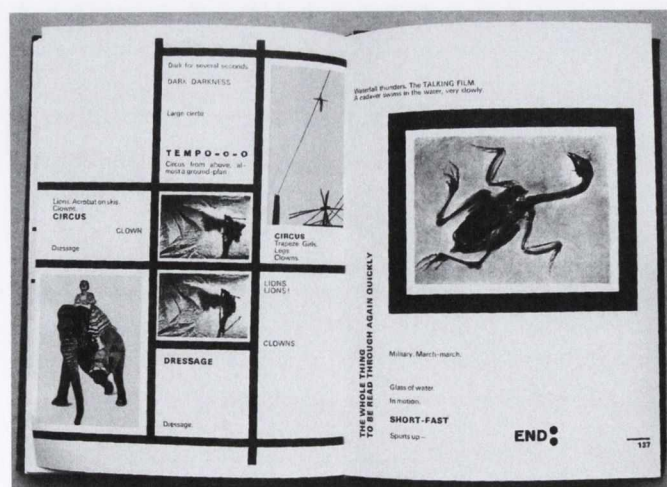
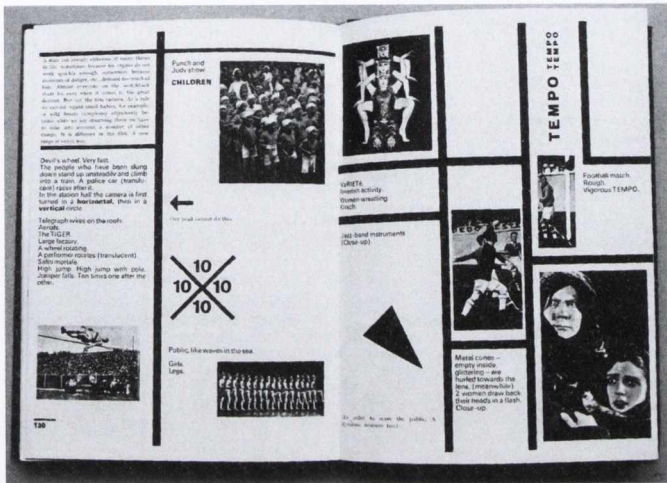
Below: Isotype logotype. From Neurath, *International Picture Language*, p. 12.



ISOTYPE

International
System
Of
TYpographic
Picture
Education





Moholy-Nagy's Typophoto film script. Originally from *Malerie, Fotografie, Film, Bauhausbücher 8* (1927). English translation from Moholy-Nagy, *Painting, Photography, Film*, pp. 130, 131, 134-137.

Plate 2.4.2: Typophoto

3.1 The Fate of the Geometric Grotesque

3.1.0 Introduction

The experimental alphabets analysed in Chapter 2.3 were just that — experiments — and they were not produced as actual typefaces (until recent digital revivals). Already in 1928, Bayer lamented the fact that advertising designers were receiving commissions to work in the ‘Bauhaus style’.¹ For the New Typographers, although Grotesques were believed to be the best available types, it was also believed that new Grotesques were needed. As the New Typography was becoming an increasingly popular style, the German typefounding industry responded to the demand for ‘modern’ and ‘elemental’ Grotesques. The typefaces that emerged were the Geometric Grotesques. Unlike the Bauhaus alphabets their ‘geometry’ was less rigid, and in many ways they adhered more closely to historical models. The task of designing such typefaces did not fall to the young New Typographers, but was led by two figures of a slightly older generation, both versed in Traditional, Jugend and Buchkunst typography — Paul Renner and Rudolf Koch.

The first two significant types in this style — Renner’s Futura and Koch’s Kabel — were quickly followed by an array of similar types by the end of the 1920s. At the same time an alternative model of Grotesque emerged in Britain — Gill Sans. The consolidation of these new Grotesque sub-styles set the agenda for future developments in Grotesque design as a process of cross-pollination; of oscillation between, and hybridisation of, established Grotesque paradigms. As the Grotesque itself became fragmented into an array of sub-styles, the idea of the Grotesque as the one style to replace all was undermined.

The spread and transformation of the New Typography in the 1930s influenced the emergence of a ‘New Pluralist’ attitude in British typography. As demonstrated in Robert Harling’s journal, *Typography*, such typographers consciously rejected the pursuit of a singular style and celebrated the inevitable stylistic pluralism of the twentieth century.

3.1.1 Futura and Kabel

Paul Renner was born in 1878, making him over twenty years older than both Tschichold and Bayer and only ten years younger than Behrens. A member of the Werkbund from 1910, he first came to prominence as a book designer through his work for the Georg Müller Verlag. Initially working in a traditional style, Renner partook in the Morris-led ‘revival’ of book typography.² Yet, like the British New Traditionalists, he was not opposed to technology.

During the mid-1920s Renner became increasingly engaged with developments in the New Typography. In 1926 Renner became the principal of two combined schools aimed at linking typographic education and industry in Munich: Meisterschule für Deutschlands Buchdrucker, and Schule der Stadt München and Des Deutschen Buchdrucker-Vereins.³ He enlisted Tschichold into the teaching staff, and the schools became a centre of New Typography. In contrast to the Bauhaus — where typographic instruction from Albers, Bayer and Schmidt, involved little practical training in typographic printing — the Munich schools engaged with the printing industry and were, according to Christopher Burke, instrumental in developing the New Typography into active practice in the printing trade.⁴

If Tschichold in the 1920s at times betrays a conflict between his identity as uncompromising modernist and knowledgeable student of typographic history, for Renner there was no contradiction. He viewed his mid-1920s modernist typography as a continuous development from his earlier work. Renner's writings on typography lack the millenarian tone of the younger New Typographers, frequently evoking notions of spiritual and aesthetic value and even German identity. When opposing the use of Fraktur, Renner justified his preference for Roman on the grounds that Fraktur's elaborate forms were a disservice to the 'wonderful German language'.⁵ Similarly, as Burke has shown, Renner was not taken in by the 'orthographic reform' sloganeering of Bayer. Although he did believe that the German practice of noun-capitalisation was redundant, he also believed that the sort of reductionist reforms advocated at the Bauhaus would impoverish the graphic resources of writing.⁶ Nevertheless he was no traditionalist: like the younger modernists, Renner argued that the Grotesque letter — purged of remnants of calligraphy — was best suited to the modern age.⁷

Renner began the design that ultimately became known as Futura in 1924, at around the same time that the *Bauhäusler* were also experimenting with geometric letters.⁸ Renner was set the task of designing such a Grotesque — what he described as 'Die Schrift unserer Zeit' — for the Bauer foundry, who were then trying to capitalise on the popularity of Grotesques. One of Bauer's most successful faces at this time was the Industrial Grotesque, Venus, admired by both Moholy-Nagy and Schmidt, and prevalent in New Typography.

The process of Futura's design charts a development from geometric radicalism to more conventional letterforms (Plate 3.1.1). Like the Bauhaus designers, Renner initially dismissed the calligraphic heritage of letterforms and developed his letters with a technical pen, a ruler and a compass. But Renner also looked to the past to find a model for his type. The starting point for Futura was Roman inscriptional capitals, which Renner described as the alphabet's *urformen* of perfect geometric simplicity. Renner saw his task as being to impose the already present

geometric perfection of Roman capitals onto the wayward lowercase.⁹ Renner's earliest drawings of Futura show that the letters were designed from basic geometric elements — circle and line — with an unmodulated stroke. There were several novel lowercase letterforms: a forked e, an r consisting of a vertical stroke and a dot, and flat-topped versions of a, m and n. As Futura developed in trial castings, it went through a series of modifications, becoming more conventional and less geometric in each iteration. Curved strokes were lightened at joins and the once-perfect circle-arcs were subtly modulated.¹⁰

By the time of the first release of Futura in late 1927, the initial elementarist geometry had been further tempered. Unusual versions of a, g, m and n were given as supplementary alternates to the more standard letterforms. All these atypical characters were removed from the second issuing of Futura in 1928. The typeface was first released in three weights — light, regular and bold.¹¹ The lighter weights appear closer to 'elemental' geometry, whereas the heavier weights deviate significantly. It is important to recall that this was already convention in both American Gothics and Industrial Grotesques. Already at the turn of the century, as Grotesques were issued in families of weights, the Modern axis was built in to the design programme of Grotesque families. The development of Futura was a process of rediscovery of already-established Grotesque convention. Though beginning as a Bauhaus-like exercise in geometric reduction, the end result achieved a greater formal sophistication; at once attendant to convention and also a genuinely new contribution to Grotesque form.

Renner, though in many ways distinct from the Bauhaus radicals, produced his design with a utopian enthusiasm for a new machine aesthetic similar to that which had motivated the younger New Typographers. Yet there were no ideological requirements to producing and selling types of this style. As Renner showcased Futura throughout its development and the Bauhaus designers propagated the virtue of the Grotesque, the surging popularity of the New Typography quickly encouraged a proliferation of types in the Geometric Grotesque style. One typeface that was certainly not a product of a designer engaged with modernist design theory and practice was Koch's Kabel, released by Klingspor in 1927 (Plate 3.1.3).

Koch was born in 1876, making him a close contemporary of Renner. Initially working in Jugendstil lithography, in 1906 he became a designer for the Klingspor foundry where he developed into a typesetter pre-occupied with new interpretations of historical (particularly Blackletter) styles.¹² In 1908 Koch became the calligraphy professor for Offenbach art school while retaining his position in Klingspor.¹³ He founded the Offenbacher Werkstatt in 1920, a small lettering and craft workshop, where he produced hand-written and hand-bound books. He also worked in carved inscriptions, tapestries, coins, and church bells.¹⁴ As this description

makes clear, Koch was far from a modernist in the Bauhaus sense.

Koch claimed that he had always been interested in the task of designing a type with a ruler and compass, yet Walter Tracy speculates that Koch may have been somewhat disingenuous in this statement.¹⁵ It is probable that Koch was requested to produce a typeface in this emerging style by the Klingspor foundry, since not only was Futura's release imminent, but several foundries were producing typefaces in this style at this time. Other than Kabel, there is little in Koch's vast body of work to suggest interest in the New Typography nor the design of geometric modernist letters. All of Koch's typefaces except Kabel were derived from calligraphy or handcraft techniques (Plate 3.1.4).¹⁶ He did design several other faces that were literally 'sans serif', but not true Grotesques. The first of these was Neuland which predated Kabel by four years — a display face designed by directly cutting punches, reminiscent of the lettering found on German Expressionist woodcuts. Koch's other serifless types were released after Kabel. There was Offenbach (c. 1928) — a calligraphically-stressed serifless uppercase design with some similarities in letter skeleton to Kabel — and two typefaces, Wallau and Jessen (both c. 1930), with stressed serifless Roman uppercases, but combined, respectively, with Rotunda and Textura lowercase (therefore more historical 'hybrids' than Grotesques). In contrast to Tschichold who blacklisted the use of Blackletter except for in cases of satire, Koch's primary creative endeavour was the production of new Blackletter types. Of the forty-five types credited to Koch, twenty-five were Blackletter.¹⁷ In the same year as Kabel's release, Koch wrote in the specimen for his Wilhelm Klingspor-Schrift (a Fraktur named after one of the brothers who owned the Klingspor foundry) that German Blackletter was a symbol of the unique spiritual character of the German people.¹⁸ Karl Klingspor, director of the foundry, was also known for having nationalist views.¹⁹ Despite Koch's preoccupations with calligraphy and Blackletter, Kabel is far from a compromised design, as it is executed by a master typedesigner turning his attention to an unfamiliar style and imbuing it with his own personality.

Although Kabel was released to fulfil a demand in the market for modernist typefaces, the first Kabel specimen avoids the techno-millennarianism found in New Typography writings and the promotional documents for Futura. It does, nevertheless, express some similar views to those of Renner, describing Roman capitals as geometrically-pure *urformen*.²⁰ Koch had praised Roman capitals on the same grounds in *The Book of Signs* (1926), in which he wrote, 'the Latin uncials, from which our present-day writing is derived, are signs of the utmost dignity and simplicity'.²¹ *The Book of Signs* features 493 graphic symbols gathered from astrological, early Christian, and pagan sources, calligraphed and captioned by Koch. It opens with the 'dot', captioned as follows, 'the dot is the origin from which all signs start, and is their innermost

essence'.²² Next comes the vertical stroke, which 'represents the oneness of God, or the Godhead in general'. Then, the horizontal line, which represents 'the Earth in which life flows evenly and everything moves on the same plane'. Though Koch derives all the symbols that follow from these 'elemental' forms, this is no Functionalist elementarism. For Koch each basic form — and each stroke of the pen — is imbued with a mystical spiritual value.

Koch's Kabel specimen describes the letters of Kabel as elemental geometric constructions, yet gives equal deference to conventional variations in form. Koch first lists the capital letters constructed from verticals and horizontals (I, L, T, E, F and H). Rather than subjecting them to a Bayer-like modular uniformity, Koch takes care to highlight the historically-established differences in width between these characters.²³ He provides diagrams of the Kabel letters derived from a basic square, showing seven 'systems' used as the basis of all uppercase letters. The inclusion of these diagrams, again, gives an inflection to Koch's elementary forms that differentiates them from Bayer's ideas — they clearly evoke similar diagrams made by Dürer.²⁴ The elemental forms are presented as faithful to tradition, rather than radical and new. As Tracy has pointed out, the systematic appearance of the diagrams is misleading as the widths of the letters are not determined by a strict geometric formula.²⁵ Further, close comparison of the diagrams and the actual letters of Koch's type reveals that the end product did not adhere to the already loose formulae of his diagrams.

Kabel is in no way the sort of anonymous new Grotesque that Tschichold demanded in *Die neue Typographie*. In fact, in *Die neue Typographie* Tschichold described Kabel as 'inferior' to Industrial Grotesques, as lacking anonymity and having too much 'art' about it.²⁶ Koch was a profoundly idiosyncratic letterer and his unique style shines through the would-be rationalising constraints of the compass and ruler. A trace of calligraphy is present: the terminals of the strokes are not verticals and horizontals but rather diagonals as though drawn with a flat-nibbed pen. Evidence of Koch's personal style is provided by the distinctive g, which Koch first used in Koch-Antiqua in 1922.²⁷ There are in fact many similarities between Kabel and Koch-Antiqua, including the relative narrowness of the B and the tilted e.

In every one of his works, including those which are not wholly a success, we feel the personality of a man who has something to say, who, to quote Albrecht Dürer, is 'inwardly full of images'. We feel that this strong personality vibrates through all his works, so that they are impregnated with the most tender and vital experiences of the soul.²⁸

Such words from *The Fleuron* celebrate an aspect of Koch's work that Tschichold rejects — all Koch's works are imbued with his 'personality'.

3.1.2 A Geometric Explosion

With Kabel and Futura, a third type, Erbar by Jakob Erbar for Ludwig & Mayer, is often also presented as part of a trio of the original Geometric Grotesques (Plate 3.1.5). In fact, Erbar is frequently said to be the original type in this style, not only in Erbar's promotional texts, but also, for example in *The Encyclopedia of Typefaces*, in which it is claimed that the design originates from 1922.²⁹ While it is true that Erbar was released in 1926 (prior to both Futura and Kabel), it is also true that Renner had publicised Futura as a work-in-progress since 1925. Renner was resentful of both Erbar and Kabel, as well as other types in the same style, and felt all had copied his design.³⁰ In a 1936 article, cited by Denis Megaw in *Typography* 7 (1938), it is claimed that Erbar had been commissioned by Ludwig and Mayer in 1913 to design 'a precise, mechanically-produced reading type in the form of a modern sans serif', and in the same article a sketch of Erbar, upper- and lowercase, is presented, conveniently and prominently dated 1922 in the bottom right-hand corner.³¹ Two further factors have been called upon to assert the priority of Erbar over Futura. The first is a claim that Erbar's earlier 'Grotesk', Feder of 1910, is evidence of his interest in the form. However Feder is less an investigation of the Grotesque than it is an example of the (laudable) formal experimentalism typical of 1910s German typedesign. Like the more experimental German Antiquas of this time (such as Ingebourg, with which it shares a top heavy R and a long-chinned G), Feder is modular and the strokes have a definite Roman stress. As Tracy observes, Feder has 'no obvious connection [with] the sans-serif design that later made his name internationally known'.³² The second piece of evidence is Erbar's type Phosphor, of 1922, which was retrospectively included in the Erbar-Grotesk family. Phosphor is a bold inline display type of capitals. It does have similar forms to the later lighter weights of Erbar, and is geometrically simple. Yet a geometrically-reduced set of display capitals was no innovation, they abound in late-nineteenth century epigraphy, and in fact even the first serifless typeface, Caslon IV's Egyptian, features a circular O and a straight legged R.

Erbar Grotesk's original lighter weights feature a relatively-low x-height which gives an elegant and spacious effect, and often an Art Deco top heaviness.³³ Like Kabel it features a round-bowled two-storey a, and like Futura its t has no lower curve (although its upper terminal is diagonally cut). Unusually the ascenders are flush to the cap-height. Regardless of whether or not Erbar did in fact conceive of his type before Renner, in its design Erbar Grotesk lacks the

certainty of Renner and Koch's types. Across the various weights and releases, character designs and relations of x-height to cap vary such that Erbar lacks the distinctively personality of Futura and Kabel.

Two more typefaces in the same style were released by the Stempel foundry in 1927, Neuzeit-Grotesk and Elegant-Grotesk.³⁴ From 1928 onward, many German and international foundries issued typefaces broadly in the Geometric Sans-serif style (Plate 3.1.5). Like Futura and Kabel, none of these Geometric Grotesques were designed according to strict 'elemental geometric construction'. Geometric Grotesques are visually distinct from older Grotesques, not because they adhere to precise geometric programmes, but rather because they appear more circular (without strictly being so) than earlier Industrial Grotesques, notably in letters C, Q and O, and in the bowls of lowercase letters b, d and p. Generally they followed Futura in the basic design of g, and used either the Futura single storey a, or the two-storey a with rounded-bowl of Kabel. The first American design in this style was Tempo released by Ludlow of 1929, which remained a popular type in newspaper headings for much of the twentieth century.

3.1.3 The Underground-Gill Line

In addition to imitators, the Geometric Grotesques also very quickly encouraged stylistic competitors — most significantly Eric Gill's Sans, which introduced another classification of Grotesque — the Humanist.

Gill's Sans was in certain regards derived from the the alphabet designed for the London Underground by Edward Johnston in 1916 (Plate 3.1.6). Johnston was the leading figure in the Arts and Crafts revival of interest in calligraphy during the first two decades of the twentieth century, and was hugely influential, not only in calligraphy but also in bookdesign in Britain and Germany. Rather than derive his design from existing Grotesque models, Johnston began with Roman capitals as the basis for his uppercase.

British commentators throughout the twentieth century have tended to treat Johnston's alphabet with reverence. Megaw in 1938 wrote that Johnston's design provided 'a solution that is traditional in its evolution and contemporary in expression'.³⁵ Handover in 1961 likewise argued that Johnston's Underground embodied 'the bold simplicity of the authentic lettering of the finest periods' and yet 'belong[s] unmistakably to the twentieth century'.³⁶ Harry Carter, writing in 1931, saw in Underground a perfect synthesis of the classical and the contemporary, claiming that the Underground letters convey 'the starkly mechanical associations of an electric railway, yet their essentially Roman forms link them with classical culture'.³⁷ Particularly gushing praise for Underground occurs in a 1947 issue of Oliver Simon's journal, *Signature*:

[...] a typographical event of unprecedented success and significance. The Johnston Underground Sans Serif was the greatest single practical contribution that has been made to 'good' printing in the last thirty years. But this was not all. Its standardisation on the Underground conferred upon it, as lettering, a sanction, civic and commercial, such as had not been accorded to an alphabet since the time of Charlemagne. It was a contribution to the art on a truly majestic scale.³⁸

It is not evident from Johnston's design that it is worthy of such high praise. Johnston outlined a meticulous rationale of ratios which he used to determine the design of his letters. For the most part the strictly monoline uppercase, derived from Roman models, is successful in providing an elegant formal contrast to the Industrial Grotesque. The almost perfect circle arcs of both the C and G are given vertically sliced terminals on the right-hand side. The centre of the M being raised allows that a consistent width be maintained without an increase in darkness of colour. But it is in the lowercase that Johnston's design falls apart. Handover claims that '[Johnston] not only worked out the relationship between counter and mass, but the spacing between letters, a nicety unknown to the Grotesques of industrial jobbing'. But as Tracy has argued, this is the opposite of the case.³⁹ The inter-letter spacing, like the stroke joins, are handled according to a strict regular programme, not according to conventionally-established subtleties of variation. Johnston's Underground is not simply a case of occasional misjudgements in design of individual characters; more fundamentally, Johnston's very approach to designing produces enfeebled letterforms. Rigidity in application of formal rules — specifically maintaining uniform stroke and generally uniform width — leads to a stretched h and n, and both a and g appear cramped. As Tracy astutely remarks,

If Johnston had studied typefounders' specimen books, as he had said he intended to do [...] Johnston should have learnt from observation of examples of type that where curves flow into stems, in sans-serif as well as serified types, the curves have to be made thinner if the illusion of evenness is to be maintained and a clotted effect at the joint is to be avoided.⁴⁰

Johnston, so highly regarded as a student of the history of letters, in his Underground, betrays an historical ignorance — Underground speaks the Grotesque without fluency.

That such deficiencies seem to have been invisible to many British authors is directly related to issues pertaining to a particular ideological tendency current in Britain. For example, having praised Johnston's design as superior to other efforts, Megaw then declares that whether

the lowercase design achieves ‘aesthetic suitability’ is a ‘moot point’ as serifless letters are ‘essentially inscriptional’. Megaw betrays both a lack of serious interest in the task of Grotesque design (as he disregards the lowercase), and a refusal to accept the Grotesque as being proper to typography.⁴¹

The idea that Underground was the source for the Geometric Grotesque is also often given by British authors. For example Harry Carter in 1931 claimed that German interest in the Grotesque was a result of a delegation of German artists seeing Johnston’s Underground letters, and Handover in 1961 repeated this claim, alleging that Futura ‘appeared at a time when the Johnstonian gospel, brought back to Germany in 1924 by a trade delegation, was being spread throughout the country’.⁴² This is a British parochial naïvety. Although the Grotesque had been initiated in Britain, by the 1920s Germany had taken command, having not only a strong Industrial Grotesque tradition but also a more recent modernist movement devoted to discovering the perfect Grotesque. Renner, and particularly Koch, were both participants in the Arts and Crafts calligraphic renaissance which Johnston was central in initiating. The extent of Johnston’s influence on Renner and Koch is more in spirit than in the specifics of design. Like Johnston, Renner and Koch both referred to classical sources, and disregarded the Industrial Grotesques’ letterforms. But here the similarities end. Johnston’s alphabet lacks the sophistication of design and attention to subtleties of colour of Futura and Kabel.

Had it not been for Gill, Johnston may have had no influence on subsequent Grotesque developments. Gill was a former student of Johnston’s who had collaborated on the Underground project. Gill Sans was released in 1927 as, according to Harling, ‘an English contribution and/or answer to that spate of sans serifs [the Geometrics] which flooded from the German typefoundries’.⁴³ Harling also observes that, as regards Gill Sans’s indebtedness to Johnston, ‘the derivation is not too emphatic’ and Gill himself sought to distance his design from Johnston comparisons.⁴⁴ Gill’s uppercase is derived most closely from Johnston’s and therefore inherits its virtues. The lowercase is a vast improvement on Johnston’s design, yet there are similar weaknesses in certain characters. Unlike Johnston, Gill accepts that variation in the stroke weight is necessary in the more detailed lowercase forms. However, in Gill Sans stroke variation frequently appears erratic.

In the 72pt titling version, reduction of stroke weight on the bowl of a, the top of the bowl of b, and at the joins of curves to verticals on h, m, n, r and u, follows the angled axis of Humanist Roman (Plate 3.1.7). Yet there are excessive contrasts in both a and r and the absence of stroke modulation on the top of a, and throughout d, reveal an unresolved design. Of the text sizes, in the light version, which has a near-monoline stroke, the bowl of the a is ample and the

top curve is well balanced. However, as we move up the weights the relationship between these elements becomes unstable. Already in the medium weight the bowl of a is diminished and the top curve, having a significantly heavier stroke than horizontals of the bowl, makes the a appear to be top-heavily lunging to the left. The bold version is an improvement, as the widening of the letters creates more room in which to balance stroke weights. But this improvement is entirely lost in the extra bold in which the bowl of the a, following no consistent policy of weight variation, is a chaos of unevenness. The same is true for the heavier weights of e and g, which betray no logical nor aesthetic policy and seem to vary strokes in an improvised and panicked attempt to fulfil the letterforms. The basic design (and therefore the quality) of several lowercase letters is subject to variation across different weights and sizes, although the logic for this variation is unclear. In the light, the bowls of d and p curve into a vertical which continues beyond the join and t is joined as a cross; medium has a continuous join at the base of d and b, with the join of b being slightly lifted from the baseline, and a triangular t join; bold re-introduces the full verticals to b and d, and maintains a triangular t; extra bold returns to the continuous joins on d but p is not given a similar treatment.

Much like Johnston's *Underground*, albeit more justifiably, Gill Sans is often held in high regard by British typographers. Tracy argues that the admiration for Gill Sans was often a consequence of the high regard Gill himself was held in: 'the traditionalist strain in the British character responded to the type's air of academic probity'.⁴⁵ Again, it is worth noting that while Gill was praised as the best Grotesque by certain British commentators, the very same authors often remained hostile to Grotesques in general. Harling heaps praise on Gill for having 'brought orderliness to what had previously been little more than a typographic shambles', yet maintains that all Grotesques, Gill included, are inappropriate for text settings.⁴⁶ British critics often supported their preference for their compatriot's Grotesques with the claim that the superiority of British to German designs was due to a 'closer understanding of traditional forms on the part of the English'.⁴⁷ This is at most half true. It is true that German Romans from the early twentieth century often boldly departed from established models — many Klingspor types provide examples of this, including Behrens's *Antiqua* and *Medieval* (1913) and both Otto Hupp's and Rudolf Koch's *Antiquas* (1909 and 1922 respectively). However, where it is entirely untrue to say that the British had a better understanding of tradition is precisely in the case of Grotesques. The designers who struggled with this emerging tradition — to whom it was most alien — were Johnston and Gill.

Interestingly, one of Gill's serif types fulfils much of what his Sans set out to achieve. *Joanna* (1931) is precisely what Gill Sans should have been: at once showing a mechanically-

crisp modernism and an elegant synthesis of traditional forms (Plate 3.1.9). In a 1936 article Gill's colleague René Hague lamented that

there is no commonly-used book-type that is not based on the sensibility of a man who has been dead for centuries; and while architects are realizing that Queen Anne is dead, every year printers are hurrying to buy new types that are deader than Anne.⁴⁸

Joanna in fact answered this demand. It manages at once to be completely original and completely unobtrusive. Much like the characters of Morris's pastoral utopian novel *News from Nowhere* (1890), Gill had one foot in the past and one foot in the future — a sort of medieval craftsman from a future utopia. His mechanisation of the Roman in Joanna embodies this dualism better than his Sans could.

Nevertheless, in its native country Gill Sans reigned for decades as the most popular Grotesque. Its early association with British modernism is evident in its being used as text in two books from 1933: Herbert Read's *Art Now* and *The Old Gang and the New Gang* by Wyndham Lewis (whose *Blast*, as already noted, was an early example of Grotesque-based radical typography) (Plate 3.1.8). Gill Sans would ultimately become, through its association with British institutions including Penguin and the BBC, an integral component of British typography. More than this, Gill established a new stylistic idiom that future typesetters would adopt and synthesise with others.

Another response to the popularity of the Geometric Grotesque was William Addison Dwiggins's *Metro* (c. 1929) (Plate 3.1.9). Like Johnston and Gill, Dwiggins was critical of the Grotesque, writing that 'it has little to commend it' and that 'it is not overly legible'.⁴⁹ Again, disregarding the accumulation of knowledge embodied in the American Gothics and Industrial Grotesques, Dwiggins attempted the serifless letter from scratch. His *Metro*, as Sebastian Carter puts it, was 'not convincing enough to establish its own tradition'.⁵⁰ Unlike Gill Sans and *Underground*, even *Metro*'s uppercase lacks evenness: the counterform of the P is too small, the Q, Z and & have too fluid a stroke (perhaps influenced by Goudy's eccentric Sanserif of 1925). Again, it is in the lowercase that Dwiggins's design is at its weakest. The f and t appear to be suddenly truncated, by the ascender-height and baseline respectively. The a handles the requirement to reduce stroke weight at joins well by adopting a sloped Humanist axis. However the horizontal of the e is excessively thin, and the variations of stroke on the g are completely erratic. Much like Gill, Dwiggins was more at home with the Roman, and his *Electra* of 1935 (for example) is an important contribution to the twentieth-century Roman.

3.1.4 One Style Among Many

Futura was adopted for several important modernist design projects, including Neurath's Isotype and Schwitters's identity design for Hannover Town Council (Plate 3.1.2).⁵¹ Futura was frequently used in Moholy-Nagy and Bayer's graphic design from this period (although it never entirely usurped the Industrials). The Geometric Grotesque came to connote modernity. Such connotations were actively fostered in the promotion of these types (Plate 3.1.10). Futura was initially marketed as particularly suitable for combination with photomontage.⁵² As an accompaniment to Futura, Bauer offered printing blocks of triangles, circles and squares, to facilitate its use in compositions in the New Typographic style. Several other foundries released similar geometric typographic devices, which, according to Tschichold, facilitated the dilution and undermining of the authentic New Typography, introducing a 'new formalism' (Plate 3.1.11).⁵³ In the early 1930s both Kabel and Futura were promoted in the USA as types related to modern art and design.⁵⁴ A French 1930 advertisement designed by Bayer for Berthold Grotesk made similar assertions (the older Grotesques were also being marketed this way — a Venus specimen boasted that it was the type preferred by Moholy-Nagy). Yet, the proliferation of Geometric Grotesques does not testify to the wholesale conversion of the type industry to modernist typography — all of the German foundries that issued Geometric Grotesques continued to sell and release Blackletter types.⁵⁵ Further, once unleashed into the market, the uses of Futura could not be limited to modernist design. As put by Konrad F. Bauer,

The creator of a printed type has to submit his script [...] to the world, which may use or abuse it according to its mood. To guide it one way or the other is no longer in his power.⁵⁶

It would be entirely untrue to take from this that the rapacious type industry had, against the will of the pious designer, diluted the Geometric Grotesque and the New Typography. Despite Renner's stated aim of creating '*Die Schrift unserer Zeit*' he was complicit in the dilution of the significance of Futura, as he produced unrelated types marketed under the name of Futura in order to cash-in on its success. These included Futura Display (also known as Topic), a squarish, heavy display face, and Futura Black, which emulated the *Schlablonenschrift* of Albers.

It was not only Renner but also the younger radicals who contributed to making a fashion of New Typography — an optional style among many. Tschichold, who was scornful of Futura Black, himself produced an Albers-like stencil type for the Amsterdam Typefoundry in 1931 named Transito (Plate 3.1.12).⁵⁷ In 1929 Monotype also released a type in this style named

Bragaddocio.⁵⁸ Tschichold produced another unusual variation on the stencil-theme, *Saskia*, released by Schelter and Giesecke in 1931 — a light cursive type fragmented into stencilable sections. Additionally, he attempted a Futura-derived Geometric Grotesque for Deberny & Peignot, although it was not completed.⁵⁹ Bayer too, in 1935, took a stab at designing a typeface (his first and only), reinstating the hairlines to the modern removed by Albers, resulting in a somewhat charming display type which might be described as a Geometric Didone.

What we see in typeface design of the late 1920s and early 1930s, is that the language of style does not develop according to addition but according to a multiplying logic of combination. Each stylistic contribution offers a new pole, a new point of reference, to be hybridised with other elements. As in the nineteenth century, there is an explosion of difference. But now these differences speak a more nuanced language of style, as new stylistic variants reorientate the field of reference. For example, at the broad level of general category, the same formal approach of the Geometric Grotesque, was also applied to the Egyptian, resulting in a Hybrid style, the ‘Geometric Egyptian’ (Plate 3.1.13). The same process happens internally to Grotesque styles. Gill’s Sans was hybridised with the Geometric Grotesque — both *Metro* and *Gill* were quite quickly released with alternate characters, such as the splayed M and the single-storey a and open g.⁶⁰ Other types, such as *Granby* (1930), synthesised Gill’s *Humanist* with the Geometric.

3.1.5 Towards a New Pluralism

In the 1930s, the style and theory of the New Typography began to spread beyond its original German and European centres, albeit in an often compromised form. An example is provided by Frederic Ehrlich’s *The New Typography & Modern Layouts*, printed in New York in 1934. Ehrlich, who taught at the New York Printers Association and the Cooper Union, produced this book in order to provide a background to the development of modern typography and instruction on how to design in what he called an ‘Americanised version’ of the New Typography.⁶¹ Ehrlich relates the development of the New Typography to the development of Functionalist ideas in the industrial arts, as the idea that ‘form, shape and design be governed by necessities of manufacturing processes and the ultimate purposes of the articles produced,’ spread to typography, producing a ‘simple, clearer interpretation of type’ in service of ‘the purpose of the printed piece’.⁶²

It is an odd book, far from modernist in its design, text pages feature large initials, centred small-cap runheads, pagination in square brackets, and text is set in Goudy’s typically whimsical *Old Face*. However the title page and section dividers reveal Ehrlich’s interpretation

of New Typography — blocks of text set in the Geometric Egyptian Stymie in asymmetric composition in which areas of type are linked by greatly-extended Stymie extruders. More odd is Ehrlich's critical stance towards the New Typography of the 1920s avant-garde. Commenting on a selection of examples which includes Tschichold's 1925 cover for *Typographische Mitteilungen* and Lissitzky's 1923 book design for Vladimir Mayakovsky's *Dlia golosa*, Ehrlich dismisses these works as 'unreasonable as to composition, and lacking any trace of real commercial qualities', though he allows that they instigate 'an entirely new form of balance'.⁶³ Even more critically, he says of Tschichold's *Die Neue Typographie* that 'there was nothing impressive in the specimens shown'.

For Ehrlich the 'real modern typography' was an American innovation, which in the 1930s 'at last bloomed forth with firm roots in productive soil'.⁶⁴ The availability of Kabel and Futura in the United States from around 1929, 'gave The New Typography its second wind'.⁶⁵ A series of charts taking up over a third of the book provides instructional sketches of his own conception of 'new typography'. He relies heavily on the use of rules to fence in areas of type (which he claims 'lead the eye') and a strange emphasis is placed on the use of extended ascenders or descenders to form rules (as he does himself in the book). What is clear from Ehrlich's sketches is that his New Typography is a departure from the totalising conception of the European New Typographers: it is not a bold new style to replace all others, but an additional approach, sometimes useful, in the repertoire of the typographer.

Throughout the 1930s European and Soviet Functionalism and Constructivism began to gather momentum in Britain. The founding of Unit One by Paul Nash in 1933 — a group of painters and sculptors whose members included Henry Moore, Graham Sutherland, Barbara Hepworth and Ben Nicholson — according to Herbert Read brought Britain 'out of the slumbering provincialism that had characterised British art for nearly a century'.⁶⁶ The following year Read edited a book on the group entitled *Unit One: The modern movement in English architecture, painting and sculpture*.⁶⁷ In the same year Faber and Faber published Read's *Art and Industry* which endorsed a more or less Functionalist approach to design (despite Read's explicit disavowal of Functionalism). The book was designed by Bayer, was casebound without a dustjacket.⁶⁸ Bayer, now in a more fluid mode of design than in the 1920s, designed the cover with three organic shapes housing the title, author and publisher (Plate 3.1.14). The inside typesetting is poor: set in a dark Modern with too-frequent hyphenation and lacking first-line indents.

British developments in these directions were aided by 'Hitler's gift' of several prominent Modernists resident in London in the 1930s, including the *bauhäusler* Marcel Breuer,

Gropius and Moholy-Nagy, as well as Mondrian and the Russian Constructivist, Gabo. Further evidence of the incursion of European modernism in England is the Lund Humphries-sponsored Man Ray exhibition of December 1935 (the invitation for which was an excellent modernist typographic composition, asymmetric with a considered use of negative space), as well as an exhibition of paintings by Bayer in the London Gallery during April 1937.

1937 also saw Faber and Faber's publication of *Circle: international survey of constructive art*, edited by Gabo, Nicholson and J.L. Martin (Plate 3.1.14). Unlike *Unit One*, *Circle* featured architecture in equal if not greater prominence to painting and sculpture. The editorial to *Circle* repeated the themes of European Functionalism of ten years prior — internationalism, social universalism, opposition to fashion and the achievement of a true style for the age:

[...] the ideas represented by the work in this book have grown spontaneously in most countries of the world. [...] The fact that [the arts] have, in the course of the last twenty years, become more crystallized, precise, and more and more allied to the various domains of social life, indicates their organic growth in the mind of society and must prove that these creative activities cannot be considered as the temporary mood of an artistic sect, but are, on the contrary, as essential part of the cultural development of the time.⁶⁹

With British contributors including Hepworth, Moore, Read and the architecture historian J.M. Richards, was an impressive selection of leading international figures such as Breuer, Le Corbusier, Giedion, Gropius, Moholy-Nagy, Mondrian, and Richard Neutra. Although, apart from the dustjacket, the typography of the book was relatively conservative, nevertheless Tschichold contributed an essay on 'The New Typography'.

This was not Tschichold's British debut. Already in 1935, Lund Humphries had arranged an exhibition of his work in London.⁷⁰ The following year his work was shown (as was Bayer's and Max Bill's) at an exhibition in the Victoria and Albert Museum entitled 'Modern Commercial Typography'.⁷¹ And in the same year as the publication of *Circle*, Tschichold had been invited to speak to the New Traditionalist association of printers and typographers, The Double Crown Club (Morison, Meynell, and Jackson were among the members).⁷² In the following year, 1938, Lund Humphries hired Tschichold to design the fortieth volume of *The Penrose Annual*.

This is not to say Tschichold was universally embraced in Britain. For many his typography was overly 'clinical' as Howard Wadman described it, a 'bloodless and bureaucratic' combination of 'Sans serif and chilly wastes of white':

Nothing could be better for finding your way about in a mass of detail [...] But apart from functional uses, clinical typography degenerates easily into a romantic sham, like the little surrealist machines that will not work.⁷³

Even a contemporaneous positive review of his book *Typographische Gestaltung* describes Tschichold as a ‘surgeon turned typographer’ who would ‘sink any individual preferences for decorative digressions in an impersonal mechanised perfection’.⁷⁴

Such views were held about Tschichold despite the fact that throughout the 1930s his approach to, and theory of, typography moved closer to British New Traditionalism. Already in early 1932, the inclusion of drawing instructions for the once forbidden Fraktur in his *Typografische Entwurfstechnik* (translated as *How to Draw Layouts*), demonstrated a less doctrinaire attitude.⁷⁵ Tschichold’s article for *Circle* revealed his less polemical stance. Though still a Functionalist and opposed to ornament —

we consider the use of ornament and rules in the manner of earlier styles as disturbing and contrary to the contemporary spirit. The form should arise clearly and unequivocally out of the requirements of the text and pictures only, and according to the functions of the printed matter⁷⁶

— he now allows that ‘the resultant form should be beautiful — thus it would be wrong to designate the new typography as anti-aesthetic’. Significantly, he acknowledges that in its attention to function and disregard of ornament for its own sake, New Typography is the same as New Traditionalism; the difference between the two being not that the latter is un-functional and decorative, as he would have said ten years earlier, but being that New Traditionalism ‘proceed[s] from an earlier feeling of space’ and therefore has ‘the charm that emanates from an old work of art’. No longer a vitriolic polemicist, he politely endorses the New Typography over Traditionalism on the grounds that ‘it seems to us that the attempt to create from the contemporary feeling of space is more worth while’. While still supporting the use of Grotesques in this article, he now favours Futura (in *Die neue Typographie* he described Renner’s type as ‘a step in the right direction’ but ‘still too artistic’) which he includes with Gill Sans, as his preferred examples of ‘beautiful sans’.⁷⁷

Also in 1937 Tschichold contributed an article to the journal *Typography*, on a subject which further demonstrated his departure from Grotesque absolutism: the combining of typestyles. His attitude to typeface use is now pluralistic, embracing the Fat Face, Egyptian, and Grotesque fruits of nineteenth-century British typefounding (although rejecting the more

excessive ornamented faces of the period).⁷⁸ Now, for modern typography an essential feature is the juxtaposition of styles of letter.

The idea of a typography that exclusively used the Grotesque (or any other one style of type), was anathema to a then emerging pluralistic tendency in British typography. This tendency was given voice by Robert Harling's journal *Typography* (1936–1939) printed by James Shand's Shenval Press (Plate 3.1.15). Despite Harling's insular naivety regarding the Grotesque (cited above), in *Typography* there developed a conscious attitude of pluralism towards the use of typefaces, informed, in part, by a synthesis of European New Typography and British New Traditionalism. From the modernists they took a dynamic conception of asymmetric composition, but rejected ahistoricism and geometric-formalism. From the traditionalists they took respect for established convention, but rejected the academicist blacklisting of nineteenth-century display types.

More than a mere selection of aspects of modernism and traditionalism, British Pluralist typography was a genuine style, approach and philosophy in its own right, with its own repertoire of techniques. A central development was the use of specific typefaces for specific connotative purposes. Such an expressive approach to type selection — in essence an attempt to add iconicity to the textual message — had been present in advertisement since the late nineteenth-century. But in *Typography* the expressive conception of typefaces developed a sophistication. Individual articles were set in typefaces appropriate to the content (although this approach was dropped for the final two issues following a supposed return to 'typographical respectability').⁷⁹ For example an article in the first issue (1936) on newspapers was set in Times New Roman, and an article in the fourth issue (1937) by Alfred Fairbank on the subject of handwriting reform, was set entirely in an italic, Fairbank's own Bembo for Monotype.

Typography was spiral bound in what was described as a 'new French *plastique* process', named 'plastoic': a bold and modern choice, in sharp contrast to the fine bindings typically associated with lofty British typography. Grant Shipcott observes that, opposing the academicism of *The Fleuron*, '*Typography* looks to the future rather than into the past, seeing potential in experiment rather than triviality'.⁸⁰ Nevertheless, unlike the polemics of Germany ten years prior, *Typography* did not reject entirely the typographic orthodoxy. The inside front cover of the first issue of *Typography* functions as both a textual and visual manifesto of the approach to typography they represent. The textual content is two quotations, one from Morison and the other from Updike. The Morison text, taken from his *First Principles of Typography*, reads:

It is always desirable that experiments be made, and it is a pity that such 'laboratory' pieces are so limited in number and in courage. Typography today does not so much need inspiration or revival as investigation.

And from the conclusion to Updike's *Printing Types*, they cite the following:

For a printer there are two camps, and only two, to be in: one, the camp of things as they are; the other, that of things as they should be. The first camp is on a level and extensive plain, and many eminent respectable persons lead lives of comfort therein; the sport is, however, inferior! The other camp is more interesting. Though on an inconvenient hill, it commands a wide view of typography.

In an ingenious move the selected texts convey two messages at once. The literal message of the text is clear, *Typography* is a progressive journal, intent on taking up the challenge of developing typography in its future direction. Yet the words cited come from no revolutionists, but rather two New Traditionalist scholars of typography history. Thus the first textual message is complemented with a second allusion: *Typography* does not seek newness for its own sake, and does not reject the established traditionalist typography, but rather enlists Morison and Updike as colleagues in the quest for a new typography.

All of this is cemented by the design of the page. Each of the quotations are set in spaciouly-leaded lines arranged in loose, not-quite-centred blocks. By themselves the text areas have a sort of whimsical elegance of a typographically-conservative nature. Yet the two areas of text are arranged asymmetrically, Morison on the top left-hand side, Updike at the bottom heading right, leaving a vast expanse of white space onto which is asymmetrically placed an image in light ink of printing press rollers, bleeding into the gutter. Overlapping on this image is printed 'TYPOGRAPHY' in Imre Reiner's eccentric Neo-Modern face Cornivus. Thus the message of a future-looking approach to typography that will build on typographic tradition is perfectly visually expressed, as the elegant text-settings of the words of two Traditionalists are arranged in an almost Malevichean tensile composition. Even the unfortunate choice of Reiner's Cornivus (an amateurish geometrically-reduced interpretation of the Modern), helps to convey that *Typography* neither rejects the new (as some traditionalists might) nor slavishly adheres to the grotesque (as many modernists certainly did).

The visual manifesto, declaring a synthesis of the traditional and the modern, of the inside front cover is confirmed in the text of the first editorial:

The sponsors of *Typography* believe that fine book production is not the only means of typographical expression or excitement. We believe, in fact, that a bill-head can be as aesthetically pleasing as a bible, that a newspaper can be as typographically arresting as a Nonesuch [...] We are neither atavistic nor *avant garde*, neither traditionalists [sic] nor traducers of tradition. We are, quite simply, contemporary. [...] It is our hope that *Typography* will prove to be the most stimulating and welcome journal of typography in England; acknowledging sound traditions; welcoming adventurous use of new materials and new forms; not afraid to accuse the stagnant traditionalist [sic] or to condemn the spurious modernist.⁸¹

More than a synthesis, *Typography*'s 'catholicity' (as the editorial put it) produces a genuinely new contribution to typography. Beginning with *Typography* (and continuing in the decades following World War II), there emerges an approach to typography that neither seeks justification in tradition, nor justifies its theories according to a not-yet-fulfilled emerging technological utopia. At last in *Typography* — unlike the New Typography which was never aligned to the present but to a particular hope for the future — a typography arrives that is truly in tune with its age, which no longer seeks a true style to replace the 'stylistic chaos' unleashed by the nineteenth century, but rather accepts the reality of the twentieth century and the co-existence of styles.

Conclusion

The failure of the New Typographers to arrive at a Grotesque to replace all styles is not to be lamented. In so far as it provoked the development of the Geometric Grotesque, the New Typography made a fundamental contribution to the art of Grotesque design. Gray argued that with the appearance of the Fat Face in the 1830s, 'the stage [was] set for the development of the new art'. Fat Face, in Gray's account, was not simply the stylistic precedent for subsequent developments; rather its bold and novel appearance kicked open the flood gates, unleashing an unprecedented creativity in the development of typestyles. In Chapter 2.1 we argued that Gray's observation was not only true of ornamented styles — the explosion of styles in the nineteenth century produced a 'mutation of status' such that no type would ever again be unburdened with style. As typedesign develops, from roughly the early twentieth century, a change occurs again, not equal to the 'mutation of status', but rather a further consequence of it. The longer it is that types are produced at speed, the more nuanced and subtle the language of typedesign becomes: types do not simply explode into an array of obvious differences, but coagulate around stylistic poles, and are increasingly distinguished by marginal differences. As typedesigns cease to be the anonymous products of foundries, but the named works of named designers, the art of

typedesign, as it develops in the twentieth century, increasingly becomes the art of nuanced navigation of existent styles. Johnston's Underground not only failed due to its poorly designed characters — through its refusal to converse with existing Grotesques, it failed to partake in what was increasingly becoming the defining characteristic of the art of typedesign. Gill salvaged Underground, not only by rectifying its formal deficiencies, but owing to the very fact that Gill was in conversation with Johnston, it forced Johnston's cross-armed, obstinately-silent forms into conversation with the emerging language of Grotesque.

To echo Gray's comment on the Fat Face, with the appearance of Futura and Gill in 1927, the stage was once again set for the new art. Subsequent developments in Grotesque design will less often be dramatic new additions, and will more often be sophisticated re-interpretations, modifications and hybridisations of Gothic, Industrial, Geometric and Humanist styles. In the next chapter we will see how a new stylistic development, the Neo-Industrial — which like the Geometric was prompted by a movement seeking to limit the array of typeface styles with the one true Grotesque — will get absorbed into this logic of stylistic differentiation.

- 1 Bayer, 'Typography and Commercial Art Forms', in *The Bauhaus: Weimar, Dessau, Berlin, Chicago*, ed. by Hans Maria Wingler (Cambridge, MA: MIT Press, 1969), p. 135.
- 2 Burke, *Paul Renner*, pp. 27–30, 34.
- 3 Burke, *Paul Renner*, p. 60.
- 4 Burke, *Paul Renner*, pp. 61, 63.
- 5 Cited in Burke, *Paul Renner*, p. 85.
- 6 Burke, *Paul Renner*, p. 117–118.
- 7 Burke, *Paul Renner*, p. 118.
- 8 Burke, *Paul Renner*, p. 84. Burke argues that, rather than being influenced by the Bauhaus alphabets, Renner independently experimented with geometric letters.
- 9 Burke, *Paul Renner*, pp. 86, 96–97.
- 10 Burke, *Paul Renner*, p. 91.
- 11 Burke, *Paul Renner*, p. 107.
- 12 Albert Windisch, 'The Work of Rudolf Koch', *The Fleuron* 6 (1928), pp. 1–35, pp. 7–8
- 13 Windisch, p. 9.
- 14 Tracy, *Letters of Credit* (London: Gordon Fraser, 1988), p. 155.
- 15 Tracy, *Letters of Credit*, p. 168.
- 16 Fritz Kredel, 'Rudolf Koch', in *The Little ABC Book of Rudolf Koch* (Boston, MA: David R. Godine, 1976), unpaginated.
- 17 Tracy, *Letters of Credit*, p. 157.
- 18 Windisch, p. 3.
- 19 Morison, *Review of Recent Typography*, p. 55.
- 20 Rudolf Koch, *Kabel*, type specimen (Offenbach-am-Main: Klingspor, 1928), p. 2.
- 21 Koch, *The Book of Signs*, trans. by Vyvyan Holland (London: First edition Club, 1930), p. 35.
- 22 Koch, *Book of Signs*, p. 1.
- 23 Koch, *Kabel*, p. 2.
- 24 Albrecht Dürer, *Of the Just Shaping of Letters*, trans. by R.T. Nichol (New York, NY: Dover, 1965).
- 25 Tracy, *Letters of Credit*, p. 170.
- 26 Tschichold, *New Typography*, p. 74.
- 27 Tracy, *Letters of Credit*, p. 156.
- 28 Windisch, p. 27.
- 29 Jaspert, Berry and Johnson, p. 269.
- 30 Burke, *Paul Renner*, p. 88.
- 31 Megaw, p. 29.
- 32 Tracy, *Letters of Credit*, p. 92.
- 33 Not all releases of Erbar feature this top-heaviness.
- 34 Burke, *Paul Renner*, p. 88.
- 35 Megaw, p. 29.
- 36 Handover, 'Letters without Serifs', p. 76.
- 37 H. Carter, p. 42.
- 38 John Dreyfus, 'Mr. Morison as "Typographer"', *Signature*, 2nd ser. 3 (1947), pp. 3–24, p. 10
- 39 Tracy, *Letters of Credit*, p. 89.
- 40 Tracy, *Letters of Credit*, p. 89.
- 41 Megaw, p. 28.
- 42 H. Carter, p. 42; Handover, 'Letters without Serifs', p. 77.
- 43 Robert Harling, 'The Type Designs of Eric Gill', *Alphabet and Image* 6 (1948), pp. 56–69, p. 55.
- 44 Harling, 'Type Designs of Eric Gill', p. 56.
- 45 Tracy, *Letters of Credit*, p. 95.
- 46 Harling, 'Type Designs of Eric Gill', pp. 59, 69.
- 47 Megaw, p. 28.
- 48 René Hague, 'Reason and Typography', *Typography* 1 (1936), pp. 8–9, p.9.
- 49 William Addison Dwiggins, *Layout in Advertising* (New York, NY: Harper and Brothers, 1928), p.23.
- 50 S. Carter, p. 67.
- 51 Burke, *Paul Renner*, pp. 109, 113.
- 52 Burke, *Paul Renner*, p. 108.

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- 53 Tschichold, *New Typography*, p. 81.
- 54 Shaw, 'Stop Making Type', *Print* 61/5 (2007), pp. 60–64, pp. 63, 65.
- 55 Peter Bain, 'A Checklist of German Blackletter Types 1900–1905' in *Blackletter*, ed. by Bain and Shaw, pp. 68–70.
- 56 K.F. Bauer, p. 7.
- 57 Burke, *Active Literature*, pp. 162–171.
- 58 Cf. Advertisement for Bradggadocio, *The Monotype Recorder* 28/232 (1929), p. 20.
- 59 Burke, *Active Literature*, p. 159.
- 60 Tracy, *Letters of Credit*, p. 95; Jaspert, Berry and Johnson, p. 306.
- 61 Frederic Ehrlich, *The New Typography & Modern Layouts* (London: Chapman and Hall, 1934), p. 7.
- 62 Ehrlich, pp. 22–23.
- 63 Ehrlich, pp. 22–29.
- 64 Ehrlich, pp. 80–81.
- 65 Ehrlich, pp. 75, 77.
- 66 Read, 'British Art 1930–1940', in *Art in Britain 1930–1940: centred around Axis, Circle and Unite One* (London: Marlborough New London Gallery, 1965), pp. 5–6, p. 5.
- 67 Read (ed.), *Unit One: The modern movement in English architecture, painting and sculpture* (London: Cassell and Cassell 1934).
- 68 Harling, 'Somebody Discovers the Case', *Typography* 1 (1936), pp. 18–23, p. 21.
- 69 J.L. Martin, Ben Nicholson and Naum Gabo (eds), *Circle: international survey of constructive art* (London: Faber and Faber, 1937), p. v.
- 70 McLean, *Jan Tschichold: a life in typography* (London: Lund Humphries, 1997), pp. 10–11.
- 71 Philip James, 'Review: Modern Commercial Typography', *Typography* 1 (1936), p. 32.
- 72 McLean, *Jan Tschichold*, p. 11.
- 73 Howard Wadman, 'Left Wing Layouts', *Typography* 3 (1937), pp. 24–28.
- 74 Harling, 'Review: Typographische Gestaltung', *Typography* 2 (1937), p. 22.
- 75 Tschichold, *How to Draw Layouts*, trans. by McLean (Edinburgh: Merchiston Publishing/Napier Polytechnic, 1991).
- 76 Tschichold, 'The New Typography', in *Circle*, ed. by Martin, Nicholson and Gabo, pp. 249–251, p. 249.
- 77 Tschichold, *New Typography*, p. 74.
- 78 Tschichold, 'Type Mixtures', *Typography* 3 (1937), pp. 2–7, pp. 2–3.
- 79 Shipcott, p. 74.
- 80 Shipcott, p. 57.
- 81 Harling, 'Editorial', *Typograhny* 1 (1936), p. 1.

| | |
|--------------|------------|
| aaabbbbc | ABCDEFG |
| dddefghij | HJKLMN |
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Futura, early drawings (c. 1925). From Burke, Paul Renner, p. 87.

A B C D E F G H I J K L M N O P
 Q R S T U V W X Y Z Ä Ö Ü Æ Œ Ç
 a b c d e f g h i j k l m n o p q r f s t u v w
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 1 2 3 4 5 6 7 8 9 0 & . , - : ; · ! ? (' « » § † *
 Auf besonderen Wunsch liefern wir auch nachstehende Figuren
 a g m n ä & 1 2 3 4 5 6 7 8 9 0


Futura, first issue, (1927). From Burke, Paul Renner, p.102.

A B C D E F G H I J K L M N O
 P Q R S T U V W X Y Z Ä Ö Ü
 a b c d e f g h i j k l m n o p q r f s t
 u v w x y z ä ö ü ch ck ff fi fl fl fi ft B
 1 2 3 4 5 6 7 8 9 0 & . , - : ; · ! ? (* † « » §
 1 2 3 4 5 6 7 8 9 0

Futura, second issue, (1928). From Burke, Paul Renner, p.102.

**ALLGEMEINE LEHRERBÜCHEREI
DER HAUPTSTADT HANNOVER**

AM KLEINEN FELDE 12
Benutzung kostenfrei — Leihfrist 6 Wochen



| BÜCHERSTUNDEN: | |
|------------------------|------------|
| Sonntags | 11-12 Uhr |
| Dienstags u. Donnerst. | 16-18 Uhr |
| Sonnabends | 12-13 Uhr* |

* In der Zeit vom 15. November bis zum 14. Februar
von 12³⁰ bis 13³⁰ Uhr
In den Ferien geschlossen

Schwitters, 1930 piece from Hannover identity project. From Helms and others (eds), *Typographie kann unter Umständen Kunst sein*, p. 247.

**SONDERSCHAU
NEUE TYPOGRAPHIE**

MITGLIEDER DES RING NEUER WERBEGESTALTER:

Prof. W. Baumeister, Frankfurt-M., Kunstgewerbeschule
Prof. Max Burdartz, Essen-Bredensy, Brachtstraße 34
Dr. W. Dexel, Magdeburg, Kunstgewerbeschule
C. Damala-Nieuwenhuis, Charlottenbg., Roscherstr. 16
Hans Leistikow, Frankfurt-Ginnheim, Fudshohl 55
Baurat Meyer, Frankfurt-M. (Ehrenmitglied des »Rings«)
Arch. Robert Michel, Frankfurt-M., Kronprinzenstr. 8
Paul Schultemaj, Rotterdam, Mauritsweg 42 a
Kurt Schwitters, Hannover, Waldhausenstraße 5
Prof. Jan Tschichold, München, Voltstraße 8
Prof. Gaorg Trump, Bielefeld, Kunstgewerbeschule
Friedel Vordemberge-Gildewart, Hannover, Königstr. 8
Arch. Piet Zwart, Wassenaar den Haag, Rijkstraatweg

GÄSTE:

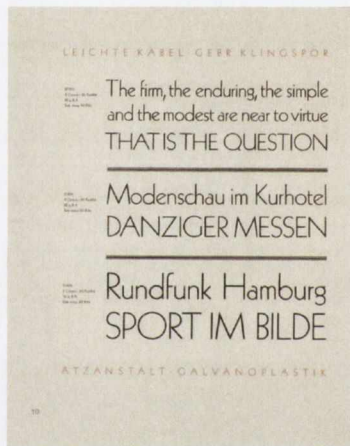
Otto Baumberger, Zürich
Herbert Bayer, Charlottenburg, Hardenbergstraße 4
A. M. Cassandre, Paris
Walter Cyliox, Zürich
Theo van Doesburg, Paris 14^{me}, Rue d'Arcueil, V.lla Carot
John Haerfield, Malikverlag, Berlin, Passauer Straße 3
Lejas Kassak, Budapest, Lehel Ucca 6
Prof. Maholy-Nagy, Berlin, Spichernstraße 21
Prof. Joh. Malzahn, Breslau, Kaiserin-Augusta-Platz 3
Oscar Nerlinger, Charlottenburg, Dernburgstraße 25
Karel Teige, Prag, Cerna Ul 12 a

DER PLAN, IN EINER GRÖßEREN AUSSTELLUNG DIE NEUZEITLICHE, HAUPTSÄCHLICH AUF DEM GEBIETE DES WERBEWESENS TÄTIGE TYPOGRAPHIE VORZUFÜHREN, WURDE WESENTLICH ERLEICHTERT DURCH DIE BEREITWILLIGKEIT DES »RING NEUER WERBEGESTALTER«, SICH GESCHLOSSEN AN DIESER AUSSTELLUNG ZU BETEILIGEN. ERWEITERT WURDE DER KREIS DURCH HERANZIEHUNG ANDERER BEDEUTENDER SCHOPFERISCHER TYPOGRAPHEN DEN OBERBLICK ÜBER DIE ENTWICKLUNG UND DIE ZIELE DER NEUEN TYPOGRAPHIE STELLTE PROFESSOR L. MOHOLY-NAGY, BERLIN, ZUSAMMEN

Ring neuer werbegestalter leaflet (1929). From Fleischmann (ed.), *Bauhaus*, p. 355.

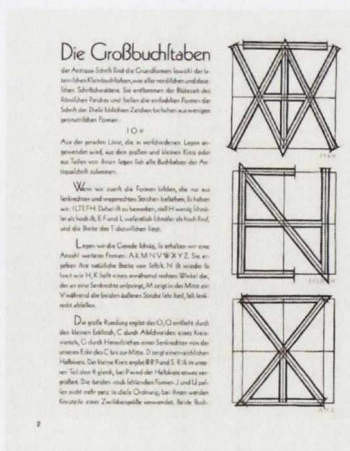
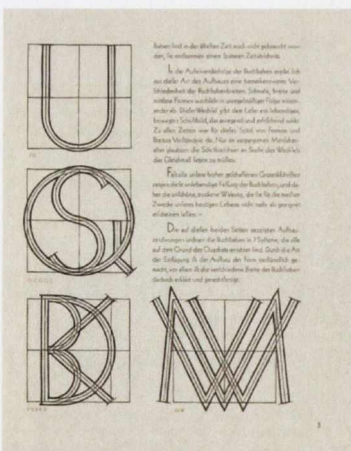
Della stessa famiglia del primo premio, idue lavori
IL RISORGIMENTO GRAFICO 12345678

Das Wanderbuch



Above: Kabel (1927).
From Tracy, *Letters of Credit*, p. 171.

Left: 1928 Klingspor
Kabel Specimen.



ES KOMMT IN DER KUNST NICHT DARAUf AN, DASS ETWAS GEMACHT, SONDERN DASS ETWAS AUSGEDRÜCKT WIRD.

Das Machen läßt sich mit Hilfe einer guten Schulung und einer gewissen Intelligenz erlernen. Aber die Kunst der Musik besteht nicht darin, daß man imstande ist, die Form des Walzers, der Sonate, des Liedes auszuführen mit Hilfe der künstlerischen Ideen, die Gemeingut sind, wie Luft und Licht, die Kunst der Poesie ist nicht erreicht, wenn sich einer geübt hat, Verse nach Heines Art zu verfertigen, die Kunst der Malerei hat noch nicht bewältigt, wer gelernt hat, ein Landschaftsmotiv oder eine Figur korrekt zu zeichnen oder zu malen. Soweit kann jeder kommen, der nicht unter dem Durchschnitt begabt ist. Von Kunst aber darf erst die Rede sein, wenn eine neue und eigene Empfindung Gestalt gewonnen hat. Das ist der Grund, weshalb so viele Bilder, die als Mache keinen Tadel verdienen, mit der Kunst nichts zu tun haben, daß so viele Musikstücke, so viele Gedichte, deren Technik nicht zu beanstanden ist, weder Musik noch Literatur sind.

Die Kunst ist ein ernsthaftes Geschäft, am ernsthaftesten, wenn sie sich mit edlen heiligen Gegenständen beschäftigt; der Künstler aber steht über der Kunst und dem Gegenstande: über jener, da er sie zu seinen Zwecken braucht, über diesem, weil er ihn nach eigener Weise behandelt.

Left: Koch-Antiqua (1922). Above: Wilhelm Klingspor Schrift (c. 1927). From Simon and Meynell (eds), *Fleuron Anthology*, pp. 174, 214.

»OFFENBACH«
IS AVAILABLE IN
TWO WEIGHTS FROM
KLINGSPOR.

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890

THIS IS THE
MEDIUM

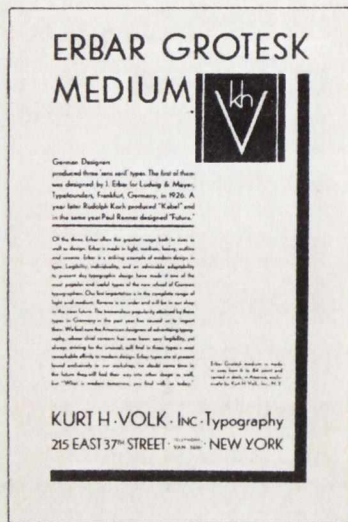
ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890

ABCDEFGHIJKLMNO
PQRSTUVWXYZ abc
efghijklmnopqrstuvwxyz

ABCDEFGHIJKLMN
OPQRSTUVWXYZ
AOU+1234567890

Above, from top: Fette Kochschrift (1910); Neuland (1923). From Simon and Meynell (eds), *Fleuron Anthology*, pp. 167, 166.

Left: Offenbach (c. 1928). From *Typography 3* (1937), p. 40.



Erbar Specimen.
From Ehrlich, *New
Typography & Modern
Layouts* (1934), p. 93.



Feder-Grotesk (1910)
and Feder-Antiqua
(1916). From de Jong,
Purvis, Tholenaar (eds),
*Type: A visual history of
typesfaces and graphic
styles*, II, pp.158, 239.

ABCDEFGHIJKLMN OPQRSTUVWXYZ
abcdefghijklmno pqrstuvwxyz 12345678

ABCDEFGHIJKLMN OPQRSTUVWXYZ
abcdefghijklmno pqrstuvwxyz?

ABCDEFGHIJKLMN OPQ
abcdefghijklmno pqrstuv

ABCDEFGHIJKLMN OPQRST
abcdefghijklmno pqrstuvwxy

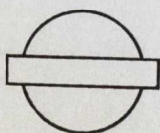
Der Architekt und die moderne Baukunst

Geometric Grotesques released in Germany
1928–1931. Left: Berthold Grotesque (1928);
Elegant Grotesque (1928); Neuzzeit Grotesque
(1928); Rhythmus (1931). Above: Super
(1930). From Jaspert, Berry, Johnson (eds),
Encyclopedia of Typefaces, pp. 254, 268, 331,
341, 343,



Johnston's development work for Underground c. 1916. From *Creative Review* 33/3 (2013), p. 27.

That Edward Johnston was commissioned in 1917 to design the sanserif type in which this announcement is set (the forerunner of the twentieth-century revivals of this letter-form) —that Feliks Topolski was commissioned last year to draw a series of character studies— these are but two examples of London Transport's consistent policy of a keen and practical interest in sound presentation. Advertise, therefore, in good company through London Transport's vehicles, stations and publications to 9,500,000 people.



LONDON TRANSPORT 55 BROADWAY SW 1 VICTORIA 6800
44

Later cut of Johnston's Underground. Advertisement from *Typography* 2 (1937), p. 44

ABCDEFGHIJ
 KLMNOPQRST
 UVWXYZ
 abcdefghijklm
 nopqrstuvwxyz
 xyz
 1234567890

Gill Sans (1927). 72pt titling.
From Tarr, *How to Plan Print*, p. 51.

GILL SANS
 AND ITS RELATED DESIGNS
 Extra Light & *Italic*
 Medium & *Italic* **Bold & *Italic***
Extra Heavy Ultra Bold
 Medium Condensed **Bold Condensed**
 Extra Condensed
EXTRA BOLD TITLING
 Gill Sans Shadow Line
 SHADOW
 SHADOW
 CAMEO
 CAMEO RULED

Gill Sans extended family. From
Tarr, *Printing To-day*, p. 77

GILL SANS LIGHT

The spread of Socialistic ideas coincided after 1885 with the rise of trade unionism among unskilled workers and the revival of the miners'

GILL SANS LIGHT ITALIC

unions. The older unions had been of craftsmen and skilled workers who paid high contributions and were all well provided for in trade and friendly benefits.

GILL SANS MEDIUM

The "new unionism" was the mass organization of general labour unions whose members, having little to lose and much to gain, rallied to a mili-

GILL SANS MEDIUM ITALIC

tant policy. The great Dock Strike led by Ben Tillett and the successful organization of the gasworkers by Will Thorne were a turning point. They estab-

GILL SANS BOLD

lished trade unionism as a civic right of labour, and gave a general impetus to trade union enrolment, the number of trade

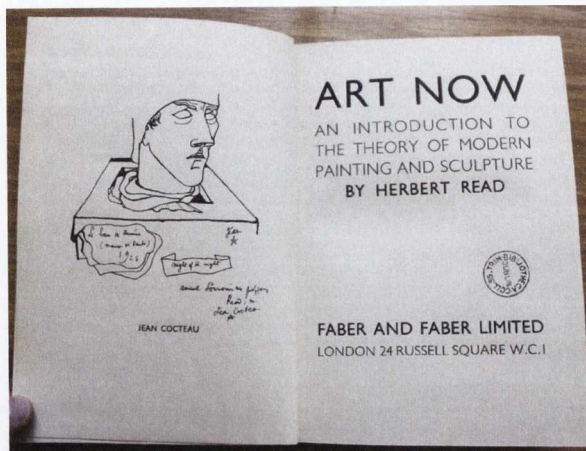
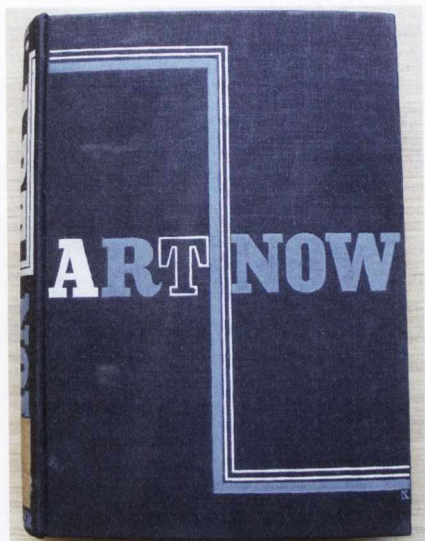
GILL SANS BOLD ITALIC

unionists being doubled between 1888 and 1892. The influence of the new unions was soon felt, and in 1890 the T.U.C. adopted a programme of

GILL SANS EXTRA BOLD

Socialistic resolutions and a demand for the eight-hour day. Congress reacted from this progressive political policy

Various weights of Gill Sans.
From Middleton, *Soldiers of Lead*, p. 17.



Above and right: Read, *Art Now*. Below: Lewis, *The Old Gang and the New Gang*.

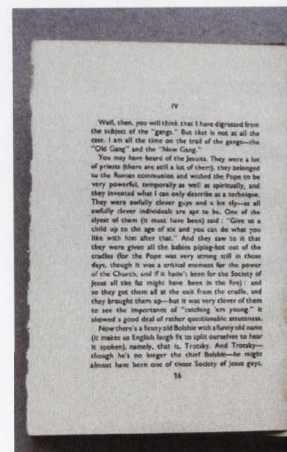
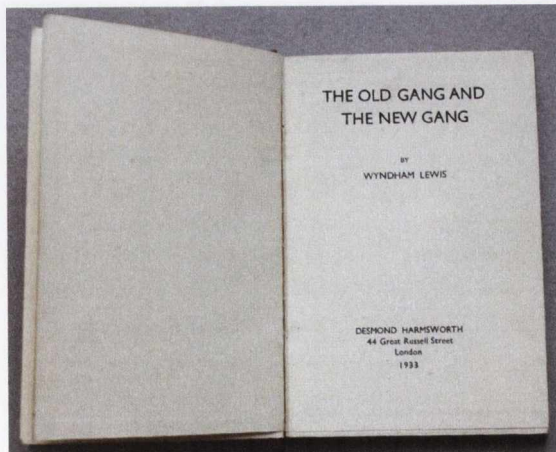
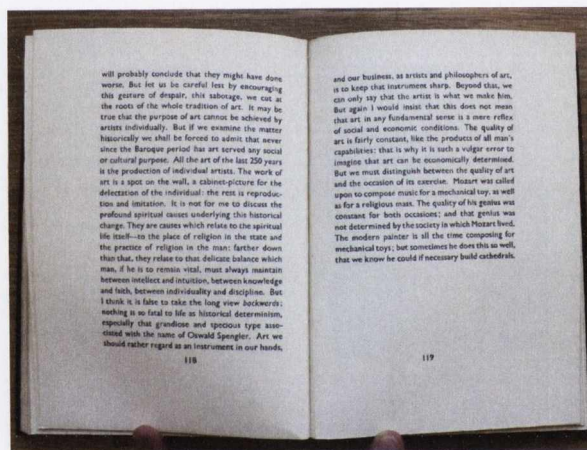


Plate 3.1.8: Frontbook New City Geography

A B C D E F G H I J K L M N O
a b c d e f g h i j k l m n
1 2 3 4 5

Dwiggins Metro
 (1929). From Tracy,
Typographic Scene,
 p. 31.

A B C D E F G H I J K L M N O P Q R R S S T T
a a b c d e e f g h i j k l m n o p q r s t u v w x y z
A B C D E F G H I J K L M N N O P Q R R
a a b c d e e f g h i j k l m n o p q r s t u

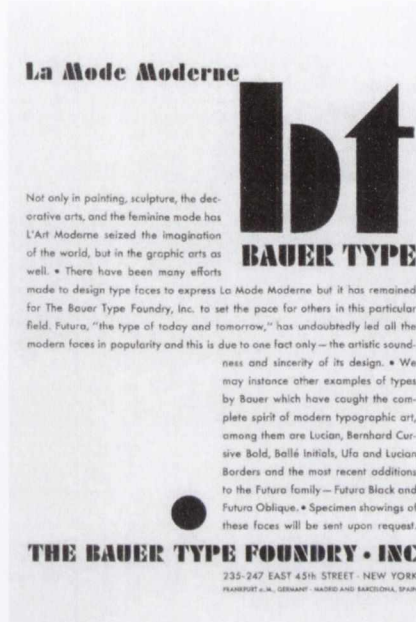
Goudy Sans (1925). From
 Jaspert, Berry, Johnson
 (eds), *Encyclopedia of*
Typefaces, p. 284.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z
1 2 3 4 5 6 7 8 9 0

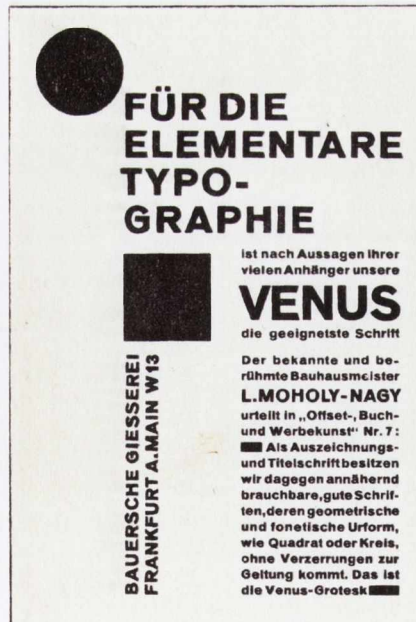
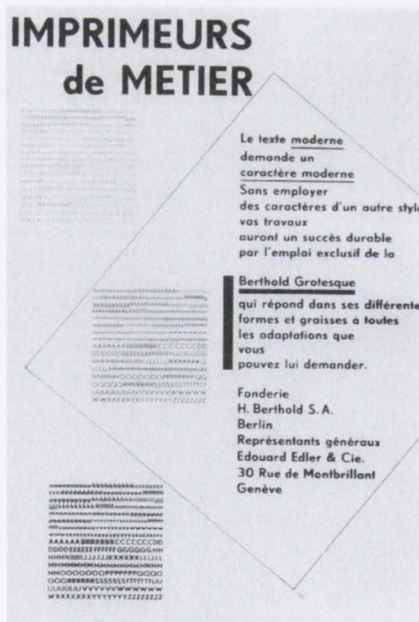
Joanna (1931). From
 Jaspert, Berry, Johnson
 (eds), *Encyclopedia of*
Typefaces, p. 124.

A B C D E F G H I J K L M N O P Q R S T U V W
X Y Z & Æ Œ a b c d e f g h i j k l m n o p q
r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

Electra (1935). S.
 Carter, *Twentieth-*
Century Type
Designers, p. 69.



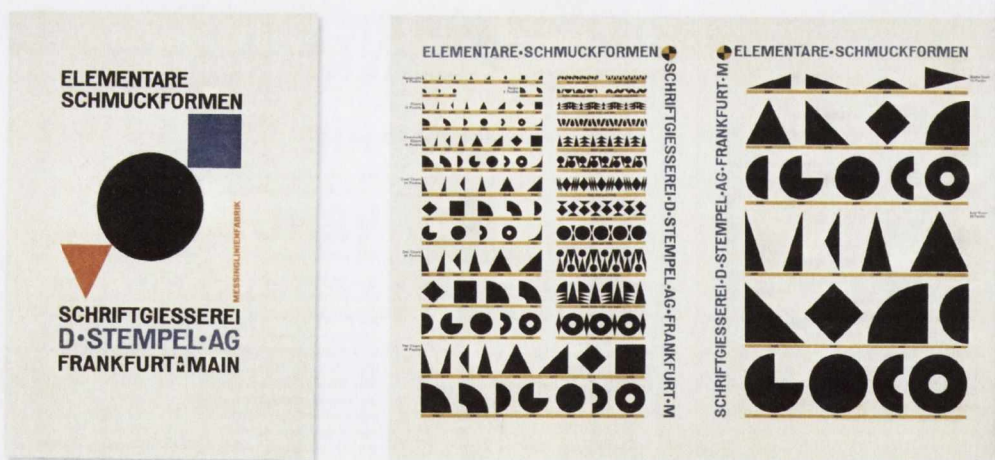
Futura and Kabel US marketing materials. Reproduced from *Print* 61/5, pp. 63, 65.



Left: Advertisement for Berthold Grottesk by Bayer. From *Herbert Bayer: painter, designer, architect*, p. 29. Right: advertisement for Venus from Ehrlich, *New Typography & Modern Layouts*, p. 60.



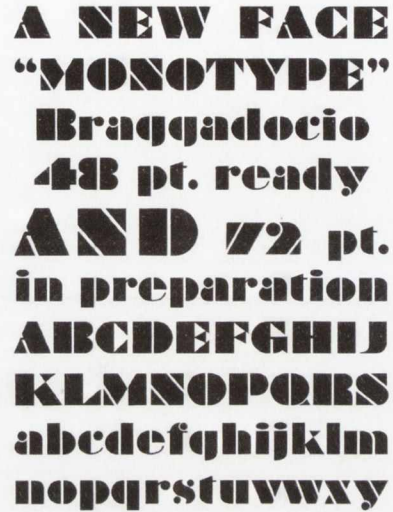
Blickfang Schmuck, Schriftguss A-G (1927).
 From de Jong, Purvis, Tholenaar (eds), *Type: visual history*, II, p. 300.



Elementare Schmuckformen, Stempel (1927).
 From de Jong, Purvis, Tholenaar (eds), *Type: visual history*, II, p. 302.



Tschichold's Transito (1931).
From Burke, *Active Literature*, p. 168.



Braggadocio (1929).
From *Monotype Recorder* 28/232, p. 20.



Left: Futura Black (1929).
From Burke, *Paul Renner*, p. 107

Below: Saskia (1931).
From Burke, *Active Literature*, p. 172.

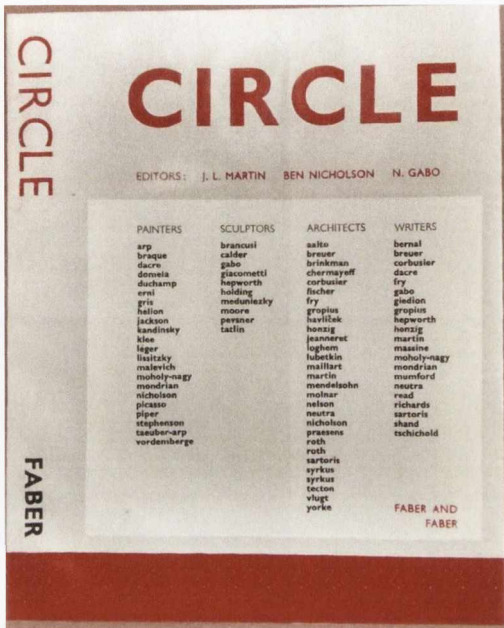




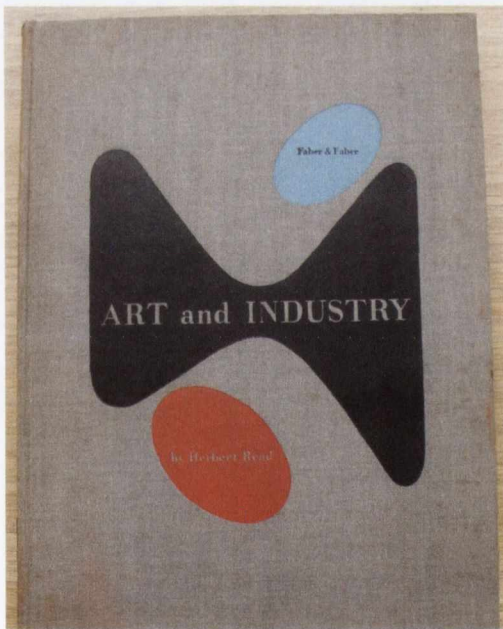
Various Geometric Egyptians shown in *Alphabet and Image 1* (1946), p. 50.



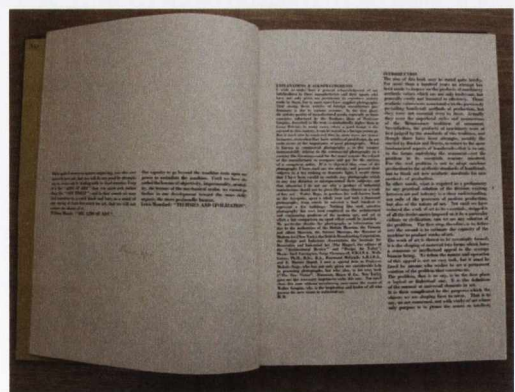
Granby (1930). From Jaspert, Berry, Johnson (eds), *Encyclopedia of Typefaces*, p. 285.

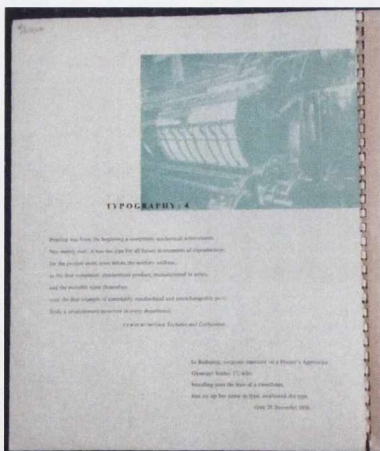
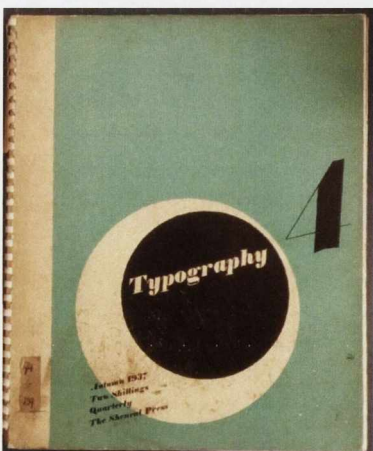
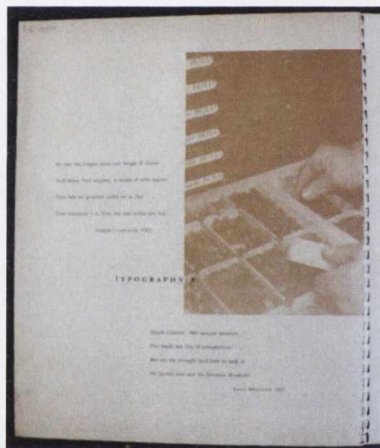
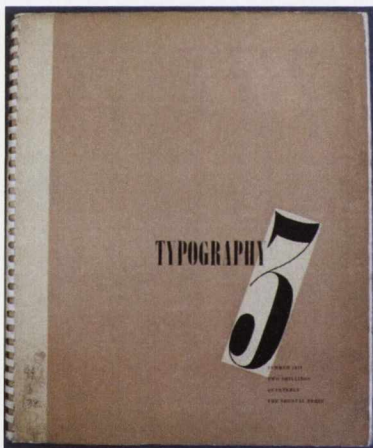
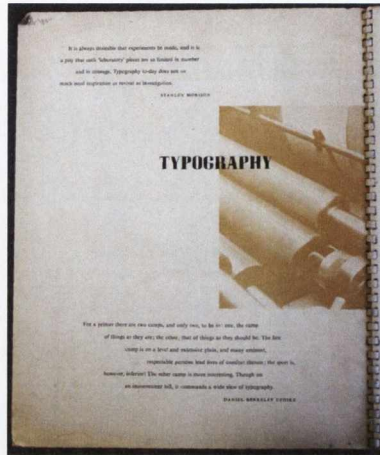
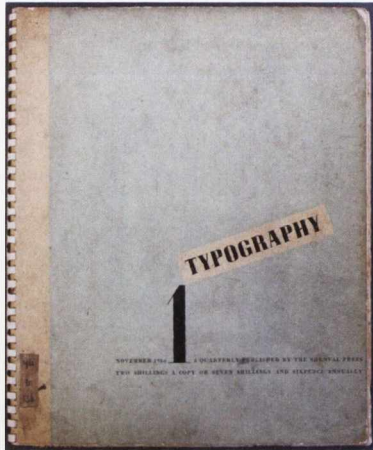


Left: Dustjacket of *Circle* (1934).



Read's *Art and Industry*, designed by Bayer (1934).





Covers and inside front covers of *Typography 1* (1936), *Typography 3* (1937), *Typography 4* (1937).

3.2 The Apostles of Modernism

3.2.0 Introduction

This chapter looks at developments in typographic discourse and Grotesque design following the Second World War, focusing on Britain and Switzerland. The project of interwar modernist typography was furthered in Switzerland, where the Grotesque was still championed as the rational, objective letter. However, in certain respects this was a new modernism. The Swiss accused their predecessors of modernism's cardinal sin: 'formalism'. The Geometric Grotesque was shunned in favour of a return to the Industrial. In Britain both the New Traditionalist and New Pluralist tendencies continued; however, increasingly from the 1960s, the Swiss style, and with it the use of the Industrial Grotesques and their new variants, would become prevalent.

In 1958 a trilingual Swiss journal, named *Neue Grafik / New Graphic Design / Graphisme actuel*, was launched. Richard Hollis described its influence on British designers as follows:

As soon as it was launched, *Neue Grafik* was available in London. Its startling white, shiny cover was a welcome shock. [...] it represented only one strand of Swiss graphic design, the 'constructive' method practised by its editors. And this was one of the most original aspects of *Neue Grafik*: it was edited and written not by journalists, but by practising designers. This is what gave the new magazine its authority.¹

According to Hollis, typography and commercial art in Britain following the war was

eclectic, typified by painterly, often witty posters, and occasional elegant typography in a traditional style, enlivened with additions of Victorian ornament and decorated typefaces [...] there was no coherent attitude to typography and design [...] It was forgotten that Jan Tschichold had been given space in British print trade journals in the thirties to alert people to the New Typography and to photomontage.

Hollis continues to describe *Neue Grafik* as vivifying, enlightening a backward 'generally insular' British typographic culture, replacing an 'eclectic' and 'improvised' approach to typography, with something of greater value — a non-Style, resultant of an alleged 'objectivity':

One phrase that was quoted was of the Swiss being in search of a 'supranational anonymous style.' It was this objectivity that was attractive [...] *Neue Grafik* in England has to be seen as part of the awakening of British designers to a more self-conscious method of work [...] foreign to the improvising approach to design common in Britain. And it simulated an interest in graphic design history.

Much of this is true. For example, the journal *Signature*'s adherence to a *Fleuron*-like traditionalism appeared increasingly outmoded by the 1940s.² Yet Hollis's account is, to say the least, biased. On a simple factual level we can query Hollis's assertion that there was something new to a British readership in *Neue Grafik* being edited by designers interested in international design history. British typography journals throughout the early twentieth century were the work of practising typographers often equally qualified as historians and engaged in international design (*The Fleuron*, for example, in its mere seven issues, covered typography and printing from Britain, Czechoslovakia, France, Germany, Holland, Italy and the United States among other places, and covered topics from Antiquity to the 1920s). If *Neue Grafik* promoted an interest in design history, it was in the form of a particular design-historical narrative, one which placed Grotesque- and whitespace-heavy commercial typographic design as the culmination of developments in avant-garde painting. More significantly, we need not accept the implication that British typographers were more-or-less backward and unthinking before the arrival of Swiss modernism. We have already seen that the approach advanced in *Typography* was not simply 'eclectic' owing to a lack of a clear conception of typography, but was rather an explicit rejection of the stylistic constraints imposed by the European modernists, and indeed native New Traditionalists. Such an attitude was continued in Ruari McLean's journal *Motif*, launched the same year as *Neue Grafik*.

3.2.1 From New Typography to *Neue Grafik*

In *Die neue Typographie*, Tschichold provides three separate historical narratives that pre-date the development of the New Typography. The first, entitled 'The Old Typography (1440–1914)', demonstrates that Tschichold, unlike the Bauhaus New Typographers, had a deep knowledge of the history of typography.³ Beginning with Gutenberg, Tschichold's account describes the history of typography as a slow but progressive development up until 1850, from whence he describes a steep decline exacerbated by technological advances in printing. Although he concedes that there is some merit to William Morris's private press typography and German Buchkunst and Jugendstil typography, Tschichold remains generally critical of late nineteenth-

and early twentieth-century typography. Tschichold's second historical narrative, entitled 'The New Art', presents a more typical account of the New Typography's self-image of its origins.⁴ Unlike the history of 'the old typography' which is ultimately a tale of demise, the history of art he provides is triumphant. The turning point is the middle of the nineteenth century, when photography encourages artists to begin 'a gradual liberation from subject'. Tschichold charts this move, from Impressionism, through Pointillism, Cubism, Futurism, Dadaism, etc., to the 'exact geometric forms' ('governed by laws') of Malevich, De Stijl and their descendants. Unlike the 'old' typographers, the artists championed by Tschichold (almost exclusively painters) recognise technology as the basis of the new form. It is from this history of painting, more than the history of typography, that Tschichold's third narrative follows.⁵ 'The History of the New Typography' begins with an acknowledgement of Behrens as a precursor (to a degree) of the New Typography. But more significant, in liberating typography from the 'ornamental', is the revolutionary typographic (in fact often hand-lettered) work of the Futurists. The Futurists and subsequently the Dadaists are said to have cleared the way for De Stijl and Russian Constructivism to build a New Typography from the ground up.

Tschichold's version of this account is more nuanced than the above synopsis suggests. Nevertheless, it is a foundational version of a particular teleological account of the development of modernist typography — which became a sort of canon of graphic design history — which excludes (or gives marginal treatment to) historical facts which contradict this narrative, as out-of-step with the march of history. For the modernist typographers of Zürich in the decades following the Second World War, this narrative allowed them to place themselves, as the earlier New Typographers did, at the apex of historical development. This can be seen throughout the Zürich-based journal *Neue Grafik*, which ran from 1958 to 1965 and was edited by Richard P. Lohse, Josef Müller-Brockmann, Hans Neuburg and Carlo Vivarelli.

In its design, *Neue Grafik* graphically embodied its own typographic ideology of reduction, standardisation and internationalism (Plate 3.2.1). For its entire run, the cover of each issue was in the exact same format, featuring text in German, English and French, in two sizes of type — Akzidenz bold for the display size, Monotype 215 for the text — arranged according to a grid with abundant white space. Akzidenz was the defining type of 1950s Swiss modernist typography. Monotype 215 was a less consistent, inferior design to Akzidenz, used heavily in Swiss typography because, unlike Akzidenz, it was available for hotmetal machine setting (Monotype capitalised on the association of this type with the Swiss style by issuing 215 with several Akzidenz-like alternates).⁶ The internal layouts of *Neue Grafik* were designed in a similar manner to the cover, using one size of 215 only (apart from article headings in a slightly

larger size of Akzidenz), set in unindented paragraphs. The trilingual nature of *Neue Grafik* facilitated the typically Swiss typographic arrangement of discrete columns of text, dispersed rhythmically across expanses of white. Such trilingual layouts abound in later Swiss typography books, and Lohse had already designed a document in a similar manner in 1953.⁷ The aesthetic is both a derivation and distillation of interwar New Typography: an attempt, as the first editorial of *Neue Grafik* put it, at an ‘almost mathematical clarity’.

The first issue featured an article by Lohse entitled, ‘The Influence of Modern Art on Contemporary Graphic Design.’ Despite differences in detail, the narrative presented was essentially that provided by Tschichold in ‘The New Art’ and ‘The History of the New Typography’, with additional developments pointing towards Zürich.⁸ Throughout the run of the journal, many other articles on the New Typography of the 1920s and early 1930s were included, often written by participants of interwar New Typography.⁹ However, while Lohse declared that its was ‘an essential task’ to ‘rescue the achievements of pioneers from oblivion’, the *Neue Grafik* editors also sought to distance themselves in certain ways from their interwar progenitors.¹⁰ Unsurprisingly, where the *Neue Grafik* editors (and indeed Swiss modernists in general) claimed difference between themselves and their predecessors, was in the absence of non-functional ‘formalism’ and transient ‘fashionable’ stylistics. This meant the removal of certain typical New Typography devices — what Max Bill called ‘fashionable trimmings: thick rules and lines, large points, oversize page numbers’.¹¹ Significantly the Swiss also rejected the Geometric Grotesques, again, as a transient fashion. As we have already seen, for the New Typographers, the Industrial Grotesques were but the best types then available, and new Grotesques were sought. Like their predecessors, the Swiss believed that the ‘true’ type of their age was Grotesque, suitable not only for display, but for all uses. The two generations agreed that one Grotesque style should replace the varieties of letterforms; however the Swiss believed that this style had already been achieved at the turn of the century. Neuberg was critical of the newer Grotesques which ‘swamped the printing trade in the twenties’.¹² He singled out Erbar and Futura for being too regular. Neuburg argued that Akzidenz, as a type ‘characterised by certain irregularities in the formation of the curves’ had a ‘smoother’ appearance in continuous text. It was Akzidenz that was the most neutral type, the least burdened with connotation, and the most adapted to ‘impart information legibly and agreeably’. Yet Akzidenz was not elevated as transcendent realisation of perfected *urform*, but as historically-established norm.

[Akzidenz] has proved its worth over several decades; and despite a few stylistic deficiencies no anxiety need be felt about its continued existence. [...] One thing however is certain: epoch-

making changes within the limits imposed by sans serif type are not possible. Attempts in other directions, such as some German typographers and founders made in the twenties, have had no lasting effect, for any fundamental deviation from the almost mysterious laws governing sans serif type, any change in form which is too specialised, soon shows itself as quite unsuitable.¹³

Such attacks on Geometric Grotesques can be found throughout the writings of Swiss modernists. The Geometric Grotesque was subjected to three interrelated criticisms: that it deviated too far from convention, that it was a transient fashion, and that it was excessively geometric. We have already seen that it is not true that Futura is strictly geometric. Nevertheless, Futura tended to be described as if it was a constructed Bauhaus alphabet, and thereby dismissed. Karl Gerstner wrote: ‘today the “elementary” alphabets of the twenties are regarded not so much as elementary, but as a typical stylistic expression of, precisely, the twenties’.¹⁴ As Handover observed, there was perhaps a touch of irony in the rejection of Futura as ‘démodé’, in favour of the decades older Akzidenz.¹⁵ Nevertheless, the Swiss were in a sense correct. Akzidenz was the result of a consolidation and refinement of decades of Grotesque design. Futura, as well as Gill, as deliberate departures from Grotesque convention, have an inevitable ‘individualism’.

Swiss typography was characterised by Industrial Grotesques and spaciouly handled modular grids, but also a continuance of the modernist conception of ‘truth to materials’ regarding the use of ink, stock and purely typographic processes. An interesting observation was made by Herbert Spencer in 1950, which suggests an economic explanation for this aspect of Swiss modernism. In America, according to Spencer, printed materials were often directed at a large monolingual population, therefore economically justifying the use of full-colour lithography and expensive processes. In contrast, in tiny polyglot Switzerland

[as] printing runs are usually short, printing is generally direct from type, colour is used generously and, to avoid the cost of reverse line blocks, light inks are frequently printed on dark papers; considerable use is made of cheap but interesting materials, and unusual methods of folding are often employed.¹⁶

3.2.2 From New Typographer to New Traditionalist

As has already been shown, throughout the 1930s Tschichold’s radicalism was becoming more moderate. After the war, Tschichold continued to drift further from his earlier views, and further from the Grotesque. In fact Tschichold’s *History of Writing and Lettering* (1946) made no mention whatsoever of the Grotesque, which was once for him the pinnacle and future of all

letters.¹⁷ A 1946 polemic by Bill, in the journal *Schweizer Graphische Mitteilungen*, made (barely veiled) reference to Tschichold as a ‘victim of spiritual infiltration’ turning him ‘reactionary’.¹⁸

Bill had been a student at the Dessau Bauhaus, and was the first director of the Hochschule für Gestaltung at Ulm, a university founded by Otl Aicher and colleagues in the early 1950s, often thought of (along with the Chicago New Bauhaus) as the heir to the Bauhaus of the 1920s. In the decades since his Bauhaus training, Bill remained an unabated Functionalist typographer, committed to the dream of graphic transcendence through the Grotesque, and believing the aesthetic in design to lie in the synthesis of form and function: ‘the totality of functions to be met, to be formed into a harmonious whole, and therefore give a perfect aesthetic overall impression’.¹⁹

In *Schweizer Graphische Mitteilungen*, Bill argued that Tschichold’s ‘flight into the traditional’ should not be mistaken for progress or for reason triumphing over modernistic formalism; rather Tschichold’s new classicism was not only ‘an expression of a backward-looking historicism’, but also — what else? — mere ‘fashion’.²⁰ Tschichold, quite naturally, was affronted, and responded in the same journal. Notoriously, Tschichold equated the ‘intolerant’ attitude of New Typography and its ‘bent for the absolute’ with the totalitarianism of Hitler’s Germany.²¹ Although Tschichold had by this time moved on from his younger propagandising self, as ever, he treated issues of ideology and the minutiae of typographic setting as continuous (for example, Tschichold now rejected the modernists’ exclusion of first-line paragraph indents as ‘dangerous’). Significantly, Tschichold — who once wrote that geometric forms transcend the individual — attacked the technophilic jargon used by modernists to justify the elemental geometric aesthetic, arguing that there is no form native to machine production, and that geometry offers no magical formula for transcending the subjective:

the machine can do anything. It has no law of its own and cannot shape anything by itself. Its products are given form by man, by the designer’s will, even when he believes himself to be ‘obeying its laws’ and that his ‘objective’ and ‘unornamented’ designs are ‘impersonal’.²²

With this new attitude came a different position in relation to the Grotesque. Tschichold criticised Bill for believing ‘sanserif to be still the best, the “up-to-date” typeface’ when ‘reading long pages set in it is genuine torture’.²³ Tschichold now claimed that the Grotesque’s lack of ‘indispensable serifs, together with unvarying stroke weights, make it difficult to read’ and that the basic forms of the Grotesque correspond ‘to the undeveloped perceptions of

children learning to spell'. Tschichold declared the Grotesques utilised by Bill — Akzidenz and Monotype 215 — to be 'deplorable'. Tschichold now believed that not only Gill Sans, but (almost unfathomably) also Dwiggin's Metro, were superior designs that 'tower above' the Industrial Grotesques. Yet what Tschichold admired in these designs was entirely different from his younger enthusiasm for Grotesques: whereas in *Die neue Typographie* the value of the Grotesque was that it erased the trace of the hand, now his favoured serifless types are commended as the 'true calligraphy of the present day'.

'Formalism' as the chief insult slung in typographic debate was now targeted at Grotesques, not only by conservatives but also by progressive designers. In a 1952 mock questionnaire to weed out the 'self-consciously chauvinistic and therefore contrived' in modern typography, the American designer Paul Rand asked 'do you accept that traditional typefaces are absolutely modern in the sense that they are established norms?' or 'do you use sanserif faces because they look "up to date"?'²⁴

3.2.3 British Pluralism's Last Hurrah

Harling's journal of the 1930s, *Typography*, embodied a philosophy of typography not grounded in Symbolic fantasy (be it a future or prior perfection and coherence), but in acceptance of the Semiotic reality of twentieth-century design. Unfortunately, *Typography* did not survive the war, and the journal that emerged in its place, *Alphabet and Image* (also edited by Harling and printed by Shand's Shenval Press) was, in comparison, greatly compromised (Plate 3.2.2). Confirming somewhat Hollis's critique of the 'insularity' of the British post-War typographic scene, the editorial to the sixth *Alphabet & Image* (1948) declared that, as a matter of policy, 'for the first five years of the existence of this magazine (on the *image* side, at least), we shall reproduce only the work of artists of these islands'.²⁵ Nevertheless, the editorial policy continued some of the virtues of *Typography*, including topics ignored by New Traditionalist journals — *The Flueron* and *Signature* — such as the typography of newspapers and (often positive) assessments of Victorian typefaces and their recent revivals.²⁶ The covers of *Alphabet & Image* continued, and often bettered, *Typography*'s bold and confident handling of types, sizes, colour and composition; however the internal layouts were less noteworthy. In line with the final issues of *Typography*'s so-called return to 'typographic respectability', the layouts of *Alphabet & Image* followed a consistent pattern. However this was not a refinement, but a move to conservatism and the merely acceptable — lacking both *Neue Grafik*'s elegantly-handled variation within a consistent framework and Harling's own earlier experimental exuberance. Although the illustrations featured were frequently dramatically and colourfully presented, body

text throughout was generally in one column, always in Times New Roman with headings in a crude nineteenth-century Egyptian. The first four issues used the same ‘plastic’ binding as *Typography* — with issue five this final radical element was expunged.

In Hollis’s account of the backward insularity of postwar British typography he allows one exception: Herbert Spencer’s journal *Typographica* (launched 1949). *Typographica* certainly embraced European developments, yet it was far less in the sway of dogma than *Neue Grafik*. To describe the first series of *Typographica* (1949–1959), as a ‘lone voice’ of Continental modernism in insular Britain does a disservice to the diversity of its range, and also neglects the extent to which *Typographica* continued interwar British Pluralism. Like *Typography*, it was pluralistic and eclectic — both visually and editorially — happy to take from European modernism, without also taking modernism’s taboos and proscriptions. However, in its second series (1960–1967), *Typographica* moved closer to Swiss ideals. Beginning with the third issue (1961), body-text was set exclusively in 215 and first-line indents were removed (although *Typographica* never went as far as aping the modular style of *Neue Grafik*). The same issue featured an essay by Ken Garland on ‘Typophoto’ illustrated exclusively with Swiss examples, as well as a review of Gerstner and Markus Kutter’s Akzidenz-based ‘National Zeitung’ project (Plate 3.2.9).²⁷ Naturally, *Typographica*’s increasingly modernist approach provoked some criticism in Britain, as a move towards, rather than away from, ‘formalism’. The seventh issue of *Typographica*’s second series (1961) which featured the work of thirty-six British typographers, was described in a contemporaneous review as showcasing

fashion-ridden, gimmicky and often irrational work [...] the trick seems to be to find an arresting visual symbol of some sort and then merely to add the words in a small size of sans serif type.²⁸

But all was not lost for British Pluralism. In the same year that *Neue Grafik* first appeared, Shand’s Shenval Press produced a new journal edited by Ruari McLean entitled *Motif* (Plate 3.2.3). *Motif* (1958–1967) was a journal of the visual arts, with an emphasis on typography and print. As with Harling’s *Typography*, the editorial policy was avowedly pluralistic — ‘we are spurred by no dogmas, will issue no manifestos’.²⁹ The typographic approach was flexible and experimental, each article featuring typefaces and compositions uniquely selected to harmonise with the content. Contributors included typography scholars such as Gray, Mosley and Tracy, and like *Typography* the attitude was one of openness and enthusiasm to areas of typography ignored by Morison’s generation, such as Victorian typeface design and contemporary public signage.³⁰ But the scope was far beyond the insular world of

typographic expertise. The proto-postmodern theorist of architecture, Reyner Banham, was a frequent contributor.³¹ The first three issues featured a series of articles on the history of photography by Helmut Gernsheim, the second of which focused on the avant-garde of interwar Europe.³² Works by contemporary illustrators were lavishly presented with special stocks, inks and print processes. Reviews of newly released typefaces sat next to discussions of the latest developments in painting, from Abstract Expressionism to Pop. All of which was housed (until the later, more cheaply produced issues) in hardcover wrapped in dramatically colourful full-bleed illustration. It was in every way out of step with the march of the Grotesque and the grid. Spencer did not like it.³³ Even Rick Poyner, who writes admiringly of *Motif*'s design, describes it as behind its own times. This is not quite right. It may not have fitted the emerging *Zeitgeist*, but it did not look like the work of any earlier period either. It was rather the graphic design of a parallel world: a world in which *Typography* had never reverted to 'respectability', and in which, following the war, Industrial Grotesque-fetishism was relegated to the status of an admired, but obscure Zürich cult. It could not last. Gradually the quality of printing dropped and issues appeared less frequently, until it ceased altogether in 1967.

Hollis described the appearance of *Neue Grafik* in 1958 as a 'welcome shock' for younger British graphic designers. However in the pages of *Motif*, *Neue Grafik* was viewed as neither particularly shocking nor necessarily welcome. The second issue of *Motif*, of February 1959, included a review by John Commander entitled 'Two New Periodicals', assessing *Neue Grafik* and a British journal, *Uppercase*. Commander expresses a simultaneous admiration for *Neue Grafik*'s goals and a dubiousness towards its 'rigid' attitude:

Their approach is logical, formal and precise: their attitude is rigid, exclusive and consistent; their prejudice is rife. Worse still, they are serious about their beliefs and their profession. [...] Such characteristics are, of course, sufficient to ensure that *Neue Grafik* will remain widely unread in this country. But if it is conceivable that design can be more than an aspiration to decency, if its practice can be regarded as something more than the exercise of 'good taste' and if, in operation design may be considered as something other than the best that can be got away with, then *Neue Grafik* is relevant.³⁴

Despite occasional jabs, Commander's assessment is generally favourable, commending the quality of textual content as doing 'more than filling the gaps between illustrations'. Significantly however, the view expressed is not that *Neue Grafik* represents a newfangled approach and an affront to tradition and decency. Rather, *Neue Grafik* is viewed as betraying a no longer credible doctrinaire attitude belonging to the interwar period. Commander contrasts

the ‘exclusiveness, consistency and lack of compromise’ with that of *Uppercase*, which announces itself in its first editorial as ‘tentative, incomplete and inconclusive.’ Commander writes

The concept of art defined in *Neue Grafik* is the result of analytic sifting of motive and impulse that has characterised the modern movement. It is a concept which the editor and authors of *Uppercase* no longer find adequate.

Uppercase was in fact closer to continental modernism than the above implies (as will be returned to below). Commander’s statement that the restrictive programme of the ‘modern movement’ is ‘no longer’ plausible better describes the editorial policy of *Motif*, in its continuation of the pluralism developed in the pre-war *Typography*.

Motif kept an eye on Swiss developments, discussing Swiss modernist typography in its second issue, twice in issue three, and again in issues five, six and nine. John Mills, in *Motif* 3 (1959), expressed an admiration for the quality of German and Swiss ‘grot typography’, but a concern that British work along such lines was formalistic ‘band-wagon stuff which only discredits “typography” as a whole’.³⁵ *Motif* 9 (1962) featured a direct criticism of Swiss typography as formalistic from Ernest Hoch in a review of Müller-Brockmann’s trilingual *Gestaltungsprobleme des Grafikers / The Graphic Artist and his Design Problems / Les problèmes d’un artiste graphique* (1961). Discussing Müller-Brockmann’s posters from 1957, Hoch writes ‘the formal principle of using only one typeface and size, with the simultaneous rejection of any spatial organization of type matter according to its content, was allowed to triumph over the prime purpose for which the posters were actually produced’.³⁶ Hoch argues that Müller-Brockmann’s typography is not, as Müller-Brockmann claims, ‘functional, objective and informative’; its restrictions are not a reduction to the essential, but an abandoning of the full functional repertoire of typographic design.

A particularly humorous response to Swiss typography is provided by Shand in his review of Gerstner and Kutter’s book *Die neue Graphik / The New Graphic Art / Le nouvel art graphique*, released the same year as the almost identically-named Zürich journal. It also featured German, English and French text in modular stacks of Grottesque type, and also used Akzidenz for display and 215 for text (Plate 3.2.7). Shand opens in three languages:

Zürich, Schweiz / Zurich, Suisse / Zurich, Switzerland must be a wonderful place for translators and typesetters; everything comes three ways. Not just a double-take but a triple-take; the block-makers don’t do so well, the illustrations only come once [...] well diese dokumentation ist von

James Shand (der schottische Bastard) / cette revue est par Jacques Shand (ce bâtard Écossais) / this notice is by James Shand (the Scots bastard) who has at last reached the point of no return, no respect for the latest of these Swiss, aseptic, asymmetrical, clinical analysis of the *Neue Grafik / Graphisme Actuel / New Graphic Design*.³⁷

He continues,

I will confess that my present and sudden allergy for these Swiss documents is excessive, illogical and completely irrational. Every time one of those beautiful cased histories arrived on my desk I used to rush to wash my hands, right up to the elbows, and put on my spotless white overall and my nice white breathing mask and typographer's skull cap [...] because the bloated cadaver of international graphic art was back on the nice, cold, white, Swiss art-paper slab. But no more — with this book I've really had it.

Shand, bored with the coherence of the Swiss style, asks 'why do they go on doing it?'

3.2.4 The Neo-Industrial Grotesque

We have already seen that the Swiss Modernists favoured Akzidenz over all other types. The depth of this obsession is demonstrated in the eight issue of *Neue Grafik* (1960). Neuburg reports on a project undertaken by students of the Kunstgewerbeschule in Zürich, under the direction of Müller-Brockmann, on the lettering and logotypes of industrial products (Plate 3.2.1). The solution arrived at — for every single product — was to replace the existing logo with the brand name set in Akzidenz. This, Neuburg claims, 'show[s] that lettering and design can be made into a single compact unity' and 'fulfils perfectly the purpose of the successful insignia'.³⁸ Yet Akzidenz's reign was already being challenged.

Much like the simultaneous appearance of Futura, Erbar and Kabel in the late 1920s, 1957 saw the release of three Grotesque faces of a new style. These were the Neo-Industrial Grotesques, Univers, Helvetica and Folio. Each of these types was derived from Akzidenz, and each introduced the same regularity in terminal design. In Akzidenz the terminals of many of the curved-strokes are angled (e.g. in a, c, e, C, G, J), as is also typically the case with other Industrial Grotesques. The Neo-Industrial Grotesques, in contrast, introduced strictly horizontal terminals across the board. And, as Neuburg points out, all three added curves to the straight-legged R of Akzidenz. As is often the case with innovations in typedesign, precedents abound. In fact Thorowgood's first upper- and lowercase Grotesque of 1834 generally adhered to horizontal terminals, as did many other subsequent designs. Aldo Novares's Etruria Vetulonia of

1942 also featured this regularity, as did his uppercase-only Microgramma of 1951 (upon which his upper- and lowercase Eurostile of 1962 was based) (Plate 3.2.4). However, for the most part such types were neither used nor intended for continuous text: the Neo-Industrials were derived from Akzidenz for which continuous text had already been sanctioned in Switzerland. Yet even here there was a precedent: Adrian Frutiger, designer of Univers, was inspired to regularise the terminals of Akzidenz by the early 1950s experiments of his teacher at the Kunstgewerbeschule in Zürich, Walter Käch.³⁹ None of this mattered to the Swiss who rejected the Geometric Grotesques on the grounds of their originality — in place of sheer innovation they sought only subtle refinement.

The first of these to be released, Frutiger's Univers, was an immediate sensation and received extensive attention in design journals internationally, including *Neue Grafik* and *Motif*. Its origins were in a project of Frutiger's, when a student of Käch.⁴⁰ The foundry Deberny & Peignot, with whom Frutiger was employed, held the French rights to Futura (which they marketed in France under the name 'Europe'). Once a best-seller, Europe was now rapidly going out of vogue.⁴¹ A more fashionable Grotesque was required.

The most striking feature of Univers was that it was released simultaneously in 21 versions, varying in weight and expansion, upright and oblique. (Plate 3.2.4). These were not given the typical nomenclature of 'light' 'bold' 'heavy' etc, but were named according to a numerical code which gave the type an air of technicality. Additionally, it was released, almost at once, as foundry type, for machine-setting, and for 'Lumitype' phototyping. Many existing Industrial Grotesques and American Gothics (as well as serified types, notably Cheltenham) were available in multiple variations; however family members had been gradually added over a course of years, and did not, in the opinion of many designers, harmonise well. Both Gill and Futura were already available in multiple weights, however there were problems with both. Gill's heavier weights were completely eccentric, related to the normal versions in basic skeleton but entirely different in tone. Futura's family members often appeared unrelated, such as the Albers-like Futura Black.

Univers also included a stylistic innovation (although not quite the revolution Frutiger claimed it to be). As Johnston, Renner, Koch and Gill had attempted before him, Frutiger sought to bring the Grotesque closer to the Roman. Underground, Futura, Kabel and Gill attempted this (to varying extents) by modelling the letter skeletons and proportions on Classical inscriptions and Renaissance types. Frutiger took a different approach. He retained the general letter style of the Industrial Grotesque, but brought the stroke structure closer to the Roman by increasing contrast (again, precedents abound; but again, the goal was to refine the Industrial, not to be

striking original). To the Industrial he made the same modifications that Folio and Helvetica would make: a reduction of extruder length and an increase in x-height. The increased x-height, so Frutiger claimed, was to make the type more 'international', as it minimised contrast between the upper- and lowercase.⁴² As it was put by Emil Ruder (with whom Frutiger consulted throughout the process of Univers's design), 'Univers is suitable for every language. The large x-height and the short ascenders of the miniscule enable the capitals to be fitted into the composition, even when they occur in large numbers [as in German]'.⁴³

In *Motif 5* (1960), Handover credits Univers with making the Industrial Grotesque 'typographically respectable', and having 'style, grace and harmony'.⁴⁴ Handover is enamoured of Univers, and (although in the very next issue of *Motif* he will claim that Grotesques of all shades are only suited for display) he claims that Univers (even in condensed weights) is suitable for text settings.⁴⁵ Though derived from Akzidenz, Univers, as Handover sees it, is a significant improvement: 'though the family features of Industrial Grotesque can be traced in, for example, a and g, they have been refined and purged and selectively bred during the [...] years that M. Frutiger has worked on the design'. Handover notes that unlike 'every other unserifed letter', which acquired new weights and variations in a 'piecemeal addition at different dates and, usually, by other hands', Univers, as a complete family of weights and variants was 'planned and designed by one man'.

Ruder himself reviewed Univers in the second *Neue Grafik* (1959). Ruder opened his review by first questioning the validity of designing new typefaces at all. 'The majority of new types are not intended to last,' he wrote, and 'it almost looks as though our own age is only attracted by the ephemeral.'⁴⁶

Every press works with one or more standard type faces and a comparison of the short-lived fashionable printing types with them reveals the curious fact that the former, almost without exception, are products of the present time, while the standard type faces belong to the past.

Nevertheless, Ruder concludes:

After several decades of restless groping for something worthwhile this new sans-serif fount gives reason for rejoicing, especially in the way in which the designer has resolved the formal and technical problems involved.

Ruder had previously been a typically-Swiss Akzidenz devotee. Upon Univers's release he became an immediate convert, and for the rest of his career Ruder exclusively used Univers.

Both Ruder and Frutiger described Univers, in its systematically-designed harmonising variants, as a functional solution to an existing problem in combining weights and styles of Grotesque. But Univers was more than such a Functionalist rationale allows. More important is how Univers provided, in Frutiger's own words, 'new possibilities for designers':

it became possible, for the first time, to work with a set of typefaces as a complete system. Thus the typographer was given an instrument which opened the way for him to new dimensions of artistic expression.⁴⁷

Univers did not solve a problem as much as it created a new way of designing. Nowhere is this more evident than in Ruder's formal experiments with the Univers family (Plate 3.2.5).⁴⁸

Helvetica was like Univers in certain respects (Plate 3.2.6). It was derived from Akzidenz (much more closely than Univers), featured horizontal terminals, reduced extruders and increased x-height. Unlike Univers, which was marketed from the outset as the work of Frutiger (making him a star typedesigner in the process), Helvetica's creators, Eduard Hoffmann and Max Meidinger, though acknowledged (both are credited in *Neue Grafik* in 1959), were not put forth as great designers in the same way in which Frutiger was. Like Akzidenz, upon which it was based, it had an air of anonymity, as the product of a foundry rather than a genius.

It was released by the Haas foundry as Neue Haas Grotesk, being renamed Helvetica to capitalise on the Swiss trend when licensed by the German Stempel foundry in 1960.⁴⁹ Although it was quite quickly released as foundry type in a range of sizes, it was initially only issued in two weights — light and semi-bold — with other variants added over a course of years. In 1983 it was released in an extended family as Neue Helvetica by Linotype, aping Univers in plan and numerical naming system.⁵⁰

Neuberg's review of Neue Haas Grotesk in the fourth *Neue Grafik* (1959) opens by asserting the validity of continued use of Akzidenz, 'which we are not in the least anxious to discard'.⁵¹ Nevertheless, he admits that Akzidenz 'had its weaknesses', and is enthusiastic about Helvetica as a development of Akzidenz. The replacement of angled with horizontal terminals, Neuberg believes, 'lends the type a greater homogeneity' producing a 'smoother' and more 'regular' appearance. For Neuberg it is precisely because Helvetica is not 'revolutionary' in its departure from Akzidenz (unlike the Geometric Grotesques) that it is to be praised.

Folio, by Konrad F. Bauer and Walter Baum, was given a positive, though fleeting, mention in Mills's article in *Motif 3* as a recent 'good grot'.⁵² As the third such Akzidenz derivative, Folio seemed to test the *Neue Grafik* acceptance of the Neo-Industrial. A short article

on Folio appears in *Neue Grafik* 5 (1960), ostensibly by Neuberg, it relied heavily on repeating directly a promotional document from Intertype.⁵³ Intertype claims, among other things, that text set in the original Industrial Grotesques ‘dazzles and tires the eye’. Whether Neuberg would agree or not to this assessment of Akzidenz is unclear: ‘we leave our readers to judge the truth of these statements’. Further, he declares that, ‘on principle’, he refrains from comparing Helvetica, Univers and Folio. Neuberg’s silence is frustrating. Attempting to determine his view, it seems to be one or both of the following: firstly, that Folio is inferior to Helvetica and Univers; and secondly, and more importantly, that the appearance of another type along these lines has left Neuberg, previously more positive about the idea of perfecting the Industrial Grotesque, weary of the seriousness of intent on the part of the foundries (‘mindful of competition from rivals’) in their production of new marginal differences in form.

In the fourteenth issue of *Neue Grafik* the task of reflecting on the Neo-Industrial types as a phenomenon is given to Günter Gerhard Lange. Lange, a type-designer for the Berthold foundry, was by no means a typical representative of the *Neue Grafik* view, yet here his cautious conservatism chimes

It is [...] doubtful (apart from the question of originality) whether the necessity really exists for re-organising and issuing sans serif types of the ‘old style’ [e.g. Akzidenz] in such numbers and whether it is economically justified.⁵⁴

Lange accepts, in principle, that there is nothing wrong with attempting new types. Nevertheless in face of the spate of Neo-Industrial Grotesques, he wonders, was Akzidenz working just fine?

The typographer and designer are continually reaffirming that no other type quite achieves the excellence which is peculiar to the older styles of sans serif [i.e. the Industrial Grotesques] [...] It is remarkable that this apparently artless, simple form of type can reflect so human an attitude, such positive zest for life and that it should be so sensitive to the slightest changes in form. Its value as a means of expression and its psychological character correspond absolutely to present modes of thought and feeling.

In contrast to Tschichold’s prophesied perfect grotesque designed by a scientific design committee, imperfection is here demanded, and even the dreaded trace of the individual designer:

The personal aspect plays a part even in the concise and apparently objective sans serif types of recent date [...] This goes to show that every form of designing, even the constructivist kind, is bound up with the artist's personality.

However this is no call to revive the sort of artist designed types of Klingspor, as the aim is still transcendence of cultural specificity: a good type 'ought to outlast fashion'.

The Neo-Industrial can be understood as a style resulting from the typefounding industry's attempt to capitalise on the growing popularity of Swiss modernism, just as the Geometric Grotesque was an attempt to provide types marketable as appropriate for New Typography. But the Swiss attitude to typedesign was already informed by a weary cautiousness, a distaste for how typefounding had trivialised 'constructive' typography with Futura and its followers. It is telling that in *Neue Grafik* positive reception of the Neo-Industrial Grotesque follows only after cautioning against the entire enterprise of producing new types.

3.2.5 An International Style

What Zürich typographers do will quickly be imitated by their contemporaries in Britain and America.⁵⁵

In *Motif*, the journal *Uppercase* (1958–1961) was marshalled in as a counter-example to the Swiss 'rigid, exclusive and consistent' approach (Plate 3.2.8). *Uppercase* was edited by Theo Crosby, an architect rather than a typographer, who would go on to be a founding partner of Crosby/Fletcher/Forbes and later Pentagram. As its first editorial announced, *Uppercase* was not devoted to typography but the 'whole field of visual communication'. Most often it focused on 'fine' graphic art, including the British pop-artists Eduardo Paolozzi and John McCale, as well as earlier modernists including Schwitters and Marcel Duchamp.⁵⁶ The fifth issue was devoted almost exclusively to the Charles Morris-derived theory of semiotics-as-praxis, devised at Ulm by Tomás Maldonado and Gui Bonsiepe.⁵⁷ Yet while the topics covered included a broader range than *Neue Grafik*'s near-exclusive preoccupation with 'constructive' typography, an examination of the design of *Uppercase* reveals that it was in fact much closer in ideology to *Neue Grafik* than Commander's review in *Motif* suggested.

The first issue was set flush left in Gill Sans bold, using line breaks between paragraphs in place of indents. The second issue used fully justified 216 (the bold counterpart of 215) for body copy, again without paragraph indents, although some pages used line breaks between paragraphs. 216 remained the body type until the final fifth issue (1961), which (designed by

Ulm-trained Maria Fraxedas) was the most elegant of all. 215 was used for body text, with headings in the same size in 216. Once again, neither indents nor line breaks were used to separate paragraphs, but any possible over-density such an approach might engender was offset by generous margins and a generally spacious handling of layout.

Although in many respects *Uppercase*'s typographic approach was close to the Swiss (certainly a great deal closer than to *Motif*), it did not fully follow Swiss style. *Neue Grafik* always highlights its own structure, dispersing blocks of text and imagery across a grid, producing a highly-categorised, technical appearance. Every page of *Neue Grafik* emphasises different beats in the same overall rhythmic structure. *Uppercase*, in contrast, is more serene. The editorial of its first issue announced that each issue would be 'an experiment in type', but this is no *Typography/Motif* experimentalism, it is rather more akin to Mondrian's endless variation of simple elements. In *Uppercase* a sense of variation in rhythm is produced at a slow pace, through subtle contrasts of structure and changes in stock (gloss artpaper, newsprint, and craft paper), spanning not only the single issue, but the entire series; slowly changing rhythms, changing in the process their own structural basis, unfurling like a Philip Glass composition.

The spread of Industrial and Neo-Industrial Grotesques in British design can be traced in, for example, the covers of Pelican Books, as the Gill Sans of the forties and fifties is replaced first in the 1960s with Akzidenz and then later in the same decade with Helvetica (Plate 3.2.9). From the early 1960s onwards, Akzidenz and shortly after, the Neo-Industrials were available in the United States, where firms such as Brownjohn, Chermayeff and Geismar propagated the 'international' style of typography.⁵⁸ Massimo Vignelli claims to have 'single-handedly imported Helvetica to the USA'.⁵⁹ While this is an exaggeration, beginning in the mid-1960s, through his firm Unimark, he played a significant role in turning Helvetica into the near ubiquitous typeface of corporate design (Plate 3.2.10). For Vignelli (a typographer whose pseudoscientific-Functionalist pretensions seemingly knew no bounds — he required the designers at Unimark to wear labcoats!)⁶⁰ Helvetica 'was the ultimate typeface': 'at the time I predicted that Helvetica would become the only typeface, obliterating once and for all the plethora of useless typefaces'.⁶¹

It would be unfair to think that all designers of this period, loyal to the Neo-Industrial, were as uncompromising and unnuanced as Vignelli. Gerstner, for example, was happy to declare his favouring of Univers as a 'personal preference'.⁶² Although Gerstner did adhere to Swiss modernists orthodoxies, such as a belief in the Grotesque as 'the typeface of the future' and a favouring of Grotesques in booksettings, he qualified such sentiments with the following: 'I do not mean by this that the modern designer must regard sans-serif or roman as mutually

exclusive alternatives. We have progressed beyond the either-or philosophy of the twenties'.⁶³ Further, he is at ease with the transient nature of typeface tastes, which he describes as 'inevitably a question of fashion'. To not acknowledge this is to be naively in the sway of the 'dream of the "functional" twenties' for a type 'immune to changes of style'.⁶⁴

Univers, Folio and Helvetica [...] have more features in common than any other group of sans-serif. Is this coincidence? Rather the spirit of the age! Future typographers will speak of the typical cuts of the fifties.⁶⁵

Conclusion

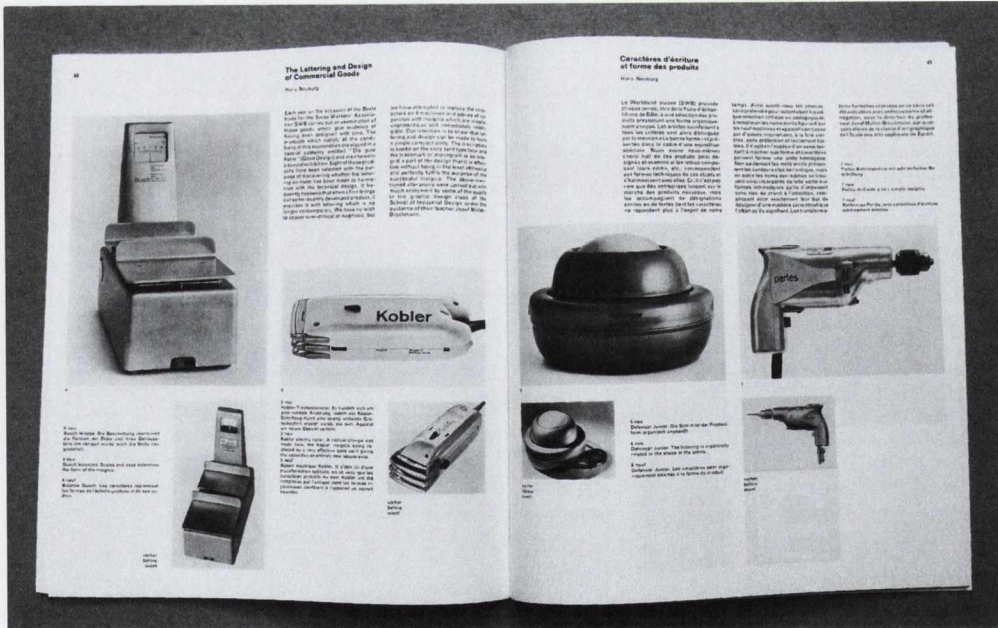
The supposed ubiquity achieved by Helvetica in the 1960s is often overstated. Despite the monomania of the likes of Vignelli, the success of the Neo-Industrial impacted the typefounding industry in the same way that the success of Futura (or any other success story) did — it encouraged the production of new types. New variations on the Industrial and Neo-Industrial themes appeared. Amsterdam produced a horizontal-serifed type named Mercator immediately following the first three Neo-Industrials.⁶⁶ Gertsner experimented with an Univers-like systematic family derived from Akzidenz.⁶⁷ Matthew Carter produced a Neo-Industrial, named Video, for Linotype in 1974.⁶⁸ There are endless other, different-by-a-hair's-breadth, Industrials and Neo-Industrials, and they continue to proliferate today. More significantly, the Neo-Industrial became yet another stylistic pole to be hybridised with others, increasing the complexity of Grotesque style. Two types by Novarese for Nebiolo are noteworthy in this regard (Plate 3.2.11). The first is Recta, which appeared shortly after the Neo-Industrials, and which, following Univers, was issued in an extended family. Like the Neo-Industrials it featured horizontal terminals, yet the lowercase a recalls Erbar and Kabel. Overall the letterforms could be called 'Industrialised Geometrics', too round to be Industrial and too square to belong to the Geometric Grotesque category.⁶⁹ Forma, from the end of the 1960s (which Novarese designed with the aid of a team including Bruno Munari) is again a hybrid of Neo-Industrial and Geometric elements, and was again conceived as an extended family.⁷⁰ It has the large x-height and horizontal terminals of the Neo-Industrials. Helvetica's square dots for i and j are present, yet so too are Futura's straight-descendered j and single-storey a. What we see is that, just as the Geometric Grotesque added more than simply a countable number of new types, the Neo-Industrial is not simply an addition to Grotesque style, it is a new reference point to be combined with others, producing new hybrids, new marginal differences.

- 1 Richard Hollis, 'Neue Grafik and British Designers', in supplement to *Neue Grafik: 1958–1965*, reprint, ed. by Lars Müller (Zürich: Lars Müller, 2014), pp. 18–19.
- 2 *Signature*, founded by O. Simon in 1935 was printed by the Curwen Press. Production ceased in 1940, resuming in 1946 and continuing until the mid-1950s. Its first run is described in Shipcott, pp. 37–55.
- 3 Tschichold, *New Typography*, pp. 15–29.
- 4 Tschichold, *New Typography*, pp. 30–51.
- 5 Tschichold, *New Typography*, pp. 52–64.
- 6 Hollis, *Swiss Graphic Design* (London: Laurence King, 2006), p. 44; Hollis, 'Neue Grafik and British Designers', p. 19.
- 7 James Sutton and Bartram, *Typefaces for Books* (London: British Library, 1990), pp. 68–69.
- 8 Richard Lohse, 'The Influence of Modern Art on Contemporary Graphic Design', *Neue Grafik* 1 (1958), pp. 4–35.
- 9 cf. Henryk Berlewi, 'Functional Design of the Twenties in Poland', *Neue Grafik* 9 (1961), pp. 2–30; Hans Ludwig C. Jaffé, 'Piet Zwarte, a Pioneer of Functional Typography', *Neue Grafik* 10 (1961), pp. 2–17; Paul Schuitema, 'New Typographical Designs in 1930', *Neue Grafik* 11 (1961), pp. 7–21; Echarid Neumann, 'Typography, Graphic Design and Advertising at the Bauhaus', *Neue Grafik* 17/18 (1965), pp. 29–55.
- 10 Lohse, 'De 8 en opbouw', *Neue Grafik* 14 (1962), pp. 47–49.
- 11 Max Bill, 'On Typography (1946)', trans. by Kinross, *Typography Papers* 4 (2000), pp. 62–70, p. 68.
- 12 Hans Neuberg, 'The New Haas Sans-serif Type', *Neue Grafik* 4 (1959), pp. 51–56.
- 13 Neuberg, 'A New Sans Serif Type: Folio', *Neue Grafik* 5 (1960), pp. 51–53.
- 14 Gerstner, *Compendium*, p. 138.
- 15 Handover, 'Letters without Serifs', p. 81.
- 16 Herbert Spencer, 'Introduction to the Exhibition', *Typographica* 5 (1952), p. 3.
- 17 Tschichold, *Illustrated History*.
- 18 Bill, 'On Typography', p. 63.
- 19 Marcus Rathgeb, *Otl Aicher* (London: Phaidon, 2006), p. 42.
- 20 Bill, 'On Typography', pp. 62, 63, 69.
- 21 Tschichold, 'Belief and Reality (1946)', trans. by McLean, *Typography Papers* 4 (2000), pp. 71–86, p. 73.
- 22 Tschichold, 'Belief and Reality', p. 75.
- 23 Tschichold, 'Belief and Reality', p. 80.
- 24 Paul Rand, 'Modern Typography in the Modern World', *Typographica* 5 (1952), pp. 27–28.
- 25 Robert Harling, 'Editorial', *Alphabet & Image* 6 (1948), pp. 1–3.
- 26 Cf. McLean, 'An Examination of Egyptians', *Alphabet & Image* 1 (1946), pp. 39–51; Allen Hutt, 'The Gothic Title-piece and the English Newspaper', *Alphabet & Image* 3 (1946), pp. 3–19.
- 27 Garland, 'Typophoto'; 'National Zeitung', *Typographica*, n.s. 3 (1961) pp. 41–51.
- 28 Anthony Adams, 'Review: *Typographica* 7', *Design* 179 (1963), p. 77.
- 29 McLean, 'A Motive for Motif', *Motif* 1 (1958), pp. 2–3.
- 30 Cf. Mosley, 'The type foundry of Vincent Figgins, 1792–1836', *Motif* 1 (1958), pp. 27–36; Tracy, 'Typography on Buildings' *Motif* 4 (1960), pp. 82–87.
- 31 Cf. Banham, 'More than Fabulous' *Motif* 2 (1959), pp. 78–79; Banham, 'The Return of the Curve' *Motif* 6 (1961), pp. 83–88.
- 32 Gernsheim, *passim*.
- 33 Rick Poyner, 'Motif Magazine: the world made visible', *Design Observer*, 3 December 2012 <<http://designobserver.com/feature/motif-magazine-the-world-made-visible/32978/>> [accessed 12 September, 2015].
- 34 John Commander, 'Two New Periodicals', *Motif* 2 (1959), p. 91.
- 35 John Mills, 'Some Grotesques', *Motif* 3 (1959), pp. 98–99.
- 36 Ernest Hoch, 'Swiss Guidance on Basic Problems of Graphic Design', *Motif* 9 (1962), pp. 100–101.
- 37 James Shand, 'Gedruckt in Schweiz / Imprimé en Suisse', *Motif* 3 (1959), pp. 107–108. In the cited passage Shand, perhaps as a deliberate allusion, mistranscribes Gerstner and Kutter's trilingual title (*Die neue Graphik / The New Graphic Art / Le nouvel art graphique*) in the form of the Zürich group's journal (*Neue Grafik / New Graphic Design / Graphisme actuel*).
- 38 Neuberg, 'The Lettering and Design of Commercial Goods', *Neue Grafik* 8 (1960), pp. 38–41, p. 40.

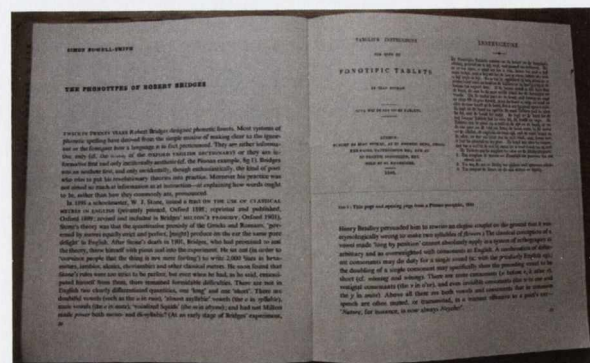
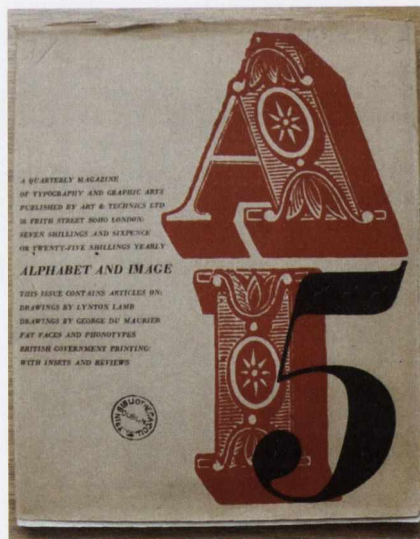
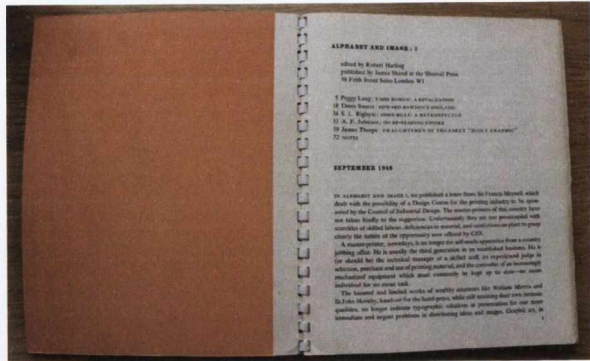
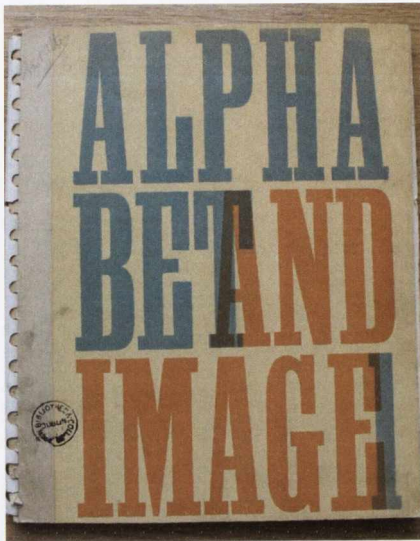
- 39 Dennis Cheetham and Brian Grimby, 'Design Analysis: typeface', *Design* 186 (1964), pp. 61–71, p. 67.
- 40 Frutiger, Heidrun Osterer and Philipp Stamm, *Adrian Frutiger – Typefaces: the complete works* (Basel: Birkhäuser 2009), p. 18.
- 41 Frutiger, Osterer and Stamm, p. 95.
- 42 Cited in Cheetham and Grimby, p. 64.
- 43 Emil Ruder, *Typographie/ Typography* (London: Tiranti 1967), p. 47.
- 44 Handover, 'Palette for Printers', *Motif* 5 (1960), pp. 94–95.
- 45 Handover, 'Letters without Serifs', p. 81.
- 46 Ruder, 'Univers: a new sans-serif type by Adrian Frutiger', *Neue Grafik* 2 (1959), pp. 55–57, p. 56.
- 47 Frutiger, *Type Sign Symbol* (Zürich: ABC Edition, 1980), p. 22.
- 48 Frutiger, *Type Sign Symbol*, pp. 152–156.
- 49 Shaw, *Helvetica and the New York City Subway System: the true (maybe) story* (Cambridge, MA: MIT Press, 2011), p. 54.
- 50 Cees W. de Jong, *Sans Serif* (London: Thames and Hudson, 2006), pp. 153, 121.
- 51 Neuberger, 'New Haas Sans-serif Type', p. 55–56.
- 52 J. Mills, pp. 98–99.
- 53 Neuberger, 'New Sans Serif Type: Folio', p. 53.
- 54 Günter Gerhard Lange, 'On the Designing of Sans serif Types', *Neue Grafik* 14 (1962), pp. 53–57.
- 55 Handover, 'Letters without Serifs', p. 66.
- 56 Crosby, 'Eduardo Paolozzi', *Uppercase* 1 (1958); Magda Cordell, 'John McCale', *Uppercase* 1 (1958); Richard Matthews, 'Kurt Schwitters', *Uppercase* 2 (1959); Hamilton, 'Towards a Typographical Rendering of the Green Box', *Uppercase* 2 (1959).
- 57 Tomás Maldonado, 'Notes on Communication', *Uppercase* 5 (1961), pp. 5–10; Maldonado and Gui Bonsiepe, 'Sign System Design for Operative Communication', *Uppercase* 5 (1961), pp. 11–18; Bonsiepe, 'Persuasive Communication: towards a visual rhetoric', *Uppercase* 5 (1961), pp. 19–34.
- 58 Shaw, *Helvetica and New York City Subway*, p. 51; Robert Brownjohn, Ivan Chermayeff and Tom Geismar, 'The Work of Brownjohn Chermayeff and Geismar', *Typographica*, n.s. 2 (1960), pp. 16–28.
- 59 Massimo Vignelli, *Vignelli: from A to Z* (Victoria: Images, 2007), p. 81.
- 60 Poynor, 'When Designers Wore Lab Coats', *Creative Review* 29/11 (2009), pp. 52–55, p. 52.
- 61 Vignelli, *A to Z*, p. 81.
- 62 Gerstner, *Compendium for Literates*, p. 132.
- 63 Gerstner, *Designing Programmes* (London: Tiranti, 1964), p. 19.
- 64 Gerstner, *Compendium for Literates*, p. 138.
- 65 Gerstner, *Designing Programmes*, p. 21.
- 66 Sutton and Bartram, *An Atlas of Typeforms* (London: Lund Humphries 1968), p. 110.
- 67 Gerstner, *Designing Programmes*, p. 19–35.
- 68 Sutton and Bartram, *Typefaces for Books*, pp. 272–273.
- 69 Jaspert, Berry and Johnson, p. 327.
- 70 Jaspert, Berry and Johnson, p. 275.



Neue Grafik (1958–1965), various covers.



Neue Grafik 8 (1960), pp. 38–39. Article showing project in which the logotypes of industrial products were replaced with lowercase Akzidenz.



Alphabet and Image (1946–1948), selected covers and spreads.

Plate 3.2.2: Alphabet and Image

Selected covers and spreads from *Motif 1* (1958), *Motif 3* (1959), *Motif 4* (1960)

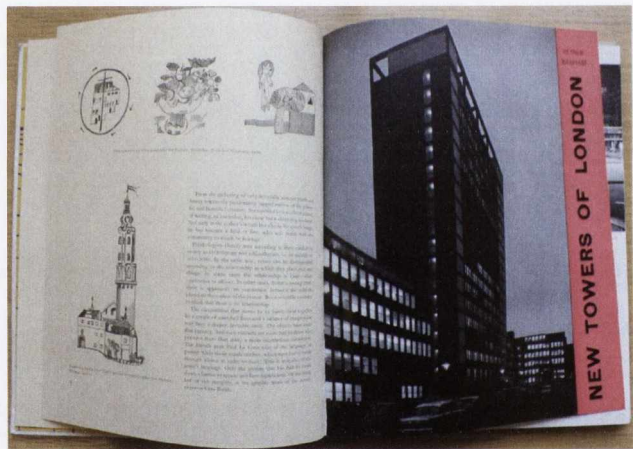
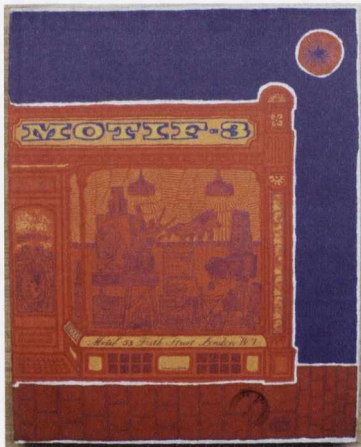
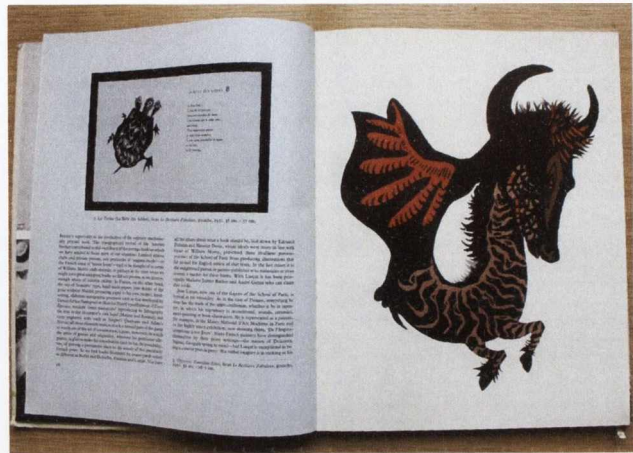
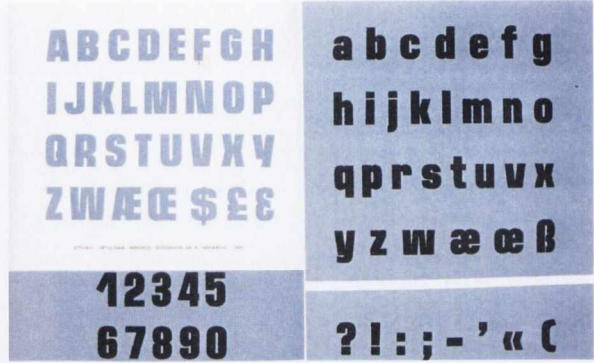
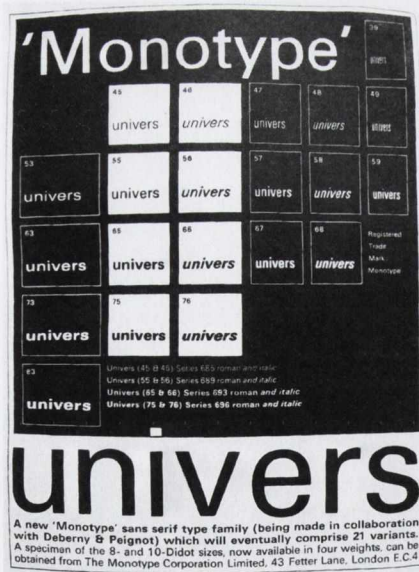


Plate 3.2.3: *Motif*



Types by Novarese for Nebiolo with horizontal terminals. Left: advertisement for Nebiolo featuring Eurostile (1962), and the type on which it was based, Microgramma (1951). From: Hutchings (ed.) *Alphabet*, p. 158. Above: Etruria Vetulonia (1942), from Blackwell, *Twentieth-century Type: remix*, p. 81.



Advertisements for Univers. Left: from Hutchings (ed.) *Alphabet*, p. 149. Right: from *Typographica*, n.s. 5 (1962).



Ruder's *Typographie* (1967), was trilingual. Spreads showing Ruder's experiments with Unvers.

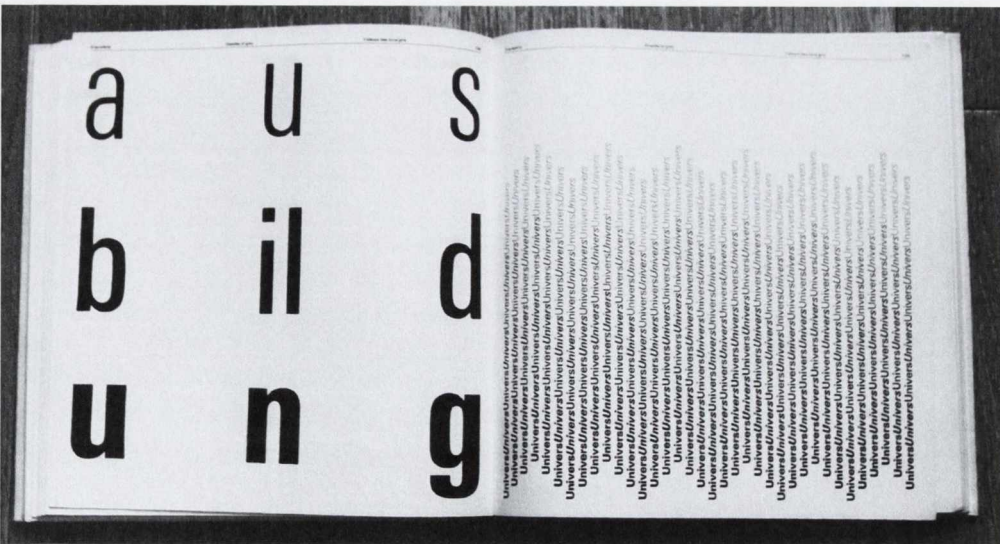
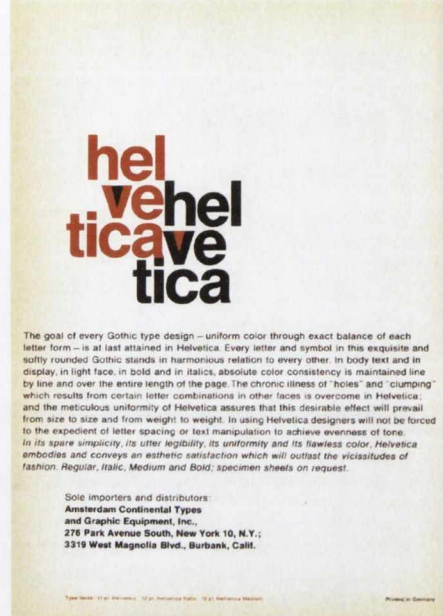


Plate 3.2.5: Ruder's *Typographie*



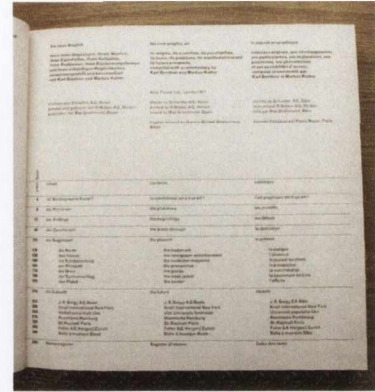
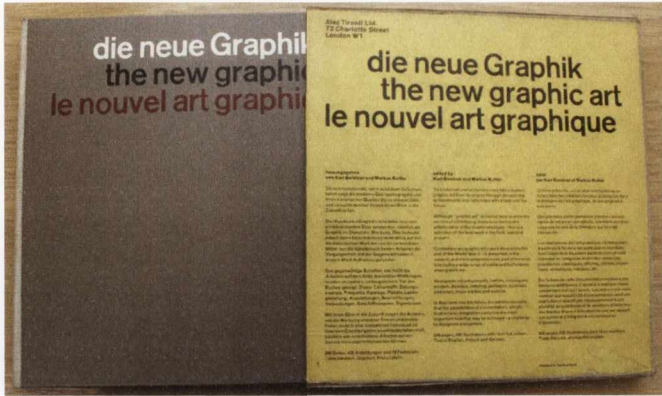
Above: specimen for Neue Hass Grotesk (pre-1960). From Blackwell, *Twentieth-century Type: remix*, p. 98. Right: Helvetica specimen (1963). From Shaw, *Helvetica and New York City Subway*, p. 57.



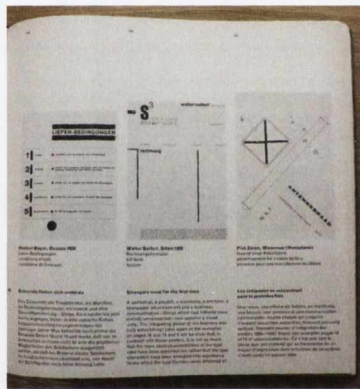
Alle Erziehung beginnt mit der praktischen Seite des Lebens. Wahre Erziehung jedoch muß darüber hin aus den Charakter zu formen suchen. Das erste Ziel ist, den Studenten mit Wissen und Können für das praktische Leben auszurüsten. Als zweites Ziel müssen wir seine Persönlichkeit entwickeln und ihn zum rechten Gebrauche dieses Wissens und Könnens fähig machen. So geht es in echter Erziehung nicht nur um praktische Ziele, sondern auch um Werte. Unsere praktischen Ziele verbinden uns mit der spezifischen Struktur unserer Epoche. Unsere Werte da

3

Folio. From *Neue Grafik 5* (1960), p. 52.



Gerstner and Kutter's *Die Neue Graphik* (1959).



Below: Müller-Brockmann's *History of Visual Communication* (1971). Another trilingual Swiss typographic publication.

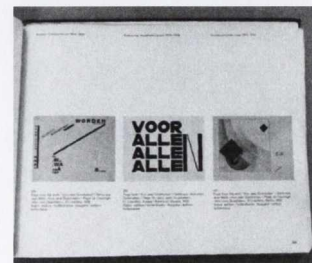
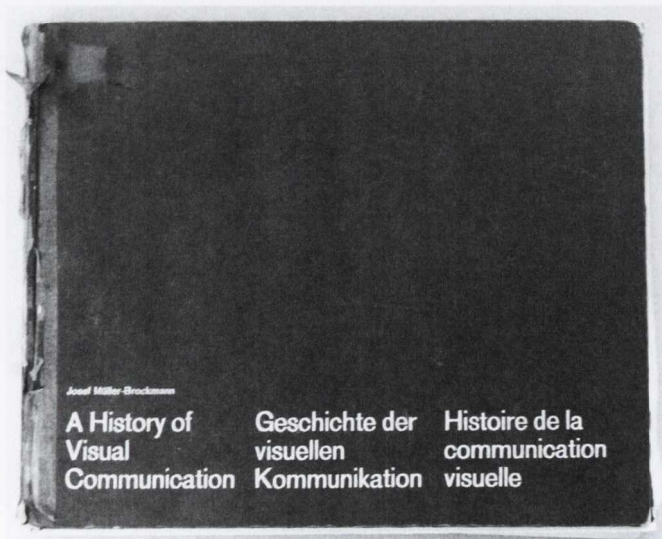
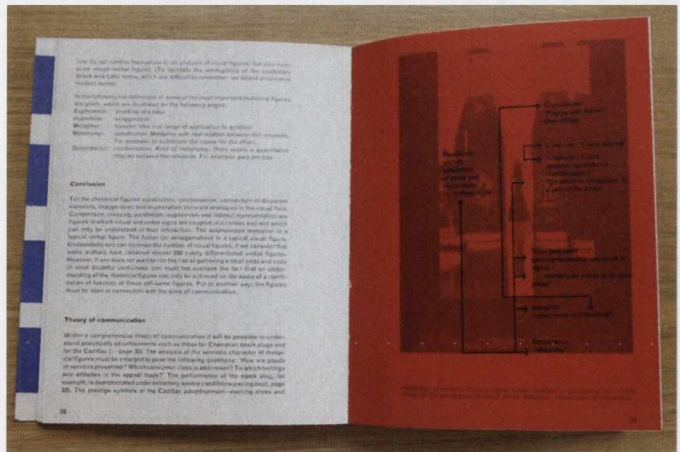
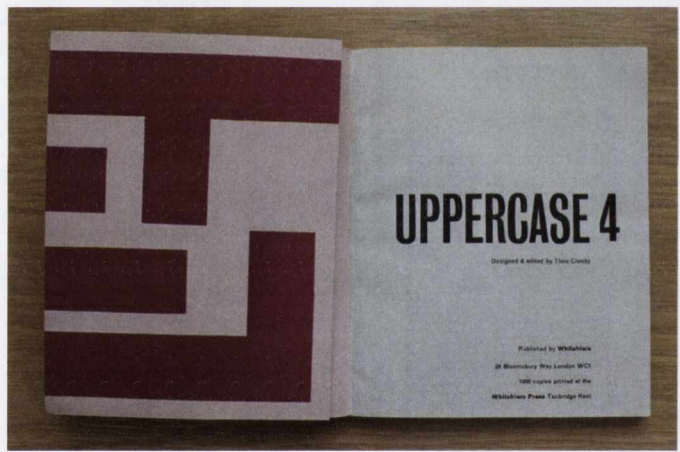
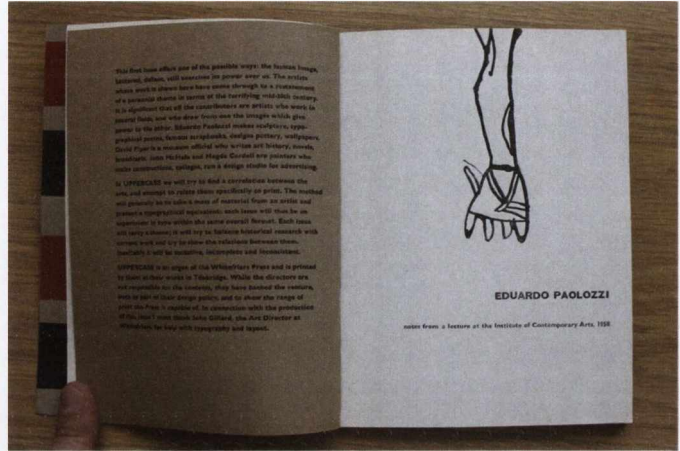
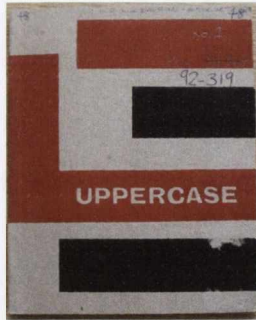


Plate 3.2.7: *Die Neue Graphik*, *History of Visual Communication*



Uppercase (1958–1960), various covers and spreads.

Plate 3.2.8: Uppercase



Above: *Typographica*, n.s. 3 (1961). Cover and fold-out spread showing Gerstner and Kutter's 'National Zeitung' project



Various Pelican covers.
 Top row: Gill Sans, 1945, 1955.
 Middle row: Akzidenz, 1962–1967.
 Bottom row: Helvetica, 1967–1972.



Logos using, or based on, Helvetica. From Müller *Helvetica: homage to a typeface*

Plate 3.2.10: Helvetica logos

| | | | |
|---------------------|---------------------|---------------------|---------------------|
| Hamburgetons | Hamburgetons | Hamburgetons | Hamburgetons |
| Hamburgetons | Hamburgetons | Hamburgetons | Hamburgetons |
| Hamburgetons | Hamburgetons | Hamburgetons | Hamburgetons |
| Hamburgetons | Hamburgetons | Hamburgetons | Hamburgetons |
| <i>Hamburgetons</i> | <i>Hamburgetons</i> | <i>Hamburgetons</i> | <i>Hamburgetons</i> |
| <i>Hamburgetons</i> | <i>Hamburgetons</i> | <i>Hamburgetons</i> | <i>Hamburgetons</i> |
| <i>Hamburgetons</i> | <i>Hamburgetons</i> | <i>Hamburgetons</i> | Hamburgetons |
| <i>Hamburgetons</i> | Hamburgetons | Hamburgetons | Hamburgetons |

ABCDEFGHIJKLMN**OP**QRSTUVWXYZW
 abcdefghijklmnopqrstuvxyzw
 1234567890

ABCDEFGHIJKLMN**OP**QRSTUVX
 abcdefghijklmnopqrstuvxyzw
 1234567890

Above: Gerstner's experimental Akzidenz family. From Gertsner, *Designing Programmes*, pp. 32–33.

Left top: Novarese's *Recta* (c.1958). Left below: Novarese's *Forma* (c. 1967). From Jaspert, Berry, Johnson, *Encyclopedia of Typefaces*, pp. 275, 327.

3.3 Travel by Grottesque

3.3.0 Introduction

In *Politics and Script* (a book posthumously published in 1972 based on lectures delivered in 1957), Stanley Morison writes that the Grottesque now ‘competes with the Humanistic script’ and that ‘the competition daily increases in vigour in all Western countries’.¹ No longer dismissible as a radicalist’s fad, Morison acknowledges that the Grottesque now ‘occupies a position which is unassailable’.² Nevertheless, Morison also correctly notes that Grottesque use is often limited to particular contexts: books and newspapers remain primarily the territory of serified letters. This is still largely true in the twenty-first century. Occasionally novels are published in Grottesque, as are some academic books, yet serified types remain the norm. In newspapers, as demonstrated by Allen Hutt’s *The Changing Newspaper* (a study of newspaper design in Britain and America from 1622–1972), throughout the twentieth century Grottesque type became increasingly common in headlines (Tempo was particularly prevalent for a number of decades), nevertheless for bodytext serified faces reigned.³ One area, Morison notes, in which the Grottesque came to attain hegemonic status was on information and signage graphics for systems of transport. Already in the nineteenth century both the underground District Railway of London and the German State Railways adopted the exclusive use of Grottesque letters.⁴ The use of Grottesque letters for transport is today so ubiquitous that, as Mark Ovendon’s *Transit Maps of the World* (2007) demonstrates, save only a handful of exceptions, every official urban rail map in the world that uses the Latin alphabet employs serifless letters.⁵

The association of Grottesque letters with transport signage was further cemented following the international spread of Swiss ideas on the formal means to achieve neutrality and clarity in typographic design. Here, for a while at least, the Industrial and Neo-Industrial Grottesque were highly fashionable, but of course they were not described as such: for sign systems, as Anthony Froshaug put it, ‘transient fashionable style’ would not suffice.⁶ The London Underground alphabet, designed by Edward Johnston in 1916 (analysed in Chapter 3.1), an early case of the systematic use of Grottesque letters for the signage of a transport system, was initially not hugely influential.⁷ Johnston’s design was highly idiosyncratic, ‘interesting, some fifty years later, more for its individual characteristics than as a final solution to display letterforms’.⁸ Following the Swiss precedent, in place of ‘transient fashionable’ types with ‘individual characteristics’, a formal preference for the Industrial and Neo-Industrial dominated. There were benefits to the use of Grottesque letters which could be expressed in

Functionalist terms: Grotesques lent themselves more easily than Romans to the modifications of increased x-height and shallower descenders.⁹ Such modification allows that in upper- and lowercase setting, lowercase letters (the letters which most frequently occur) are proportionally larger, and therefore visible at a greater distance. But formal disadvantages were also perceived in the regularity of the Neo-Industrials (as will be discussed below), and a certain interpretation of the Johnston/Gill style re-appeared on the signs of travel in the 1970s. The paradox of the Grotesque on transport signage is that, on the one hand it represents a sort of hegemony of the Grotesque, yet, on the other, this area of design has helped to make the Grotesque itself less homogeneous.

3.3.1 Regulated Letters

Since the early twentieth century, British road signs have been predominantly, though not exclusively, in Grotesque letters. In 1921 the Department of Transport made a first attempt at standardising the letters of road signs, recommending the use of ‘block letters’.¹⁰ A greater attempt at standardisation was made in 1933 when a particular alphabet design was recommended, and subsequently was prescribed by regulation in 1944 along with standards of layout.¹¹ Interestingly, this alphabet was in many ways similar to Caslon’s ‘Egyptian’, confirming Mosely’s assertion of the lineage of this style among British signwriters (Plate 3.3.1). The committee behind the regulation had rejected a recommendation that they use the highly-esteemed Roman capitals of the Trajan column on the grounds that such letters were ‘better fitted for contemplative perusal than for correct reading in a swift glance’.¹² Grotesques, they believed, were the most legible letters for such a context. An unnamed ‘leading typographer’ writing on British road signs in 1946 supported the use of Grotesque letters but was critical of the particular alphabet in use as being excessively regular and modular in its design.¹³ It appeared unsophisticated when compared to the nuanced and crafted shapes of printing types. Of particular concern to the author was the regularity of letter spacing: whereas in typography letters are carefully spaced and subtly adjusted so as to have an even appearance, the letters of British road signs were spaced almost uniformly.

Such sophisticated attention to detail was not yet an entirely feasible suggestion as road signs were produced by non-typographic signwriting and sign-making procedures. Therefore there was an inevitable variation in the style and quality of letters produced. Regulatory standards were obliged to rely on simple-to-apply modular formulas. A set of letters devised by the *Deutsches Institut für Normung* (known as DIN-1451), initially designed in the 1910s and iteratively revised through to the 1940s, would hugely influence the appearance of the

typographic environment, not just in Germany but also in other European countries including Sweden and Switzerland (Plate 3.3.2). DIN-1451 was not conceived as a typeface (although it is available as one today) but a standardised system of lettering, that could be adopted by any institution, public or private, saving time in the consideration of letterstyle and ensuring that lettering adhered to a standard endorsed by the Deutsches Institut für Normung.¹⁴ This demanded a regular simplicity in design, to facilitate easy re-drawing by people otherwise untrained in lettering.¹⁵ But again, this also meant there would be an inevitable variation in how the letters were rendered. DIN continued to be used on German road signs, long after technical limitations necessitated a modular script, and were still to be found as late as 1992, a fact which irritated Otl Aicher:

The Federal Republic of Germany is still using a technical script for its road signs that deploys a uniform width of stroke in tracing the n, even where the arch emerges from the vertical. No other European country uses a traffic typography that is so retarded or imbued with bureaucratic thinking.¹⁶

Although it is true that Johnston's Underground had little direct influence on transport signage lettering initially, there is at least one counterexample. In the early 1960s, a DIN-like modular, and in many ways unpolished, letterstyle was to be found on the motorway signs of Holland (Plate 3.3.3).¹⁷ However, there was also an attempt to impose a more crafted style, influenced by Johnston and Gill. Between the years 1948 and 1956, the Dutch standards organisation, *Nederlandse Norm* (NEN), put together a committee including typesigner Jan van Krimpen and legibility researcher G.W. Ovinck, to produce standards for lettering to be used on 'buildings, public signs, tombstones, etc.'¹⁸ These standards were published in 1963 as NEN 3225. The Dutch solution was in every way different from DIN. Firstly, NEN 3225 included both Roman and Grotesque letters. More significantly, the very idea of DIN-1451, as a letter of a standardised quality yet simple enough to be drawn by the inexperienced letterer, was explicitly rejected. Such modular forms were thought by the NEN committee to inhibit character recognition.¹⁹ The NEN 3225 alphabets were precisely designed and carefully crafted, presented on 1mm grid paper at a cap height of 70mm, for 'the inexperienced letter-draughtsman to copy slavishly'.²⁰ The Roman, designed by van Krimpen, though admirable as a printing type design, featured sophisticated subtleties which an 'inexperienced letter-draughtsman' would find near impossible to reproduce no matter how 'slavishly' he attempted to copy it.

The NEN 3225 Grotesque, as Ovink puts it,

derive[s] from Johnstonian roots [rather] than from either the Erbar Futura group, or the nineteenth-century craftsman-typecutter's models, be it in their original form or in the recent, completely dehydrated versions of the Univers-Helvetica group.²¹

The NEN committee determined that in order to avoid 'an all too short-lived topicality' and 'personal mannerisms' — to shrug-off fashion — they should adopt letters modelled on Gill's (rationalised on the grounds that Gill Sans retains 'the skeleton proportions of old style printing types'). Yet, the Gill style, as Tracy notes, had relatively few imitators, and was thus much more an 'individual' style.²² NEN 3225 backed the wrong horse — the Industrial Grotesque and its new variants were in ascendancy as the letter of travel and public space, becoming, if not due to the innate appeal of its forms at least through familiarity, the most-expected/least-intrusive form. The Roman was not broadly adopted, yet the Grotesque was used for the street signs in several cities including Amsterdam where it is still to be found, pronouncing Dutch street names in an English accent.²³

3.3.2 The Typographic Environment

The reader encounters typefaces in other forms as well as in printing. His daily environment, in fact his entire living space is filled with typographic characters of all kinds. Unlike printed matter, with which the reader can bring the written word into his field of vision according to his own desire and choice, lettering on buildings is forced into view without restraint. Depending on its design, such lettering can provide an enrichment of the environment, almost in the sense of ornamentation or on the other hand, it can be ugly and therefore experienced as aggressive 'pictorial noise', inimical to the environment.²⁴

The development of signage systems in the early 1960s followed the spread of Swiss ideas on typography through Europe, Britain and the United States. The ordered, austere style of Swiss modernism, and with it the tight solidity of the Industrial Grotesque, were felt to fulfil the requirement in such systems for economy of expression and clarity.

In the early 1960s, the idea that the world was too full of typographic variation was applied beyond the printed page, to 'typography' or lettering in the environment. We have already cited Bayer's statement, that the world was too full of linguistic-typographic interference ('too many words'). In 1961 a former colleague of Bayer's at the Container

Corporation of America, Egbert Jacobson, with New York Museum of Modern Art curator, Mildred Constantine, produced a book entitled *Sign Language: for buildings and landscape*. The book, designed by Elaine Lustig who had previously designed the signage for Mies van der Rohe's Seagram Building, was set entirely in the Haas foundry's Industrial Grotesque, Französische, a choice which reflected the (Swiss-) modernising agenda of the text. In *Sign Language*, Constantine and Jacobson lament the lack of typographic consistency in the advertisements and signage of the urban environment:

Whether in Peachtree Street in Atlanta, Market Street in San Francisco, Broadway in New York, Piccadilly in London, the Piazza del Duomo in Milan, or on Main Streets throughout the world, we are confronted with a vulgar and mistaken notion of free enterprise expressed in the sign language of our time. We are assailed with a confusion of words, names and slogans in all sizes, in all forms, in all colours and shapes — a never-ceasing roar that moves, blinks, flashes warnings, pleads and cajoles, demands, reminds, but seldom instructs. In this cacophonous bombardment, what do we look at? What do we see? Can anybody see in this impetuous, disorderly landscape of lettering?²⁵

They go on to declare that 'absence of planning' in the placing of 'information and communication signs' has rendered twentieth-century cities 'ugly'.²⁶ Although they caution that a complete standardisation of advertisement and signage would produce a 'colourless conformity', they demand greater clarity, order and regulation of the typographic environment, without ever quite specifying the appropriate letterstyle to fulfil such an objective.²⁷

Robert Brownjohn, writing in a 1961 issue of *Typographica*, also criticises the 'mess of architecturalism, engineering, planning and tycoonery' evident in the typography and lettering of the urban environment.²⁸ In an insightful comment on the semioticisation of the environment, Brownjohn notes that 'the fact is that we begin to see our cityscapes not so much as architecture as three-dimensional typography'.²⁹ Brownjohn found pleasure in the 'music' of the lettering of 'street-level designers, typographers, scribblers and even advertising men'. However this pleasure was simply making the best of the given; Brownjohn believed that planned urban environments, in which architecture and 'three-dimensional typography' were carefully integrated, to be an urgent necessity.

A 1965 article in the British Design Council's magazine, *Design*, by Dennis Cheetham and Noel Carrington, endorsed the idea that street signs needed to be designed consistently on a national level. Carrington accepted that in residential districts a 'local idiom' could be maintained but in city centres 'anything less than a national system of naming and numbering

will hardly do'. Carrington lamented that not only were signs inconsistent, but were 'lost in the camouflage of surrounding advertisements'.³⁰ He claimed that both the colour and scale of the signs was something which could be 'scientifically determined', but he refrained from discussing the typestyle to be used. Cheetham, later in the article, also allowed for variation in style of letter 'on aesthetic grounds alone', provided the letters adhered to certain qualities (not precisely defined). In support of this Cheetham quoted Jock Kinneir:

I am not against variety, but I am against bad siting and against weak lettering. It's all right so long as the lettering is bold enough and big enough: variety can give a regional atmosphere, an urban character of a very specific kind, especially in an urban area that is a distinctive entity. But the lettering has got to be in the right place, and the siting must be standardised wherever possible.³¹

As is somewhat evident from Kinneir's statement, there was a degree of resistance to a complete standardisation of the typographic environment. The pluralistic tastes of many British typography intellectuals of this period embraced diversity of style. It is no surprise then, that at the same time as many modernists saw in the typographic environment noise and chaos, several British authors who turned their attention to the typographic environment, took a characteristically pluralistic view, championing the variety of traditional styles of letter in use in public signage, and the role such letters played in creating a unique sense of place. This was not so much a case of disagreement — opposition to standardisation was rarely directly stated — rather it was a case of a difference of interest. The eclecticist British authors found in the variety of letters in the environment not so much a graphic chaos to be debabelised, as a richness of letterforms, an ecological diversity, to be studied and protected. In the same year that Constantine and Jacobson's book was published, Walter Tracy (appropriately in *Motif*) argued for local street signs as a resistance to uniformity: 'original lettering may be a small but useful means of adding a visible touch of humanity to the growing rectangularities of the urban landscape'.³² Alan Bartam, in his later studies of public lettering maintained such a view, writing in 1978 that while 'for national road signs, consistency is I suppose desirable', he would 'hate' to see a standardised letter used for street names throughout the country.³³

3.3.3 Standardised Terminals

Despite some British resistance, British designers would also play a central role in the development of standardised Grotesque-utilising signage systems. Among these designers were

Margaret Calvert and Jock Kinneir, as well as the firm of Theo Crosby (editor of *Uppercase*), Alan Fletcher, and Colin Forbes known as Crosby/Fletcher/Forbes.

The 1961 issue of *Typographica* in which Brownjohn's essay appeared was devoted to signs and lettering in the urban environment. Brownjohn's contribution was primarily in the form of photographs of type and lettering in the environment, which, according to Spencer's editorial

reveal the pleasures, for people who are letter-conscious, of primitive street 'typography' and the accidents of juxtaposition — pleasures which [...] are so easily destroyed (though not necessarily, if local traditions are respected) by concentrated attempts to erase ugliness from the streetscape.³⁴

However, on the whole, Spencer sided with the need to 'erase ugliness'. In his own article (a photo-essay with a relatively short textual component), he highlighted the degree of inconsistency and typographic noise a motorist would face navigating the route from central London to Heathrow Airport.³⁵ In the following issue of *Typographica*, Spencer extended the journey, investigating the inside of the airport itself. Spencer criticises the

melange of signs that faces the driver and pedestrian, the visitor and the traveller [which] brutally underlines how essential is the need for the exercise of logic and discipline and professional skill in the preparation of directional and informational signs.³⁶

Heathrow had, in the years since its original construction, accumulated a mass of signs, both commercial and informative, lacking consistency and competing for space.³⁷ The exception to this was the signage system for the new Oceanic Terminal (terminal 3). The design was handled by Colin Forbes (c. 1961), working with the then very young and equally gifted typesigner, Matthew Carter. The son of Harry Carter, Matthew then in his mid-twenties had already worked with his father at the Oxford University Press, trained as a punch-cutter in the Enschedé foundry, and designed several typefaces.³⁸

Taking Akzidenz as the basis, Forbes and Carter's 'Airport' alphabet made several modifications (Plate 3.3.4). The x-height is greater and the descenders reduced, resulting in a larger size of lowercase letter, to allow signs to be 'read and recognised at a distance at speed'.³⁹ Secondly, regular horizontal terminals replace Akzidenz's angled terminals. It is striking that Airport repeats Helvetica's modifications of Akzidenz. In Crosby/Fletcher/Forbes's book *Sign Systems Manual* (1970) the authors acknowledge the similarity of their design to Helvetica.⁴⁰ In

fact, Carter has said that had he been aware of Helvetica's existence at the time, it would have been used.⁴¹ In the spirit of standardisation the regularised forms of the letters embodied, Airport was subsequently made available for others to use through various photo-reproduction technologies.⁴²

In the 1960s the Industrial Grotesque and its new regularised variants would become increasingly prevalent on transport signage systems (Plate 3.3.5). As Paul Shaw has demonstrated, contrary to popular conception, the system for the New York City Subway by Bob Noorda and Vignelli for Unimark from the late 1960s initially used Akzidenz rather than Helvetica.⁴³ At the same time the Boston Subway signage system by Cambridge Seven Associates used Helvetica. Interestingly, new signage systems often utilised custom designs which modified Akzidenz to have Helvetica's standardised horizontal terminals. Bob Noorda's design for the Milan Metro of 1964 was derived from Akzidenz and Helvetica, having Helvetica's horizontal terminals and a further increased x-height and shortened descenders.⁴⁴ The M and W are condensed in comparison with Helvetica. Further it re-instated the Akzidenz straight-legged R, and its Q, though curve-tailed, is closer to Akzidenz. In 1964 British Rail introduced a new corporate identity, designed by the firm Design Research Unit, implemented on a national level replacing a variety of regional graphic styles.⁴⁵ Jock Kinnear Associates were hired to design the signage and lettering. The alphabet, designed by Margaret Calvert, again, was derived from Akzidenz and Helvetica (Plate 3.3.6). Again, x-height was increased and descenders reduced. As with Noorda's design, a more Akzidenz-like Q is featured. The j was narrowed, and the curved strokes on many letters (including j, s, t, y and S) were slightly straightened creating a somewhat squared look. This design was then applied to all British Airports, giving standardised terminals to all airport terminals.⁴⁶ Benno Wissing, of Total Design, was hired to work on the design of signage for a new terminal of Amsterdam's Schiphol Airport, opened in 1967.⁴⁷ Wissing also took Akzidenz as the basis for his, condensing the letters, and again, increasing x-height and reducing ascenders. However Wissing did not introduce horizontal terminals.⁴⁸ Interestingly the text on the Schiphol signs was, apart from gate codes, entirely lowercase.

3.3.4 Humanist Traffic

While it seemed almost comical when it was suggested in *Neue Grafik* that all logotypes should be replaced by Akzidenz, around the turn of the 1970s, in certain contexts, it seemed like Helvetica might achieve such a ubiquity. Increasingly Airlines were given Neo-Industrial rebrands. Aicher's re-brand for Lufthansa (conceived in 1962) replaced the earlier all-caps

Egyptian logotype with upper- and lowercase Helvetica, believing Grotesque more appropriate as it 'was equated with technology and modernism'.⁴⁹ Vignelli's re-brand for American Airlines from 1967 followed suit, imposing Helvetica across the board, as did the 1974 re-brand of Aer Lingus (Plate 3.3.7).⁵⁰

Though Aicher used Helvetica for Lufthansa, ultimately he would reject Helvetica, on the grounds that it had a 'lack of originality' and was 'almost too elegant'.⁵¹ Aicher's 1970s work became indelibly associated with Univers. Aicher admired the stressed strokes of Univers for, as he saw it, bringing the Grotesque closer to the Roman. For his 1971 sign system project for Frankfurt Airport, Aicher developed a thoroughly consistent set of symbols, designed according to a modular system (informed by Aicher's studies of semiotics at Ulm), in the belief that communications at a polyglot airport environment should rely as little as possible on natural language. Aicher paired these elegantly-elongated symbols with the subtly-crafted forms of Univers, and bright colours (Plate 3.3.8). Compared to the bold, black and white, commanding (almost authoritarian) appearance of Vignelli's New York Subway or Fletcher's Oceanic Terminal, which rely on more monoline and heavier Akzidenz/Helvetica forms, Frankfurt's signage seems to speak in a gentler, though nonetheless persuasive, voice. Aicher further developed his system of symbols in his celebrated design for the 1972 Munich Olympics, and again these symbols were paired with Univers which was used for all applications from the largest signs to the smallest leaflets. For signage directing traffic within the Olympic village, Aicher created his own version of a bold condensed Univers which he named Traffic — a type he also used in his 1974 design for Franz Josef Airport in Munich.⁵²

Frutiger himself was tasked with the design of transport signage systems in the early 1970s, for the Paris Métro and Roissy/Charles de Gaulle Airport. For the Métro, as Aicher did, Frutiger created a new version of Univers Bold Condensed, less condensed than the bold condensed 'Univers 65' of the original family (Plate 3.3.8). The Métro signage featured no lowercase letters. This was possibly to do with economic and practical constraints — it was necessary to use certain existing sign sizes. This may explain why a condensed uppercase was used, as it allowed a larger height of letter on smaller signs. However Frutiger claimed 'for reasons of legibility proper names in block capitals are easier to grasp', and also that words are 'read from left to right, but recognised as a familiar whole'.⁵³ This is a surprising claim, at odds with the general consensus on the more distinctive word shapes produced by lowercase letters.

In an earlier signage project, Orly Airport (1959), of which he was not proud, Frutiger had made another variation of Univers. Charles Peignot, director of the Deberny & Peignot foundry, who was in charge of the project ('I just followed his instructions') had asked Frutiger

to base his letters on A.M. Cassandre's eccentric display face, named Peignot.⁵⁴ From Cassandre's Peignot, Frutiger seems to have only taken the exclusive use of majuscule forms, and the greater, Roman-like, stroke stress. Otherwise the design followed Univers (horizontal terminals included), albeit with an awkwardly-realised exaggeration of stroke contrast. While Univers's stroke contrast does provide a greater character differentiation than Helvetica, its regular terminals also give the characters a degree of uniformity — a feature retained in Aicher's Traffic and Frutiger's Métro. At Roissy, Frutiger would also produce a Grotesque influenced by Roman form, but this time in character rather than stroke structure (Plate 3.3.9).

For the signage system itself, unlike (and possibly in response to) Aicher's heavy use of non-linguistic symbols, Frutiger relied mostly on text (in both French and English). 'The written notice has proved to be the most serviceable element [...] It is superior to the pictorial sign'.⁵⁵ The written word 'Bar', so Frutiger believed, was more universally understood than a picture of a glass.⁵⁶ The letters were, of course, Grotesque. But something new was needed, as Frutiger believed the regularised terminals of the Neo-Industrial had had their day: 'the sanserif faces of the 1950s and '60s [Helvetica and Univers] already have a dated appearance'.⁵⁷

While it is true that, as Tracy has noted, Gill Sans had 'few imitators' initially, ultimately Gill Sans was absorbed into combinatory aesthetic of the Grotesque. Here Frutiger's Roissy design played a decisive role. In an interview shortly after the release of Univers, Frutiger said that if it were not for the need to create forms which would translate easily across a broad system of weights and widths, his design 'would have been more like Gill's'.⁵⁸ Gill Sans was, he claimed, 'a very pure form of sans serif — there are letters I dislike, but in spirit it is simple and humanistic'. In his letterdesign for Roissy, Frutiger took aspects of the Gill's Humanist Grotesque and integrated them with the more solid forms of his own Univers.⁵⁹ Overall the design has a regularity and consistency absent in Gill, and much of the lowercase (b, d, h, u, m, p, q) is very close to Univers. Yet, gone are Univers's horizontal terminals, resulting in more open (and therefore more Gill-like) apertures on characters such as S, s, a, c, e and s. The move away from the regular shapes of the Neo-Industrial was informed by a deliberate attempt to produce more differentiated characters; an a priori theory that letters with lesser uniformity were of greater legibility.⁶⁰ The Roissy letters have less obviously contrasted strokes than Univers, although stroke contrast is present and as with Univers such contrast follows the Modern axis rather than Gill's erratic approach.

The Roissy alphabet was later used on French motorway signage, and also became a successful commercial typeface, released by Linotype in 1976 as 'Frutiger'.⁶¹ Frutiger was by no means the first Grotesque to attempt to emulate Roman forms. Not only had Gill done so

(and in different degrees, Renner and Koch), so too had other designers, including Hans Eduard Meier, whose Syntax of 1968 attempted to be both 'modern' and to follow the 'highly legible Antiqua faces from past centuries'.⁶² However, what was significant about Frutiger for the development of Grotesque style was that with the synthesis of the 'Humanist' and the Neo-Industrial, Frutiger expanded Grotesque vocabulary by demonstrating how the pointedly-isolationist forms of the 'Academic Sans' (designed intentionally in opposition to the Industrial and Geometric Grotesques) could be brought into conversation with other Grotesques.

Since Frutiger's Roissy project, many other designs intended for signage use have continued, and furthered, the attempt at greater character differentiation (Plate 3.3.9). Frutiger itself has been updated to include a hockey-stick l, and two perhaps superfluous modifications in the numerals: serifed feet added to the number 1 (which was already distinguished from l and by its diagonal stroke) and an unfortunate dot in the centre of the 0. Other similar types are FF Info Display (used in Düsseldorf Airport) and Linotype Vialog, both of which have Frutiger/Gill-like open apertures and various details to aid in distinguishing characters such as l, 1 and I. As Erik Spiekermann has noted, much of this involves reinstating in Grotesques, characteristics already found in Romans.⁶³ 'Why not use serif faces in the first place, you may ask?' The answer Spiekermann gives is that 'committees' and 'engineers', rather than designers, have been behind public signage designs. This was true for earlier letters, such as DIN-1451 and those found in Britain in the first half of the twentieth century. However, we know that many designers were enthralled with the aesthetic of the Grotesque, advocating it as the most modern, legible and appropriate form for such contexts. Though always insisted as a logical or functional solution, it was aesthetic satisfaction in the regularity of the Neo-Industrial, in how it chimed with a vision for a rationalised world, a purified typographic environment, that led to its imposition on transport signs in the 1960s. It would be naïve for us to assume that today's taste for differentiated characters is purely rational, that the image of varied but harmonised forms, united in diversity, does not somehow chime with our self-image as being of a post-ideological age (this subject will be returned to in Chapter 4.2).

3.3.5 Sans Evidence

Already, from the mid-1940s, US road signs included the sort of differentiated characters typical in more recent custom signage types. Standardised letters were introduced in the mid-1940s by the Federal Highway Administration (FHWA) for use not only on highways, but also streets, bike routes, and other public traffic signage contexts (Plate 3.3.10). Initially they were released, in the form of charts to be reproduced by signwriters, as six series (named 'a' to 'f') of

uppercase and numeral characters, ranging from a highly condensed Series A to a moderately expanded Series F. In 1966 they were updated: the most-condensed Series A was removed and an additional 'E Modified' series added between E and F, and a lowercase provided for E Modified and F. The 2000 update provided lowercase for all series.⁶⁴ Though the stroke weight in each series is generally uniform, the letters are far less modular than DIN. The numerals, in particular, have a uniquely curved style, especially notable in the more expanded series. The central diagonal of the 2 has a high arch, and the 5, 6, 8, feature elliptical curves which seem to bulge like over-filled water balloons. Similarly, the bowl of lowercase a being rounded on both sides (as in Erbar), has a bulging ebullience. Other distinctive characteristics of the lowercase include the slanted terminals on ascenders and descenders (meaning that b and d and p and q are not simply reflected pairs, and lowercase l is distinguished from uppercase l). The United States was ahead of the tendency towards such differentiated characters, though soon Britain catch up and overtake, introducing a letter not only differentiated, but synthesising prior Grotesque form.

Due to the increase in roads and road use in Britain throughout the 1950s, the 1944 road sign regulations (described above) came to be felt insufficient.⁶⁵ From the early 1950s there were moves to bring British road signs in line with European standards.⁶⁶ In 1957 a new, DIN-like standard uppercase alphabet was established, although it was not rigorously adhered to (Plate 3.3.10).⁶⁷ This alphabet would very soon be replaced with a more modern design. In the closing years of the 1950s, as construction of the first British motorway (M1) was underway, the 'Anderson Committee' was established to develop a new system of signs. The committee was comprised of Sir Colin Anderson, Noel Carrington (a designer who had worked for Penguin)⁶⁸ and others including architects, landscape architects, and civil servants of various levels. Above we cited an 'unnamed typographer' who had demanded that a typographer be consulted in future sign lettering. For the first time such an idea was accepted: graphic designer Jock Kinneir who had already produced signage for Gatwick Airport, was hired as a consultant to the committee.⁶⁹ Together with his colleague Margaret Calvert, they changed the face of British roads.

Highspeed motorways were new to Britain in the late 1950s. The Anderson Committee determined that the existing road signs were 'completely inadequate' to deal with this situation and that an entirely new design was needed.⁷⁰ The Committee consulted the signage for existing motorway systems in the United States as well as in Europe, and several members of the Committee travelled to research the motorway signage of Belgium, Holland and West Germany. Informed by their research, the decision was made to use upper- and lowercase on British road signs for the first time. Kinneir, who did not disagree with this decision, later claimed that the

argument for greater legibility in upper-and lowercase on the basis of word shape remained unproven, and that therefore this choice was therefore ‘subjective’, although the Anderson Committee’s report of 1962 makes reference to an American empirical study which supported upper- and lowercase.⁷¹ Nevertheless the Anderson Committee was happy to mix ‘functional’ and ‘aesthetic’ justifications for their design: their report makes explicitly clear that, as motorway signs are of necessity large, there was a need to produce a design having aesthetic merit.

The committee, impressed by the German road signs, had initially suggested the use of DIN letters, but Kinneir rejected this idea on ‘aesthetic’ grounds. Instead Calvert and Kinneir produced a new design which became known as Transport (Plate 3.3.11). The design of the letters was informed in part by experiments, albeit of a relatively informal kind. As the letters were to be produced from a reflective material there was a risk of ‘haloing’, causing the forms to blur, so the reflective effects of various stroke weights were examined in an underground garage. Further it was determined that such methods demanded a broader counterform than DIN-1451 provided. As with the other 1960s systems described above, it was determined that a larger than typical x-height would allow the letters to be viewed more easily at a distance. Various x-height ratios were tested by ‘mounting them on blue panels, propping them up against a tree in Hyde Park and then walking towards them to see which could be read from the greatest distance’.⁷²

Such experimentation informed certain aspects of the design (x-height, stroke thickness), but undeniably the design was primarily Kinneir and Calvert’s formal interpretation and modification of prior letters. Following the Swiss/International aesthetic trend, the signs themselves were asymmetric, abundant in negative space, and the arrows were reduced to a graphic minimum. Nevertheless the signs resisted the taste for excessive modularity, allowing fluidity in the composition of each sign. Like Fletcher’s Airport of around the same time, Akzidenz appears to have been the starting point for Transport (the numerals are almost identical). Yet, Kinneir and Calvert did not follow the ‘Helveticaisation’ trend. In fact the design moved closer to Gill Sans. Like Gill, the central join of the M is raised. There is a slight opening-up of the apertures (though moderate when compared to Gill) in the S and s, and particularly in both the a and g. And interestingly the l is curved. Although visually distinct, in conception the design somewhat pre-empted Frutiger, as a synthesis of aspects of Gill’s irregularity and openness into the more consistent Industrial idiom. Kinross, inadvertently, undermines the formal nuance of the design when he claims that Transport ‘reject[s] formalism at every turn’, implying that that which is always opposed to formalism — function — explains

the design. Although Transport certainly was free of particular, then fashionable, Neo-Industrial formalisms.⁷³

The signs were publicly trialled on a small area of road on the Preston Bypass.⁷⁴ Their appearance provoked a significant degree of public discussion, which led in turn to a comparative testing of alternative designs. Writing in 1989 Kinross praised the project, the public debate that followed, and the attempt to provide an empirical answer to the questions posed in the debate, as representing a lost civic-spirited, rational approach to design in which ‘the process of [...] design [...] was to a significant extent open to public discussion, to amendment and rational justification’.⁷⁵ However Lund’s illuminating discussion of the affair (summarised below) offers a less utopian picture.

Following the appearance of the test signs on the Preston Bypass, a public controversy erupted in the columns of not only specialist engineering journals and the journal of the British Council Of Industrial Design, but also in the popular press — including *The Daily Telegraph*, *The Observer* and *The Times*.⁷⁶ The lettercutter and printer at the Cambridge University Press, David Kindersley, placed himself at the centre of the debate. Kindersley, a representative of British Traditionalism, rejected Kinneir’s work as naïve (at times resorting to personal insults) and too much in the sway of Continental fashion.⁷⁷ Kindersley, following traditional thinking, argued not only were capitals the most appropriate for public lettering but that serifs were necessary for legibility. Those in favour of Kinneir’s design argued in response that serifs and variation in stroke weight would not work in the reflective material to be used. Each side claimed science to be on their side as regards the benefits of their favoured letterstyle.⁷⁸ Thus, the British Road Research Laboratory commissioned two researchers, A.W. Christie and K.S. Rutley, to determine the superior style. Lund, however, does not take this as evidence of an example of the sort of civic-engagement described by Kinross. Lund notes that Kinneir’s project was already in production, and that the purpose of the experiment was rather to placate, and thereby silence, Kindersley, viewed as an ‘indefatigable crank’.⁷⁹ A tone of exasperation is indeed detectable in the otherwise sober Anderson Committee report in reference to ‘some criticism’ which occurred in ‘the correspondence column of *The Times*’.⁸⁰

Kindersley proposed his own solution, which was neither modern nor traditional, but rather highly eccentric. (Plate 3.3.11). Though majuscule and serified, his letters were designed to have a maximum irregularity, with the aim of diminishing the possibility of character confusion. For example, E and F, which typically have identical (or near identical) structures save E’s bottom horizontal, were given an array of extra differences: the crossbar of the E is tapered, while that of the F is serified; the top horizontal of E is serified above and below, while

that of the F is serified above and tapered below. Similarly the top terminal of the C has serifs while that of G has none. Many of the other characters are unusual for no obvious reason: the central stroke of B is thinned making it top and bottom heavy, almost recalling the Victorian 'Italian Old Face'; and the U approaches being horseshoe shaped. Kindersley also tackled the signs on which the lettering appeared, purging the signs of negative space and imposing symmetry in rejection of Kinneir's 'off-centre and asymmetrical contemporary typographic fashion'.⁸¹ At the same time he happily borrowed, and weakened, Kinneir's non-letter graphics, appropriating the headless arrows whilst diminishing their directional force.

Christie and Rutley's experiment compared four different styles of letter: an uppercase Johnston-based letter drawn by Kindersley at the Road Research Units behest; Kindersley's own design of oddly-serifed capitals; Kinneir's design as already in use; and Kinneir's design at a reduced size with greater linespacing. Ninety-six signs containing the same information in each of the styles were placed in turn on moving cars, travelling slowly across a field to ten to fifteen seated subjects. The stated aims of the experiment were to determine which style of letter could be read at a greater distance, whether upper- and lowercase was superior to uppercase, and whether serifs were integral to legibility or not. As this description makes clear the experiment was not sufficiently designed to answer the third of these questions: as Kinneir's design was only presented in upper- and lowercase and Kindersley's only in upper, it would be impossible to determine if differences detected were due to casing or style. Such an error in experiment design is referred to as involving 'uncontrolled variables' (a subject that will be returned to in Chapter 4.1). As regards determining the relative strengths of Kindersley and Kinneir's designs in their intended casing, the experiment was also seriously flawed. Both designs were presented in equal cap-heights, regardless of the fact that Kinneir's design featured predominantly lowercase letters which were approximately twenty-five per cent smaller than Kindersley's capitals. Lund argues that, as lowercase letters are narrower than uppercase, Kinneir's letters could have been increased in size in an attempt at compensation without requiring a wider sign.⁸² In effect, the tests compared larger Kindersley letters than Kinneir letters. The results were therefore not entirely surprising. Kindersley's letters came out on top, followed by Kinneir's design, with the Johnston letter third, and the reduced size Kinneir last. Despite this result, Christie and Rutley concluded that the determined difference was so small that it was not sufficiently reliable to generalise from. In short: no significant result was found, and even if one had been found, the experiment was not sufficiently designed to allow its findings to be accepted. In absence of proof either way, the Anderson Committee continued on as planned, rejecting Kindersley's design on aesthetic grounds, as Kinross notes.⁸³

Lund notes that later accounts of the experiment have often misrepresented this experiment in one of two ways: either claiming that it was definitively determined that Kindersley's design was superior; or claiming fallaciously that the experiment found in favour of Kinneir. A third, more subtle, way of misrepresenting the experiment is possibly expressed by Kinross: 'no significant difference in legibility was found'. It is vital that it not be accepted that the experiment determined Kindersley and Kinneir's designs to be equally legible (this is not necessarily what Kinross means here; I use this only for demonstration). The experiment was not sufficiently designed to tell us anything about the relative strengths of each set of letterforms. If the absence of a clear result tells us anything, it that the researchers failed to design a way of testing the relative legibility of letterforms. As Lund has demonstrated, and as we will see in the next chapters, failure to produce meaningful results due to poorly designed experiments (uncontrolled variables), has blighted attempts to determine empirically the role of serifs in 'legibility'.

Conclusion

The origins of Grottesque letters in signage contexts resides not only in the intuition that simplicity of form equates with legibility, but also in the fact that such simple forms were easily rendered by sign-producers and signwriters. The later consolidation of the association of Grottesques and signage followed the Swiss formal preference for Industrial Grottesque letters. What is interesting to note is that, even among designers in agreement on the general suitability of Akzidenz/Helvetica as the basis of signage systems, in imposing modifications based on the same functional rationale (increased x-height for distance legibility) a range of minutely differentiated forms arise. Even Frutiger's 'total system' type, Univers, did not supply enough variants — both Aicher and Frutiger were compelled to produce new versions for their signage systems. More dramatically, as Frutiger synthesised Gill with Univers, a through-road breaks into the stylistic cul-de-sac of the 'Humanist Sans', opening new possibilities for Grottesque stylistic combination and variation.

Discussing the Transport project, Kinneir writes that one of their aims was to ensure that the signs would be easily distinguished from other signs, therefore the signs needed a clear 'image'.⁸⁴ The ubiquity of Grottesques on road signs can be understood on this level as creating a self-fulfilling functionality, not necessarily related to the intrinsic suitability of such letterforms: we recognise official road signs in Grottesque as official road signs, the presence of serifs with not fit this image.

- 1 Morison, *Politics and Script*, p. 322
- 2 Morison, *Politics and Script*, p. 330.
- 3 Hutt, *The Changing Newspaper* (London: Gordon Fraser, 1973), passim.
- 4 Morison, *Politics and Script*, p. 330.
- 5 Mark Ovendon, *Transit Maps of the World*, 3rd edn (London: Penguin 2007), passim.
- 6 Anthony Froshaug, 'Road Traffic Signs', *Design* 176 (1963), pp. 36–50, p. 50.
- 7 Shaw, *Helvetica and New York City Subway*, p. 17.
- 8 Crosby, Fletcher and Forbes, p. 12.
- 9 Lange, p. 54.
- 10 Traffic Signs Branch, *The History of Traffic Signs* (London: Department of Transport, 1991), p. 6.
- 11 Traffic Signs Branch, p. 10.
- 12 Dudley Noble, *The Book of Road Signs* (London: William Clowes & Sons/The British Road Federation, 1946), inside back cover.
- 13 Cited in Noble, inside back cover.
- 14 Ludwig Goller, *Beschriftung von Zeichnungen Schildern, Druckvorlagen, usw: nach DIN 1451, DIN 16 und DIN 17* (Berlin: Beuth, 1949).
- 15 G.W. Ovink, 'NEN 3225: Dutch Standard Alphabets', in *Alphabet: international annual of letterforms*, ed. by R.S. Hutchings (London: James Moran, 1964), pp. 123–130, p. 123.
- 16 Aicher, p. 172.
- 17 Margaret Wissing, 'Road Signs in Holland', *Typographica*, n.s. 4 (1961), pp. 17–27.
- 18 Ovink, p. 123.
- 19 Jan Middendorp, *Dutch Type* (010: Rotterdam, 2004), p. 298.
- 20 Ovink, p. 124.
- 21 Ovink, p. 124.
- 22 Tracy, *Letters of Credit*, p. 95.
- 23 Middendorp, p. 299.
- 24 Frutiger, *Type Sign Symbol*, p. 70.
- 25 Mildred Constantine and Egbert Jacobson, *Sign Language: for buildings and landscape* (New York, NY: Reinhold, 1961), p. 10.
- 26 Constantine and Jacobson, p. 19.
- 27 Surprisingly, Constantine and Jacobson's lack of specific prescription of letter style seems in part to arise from a poor fluency in discussing typeface and letter design. One example of their confusion is the mis-identification of the letters on Mies van der Rohe's Barcelona Pavillion as Futura, when in fact a basic uppercase geometric letter is used, featuring a geometrically severe, Bauhaus-like S with parallel horizontal strokes. cf. Constantine and Jacobson, pp. 56, 76.
- 28 Brownjohn, 'Street Level', *Typographica*, n.s. 4 (1961), pp. 29–60, p. 29.
- 29 Brownjohn, p. 29.
- 30 Noel Carrington and Cheetham, 'Street Name Signs', *Design* 195 (March 1965), pp. 40–45, p. 41.
- 31 Carrington and Cheetham, p. 44.
- 32 Tracy, 'Typography on Buildings', p. 87.
- 33 Bartram, *Street Name Lettering in the British Isles* (London: Lund Humphries, 1978), unpaginated.
- 34 Spencer, 'Editorial', *Typographica*, n.s. 4 (1961), p. 1.
- 35 Spencer, 'Mile-a-minute Typography?', *Typographica*, n.s. 4 (1961), pp. 3–16.
- 36 Spencer, 'London Airport Looks Up', *Typographica*, n.s. 5 (1962), pp. 35–44, p. 35.
- 37 James Cousins, 'The Off-white Cliffs of London', *Design* 175 (1963), pp. 31–35, pp. 31–32.
- 38 'Type reviews', *Motif* 4 (1960), pp. 94–99, p. 96.
- 39 Crosby, Fletcher and Forbes, p. 16.
- 40 Crosby, Fletcher and Forbes, p. 16.
- 41 Cited in: Shaw, *Helvetica and New York City Subway*, p. 18.
- 42 Crosby, Fletcher and Forbes, p. 76.
- 43 Shaw, *Helvetica and New York City Subway*, passim.
- 44 Shaw, *Helvetica and New York City Subway*, pp. 19, 67.
- 45 Robert Spark 'Face-lift for BR', *Design* 193 (1965), pp. 46–51, p. 47–49.
- 46 John L. Waters, 'Britain's Signature', *Eye* 18/71 (2009), pp. 46–49.

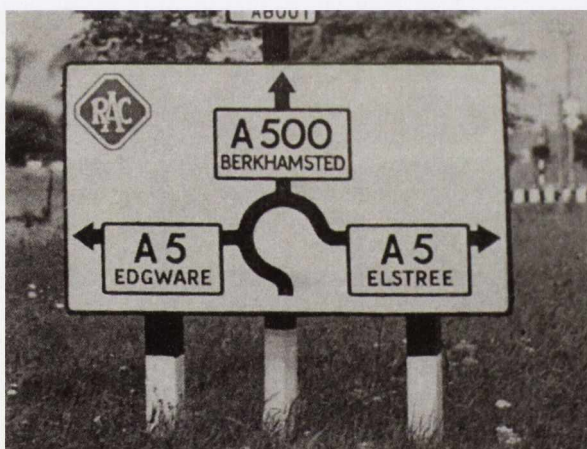
- 47 Ben Bos, 'Revisiting Schiphol: Benno Wissing and the airport that changed the world', *Print* 65/4 (2011), pp. 60–65, p. 61.
- 48 Bos, p. 63.
- 49 Rathgreb, p. 61.
- 50 Linda King, 'Saints, Shamrocks, and Signifying Practices: Aer Lingus and the materialisation of Irish identity', *Éire-Ireland* 45/1–2, pp. 128–152, p. 149.
- 51 Aicher, p. 172.
- 52 Rathgreb, p. 128.
- 53 Frutiger, *Type Sign Symbol*, p. 71.
- 54 Frutiger, Osterer and Stamm, p. 134.
- 55 Frutiger, *Type Sign Symbol*, p. 80.
- 56 Frutiger, *Type Sign Symbol*, p. 86.
- 57 Frutiger, *Type Sign Symbol*, p. 80.
- 58 Cheetham and Grimbley. Includes an interview with Frutiger by Matthew Carter, pp. 62–64.
- 59 Frutiger, Osterer and Stamm, p. 224.
- 60 Frutiger, Osterer and Stamm, p. 227.
- 61 Jong, pp. 136, 225.
- 62 Hans Eduard Meier, cited in Jong, p. 218.
- 63 Erik Spiekermann, *Stop Stealing Sheep*, 3rd edn (San Francisco: Adobe Press, 2014), p. 25.
- 64 Federal Highway Administration, *Standard Highway Signs* (U.S. Department of Transportation, 2004), § 9, p. 1 <<http://mutcd.fhwa.dot.gov/SHSe/Alphabets.pdf>> [accessed 08 September 2015].
- 65 Kinneir, 'The Practical and Graphic Problems of Road Sign Design', in *Information Design: the design and evaluation of signs and printed material*, ed. by Ronald Easterby and Harm Zwaga (Chichester: John Wiley, 1978), pp. 341–350, p. 341.
- 66 Traffic Signs Branch, p.10.
- 67 Spencer 'Mile-a-minute Typography?', p. 3.
- 68 Phil Baines, *Penguin by Design* (London: Penguin, 2005), pp. 16, 34.
- 69 Ministry of Transport, *Traffic Signs for Motorways: final report of the advisory committee* (London: Her Majesty's Stationery Office, 1962), p. 3; Froshaug, 'Roadside Traffic Signs', p. 50.
- 70 Ministry of Transport, p. 2.
- 71 Kinneir, 'Practical and Graphic Problems', p. 344; Ministry of Transport, p. 4.
- 72 Kinneir, 'Practical and Graphic Problems', p. 345.
- 73 Kinross, *Unjustified Texts: perspectives on typography* (London: Hyphen, 2011), p. 153.
- 74 Traffic Signs Branch, p. 12.
- 75 Kinross, *Unjustified Texts*, p. 155.
- 76 Lund, p. 130.
- 77 Lund, p. 131; see also p. 131 n. 223.
- 78 Lund, pp. 132–133.
- 79 Lund, p. 133.
- 80 Ministry of Transport, p. 4.
- 81 Cited in Lund, p.140.
- 82 Lund, p. 136.
- 83 Kinross, *Unjustified Texts*, p. 155.
- 84 Kinneir, 'Practical and Graphic Problems', p. 344.



Above left: Standardised alphabet of 1933, reminiscent of Caslon's Egyptian. From Traffic Signs Branch, *History of Traffic Signs*, p.9.

Above right: a sign from 1939 showing the 1933 alphabet as well as cruder modular letters. From Nobel, *Book of Road Signs*, p. 12.

Right: A 1946 road sign following the 1944 regulations. From Nobel, *Book of Road Signs*, p. 17.



Below right: Another sign following the 1944 regulations. From Traffic Signs Branch, *History of Traffic Signs*, p.9.

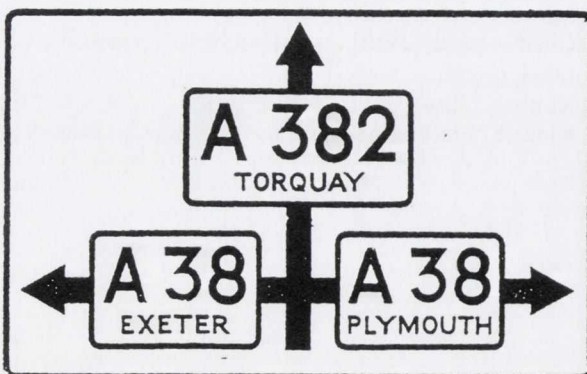
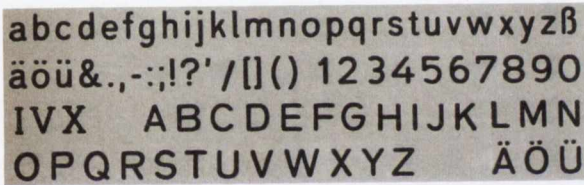
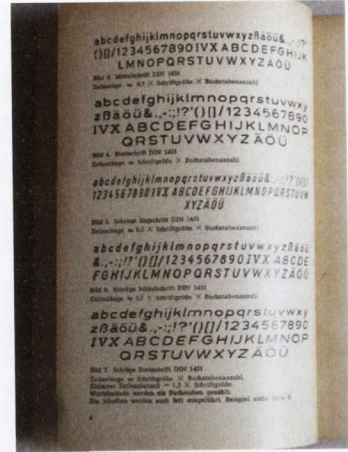
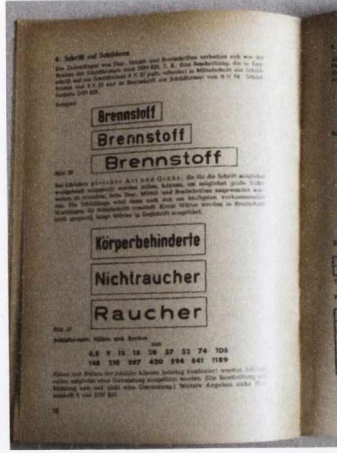
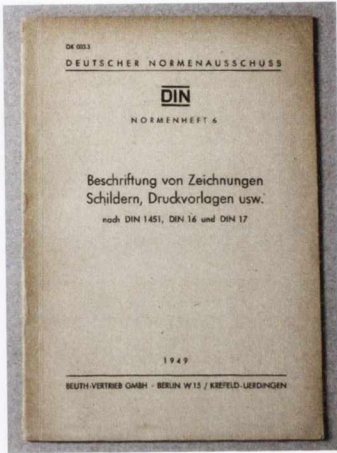
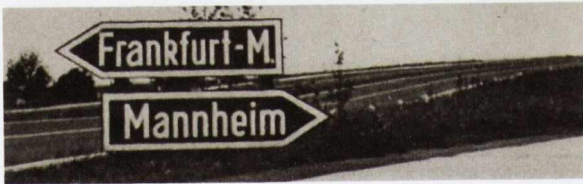


Plate 3.3.1: British roads signs of the 1930s and 1940s



Above and left: DIN letter guidelines from Goller, *Beschriftung von Zeichnungen Schildern*.



Below left: a German road sign, c. 1939. The letters are not a rigid application of DIN standards, for example the closed upper stroke of k. From Nobel, *Book of Road Signs*, p. 33.



Below: Swiss and Swedish DIN-like letters in upper- and lowercase, c. 1946. From Nobel, *Book of Road Signs*, p. 34.



Left: Dutch road sign, c. 1960. From *Typographica*, n.s. 4 (1961), p. 14.

Below: NEN 3225 Grotesque and Roman letters. From Hutchings (ed.), *Alphabet*, pp. 125–129.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| I | J | K | L | M | N | O | P | Q | |
| R | S | T | U | V | W | X | Y | Z | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| a | b | c | d | e | f | g | h | i | j | k | l |
| m | n | o | p | q | r | s | t | u | v | | |
| w | x | y | z | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L |
| M | N | O | P | Q | R | S | T | U | V | & | |
| W | X | Y | Z | P | R | N | H | U | M | | |

| | | | | | | | | | | | | | |
|----|-----|----|-----|----|-------|-----|---|---|---|---|---|---|---|
| Z | a | b | c | d | e | f | g | h | i | j | k | l | m |
| n | o | p | q | r | s | t | u | v | w | x | y | z | |
| ff | .fb | fh | fif | fk | ffiff | ffl | | | | | | | ? |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| I | J | K | L | M | N | O | P | Q | |
| R | S | T | U | V | W | X | Y | Z | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| a | b | c | d | e | f | g | h | i | j | k | l | |
| m | n | o | p | q | r | s | t | u | v | | | |
| H | | | | | | | | | w | x | y | z |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| I | J | K | L | M | N | O | P | Q | |
| R | S | T | U | V | W | X | Y | Z | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| a | b | c | d | e | f | g | h | i | j | k | l | | |
| m | n | o | p | q | r | s | t | u | | | | | |
| H | | | | | | | | | v | w | x | y | z |

| | | |
|--------|-------------|-------------|
| ABCD | abcd | ← Etiam sun |
| EFGHI | efghij | ← Etiam sun |
| JKLM | klmno | luptam pr |
| NOPQ | pqr | ↑ Etiam sun |
| RSTUV | stuvw | ← Luptam |
| WXYZ | xyz | ↓ Propter a |
| 123456 | &?!(,),-,:; | |
| 7890 | ← | |



Airport. Two versions of r were designed: a hooked r and a more typical design. From Crosby, Fletcher, Forbes, *Sign Systems Manual*, pp. 18–21, and Shaw, *Helvetica and New York City Subway*, pp. 16, 18.

Below: Airport in use at the University of Essex. From Crosby, Fletcher, Forbes, *Sign Systems Manual*, p. 65.

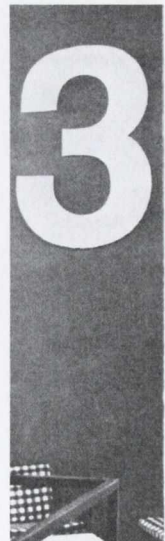


Plate 3.3.4: Airport

ABCDEFGHIJ
 KLMNOPQR
 STUVWXYZ
 1234567890
 abcdefghij
 klmnopqrst
 uvwxyz

Bob Noorda's Milan alphabet (1964).
 From Shaw, *Helvetica and New York City Subway*, p. 20.

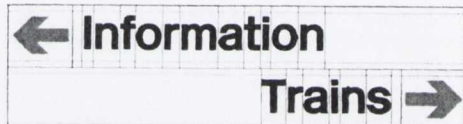
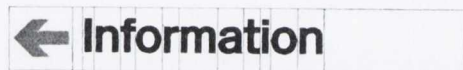
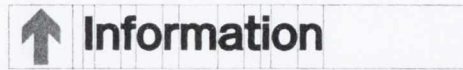


Total Design's Schiphol Airport signage (opened in 1967). From Shaw, *Helvetica and New York City Subway*, p. 23.

New York Subway signs in Akzidenz (left) and Helvetica (right). From Shaw, *Helvetica and New York City Subway*, p. 109.

Subway
 PATH Trains

Subway



Above: Calvert and Kinneir's British Rail alphabet. From Crosby, Fletcher, Forbes, *Sign Systems Manual*, pp. 58–59.

Left: Rail alphabet was applied to all British Airports. From *Eye* 18/71 (2009), p. 47.



Left: Rail alphabet used in Denmark for Danske Statsbaner. From Müller, *Helvetica: homage to a typeface*

Plate 3.3.6: Rail alphabet



Above: American Airlines. From Vignelli, *Vignelli Canon*, p. 31.

Left: Lufthansa. From Rathgeb, *Oil Aicher*, p. 66.

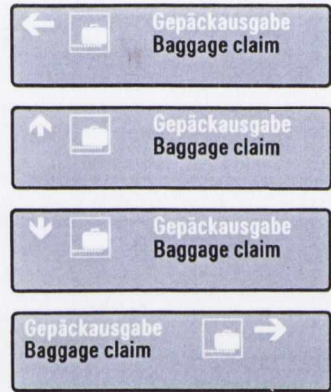
Below: Aer Lingus. From Wikipedia.





abcdefghijklmnop
 qrstuvwxyzäöüß
 áâãäåæçèéëìíîï
 ñóôõöøœúûü
 1234567890
 .,:;?!,"*'%&@{}|~<>()[]
 --+=&#& \$
 ABCDEFGHIJKLMNOP
 QRSTUVWXYZÄÖÜ
 ÁÂÃÄÅÆÇÈÉÊËÌÍÎÏ
 ÑÓÔÕÖØœÚÛÜ

abcdefghijklmnop
 qrstuvwxyzäöüß
 áâãäåæçèéëìíîï
 ñóôõöøœúûü
 1234567890
 .,:;?!,"*'%&@{}|~<>()[]
 --+=&#& \$
 ABCDEFGHIJKLMNOP
 QRSTUVWXYZÄÖÜ
 ÁÂÃÄÅÆÇÈÉÊËÌÍÎÏ
 ÑÓÔÕÖØœÚÛÜ



ALPHABET MÉTRO
ABCDEFGHIJKLMNPOQR
STUVWXYZ LA LT TT
Â É È Ê Ç Ü ., ' - _ .
1234567890 AOÛT 1973



Top row: Univers at Frankfurt Airport (designed 1971). From Rathgeb, *Otl Aicher*, p. 116.

Above: Aicher's Traffic (1972), derived from Univers condensed. From Rathgeb, *Otl Aicher*, p. 128.

Left: Frutiger's Paris Métro. From Frutiger, *Type Sign Symbol*, pp. 73, 75.

Plate 3.3.8: Univers and Univers variations

Alphabet Roissy:

HAHBHCHDHEHFHGHGHIHJHKHLHMHNHOHPHQHRH

HSHTHUHVHWHXHYHZH nanbncndnenfngnhninjn «β»

nknlmnonpnqnrnsntnunvnwnxnynzn ç (éèêë) ïï

0102030405060708090

Frutiger's Roissy Airport (c. 1970).
From Frutiger, *Type Sign Symbol*, pp. 82, 83.



Below: various signage types. From Spiekermann, *Stop Stealing Sheep*, p. 25.

Wayfinding Sans

FF Transit Front Positive

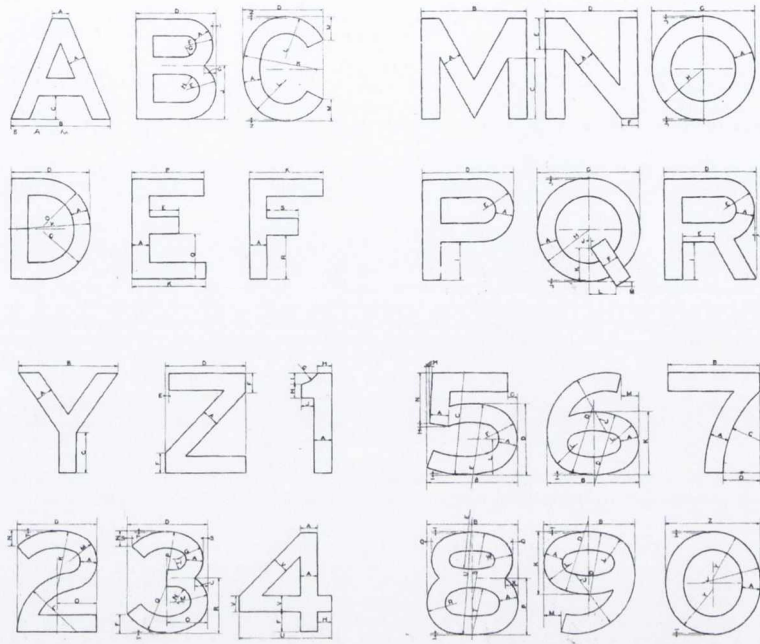
→ FF Info Display

Arrival ↗

Linotype Vialog

Clearview

Plate 3.3.9: Roissy and recent signage types



FHWA Alphabets (1952). Left series E. Right: Series F. From *Standard Alphabets for Highway Signs*.

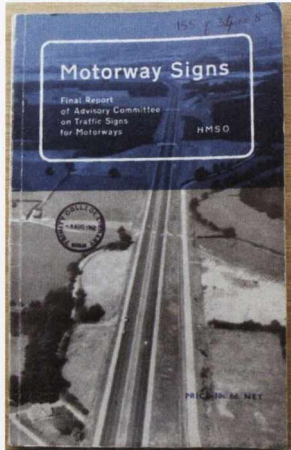


Left: US road signs. From Baines and Dixon, *Signs*, p. 37.

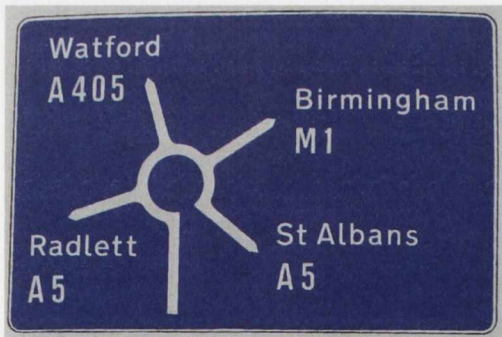


The 1957 British road alphabet and a sign in accord with 1957 regulations. From *Typographica*, n.s. 4 (1961), p.14; Easterby and Zwaga (eds), *Information Design*, p. 342.





Above: cover of Anderson Committee report (Ministry of Transport, *Traffic Signs for Motorways*). The cover uses a lithography-rendered Transport. Right: Transport. Below: Kinneir's sign. From the Anderson Committee report, pp. 36, 38, 48.



Kindersley's alternative design. From Loxley, *Type: secret history*, pp. 195, 197.

4.1. Legibilities

4.1.0 Introduction

Debates about the superiority or inferiority of Grotesque types within typographic discourse have failed to produce consensus. In face of the increasingly hair-splitting diversification of difference, perhaps science can determine the true form which type *should* take. Is what is at stake in typedesign a thing amenable to empirical method? More specifically, can science confirm or refute the modernists' advocacy of the Grotesque?

Legibility, in the simple sense of discernible writing, has always been of concern to typographers, just as it has been to anyone who has produced writing intended to be read by others. As Gray wrote, 'writing is for communication. It uses visible signs to enable us to pass on and receive messages to and from people who are separated from one another by time, space, or both. Its essence is therefore legibility'.¹ In this simple sense, to be legible is the purpose of all written and printed texts. Over the course of the twentieth century, the term legibility has (for some) acquired a scientific connotation that it did not always carry. Legibility has become a feature of typography which, ideally, should be empirically determined in the laboratory. However not all uses of the term 'legibility' involve claims which can be empirically refuted or confirmed.

Ole Lund's 1999 PhD thesis, 'Knowledge Construction in Typography', remains the most incisive work on the field of legibility research. The strength of Lund's research resides in the fact that, rather than attempting to contribute to the field's own objectives, Lund, from a theoretical distance, undertakes a critical reading of the theories and practices of legibility researchers throughout the twentieth century. Further, Lund's direct focus is studies into the relative legibility of Grotesque and Roman types. For both of these reasons Lund will be relied upon heavily below.

4.1.1 The Twin Births of Style and Science

A science of typefaces could only be conceived of once the Symbolic stability of type had been eroded. Only when the Modern 'mutated the status' of typeface design, was it possible to ask, which of the available styles can be proven to be the most legible? In fact, this happened almost immediately.

The sixth issue of *The Fleuron* (1928) presented a translation of texts written in Paris at the turn of the nineteenth century which described the first-known attempt to scientifically

determine the relative legibility of typefaces.² The typefounder Gillé fils submitted a series of type specimens — including a Modern face in the style of Didot — to the *Société libre des Science, Lettres et Arts* hoping to have the quality of his types confirmed by a body of scientific experts. A certain Citizen Sobry responded negatively to Gillé's specimen in an address to the *Société*. Sobry argued that 'what happens to be the fashion is not always perfect' and that the design of types should 'follow principles rather than the vagaries of taste'.³ Sobry favoured the Old Style of Garamond. Didot's types, according to Sobry, suffered from a 'destructive ultra-perfection' and a 'delicate languishing beauty', which introduce a 'secondary quality' detracting from the 'essential quality' of legibility. In support of his argument Sobry made reference to an experiment conducted at the *Imprimerie Nationale*:

Anisson took a page printed from types in the Didot manner, and copied it with the same spacing, in types of the same body, but in Garamond's manner. He put the two pages beside one another on a reading desk and placed the experts in front of them. At first he made them read the two pages without noticing any great difference. Anisson made them read the pages again and again, each time at a greater distance, until they could not distinguish the print at all. It turned out that the page which it was possible to make out the longest was the one printed on Garamond's system, and this was readable several stages after Didot's characters had become indistinguishable. This experiment, which everyone can make for himself, is a fact which peremptorily decides between the old and new types.⁴

The validity of this experiment is of course highly questionable — that a page of type becomes illegible at a distance does not necessarily mean that the page is less legible when read in normal reading conditions, as twentieth-century legibility researchers have argued.⁵ What is important to note is that Sobry's argument is entangled in a stylistic debate: the Modern, he claims, introduced an excess of style, a surplus quality beyond utility.

4.1.2 A Science of Typefaces?

Legibility research attempts to objectively determine, through measuring the responses of human subjects to typographic stimuli, the optimum design of typographical elements — from individual letters, to typefaces, to size, to issues of arrangement such as line length and leading, and (from the later twentieth century) the logical arrangement of information in contexts such as bibliographies, tables and signage systems. Empirical legibility research attempts to depart from design-ideological debate, and to determine how best to arrange print in order to appeal to the innate faculties of human beings.

What exactly 'legibility' is has not been generally settled. At broadest level, Lund provides the following definition of the term as it is understood in legibility research: 'legibility has to do with the effect of design variables on reading performance'.⁶ What specifically has been objectively measured in the name of 'legibility', as Lund demonstrates, has varied.⁷ The 'legibility' of typographic stimulus materials has been determined by observing subjects' speed of reading in 'normal reading conditions' (i.e. continuous prose at typical illumination and distance). Such experiments are often supplemented with comprehension tests. Alternatively the 'legibility' of alphabetic characters, typeface styles or individual typefaces has been a thing determined by observing subjects' ability to recognise words or letters in various arrangements, such as grouped or isolated, in meaningful or non-sense text, under various constraints such as controlled distance, illumination and exposure time. Certain researchers have attempted to clarify the definition of legibility by adding a second term, 'readability' — assigning 'readability' to refer to speed and/or ease of reading continuous text under normal reading conditions, with 'legibility' referring only to recognition of individual characters. Such a distinction between 'readability' and 'legibility' is provided in Tracy's *The Typographic Scene*.⁸ Despite the satisfying stability of such a usage, in reviewing legibility research one needs to be vigilant to the ever changing meanings of legibility. In contrast to Tracy, legibility researcher Linda Reynolds (in 1988) used 'legibility' more broadly to refer to 'all those factors in typography and layout which may influence the ease, speed and accuracy with which information can be read'.⁹ Regardless of the precise definition of legibility and the theory of how legibility is to be measured, the universal feature of legibility research is that, from measuring subjects responses to typographic stimuli in controlled contexts, an attempt is made to extrapolate conclusions about how people respond to typography generally in their usual environments.

The particular subset of this field pertinent to the assessment of the inferiority or superiority of the Grotesque is 'comparative typeface legibility research'. Lund has shown that in this area several issues have recurrently undermined the validity of research.¹⁰ A common problem has been the failure to distinguish 'nominal' and 'actual' size. The point sizes of types refer not to the actual height of the letters, but to the height of the 'body': that is, historically, the size of the piece of metal on which the letter design sits, or in digital typefaces the scale of the field in which the design is placed. Typedesigns differ regarding how much of this field is filled by characters. What this means for legibility studies that compare different types of the same nominal sizes is that they may in fact be comparing printed (or digitally-rendered) letters of significantly different *actual* sizes, and thus compromising assessment of the meaning of

results, as it is uncertain whether the typeface's character designs or merely its size was the determining factor. Similarly, there has often been a failure to take into account differences in x-height. Given that in continuous text the majority of letters are lowercase, even if types with the same actual size in cap-height are compared, differences in x-height, again, mean that types compared may have significantly different actual sizes. Further, differences in x-height influence the appearance of line spacing: two paragraphs each set in different types with the same amount of leading but with different x-heights, will have differences in the actual vertical size of space between the lowercase letters. Again, this renders results ambiguous, as it cannot be said whether character design or *actual size* linespacing has influenced the observed result. Each of these errors involves a failure to control variables, and the source of such mistakes often results from what Lund calls 'lack of domain knowledge' — that is, insufficient familiarity with typography and typesetting to be aware of such differences.

Many relative typeface legibility studies have addressed these concerns in various ways, such as ensuring that types of actual rather than nominal sizes are compared. Yet, given that typefaces are overwhelming full of unique variables — letterwidth and the ratios of letterwidth to letterheight, the minutiae of differences in each character design, the modulation of stroke, etc. — variable control remains an obstacle in interpreting the results of comparative typeface studies. In the face of this, experiments have been conducted on specially-designed typefaces with strictly controlled differences. Two such experiments will be described below, one by Aries Arditi and Jianna Cho (assessed in section 4.1.5 of this chapter), and another by Sofie Beier and Kevin Larson (described in Chapter 4.2). A more fundamental issue pertaining to comparative typeface legibility research is the question of generalisability. Even if an experiment were to definitively determine the greater legibility of one or more typefaces over a number of others, could this be extrapolated into knowledge about typefaces in general, or would it only tell us about the individual typefaces tested? This question will be addressed in section 4.1.5 of this chapter.

4.1.3 A Plurality of Legibilities

For Miles A. Tinker, one of the most prolific and influential legibility researchers of the twentieth century, the advice of typographers on issues of best practice in the selection of types, typesizes, line-lengths, paper and ink, were 'mere opinion' and 'casual observation'.¹¹ Typographers and printers based their designs on 'tradition and opinion', when they should in fact rely on empirically confirmed facts.¹² 'To a considerable degree', wrote Tinker, 'tradition and aesthetic taste have obstructed the designing of more legible type'.¹³ Such a view was put

more forcefully by Dennis Cheetham, Christopher Poulton, and Brian Grimby in 1965, who claimed 'there is no real body of knowledge about graphic design — slogans substitute for fact'.¹⁴

Certainly, scientifically dubious claims abound in the writings of typographers. Nevertheless, it is also important to recognise that often the sense in which the term 'legibility' has been used in typographic discourse has not always involved the sort of claims that can be resolved by means of empirical studies into human subjects' responses to typographic stimuli.

One of the most common contexts in which the term 'legibility' occurs in typographic discourse is in relation to issues of technique and technology, or 'practical legibility'.¹⁵ In such instances often what is at stake is not so much a claim that a particular design (be it a typeface or a typographic arrangement) is inherently superior in legibility to another in the sense that the design is particularly adapted to better stimulate innate human faculties of reception. Rather, the concern is with the ability to clearly realise in print (or screen or other medium) the design as intended. Thus in De Vinne's history of early typography, *The Invention of Printing* (1876), 'legibility' is most often mentioned in relation to technical factors — printing method, ink, wear of types — which when handled poorly will cause a design to fail to render clearly.¹⁶ In *The Practice of Typography* (published approximately a quarter of a century later), De Vinne describes how the design of types must be adapted to the nature of their reproduction. Smaller typesizes are designed proportionally wider and with broader counters in order to maintain clarity of impression when printing.¹⁷ In this sense, a legible five-point type is not one which it is claimed will facilitate quicker reading or better comprehension, but is simply one that, when rolled through the press, will realise its letters precisely and not dissolve into muddy clots of ink. Neither 'slogans' nor 'opinion', nor the objectively-measured responses of subjects, are relevant to this sense of legibility.

This 'practical' or technical understanding of the term 'legibility' informed the design of a set of typefaces for newspaper printing issued by Linotype in the 1920s and 1930s (Plate 4.1.1). The 'Legibility Group', as Linotype named them, included Ionic no. 5 — derived from lighter nineteenth-century Clarendons, with a large x-height and shallow descenders — and Excelsior, a similar design. Both were designed by C. H. Griffith. As Sebastian Carter has pointed out, the Linotype's hotmetal composing machines printed at a greater speed and with thinner inks than traditional handsetting processes. Thus the Legibility Group types were attempts to avoid the disappearing hairlines of Modern typefaces when printed under such conditions.¹⁸ Stanley Morison's redesign of the *British Medical Journal* of 1937, replaced Monotype Oldstyle (a Caslon derivative) with Morison's own Times for similar reasons. The

change in type was justified as an increase in ‘legibility’ on the grounds that the heavier strokes of Times were better adapted to the manner in which the journal was printed:

Whereas fifty years ago the Journal was produced on the same kind of printing press as is now ordinarily used for the printing of books, the [Journal] has for many years been printed on much faster-running rotary presses in which, on account of the speed, the ink flow is much less liberal, the impression of the type into the paper much slighter, producing a letter-form comparatively lacking in clarity and colour and therefore perceptibility.¹⁹

Claims made in this area can of course be empirically confirmed or refuted — not by the legibility researcher’s observation of subject responses, but, more simply, by examining how well the printed result achieves its aim (i.e. do the counters fill, do the serifs render, etc.).

A second sense in which ‘legibility’ occurs in typographic discourse is far more nebulous. It blurs not only with the technical considerations described above, but also, it is true, with claims that often demand empirical investigation. This use of ‘legibility’ occurs in the context of design-ideological debate wherein ‘legibility’ is taken to be the opposite of style or fashion. We have already shown that Sobry merged an empirical assertion with an attack on the ‘vagaries of fashion’. De Vinne makes a similar move. For De Vinne, ‘the feminine fashion’ of hairline serifs in Modern types detracts from legibility, as the serifs and strokes risk becoming invisible at smaller sizes.²⁰ De Vinne contrasts the Modern with the ‘masculine strength’ of Caslon’s Old Style.²¹ De Vinne’s claim, that on practical grounds Modern faces may not render in print, is bundled together with a general assault on the Modern face as an overly-stylised, overly-fashionable type. As this demonstrates, legibility is frequently used in an equivalent manner to how ‘function’ is used in other design contexts. Legibility is the necessary primary component of typography, that to which style or beauty are distinct and secondary. The legibility of Caslon is distinct from the connotations of its style: ‘the continued popularity of the Old-style is due more to the clearness produced by its strong lines and serifs than to its quaintness of form’.²² Likewise, in praise of Morris’s Golden type, De Vinne distinguishes its legibility from its medieval styling: ‘the merit of the Golden type is not in its sturdy medievalism, but in its simplicity and legibility’.²³ Thus, while Old-style may be quaint and Golden may be medieval, their legibility is a factor antecedent to such connotations. In making this distinction De Vinne follows Morris’s own thinking on the relationship between legibility and style. In ‘An Essay on Printing’, co-authored by Morris and Emery Walker, the authors emphasise the primacy of legibility over style — ‘it is obvious that legibility is the first thing to be aimed at in the forms of the letters; this is best furthered by the avoidance of irrational swellings and spiky

projections, and by the using of careful purity of line'.²⁴ For Morris and Walker the model of legible type is earlier still than De Vinne's — Jenson — and they chastise Caslon for departing from this model.²⁵ Again for Morris, as it is for De Vinne, the Modern letter is particularly guilty of departing from legibility in its pursuit of fashion. Morris notoriously described Bodoni as having a 'sweltering hideousness' and being 'the most illegible type that was ever cut, with its preposterous thicks and thins'.²⁶

Such a use of 'legibility', as a colleague of function and an enemy of fashion, continues in the twentieth century. A 1952 issue of *Typographica*, features comments on legibility from two typographers representative of opposing tendencies in mid-twentieth-century typography — the New Traditionalist Herbert Simon (brother of Oliver), and the Swiss modernist Max Bill. Both deploy 'legibility' as a thing which opposes either 'style' or 'aesthetic'. Simon, cautioning against what he sees as an abundance of frivolous fashions in contemporary printing writes

All new ideas and notions naturally create protagonists for this style or that [...] the principles of clarity and ease of legibility remain constant whether the work be permanent or ephemeral.²⁷

Max Bill writes, 'first and foremost the demands of language and legibility must be met. Only then can one afford any aesthetic consideration'.²⁸

Legibility as it occurs in such instances is bound to the same design historical questions that have excited typographers since the early twentieth century. Mirroring the Functionalist reaction to nineteenth-century design in general, legibility is said to have been undermined by the frivolous fashions and poor production methods of the nineteenth century. The legibility of a type is independent of style — style is a quality which is secondary to its legibility. And thus a true typographic aesthetic is only formed after the achievement of legibility. This of course inevitably spills in to the domain of (often dubious) empirical speculation. But the question that underlies this use of legibility — is there a mode of design that is without style? — is not an empirical question, nor is it a meaningless one.

4.1.4 Ideology and Serifs

That 'legibility' in typographic discourse is often used in discussion of subjects not amenable to empirical method does not mean that typographers are immune to making pseudoscientific claims. In fact, this was almost a defining feature of writings by New Typographers. For example Teige wrote

today we know that reading badly written books is not half as damaging as reading books that are badly designed. The first is a waste of time, the second wastes our eye-sight. Near-sightedness is a damning verdict against bad typography and the only people it benefits are opticians who get rich on it. The issue is not to treat near-sightedness but to prevent it. Not small type but bad typography, unsuitable composition, and type forms with all manners of curlicues have a detrimental effect on eyesight. That is why the very first requirement for modern typography is order, good work, and legibility.²⁹

Schmidt too claimed that Fraktur letters were a cause of short-sightedness in children.³⁰ Neither demonstrated scientific support for this claim. The idea that complicated letterforms could be detrimental to eyesight can also be found in scientific research into typography at the turn of the century, although it was a premise that directed research rather than a subject submitted to scientific investigation.³¹

Whereas the New Typographers made pseudo-scientific claims regarding the superiority of Grotesque letters, many more typographers believed that, outside of certain limited uses, Grotesque letters were inferior. Psychologist Cyril Burt claimed to have proven Grotesques inferior as regards legibility. In so doing he gained the approval of the New Traditionalists. Both Beatrice Warde and Morison are thanked for their assistance in the preface to his Cambridge University Press monograph, *A Psychological Study of Typography*.³² In the preface, Morison writes that Burt has scientifically refuted the ideas of modernists:

[Burt's] investigation confirms several of the conventions that had been agreed upon by calligraphers, printers and publishers, though some modern 'book designers', 'typographers' and 'layout men' need to be recalled to these standards.³³

Morison revels in Burt's 'findings', writing that 'in terms of word-recognition, the design known as sans serif [is] was worst of all', and that Burt has confirmed 'that serified letters are more legible than unserified'.³⁴ Morison contends that to view the serif as ornamental is 'to misunderstand all history and the whole of typography, including the function of the serif'. An interesting argument, if only any of what Burt had written were true. Burt's outright fraudulent practices included publishing papers with fictitious co-authors, buttressing conjecture with misleading allusions to their being supported by evidence, and citing non-existent papers to support his arguments.³⁵

Morison, buoyed by Burt's 'evidence', continues in the preface to extend an attack on the entire programme of modernist Functionalism:

No 'age' has been, or ever will be, more 'functional' than another, and the description of the period of the Industrial Revolution as a 'functional age' in a sense in which other centuries never were is misleading.³⁶

Morison, intoxicated by the misapprehension that his own views have now been scientifically confirmed, asserts that 'it is sufficient to say that rejection [of serifs] as a superfluous decoration inconsistent with the "correct" art form for "a functionalist age" is not supported by history or psychology'.³⁷ Lumping together as one, both Blast's intentionally anarchic use of Grotesque 9 and Functionalist modernists' use of serifless types (for example, the measured precision of *Neue Grafik's* handling of 215 or Schwitters' use of Futura), Morison, patronisingly and with false-generosity, allows that Grotesque may be appropriate for 'ideological [...] composition [...] from a militant literary, artistic or political group':

'Leftist' or 'coterie' styles in typography are likely to remain with us. There can be no objection to that. Indeed, so long as they are not regarded too seriously, they are to be welcomed. Minority-typography is of considerable interest. A study of the influence of the Bauhaus school upon the printed page would certainly be of value to those interested in attempts to create a 'modern' style. Sir Cyril Burt and the conductors of the present inquiry, however, are not concerned with the typographical preferences of sects preoccupied with some special subject as 'modern' painting or architecture, or the creation *ad hoc* of a twentieth-century artform.³⁸

Morison was not alone in being taken in by Burt. Not only were many typographers duped, but also many legibility researchers. Such was the influence of Burt's monograph that it may explain why even Albers, of all people, in the 1970s, renounced as 'dogma' and naïve 'fashionable preference' his earlier support for the Grotesque. Now Albers is certain that 'ophthalmology has disclosed' that 'when comparing serif letters with sans-serif, the later provide an uneasy reading'.³⁹ Similarly, the historian of Weimar art and design John Willett, who otherwise wrote favourably of the New Typography, in 1978 criticised use of the Grotesque as 'an utterly unfunctional gesture, since sanserif (or grotesque) typefaces [...] make much less easy reading than letters with thick and thin strokes and feet to them'.⁴⁰

Conversely, advocacy of the Grotesque can also be found in scientific (or quasi-scientific) literature on typography. For example the essay 'Graphic Design of Building Sign System Design' by Katherine Selfridge from the anthology *Information Design* (1984), refers to Helvetica as 'very legible'.⁴¹ In the same volume, Fred Robinett and Al Hughes's 'Visual Alerts

to Machinery Hazards: a design case study' also describes Helvetica Bold as having 'legibility characteristics'.⁴² Neither of these essays explicitly claim empirical support for Helvetica, and it would be unfair to imply there was any Burt-like deception involved. However, the very assertion of the superiority of Helvetica in the context of a volume which has the stated aim of informing design with 'psychologically-based principles' and 'generalisable evaluative procedures', potentially has the subtle rhetorical effect of suggesting the preference for Helvetica given, has more basis than a similar statement in, for example, *Creative Review*.⁴³

Despite the proclamations of the New Typographers and the deceptions of Burt, there is no scientific consensus to support or refute the use of Grotesques. Lund provides an assessment of twenty-eight 'experimental behavioural studies on the relative legibility of serif and sans serif typefaces' spanning over one hundred years, from 1896 to 1998.⁴⁴ Even setting aside the fact that Lund demonstrates that the vast majority of these experiments were invalid, the lack of consensus alone is telling. Of the studies reviewed, many arrived at 'findings' which aligned with the New Typographers' assumption of the greater legibility of the Grotesque, including a 1912 study which claimed to have shown Morris Fuller Benton's News Gothic to be 'ideal' in terms of legibility, and a 1944 study into the legibility of newspaper headline types which found in favour of the Geometric Grotesque, Tempo.⁴⁵ In many other studies, from throughout the hundred-year period investigated by Lund, the Grotesque fared poorly.⁴⁶ Many more studies arrived at ambivalent conclusions regarding the legibility of Grotesques, and even in those that found either in favour or against Grotesques, the differences believed to have been determined were too slight to be generalisable.

It would be a misreading of Lund to take from this that he has shown that neither Grotesque nor Roman is more legible, or, to put it another way, that Grotesque and Roman are equally legible. Lund's research subject was not the legibility of types, but *research on the legibility of types*. As such, his research tells us not which types or typestyles are legible, but rather that legibility research as a discipline has failed to meaningfully answer the question of whether Grotesques or Romans are more legible.

4.1.5 Naturalising the Grotesque

Is it unlikely that the question of whether Roman or Grotesque is more legible will ever be provided with a definitive empirically-supported answer. Are the varieties of difference falling under each of these banners, and the varieties of similarities reaching across each category, coherent enough for general statements about the legibility of each to be made in a scientifically supported manner?

Often legibility researchers have assumed that experiments on a limited number of Grotesque faces should provide information on Grotesque faces *in toto*. Legros and Grant's *Typographical Printing Surfaces* includes an attempt to determine the relative legibility of types through an investigation of the surface-areas of letter designs based on an *a priori* theory that maximum difference in character design determines legibility. Lund shows that as only one representative Grotesque type was used, it is invalid of Legros and Grant to assume that their findings should hold for all other types categorised as 'sans serif'. The particular Grotesque in Legros and Grant's study, of course, has many characteristics unique to its design which could have influenced their result (stroke weight, x-height, the minutiae of each letter, etc.) (Plate 4.1.2). As Lund observes

they induce (without explicitly saying that they do) from specific typefaces (the ones actually employed in the investigation) with all their details and idiosyncrasies, to generic categories (old style, sans serif, etc) — and then they judge the categories on this basis.⁴⁷

Similarly, Tinker conducted several experiments comparing various typefaces in which Kabel — a rather unique Geometric Grotesque — was used as a representative type from which extrapolations were made about Grotesques in general.⁴⁸

The issue of invalid extrapolation to general categories is frequently exacerbated by imprecise citations of previous research. That is to say, an experiment which found that Kabel or Metro scored a particular way will later be cited as evidence about the legibility of the Grotesque in general. Dirk Wendt, in 1969, believed that he had found Futura to be as legible as Bodoni.⁴⁹ However this result surprised Wendt as it conflicted with Tinker's earlier finding for the inferiority of Kabel. He therefore erroneously assumed that his findings for one particular typeface design should also be valid for another of similar but different design. The very practice of typedesign, which is one of continuous fragmentation and merging of styles, of production of differences big and small, undermines the idea that the categories adopted in classification systems could be susceptible to empirically-supported generalisations. Although an individual comparison of one type with serifs and one without, may (hypothetically) produce a concrete finding in favour of one or the other, in a study which compared, for example, Joanna, Metro and Gill, of the innumerable differences between the three types, it is not likely that the single issue of serifs could be isolated as the determining factor. What encourages such a fallacious assumption is the misapprehension that the categories of typeface classification are

akin to those of a biological taxonomy. The Grotesque is an amorphous associative concept, not a natural kind.

Intuitively, it might be rebutted, what if one were to design types in which the only difference was the presence or absence of serifs? Surely that would supply information about the function of serifs in legibility. This was attempted in a 2005 study by Arditi and Cho.⁵⁰ In order to avoid the inevitability of uncontrolled variables when comparing existing serified and serifless types (for example Times and Univers), Arditi and Cho experimented on three alphabets of their own design (Plate 4.1.2). Each 'font' was a lowercase alphabet with a monoline stroke in a thickness of 10% of the ascender height (mislabelled 'cap-height'). Each was identical in letter design, except that one was serifless, another had serifs equal in width to 5% of the ascender height, and the third had serifs at a breadth of 10% of the ascender height. A variety of methods were used to determine the relative legibility of these types, including reading speed and threshold methods, but for our purposes an analysis of the alphabets is sufficient to demonstrate the invalidity of the experiment.

As is evident from the description above, the test materials were highly artificial and unlike the typefaces one encounters in print or on screen. The letters are remarkably crude — for example, the overhanging a, the squared s, and the d which in the serified versions has a lower serif which merges with the bowl. Further they use a single ascender height not only for b, d, k, etc., but also t and the dots of i and j which are typically significantly lower. Words set in each of the types are letter-spaced in one of three ways, with no spacing, with spacing equal in width to 10% of the ascender height, and at 40% of ascender height. This is not how type is ever spaced. In printed texts, letters are not spaced uniformly according to a precise and repeated ratio based on ascender height. In typefaces, just as the actual body of the design sits vertically into a field which it does not fill, so it does horizontally. Additionally, for certain awkward letterspacing types designers produce custom spacings. Arditi and Cho's spacing measures are applied to the very edge of the letters, meaning that at 0% the letters butt together. In attempting to reduce noise in assessing the role of serifs in legibility what the researchers have in fact done is produce stimuli materials so unlike actually existing typefaces that no conclusions about serifs can validly be inferred: all their experiment can tell us about is their own designs.

They arrive at more-or-less negligible results, yet attempt to extrapolate some conclusions from their limited data: one of their three experiments favoured the presence of serifs.⁵¹ Arditi and Cho acknowledge that their study is limited in that it only assessed their own designs and not those 'designed with the critical eye of an expert font designer'. Nevertheless,

they insist on asserting the generalisability of their findings: ‘while our font choices were to a degree arbitrary, we can think of no reason why they would bias our results against finding stronger serif effects on legibility’. That they can think of no reason why letters so intensely odd, so peculiarly spaced, should not provide generalisable knowledge applicable to professionally-designed typefaces reveals a debilitating lack of domain knowledge.

A more plausible extrapolation would have to take into account the other design variables present in Arditì and Cho’s alphabets beyond the serifs. For example, a more plausible (though still speculative) interpretation would be: in the case of monoline, modular letters, uniformly letterspaced, serifs can help. Why assume that the supposed finding in favour of serifs could be extrapolated to other types with other interacting design variables, such as considered spacing, humanist axis, and modulated stroke?

Yet even a similar experiment conducted on more typical typefaces would still suffer from a lack of generalisability. The intense outlandishness of Arditì and Cho’s alphabets brings to the fore what is true of all types: all are burdened with subtleties that distinguish them from one another (and interact with one another) in ways that it would be often inconceivably difficult to innumerate. What is true of Baskerville is not necessarily true of Excelsior.

4.1.6. Towards a New Alphabet, again

Beginning in the late 1960s, a ‘paradigm shift’ occurred in legibility research under the influence of the field known as ‘ergonomics’ or ‘human factors’. This saw research move from a focus on issues such as type- and character design to the examination of the meaningful arrangement of text. Central to this development was a research unit at the Royal College of Art headed by former editor of *Typographica* Herbert Spencer, with Brian Coe and Linda Reynolds. Although we have already quoted, from *Typographica*, Herbert Simon and Max Bill’s usage of ‘legibility’ in the design-ideological sense, no attention was given to empirical legibility research in *Typographica*’s near twenty-year run. Nevertheless, as *Typographica* reached its close, Spencer became increasingly pre-occupied with legibility research. From 1966, Spencer was a Senior Research Fellow on the ‘Readability of Print’, at the Royal College of Art, London. Around this time Spencer founded the Readability of Research Unit, later renamed the Graphic Information Research Unit.⁵² Throughout the 1970s, the unit conducted numerous studies on topics ranging from library signage to the legibility of individual characters, presented modestly (in stark contrast to the virtuosity of *Typographica*) in white covers uniformly designed with asymmetrically placed Grottesque titles, enclosing typewritten texts (Plate 4.1.3).

The first, and perhaps most significant output of this unit was Spencer's book, *The Visible Word* (1969) (Plate 4.1.4). *The Visible Word* was not a report of the unit's own experiments, but was rather a thorough survey of findings from the history of legibility research, presented in a manner digestible to designers.

But this is not all it covered. It is interesting to note that for Spencer, the legibility researcher's pursuit of scientifically-validated approaches to typography was bundled with the modernist's quest for universal communication. Throughout the introduction, Spencer expresses views in line with the New Typographers. Recalling Tschichold's demand that new Grotesques be designed by a scientific committee, Spencer writes that the 'new alphabet' will require collaboration of 'designers, technicians, perception psychologists, linguists, engineers, and representatives of many other professions'.⁵³ Recalling Moholy-Nagy's belief that new technologies would alter the orthographic structure of writing, Spencer likewise discusses the future of writing in terms of a vague techno-utopianism:

the multi-media system of communication which is now emerging has far-reaching implications for the visible word. It is a development which is drastically changing the form of all visual language, and it provides a unique opportunity to reconsider our present use of alphabetic signs.

Further, he employs a familiar moralising tone of dissatisfaction with orthography's 'extravagant and inadequate' departure from the alphabetic principle — 'we *force* one letter, a, to convey seven different sound values' [emphasis added].⁵⁴ The final chapter of *The Visible Word* — given the Bayer-like title, 'Towards a New Alphabet' — is devoted to asking whether 'better use could not be made of the resources available to us, and the reader's long-term convenience better served, by revision and rationalisation of the signs we employ'. Again, he asserts, in a modernist millenarian tone, that a re-evaluation or redesign of orthography is both facilitated and demanded by new technology:

New media and new techniques of reproducing the visible word are providing new opportunities for alphabetic communication as well as imposing changes in the design of the signs we employ. The reconsideration of our alphabet is, therefore, no longer merely a theoretical exercise but an activity which, on practical grounds, it is today both desirable and opportune to pursue with vigour.⁵⁵

In 'Towards a New Alphabet', Spencer approaches this question from both the standpoint of the graphic realisation and the orthographic function of alphabetic symbols. He initially

distinguishes between alphabets designed solely to address the appearance of letters ‘recognising that the printed rather than the inscriptional or handwritten letter has become the norm’, and those designed ‘with the aim of establishing a greater correspondence between the written and spoken language’.⁵⁶ Yet, as with the New Typographers, the subjects of visual design and orthographic structure are frequently blurred.

The varieties of alphabets shown include those that make purely graphic ‘reforms’, some of which are designed in such a way as to be legible to both humans and machines — such as Frutiger’s OCR B. Other alphabets are shown with graphic modifications designed to address the limitations of particular technologies — such as Wim Crowel’s screen-display alphabet, and a screen type used by CBS which included cuts at joins to prevent distortions in rendering. With these there are those with graphic peculiarities combined with some attempt at phonetic reform — including Bayer’s Universal, which, as we know, combines a belief in the transcendence of geometry with a minimal attempt at pure alphabeticism in its abandonment of uppercase. Then there are those that go a little further towards the alphabetic principle — including Bayer’s later Basic Alfabet.⁵⁷ With Bayer’s design he includes Kingsley Read’s Shavian alphabet as noteworthy, although he then dismisses it, just as Bayer did, on the grounds that to entirely abandon the Latin alphabet would be economically disadvantageous (without noting that Shavian is based on a featural analysis of speech sounds).

This scattergun approach, bringing together designs arising from entirely different concerns, severely undermines the techno-millenarianism Spencer expresses in passages where he breathlessly describes the impact technology will inevitably have on the appearance and structure of writing before the year 2000.⁵⁸ Whether the machines with letters are reproduced will change the specific shapes of letters (as the printing press and typewriter did) is one issue; whether technologies will change the orthographic structure of writing is another. Rather than seek precision in these questions, Spencer provides a conclusion that is both vague and compromised:

A more rewarding direction for alphabet reform is likely to be towards a single alphabet composed of many of our present signs (but with those which are redundant eliminated, and those which are confusing replaced with less ambiguous signs) augmented with a sufficient number of additional signs to permit our alphabet to be used phonetically (without requiring that it must be so used). The basic design of the signs must be considered and developed in relation to the requirements of all visual media, and be such as will allow a variety of design interpretations. A single standard typeface, though it has much to commend it on functional grounds for many kinds of alphabetic communication, can never be adequate for all purposes since typographic

allusion or ‘congeniality’, in which the shape and visual weight of letters plays an important role.⁵⁹

In short: we need to redesign one or two of the characters that score badly on relative legibility; we need some phonetic reform in line with the alphabetical principle, but, oddly, the ‘new alphabet’ must also work for non-reformed orthography; we need a unicasé alphabet designed so as to render clearly on all technologies, but, we need to retain varieties of letter designs for expressive purposes.

Although the bond between the sorts of universal communication projects analysed in Chapter 2.4 and modernist typography became loosened following the Second World War, the motivating idea — the pernicious influence of language — remained a recurrent theme in typographic discourse. Modernist discussion of the ‘typographic environment’ in the 1960s often involved a sense of paranoia that the world was plagued with too many words, with linguistic deception, coupled with a utopian fantasy that correct design and typography might remedy such a state of affairs. Like Bayer, Spencer was concerned that people were being bombarded by too many words. In the introduction to *The Visible Word*, Spencer transitions from a concern that printing should be legible, to concern with the sheer quantity of print produced:

The real threat to the survival of the printed word comes not from other, alternative communication media but from the torrent of paper and ink which is today pouring from the presses [...] As it has rolled down the centuries, Gutenberg’s paper snowball has become an avalanche which now threatens to overwhelm us.⁶⁰

Spencer returned to the theme of ‘too many words’ in a small book published in 1972 entitled *Worte Worte Worte* — a beautifully designed book featuring experimental layouts in an array of typefaces, used to set phrases from various authors from Antiquity to the twentieth century on the subject of ‘words’ (Plate 4.1.5).⁶¹ Tellingly, the majority of the text expresses concern with the supposed deceptive nature of language. Apart from one or two passages, most of the quotations assert one of the following three things: that words are empty; that words are too plentiful; that words deceive.

The emptiness of words is conveyed in the Portuguese saying, ‘words butter no parsnips’; and from Shakespeare we learn that honour is a mere word, and words mere air; Samuel Butler confirms that ‘oaths’ as words are likewise just wind. Not only are words empty, but they are too plentiful. Although Demophilus advises that silence is more dangerous than

speech, the other cited authors take the opposite view: Swinburne proposes that ‘words divide and rend, but silence is most noble till the end’; Alexander Pope writes ‘words are like leaves; and where they abound / Much fruit of sense beneath is rarely found’. ‘Prune thy words’, attributed to John Henry Newman, is appropriately set in Brian Coe’s pruned letterforms. Worse than empty, words can be full of lies. Molière’s statement that ‘La parole a été donnée à l’homme pour expliquer ses pensées’, is countered with Talleyrand’s ‘La parole a été donnée à l’homme pour déguiser ses pensées’. Pascal’s warning that the bad speak well, is echoed in another Portuguese saying, ‘under fine words is cheating hid’. Finally, Carlyle tell us not to be the slave of words, and the book closes, with ‘satis verborum’, which in light of the content of the book is not so much a closing statement as a manifesto slogan.

Conclusion

‘To a considerable degree’, claimed Tinker, ‘tradition and aesthetic taste have obstructed the designing of more legible type’.⁶² In place of tradition, Tinker asserted that there ‘are now considerable experimental data’ that typographers can rely on in place of their mere opinions.⁶³ However, at least as regards the relative legibility of typefaces, Tinker knew this to be untrue. The results of his own experiments were either inconsistent or produced ‘findings’ of negligibly fine differences.⁶⁴ Concluding a chapter on the relative legibility of types, he writes, ‘typefaces in common use are equally legible’. One could take that as a bald fact about typefaces, or one could take it that Tinker’s experiments failed to provide meaningful data on the use of types. Either way, it offers little in the way of advice to the practice of selecting types beyond the tautology that people are able to read what they regularly read (‘typefaces in common use’). Tinker, as someone immersed in the field of legibility research, might feel confident in judiciously separating valid from invalid findings and noting nuances of difference in definition of terms such as ‘legibility’ and ‘readability’. Yet, given the combination of a lack of stable definitions and a lack of meaningful results, there is no validity in Tinker’s assertion that the practising typographer should be obliged to familiarise himself with the sidestreets of the legibility researcher’s own academic ghetto or be branded a superstitious pseudo-scientist.

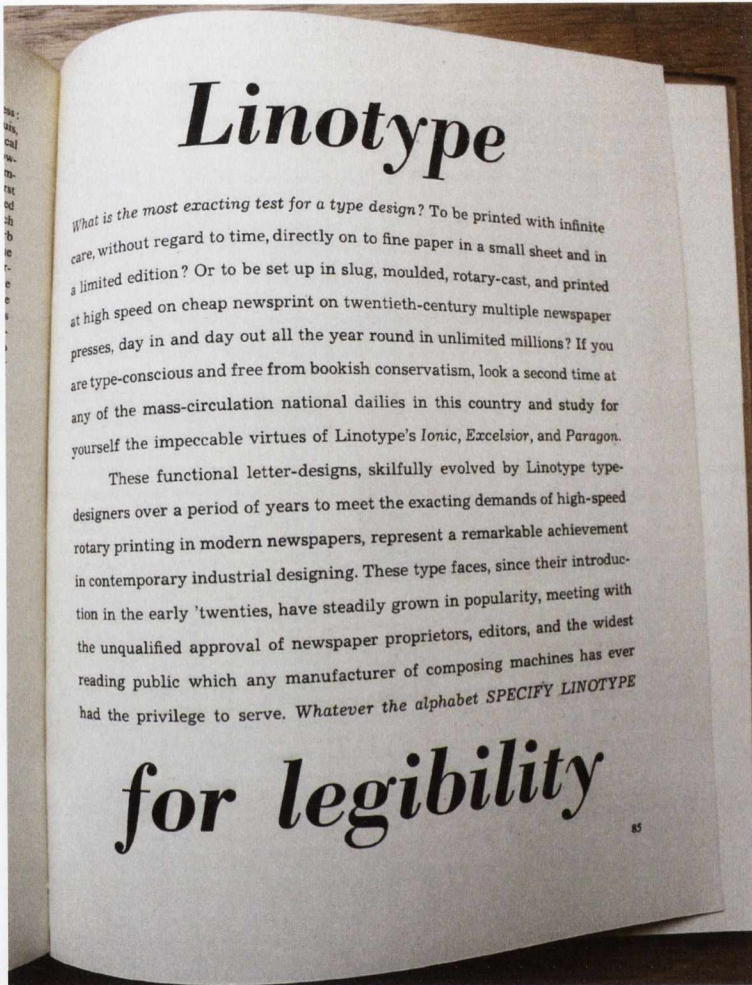
Regardless of whether or not other areas of legibility research are in fact capable of producing ‘facts’ to inform the design and arrangement of type, the question of whether Grotesque or Roman types are more legible is not one that is likely to be scientifically determined. Stating this should not be mistaken for a romantic assertion that typedesign as an artform is beyond science’s reach. Rather, what is being asserted is that a serious and informed consideration of the question leads one to realise that the terms involved are not sufficiently

coherent to allow a scientific answer. There is little likelihood that science will prove that Rockwell, Mrs Eaves, Clearface and Joanna share a quality crucial to legibility, absent in Neuzeit, Optima, 215 and Metro. The assumption that such a quality could be found, housed on one branch of Vox's forking tree and not on another, arises less from scientific curiosity than from typographic naïvety.

In general, as the poverty of domain knowledge would suggest, legibility researchers have not consciously engaged with debates already active in typographic discourse. Yet, it is telling that when one of Britain's foremost twentieth-century typographers — Herbert Spencer — turned his attention to the legibility research it became embroiled in the modernist quest for universal communication. Though their methods are different, the relative typeface legibility researcher's and the modernist's pursuit of the true form for type to take are equally utopian and equally unlikely.

- 1 Gray, *A History of Lettering* (Oxford: Phaidon, 1986), p. 9.
- 2 Updike (ed.), 'A Translation of the Reports of Berlier and Sobry on the Types of Gillé fils', *The Fleuron* 6 (1928), pp. 167–183.
- 3 Updike, 'Translation of Reports', p. 178.
- 4 Updike, 'Translation of Reports', p. 180.
- 5 Cf. Spencer, *The Visible Word*, rev. edn (London: Lund Humphries, 1969), p. 21.
- 6 Lund, p. 15.
- 7 Lund, pp. 15–18.
- 8 Tracy, *Typographic Scene*, pp. 72–73.
- 9 Linda Reynolds, 'The Legibility of Printed Scientific and Technical Materials', in *Information Design*, ed. by Easterby and Zwaga, pp. 187–208, p. 187.
- 10 Lund, pp. 61–62.
- 11 Miles A. Tinker, *Legibility of Print* (Ames, IA: Iowa State University Press, 1963), p. 128.
- 12 Tinker, p. 64.
- 13 Tinker, p. 43.
- 14 Cheetham, Christopher Poulton, and Grimbley, 'The case for research', *Design*, 195 (1965), pp. 48–51, p. 48. This passage is also cited in Lund, p. 55.
- 15 Lund, p. 87.
- 16 Theodore Low De Vinne, *The Invention of Printing* (New York, NY: Francis Hart & Co., 1876), passim. Cf. pp. 40, 241, 248, 261, 290, etc.
- 17 De Vinne, *Practice of Typography*, p. 117.
- 18 S. Carter, p. 91.
- 19 'The New Journal Typography: principles underlying the change', *British Medical Journal* 1/3965 (1937), pp. 32–33.
- 20 De Vinne, *Practice of Typography*, pp. 87, 230, 281, 370.
- 21 De Vinne, *Practice of Typography*, p. 266.
- 22 De Vinne, *Practice of Typography*, p. 230.
- 23 De Vinne, *Practice of Typography*, p. 208.
- 24 William Morris and Emery Walker, 'An Essay on Printing', in Morris, *The Art and Craft of Printing* (New Rochelle, NY: Elston Press, 1902), pp. 11–19, p. 15.
- 25 Morris and Walker, pp. 15–16.
- 26 Morris, 'The Ideal Book', in Morris, *The Art and Craft of Printing*, pp. 1–8, p. 3.
- 27 Herbert Simon, 'Is There a "New" Style of Typography?', *Typographica* 5 (1952), p. 25.
- 28 Max Bill, 'Typography To-day', *Typographica* 5 (1952), p. 29.
- 29 Teige, p. 100.
- 30 Schmidt, p. 31.
- 31 Lund, pp. 92, 116.
- 32 Cyril Burt, *A Psychological Study of Typography* (Cambridge: Cambridge University Press, 1959), pp. 8–9.
- 33 Morison, 'Introduction', *Psychological Study of Typography*, pp. ix–xix, p. x.
- 34 Morison, 'Introduction', p. xi.
- 35 Lund, pp. 122–123.
- 36 Morison, 'Introduction', p. vi.
- 37 Morison, 'Introduction', p. xiii.
- 38 Morison, 'Introduction', p. xv.
- 39 Albers, *Interaction of Color*, rev. edn (New Haven, CT: Yale University Press, 2006), p. 4.
- 40 John Willett, *The New Sobriety: art and politics in the Weimar period, 1917–1933* (London: Thames and Hudson, 1978), p. 134.
- 41 Katherine Selfridge, 'Graphic Design of Building Sign System Design', in *Information Design*, ed. by Easterby and Zwaga, pp. 265–275, p. 269.
- 42 Fred Robinett and Al Hughes, 'Visual Alerts to Machinery Hazards: a design case study', in *Information Design*, ed. by Easterby and Zwaga, pp. 405–417, p. 411.
- 43 Easterby and Zwaga (eds), *Information Design*, p. xxiv.
- 44 Lund, p. 84.
- 45 Lund, pp. 95, 121.

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- 46 Cf. Lund, pp. 101, 114, 165.
47 Lund, p. 102.
48 Lund, pp. 111–115.
49 Lund, p. 157.
50 Aries Arditì and Jianna Cho, ‘Serifs and Font Legibility’, *Vision Research* 45 (2005), pp. 2926–2933.
51 Arditì and Jianna Cho, pp. 2931–2932.
52 Reynolds, ‘The Graphic Information Research Unit: a pioneer of typographic research’, *Typography Papers* 7 (2007), pp. 115–137, p. 115.
53 Spencer, *Visible Word*, p. 12.
54 Spencer, *Visible Word*, p. 11.
55 Spencer, *Visible Word*, p. 58.
56 Spencer, *Visible Word*, p. 57.
57 Spencer, *Visible Word*, p. 75.
58 Spencer, *Visible Word*, p. 12.
59 Spencer, *Visible Word*, p. 58.
60 Spencer, *Visible Word*, p. 7.
61 Spencer, *Worte Worte Worte* (Cologne: Galerie der Spiegel, 1972), unpaginated.
62 Tinker, *Legibility of Print*, p. 43.
63 Tinker, *Legibility of Print*, p. 64.
64 Tinker, *Legibility of Print*, passim.

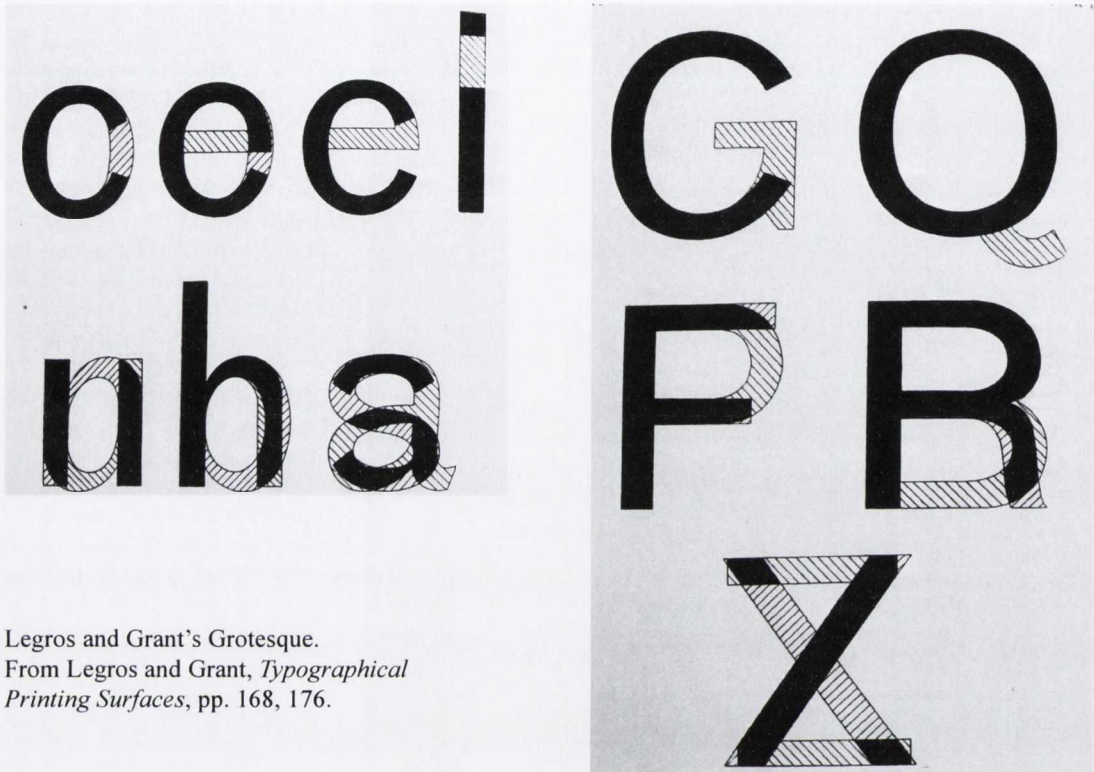


A 1947 Linotype advertisement boasting of legibility. From *Alphabet and Image 5* (1947).

there is no recorded instance of a definitive study of the printing and reading qualities of small body types in relation

type design, as I get it now, is to hit a middle ground between mechanical exactitude and the flow of a written hand – suggest-

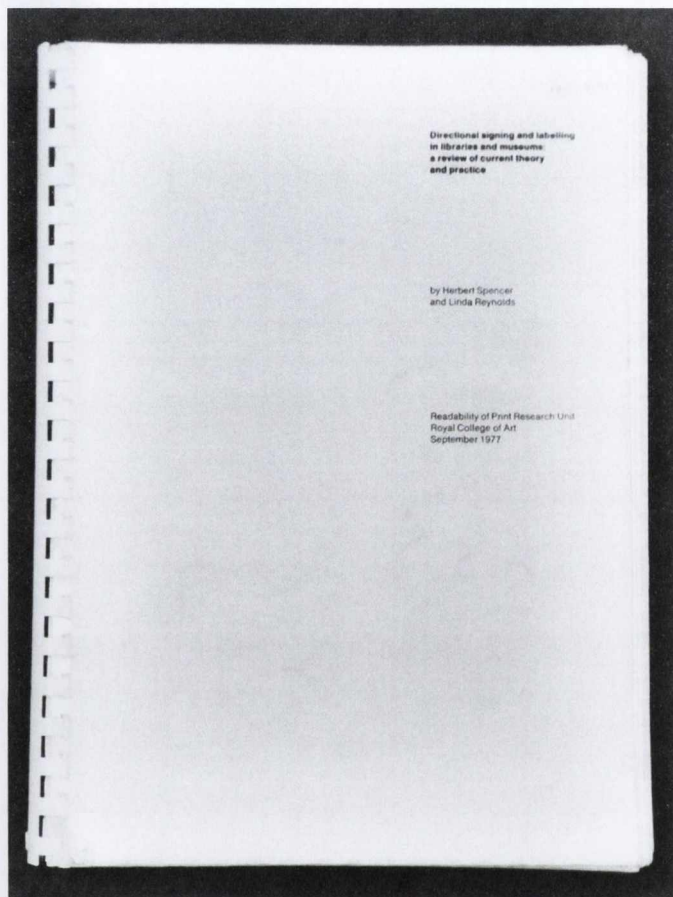
Legibility Group typefaces. Above: Ionic (1922). Below: Excelsior (1931). From S. Carter, *Twentieth-Century Type Designers*, p. 91.



Legros and Grant's Grotesque.
From Legros and Grant, *Typographical
Printing Surfaces*, pp. 168, 176.

abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz
abcdefghijklmnopqrstuvwxyz

Arditi and Cho's alphabets. From *Vision
Research* 45 (2005), p. 2928.



Left: Spencer and Reynolds, *Directional Signing and Labelling in Libraries and Museums* (1977), a typical RCA Research Unit cover. Below: various RCA Research Unit report covers.

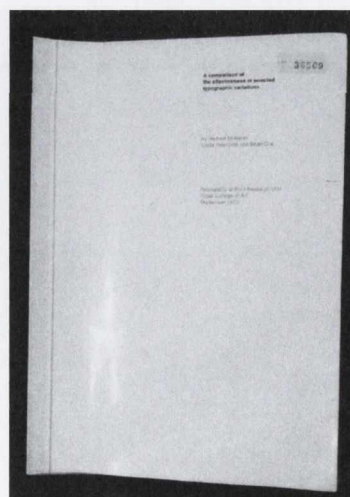
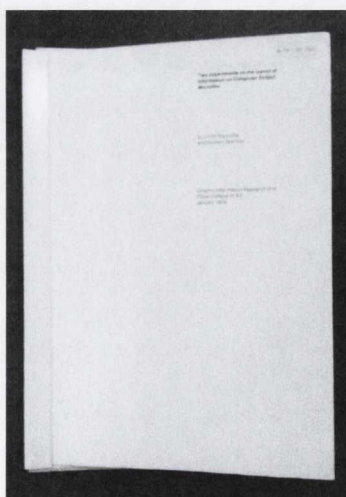
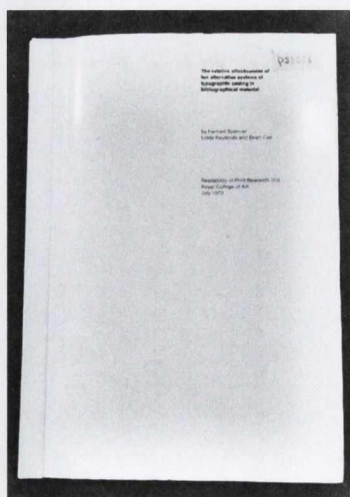
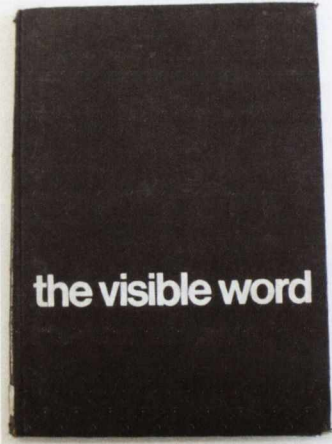


Plate 4.1.3: RCA Research Unit



Spencer, *The Visible Word*.
 p. 62: experimental alphabet by Coe.
 p. 65: OCR-B by Frutiger.
 p. 71: CBS Screen type.
 p. 69: New Alphabet by Crouwel.

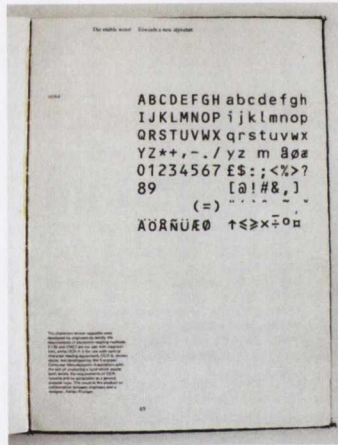
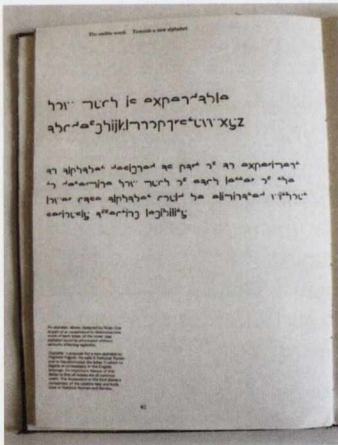


Plate 4.1.4: *The Visible Word*

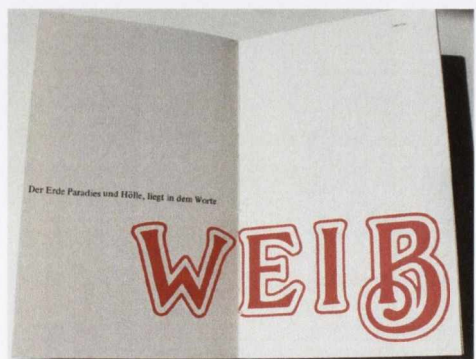
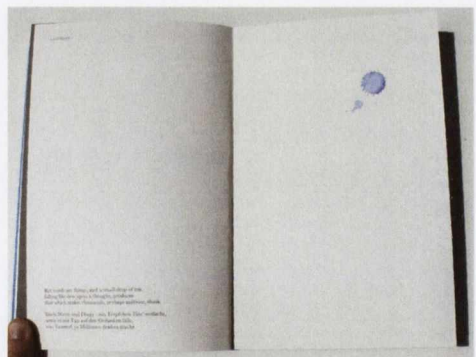
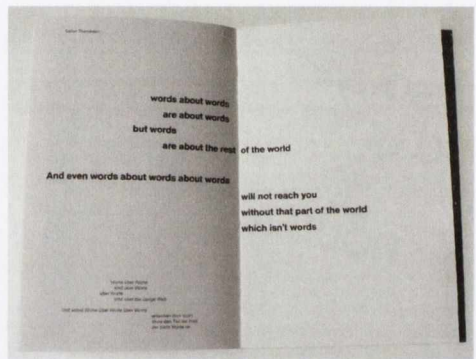
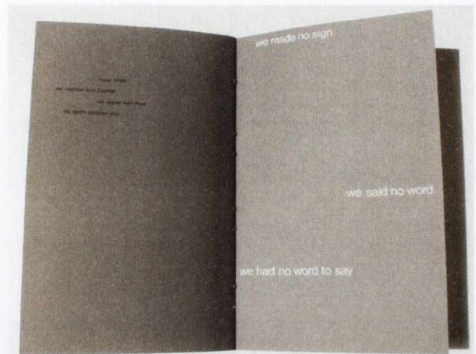
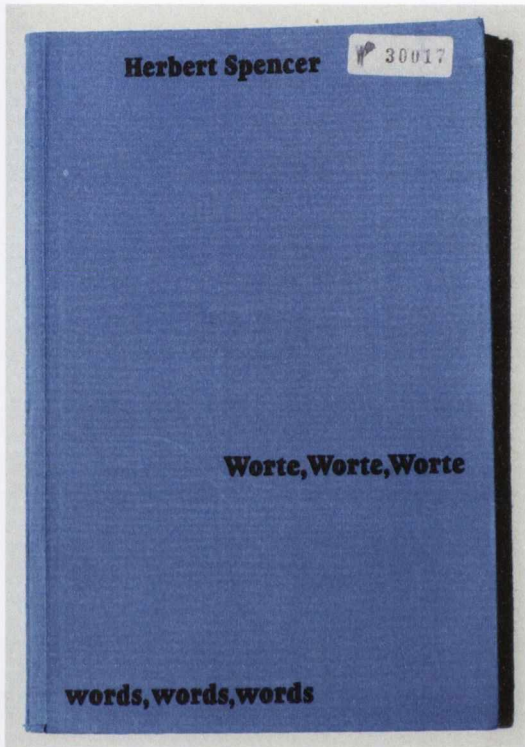


Plate 4.1.5: *Worte, Worte, Worte*

4.2 The Accessible Grotesque

4.2.0 Introduction

This chapter examines recent Grotesques which are claimed to have been designed with enhanced legibility, including typefaces purportedly tailored to specific special needs. The objective is no longer to weed out the specific (to purge 'NATIONALISMUS', as Tschichold encouraged), in pursuit of a universalism understood as levelling of difference. Today a functional type is an 'accessible' one; one which is inclusive of difference. Yet, scientific support for types supposedly adapted to this inclusive objective is rarely found. Given that this is the case, given that these types do not actually provide 'functional' solutions in the address of 'needs', another description of this phenomenon is required. It is here argued that these types are best understood as part of the same general tendencies observed already in the development of the Grotesque. Stepping back from the rationale for the designs provided by the designers, we must view these in the context of a general tendency in typeface design today: that tendency is an increased speed of production of types with marginal stylistic differences, where 'function' and 'need' are not independent of stylistic profusion but are means of generating new form. Viewed in this way, the attempt at accessible typefaces, though often scientifically unsupported, potentially still plays a positive role as a catalyst for new form. However, a contrary tendency is also present in the form of 'accessibility policy', which seeks to (once again in the history of typography) assert the Grotesque as the 'accessible' style to replace all others.

4.2.1 Marginal Difference

In the previous chapter we showed that the idea of the Grotesque as a coherent and natural kind, susceptible scientific analysis, is undermined by the very practice of Grotesque design. It is necessary here to recap and elaborate some of the details of the development of the Grotesque over the course of the twentieth century.

The course of Grotesque development in the twentieth century has been towards an increasing production of difference, resulting in, by the early twenty-first century, an incredibly nuanced language of style. While this has been the tendency in typedesign generally, it is of particular interest as regards the Grotesque, as Grotesques were championed, on more than one occasion, as the antidote to stylistic profusion. This led firstly to an expansion of styles accepted in continuous text, as the New Typographers brought the Grotesque into the domain of the book. The attempt to improve upon the Industrial Grotesque, in the workshops of the Bauhaus and in

the foundries which followed suit, introduced a new stylistic idiom in the form of the Geometric Grotesque, which in turn provoked rival new Grotesques such as Metro and Gill. Already, by the early 1930s, between the poles of Akzidenz, Franklin, Futura and Gill, hybrids emerged, combining aspects of these different models. Again, the Industrial Grotesque was championed by the Swiss modernists in the face of optional styles, and again this very attempt at limitation introduced another dialectical variant, the Neo-Industrial, which offered a new set of references to be combined with other models, allowing further hybridisation. What is fascinating about the language of Grotesque style that has developed is that, although additions occur, the stylistic language is increased primarily not by addition but by division; by splitting prior models, and combining, re-splitting, re-combining, producing ever new variants which, at their best (when designed by those who speak the Grotesque most fluently) are without originality, not because they are 'impersonal' in the Bauhaus or Swiss sense, but because, more important than originality is a nuanced discussion of prior Grotesque form embodied as typeface. The self-consciously 'postmodern' type, *Dead History* (1990) by P. Scott Makela merges the rounded Grotesque Vag with the Roman Centennial (Plate 4.2.1).¹ But this is just a simple version of the combinatory aesthetic that is the heart of all typedesign.

Combination, referencing, locating new positions, is not only internal to Grotesque styles, but leads to a merging of the Grotesque with others — for example, the Geometric Egyptian merged the nineteenth-century Egyptian with the Geometric Grotesque. Already at the turn of the century, *Brittanic* from Stephenson Blake and Morris Fuller Benton's *Globe Gothic*, were types lacking serifs, but with the heavy stress of the Modern.² Such experimental types, with Roman stress but no serifs, continued in display faces including Erbar's *Feder* (1910) and A.M. Cassandre's *Peignot* (1937), and reached maturity with Hermann Zapf's *Optima* (1958) (Plate 4.2.1). Stressed and serifless types made porous the borders between the Roman and the Grotesque. Evert Bloemsma's *Legato* of 2004, through diagonal axis and tapering 'vestigial' serifs, brings the Grotesque right to the Roman's door. The borders of the Grotesque have been further undermined by the development of families of type which include both serified and serifless members. Such a family was first attempted in the 1930s by Jan van Krimpen with *Romulus*, an extended Roman family which also included a Gill-like Grotesque.³

Aicher's *Rotis* family takes van Krimpen's concept even further, including not only Roman and Grotesque versions but also intermediary 'semigrotesk' and 'semiantiqua' variants (each also provided with sloped/italic, and in several weights) (Plate 4.2.2). In 1992 Aicher wrote, 'never in the history of typography has there existed such a profusion of scripts as at present', and that 'formally speaking, our cup certainly overfloweth'. Aicher acknowledged that

certain typedesigns are produced according to ‘the vanity of the market’, yet he insisted that Rotis was not an experiment in form.⁴ Rather, he claimed, it was an attempt at providing a functional solution to the demands of typography. But ‘function’ is no longer tethered to the universalist, one-size-fits-all conception of the interwar modernists: Rotis does not ‘aspire to universalism and standardisation’, but ‘the particular of the given instance’.⁵ Rotis is a family far larger than Univers, a family in which every variant between the poles of style and weight is attempted. Aicher insists this is not form for its own sake: Rotis ‘does not espouse formal diversity, but the freedom gained by offering a variety of solutions within an overall unified framework’. But what problems does it solve? Did they pre-exist Rotis, awaiting Aicher’s solution? We must recall Ettore Sottsass’s comment: ‘when Charles Eames designed his chair, he was not designing a chair but a new way of sitting; that is to say he was not designing for a function, but designing a function’.⁶

The hyper-Semioticisation in Grotesque design (every stroke, stress, terminal, every ratio, a stylistic signifier) was already deeply entrenched before the advent of desktop typesetting software and the new world of screen territories for types to conquer. What the digitisation of type has done is to expand the domain of stylistic discourse, increasing the speed at which types are produced and the ease at which they are accessed. Led by Zuzana Licko and Rudy VanderLans’s foundry Emigre, desktop typesetting doped-up on poststructuralism unleashed a new torrent of form, often (at least initially) closer to nineteenth- than twentieth-century endeavours in its pursuit of sheer difference.⁷ Digital type also gave the world Ray Larabie, designer and/or digitiser of over one thousand typefaces, and in the flashing-gif backstreets of the internet thousands more freeware Grotesques await curbside. But all is not chaos: the idea of a single coherent style may be irretrievable, or even laughable, but it is in their very navigation of the vast field of difference that today’s most exciting Grotesques excel. For example, Hoefler Frere-Jones’s excellent Gotham is ostensibly derived from the Geometric Grotesque letters of early twentieth-century New York signage.⁸ Yet it is undeniably post-Avenir — Frutiger’s sophisticated integration of Humanist, Geometric and Industrial styles (Plate 4.2.3). Gotham can only exist, can only provide such richness of allusion, because it emerges from and discusses (discussing itself) the language of style which has developed today. If we could send samples of it to the 1930s, Paul Renner might admire it, but he would no more understand it than Cervantes would understand Pierre Menard’s *Don Quixote*. Christian Schwartz’s Graphik of 2009 might in this context be called an ‘ideal’ Grotesque (if such a term makes any sense any more now that we no longer aspire to Symbolic certainty); not ideal in the sense that it successfully locates *ur-* or perfected forms, or forms stripped of style, but precisely

because of the fluency and eloquence in which it speaks the formal-stylistic idiomata of the Grotesque (Plate 4.2.3). Graphik synthesises aspects of already hybridised styles (such as Novarese's Neo-Industrial/Geometric hybrid, Recta) resulting in a design which, though at a passing glance is clear and unadorned, is an aggregation of micro-signifiers of stylistic allusion.⁹ Further, through OpenType technology, Schwartz gives the user the option of manipulating the formal connotations — alternate characters, such as one- and two-storey forms of a, allow the typographer to adjust Graphik's subtleties of period style from the 1930s to the 1950s.

What role is left for function in this context of endless division, of profusion of difference, in which letterforms are discussions of their own formal history? Function as it was once theorised, as that which remained when style was removed, is gone. Functional typesetting as that which, as Papanek would put it, addresses 'needs' rather than 'wants', no longer has any meaning. What is left is 'function' as a means of generating stylistic difference — was it not always this way? Function has been absorbed into the Semiotics of style. The logic of the consumer object as analysed by Baudrillard can be seen at work here: functions and needs to be addressed in typesetting are not independent and outside of the production of stylistic difference: needs are produced by the system.¹⁰ Functional demands serve to cleave apart each seemingly static point in the stylistic grid, creating/revealing new sub-divisions, endlessly differentiating. British Petroleum's identity by Pentagram uses a Futura, but a Futura re-designed by Frutiger in the early 1970s with shallower extenders for display uses.¹¹ But Ikea's Futura by Robin Nicholas retains the low x-height yet features other 'necessary' modifications. Function therefore fragments Futura into micro-stylistic differences in form. Just as Munari allowed 'beauty' to have a function, magazines such as Esquire commission custom types to meet certain line-lengths or word-counts, and also to fulfil connotative functions such as 'masculine', 'muscular', etc.¹² And there is no hierarchy between 'functional' functions and connotative ones: style and function have been thoroughly merged, as both become means of generating difference. The philosophy of design known as Functionalism may be gone, but this is not because we have remembered beauty (or whatever alternative to Functionalism might be imagined); it is rather because function has been absorbed into the tangled web of style, because function has been opened up, Semioticised, become 'commutable'; now anything can be a function or acquire a function, and even function as a means of generating form is itself a valid commutable function.

4.2.2 Legibility and Diversity

Aicher's distinction between the modernist conception of function as the address of universal needs and a 'functionalism' (if one could call it that) which addresses the particular and involves a ('not for its own sake') formal diversity, is evident in typefaces which are claimed to have been designed for increased legibility. Although we have already demonstrated that a pluralistic approach to the use of typefaces was theoretically elaborated in Harling's interwar journal *Typography*, in late twentieth-century discourse on the legibility of types a paradigm shift is evident: no longer is the one legible typeface sought. Instead a plurality of stylistically-divergent 'legible' typefaces are presented, often, though not always, Grotesque. Further, types are often claimed to not simply be universally legible but tailored to the needs of specific groups. Whereas the modernist metanarrative of universal emancipation through rational design sought to eradicate difference with universally-valid solutions, the new paradigm is based on inclusion of difference, as 'accessible' replaces 'functional'. This same move can also be charted in Information Design. For example, in Ronald Easterby and Harm Zwaga's *Information Design of 1984* (an anthology compiled from a 1978 NATO-sponsored conference), although occasional references are made to the special needs of certain groups (those with visual impairments for example), overwhelmingly, the pursuit of optimally-designed information is targeted at the 'reader' or 'user': a singular noun used as an idealisation and homogenisation of the entire society.¹³ In contrast, in a more recent Information Design publication — Jenn and Ken Visocky O'Grady's *Information Design Handbook* (2008) — emphasis is placed on 'accessibility' throughout, and the following agenda is cited from Paul J. Nini:

The main premise behind universal or inclusive design is that by designing for those with the lowest ability, we ensure that everyone can easily use the results of our work.¹⁴

The typedesigner and legibility researcher, Sofie Beier, conducted empirical research with Kevin Larson in order to to inform the design of her typefaces. Informed not only by a deep domain knowledge, but also an awareness of the errors which have plagued relative typeface legibility research, Beier and Larson designed their experiment so as to avoid the issue of uncontrolled variables. To achieve this, instead of comparing existing designs, Beier produced her own type variations with isolated and controlled differences. Unlike Arditì and Cho, their aim was not to determine the value of a general category of types (those with serifs), but to achieve an optimum of character design within a stylistic constraint. Beier designed three typefaces, each named after a prominent twentieth-century legibility researcher: Pyke, Spencer

and Ovink (Plate 4.2.4). Each typeface included alternate forms of particular characters.¹⁵ The relative legibility of these characters was assessed by testing subjects speed of recognition of characters within exposure and distance constraints.

Whether or not genuinely generalisable results were found is not here the focus. What is of interest here is the way in which Beier applies their experimental findings. According to Beier and Larson's study, lowercase a should be two-storey and feature a rounded bowl (as found in Erbar and Kabel) rather than have a diagonal central stroke (as found in Old Style types). Although this is applied to all three of the types, the Pyke, Spencer and Ovink types remain — despite similarities in basic character skeletons — deliberately divergent in design. The style of each face is not informed by legibility research but represent Beier's own experiments with typeface idiomata. Pyke is a contemporary interpretation of the Modern style of Bodoni (it was later given a 'Transitional' variation).¹⁶ Spencer might be called semi-serif (following Rotis), as it features serifs at the tops of letters only and rounded swellings or calligraphic flicks at terminals in the lower parts of the letters. Ovink is more easily classed as a Grotesque (in the broad sense in which the term is used in this thesis). Yet, as a product of the twenty-first century it combines numerous nuances in stroke structure which distance it from earlier Grotesques, including irregularly-curved terminals, abruptly-sliced diagonal strokes (particularly noticeable in heavier weights, e.g. R), and various points of swelling.

Typographers in the twentieth century tended to selectively take 'data' from legibility research to support their own ideological position regarding the function of serifs in legibility. Now the selective use of data is not so partisan. The Spencer semi-serif type is, according to Beier, informed by the 'finding' of a 1973 study that in certain positions serifs inhibit legibility. At the same time, Beier produces Pyke, a Modern Roman with serifs in all the usual places. Ovink, lacking serifs, is true to the 1973 'finding', yet is ambivalent with regards to Beier's own research. According to Beier and Larson, their study indicated that i and j are more legible when a serif at the top of the vertical stroke is included, and a hockey-stick curved lowercase l is more legible than a straight vertical l. Rather than simply adhere to these principles, the Ovink type provides alternates of i and j (both with and without serifs). And both Ovink and Spencer are provided with both vertical and curved forms of l.

In place of the modernist quest for the one type to replace all, what we see is that the ideology of accessibility as inclusion of difference is graphically manifested in the stylistic variety of types which Beier presents. This is repeated at the level of individual letters within a typeface. The modular programme of Bayer's Universal and the uniformly-horizontal terminals of Helvetica conveyed the erasure of difference inherent in the modernists' conception of the

universal. In Beier's types, differences between individual characters are exaggerated and characters are often provided with optional alternates.

4.2.3 Accessible Aesthetics

In *Why Me?*, a promotional document for the typeface FS Me, the following words are attributed to Lorraine Bellamy, a person with a learning disability: 'FS Me helps me understand things that I read. If I understand more, I feel more independent'.¹⁷ Who would deny Bellamy's right to a style of letter that provided her with such benefits? The inside cover of *Why Me?* reads 'all people should be valued equally, listened to and included. Therefore, we must support some people to understand things. An accessible typeface can help'.

Me is a rounded Grotesque designed by Fontsmith as part of a 2008 corporate identity for the UK learning disability advocacy charity, Mencap (Plate 4.2.5). It is commercially available and a percentage of the license fee goes to the charity. Me has a large x-height and terminals rounded asymmetrically with great subtlety and care, varying according to weight and ductile direction of the stroke. It thereby avoids the more simplistic appearance of earlier rounded Grotesques such as Vag, which featured uniform and symmetrically-curved terminals. The apertures being generous and the ascenders extending the cap-height give it a Humanist Grotesque accent, although, as a design of the twentieth-first century it naturally combines aspects of various historical precedents. Like Futura the a and g follow italic paradigms for both the upright and sloped versions. Many vertical strokes (e.g. in h and n) feature a slight calligraphic movement (more pronounced in heavier weights). Various other quirks are included, such as a cursive flick at the base of the d, a hockey-stick l, and an obese dot on the i which almost reaches the ascender height. The concept for these characteristics is to maximise the differences between characters. In addition to attempting to achieve 'legibility', several connotative 'functions' — 'approachable', 'not for kids' — informed the design.

In Fontsmith's specimen for the type, it is claimed that Me was 'designed to aid legibility for those with a learning disability' and that it was 'researched and developed with — and endorsed by — Mencap'.¹⁸ This claim is elaborated on the Fontsmith website where it is stated that 'every letter of FS Me was tested for its appeal and readability with a range of learning disability groups across the UK'.¹⁹ From this process, so Fontsmith claim, 'a clean, modern sans serif proved to be the most legible'.²⁰ Fontsmith's promotional texts create an impression that the type has been in some manner empirically validated by 'research'. The Fontsmith website makes reference to Me having been tested on 'a range' of subjects in 'extensive research groups'. Information about this research is not forthcoming, although an

article from a 2008 issue of *Creative Review* tells a humbler tale.²¹ The first thing to note about the ‘research’ as it is described in *Creative Review* is that it is not empirical. Rather a consultation was undertaken to gather the opinions of a group of people. The group that gave their opinions were eight employees of Mencap: Nina Clarke, a creative manager, and seven other employees with learning disabilities (not specified in the article). *Creative Review* is happy to allow that this qualifies as some sort of ‘research’ on the needs of those with learning disabilities, yet the picture given is much more like a client consultation process (common in branding projects) than anything like a serious study into the reading requirements of those with (all and any) learning disabilities (even as what legibility researchers call a ‘subjective preference study’, the number of subjects is negligible). The eight employees of Mencap were first shown representatives of broad categories of type — Grotesque, Serif, Cursive, etc. — and asked which they felt to be most legible. It would seem no attempt was made to test performance against preference. Grotesque was perceived by this group as being ‘accessible’. While it is clear that Me incorporates recommendations from earlier comparative character legibility research, receiving feedback on a client’s intuitive feelings on what constitutes an ‘accessible’ type is more likely to betray the aesthetic assumptions of the client, and is unlikely to have any influence on actual reading performance. Me is a beautiful and sophisticated type. Like most typefaces from designers as proficient as Fontsmith, careful consideration was put into every aspect of the design. However, it is lamentable that they inflate the strengths of their design, and exploit sentiment (‘all people should be valued equally, listened to and included’) in marketing their product.

Me is claimed to have been tailored to the needs of a particular group, yet as this group is defined as ‘people with learning disabilities’ it includes a diversity of people with entirely different issues relating to reading and vision. It therefore seems unlikely that Me can genuinely live up to such claims. Several typefaces have been devised to more narrowly address the learning disability dyslexia. One such type is Read, a Grotesque designed by Natascha Frensch when studying at Royal College of Art (Plate 4.2.6). It received significant media attention in the UK between 2003 and 2005, and was also giving enthusiastic assessment in J. and K. Visocky O’Grady’s *Information Design Handbook*, where it was claimed that Read was beneficial not only for dyslexics but ‘anyone with reading difficulties’.²² As with Bayer’s later ‘Basic Alfabet’, FS Me, and Beier’s types, Frensch’s type is designed to heighten the differences between characters (although both I and lowercase l are simple verticals). Like Me it uses a single-storey a and an open g (in an interview with *The Guardian*, Frensch astutely reasons that the greater ‘legibility’ of the italic-paradigm forms of a and g, resides in the fact that are learnt

first in writing, rather than claiming the character shapes are better adapted to optical reception).

More recently a similar type was designed by Christian Boer, also as a student project, supposedly adapted for people with dyslexia (Plate 4.2.6). Again, Boer's Dyslexie is a Grotesque modified so as to enhance the differences between characters. However Boer's approach is far cruder: the letters are warped and distorted as though viewed through a rain-spattered window. Boer received perhaps even more positive media attention than did Frensch, including an article in *Scientific American* where it was stated that 'an independent study on the font as part of a Masters thesis [...] discovered a significant reduction in reading errors by dyslexics when reading Dutch text typed in Dyslexie as opposed to the Arial font'.²³ This is not true. The findings of the study (which, incidentally, suffered the usual issues with variable control found in comparative typeface legibility research), were that neither dyslexics nor 'normal readers' had improved reading speeds with Dyslexie, and that dyslexics reading words in Dyslexie had found a reduction in certain character recognition problems but also an increase in others.²⁴ Only a subjective preference survey of dyslexic readers found definitively in favour of Dyslexie. Without any objective measures of improved performance, this is an aesthetic judgement. Perhaps the variably distorted forms of Dyslexie, signifying difference, and/or the knowledge that such forms were intended to specifically benefit the group, informed the preference. Whatever the answer, Dyslexie remains a formal exercise with no scientific support.

Neither Read nor Dyslexie were products of legibility testing (the study of Dyslexie occurred after its release). Both were rather intuitively arrived at by their designers, and both designers believed Grotesque to be the appropriate starting point for their formal experiments. Both designers in their press interviews stated that they intended to avoid having characters such as p, b, d, q or n and u as direct reflections or rotations of each other. Yet, as typedesigner Bruno Maag noted in a discussion of Read in *Creative Review*, rarely, if ever, are Roman types so designed, and although some Grotesques do have reflected or rotated pairs (such as b and d in Helvetica), a great many prominent Grotesques (designed by more proficient designers) have distinct character designs which are not reflections and rotations of one another.²⁵

A more serious attempt at devising a type specifically adapted to the needs of dyslexics is the Sylexiad project of Robert Allan Hillier (Plate 4.2.6). Hillier began in 2001 by designing a typeface informed by then current research on the legibility of type and types recommended for dyslexics. This initial design, named Dine 1, was intentionally radical. It was single-case serifless alphabet, therefore reducing the number of characters for a dyslexic to learn. The characters were designed so as to have maximum differences in form, as well as differences in scale so as to produce highly-distinctive word shapes. Hillier then undertook comparative

typeface legibility research, comparing Dine 1 with typefaces recommended by Dyslexia advocacy groups, including Arial, Sassoon Primary, and Times New Roman.²⁶ The results of this research informed a modified design, which again was tested against existing types, which again led to results to inform a new modified version of Dine. In all, five iterations were produced by this process and were presented in Hillier's 2007 PhD thesis. It is interesting to note that while the final types are still quite atypical, he moved from an extremely radical Dine 1 to more conservative typefaces. The final versions presented in the thesis were both serified and unserified versions of a type named Sylexiad. Hillier notes that both *dyslexia.com* and the British Dyslexia Association advocate the exclusive use of Grotesque types, yet his own research led him to believe that the presence of absence of serifs was not a central issue.²⁷

Hillier's project is commendable in that, unlike Dyslexie and Read, his types were not simply a product of imaginative reasoning but involved extensive research with dyslexic subjects. Nevertheless it would be incorrect to believe that, at last, scientifically-validated typefaces for dyslexics were produced with the Sylexiads. Hillier's methodology is a troubling Dadaist collage of elements derived from prior researchers' methodologies from the nineteenth century to more recently:

[the methodology] has incorporated ideas concerning comparative typeface testing (Anisson), the primacy of uniform letters (Babbage), the primacy of the upper half of a word (Javel), the testing of serif and sans-serif forms (Zachrisson) aesthetic preference (Burt) and reading rates (Wilkins). The theoretical model also combines elements of Frith's literacy developmental stage model and Tinker's methodological approach to measuring legibility.²⁸

Often Hillier's approach does not meet criteria of scientific objectivity. For example, much of the research takes the following form: first subjects self-report particular visual or cognitive difficulties in reading (such as 'visual distortion', 'tracking difficulties' and 'retaining information'), rather than the presence of these difficulties having been determined by objective measures. It is quite possible that a subject with a cluster of visual difficulties would not be able intuitively to locate whether it was 'distortion' or 'tracking' at work or to isolate precisely from among such difficulties. And it is entirely likely that a subject would perceive themselves as having better or worse abilities in 'retaining information' compared to the mean than they actually did. Then, of those who elect themselves as having such problems, Hillier gathers their subjective preference in typeface.²⁹ From this he extrapolates a *causation* from the *correlation* of the self-reported difficulty and the subjects' typeface preferences. In sum, this is a three stage move from non-objectively measured self-reported abilities, to subjective preference collection,

to a fallacious assumption that a correlation equals a causation. This is not all that Hillier does, yet the fact that such methods are central to his research means that whatever he is doing, despite the complexity of his approach, it is not scientific: it is rather more like a wonderfully insane Rube Goldberg machine for generating new letterforms.

4.2.4 Grotesque Policies

The impact of pseudo-scientific legibility research on typedesign, or other non-empirically researched pseudo-scientific claims, is still in a sense positive, in that it provides rationales to designers for generating new and often radical typedesigns (such as Dine 1 and also Dyslexie, despite its amateurish appearance) which have the potential to expand the Grotesque language. Increasingly however, in the area of accessibility policy, guidelines are produced to limit the choice in typefaces. With regard to the typefaces which claimed to address the ‘needs’ of people with particular abilities, we have seen that rather than their having been demonstrated as functionally superior, the primary justification in fact comes from the stated preferences of a surveyed group. This is also the case in accessibility guideline policies.

The British Dyslexia Association (BDA), as Hillier noted, recommend Grotesque types. Yet, in the documents in which they present typeface guidelines, they offer no scientific validation for their recommendations.³⁰ They note that they gathered information from surveying members, rather than by objective methods, and further they endorse all three of the above discussed types (Dyslexie, Read, Sylexiad) which have not been scientifically validated. One source BDA cites in fact overtly states that there is ‘no evidence that special dyslexia fonts confer statistically significant improvements in reading speed compared to standard, run-of-the-mill fonts’ and further, the source does not support the idea that Grotesques are superior.³¹ We have already shown that Grotesque (or ‘sans serif’) is not a natural category, but an associative one that brings together divergent types. The core types recommended by the BDA are all Grotesques which have been included in Microsoft Windows operating systems for many years (Arial, Century Gothic, Comic Sans, Tahoma, Trebuchet, Verdana). Other than the fact that these typefaces are united in common typeface taxonomy parlance (and are universally available through Microsoft Windows) they are massively divergent: Century Gothic is essentially modular, Verdana has features adapted for earlier low-resolution screens (broad counters, large x-height), etc. It seems unlikely, and no evidence is forthcoming, that such different designs could be united as ‘legible’ and ‘accessible’. Opinion and speculation (and often an unfortunate typographic naivety) are what allows such Grotesques to be recommended in this manner. Additionally, an impression of scientificity is given to this claim, by its being

repeatedly asserted as valid. Once it was said that in typographic discourse on typeface legibility ‘there is no real body of knowledge about graphic design — slogans substitute for fact’.³² Were this ever a true statement, it could only be so now in relation to accessibility policy.

Were such well-intentioned/ill-informed guidelines limited to contexts aimed solely at dyslexics, the subjective aesthetic preferences of that narrow group might be a valid justification for typeface selection. But increasingly pseudo-science attempts to control the entire typographic environment. In Ireland, the National Adult Literacy Association, a charity which provides ‘accessible’ printing guidelines to government bodies and private organisations recommends that ‘it is best to stick to clear, easy-to-read sans serif fonts like Arial or Helvetica’.³³ Even being well-informed cannot prevent the repetition of this fabricated truth: the Canadian visual impairment advocacy charity, Canadian National Institute for the Blind, which seeks to ensure that official printing and typography is ‘accessible’ to all, recommends in its style guidelines that ‘Arial and Verdana are good choices’.³⁴ This is despite the fact that their own 2006 review of legibility research concluded that there was no scientific consensus on typeface legibility for the visually impaired.³⁵ There is a definite continuation here with the modernists’ dream of a purified language and a universal script, but it is a battered and degraded version of this vision. The Plain English Campaign — following the Orwell who wrote ‘Politics and the English Language’ — believes that imposing a reduced vocabulary and basic sentence structure on political bodies will help to purge such communications of ideological obfuscation (but ‘straight shooting’ politicians belie this everyday). And like the Newspeak Research Department invented by the Orwell who wrote *Nineteen Eighty-Four*, the Plain English Campaign seeks to politically enforce a simpler mode of English. But they don’t stop there. ‘We’re destroying words — scores of them, hundreds of them, every day. We’re cutting the language down to the bone’ said an enthusiastic Newspeak engineer.³⁶ The Plain English Campaign, buttressed by the illusion of science and the insinuation that to oppose them is to marginalise further the marginalised, through their recommendation of exclusive use of Grotesques, seek to destroy typefaces everyday.³⁷ This is the final resting place of the utopian vision of the universal Grotesque — anaemic, divorced from the dream of a new world of universal equality, the Grotesque is the graphic form in which the lie is told to the marginalised that they are included.

Conclusion

As Beier’s research-informed typefaces show, no longer is legibility research used by typographers and typedesigners to support claims from either side of the great twentieth-century

typographic-ideological divide over the function of serifs. However, it would be a mistake to believe that such a pluralistic attitude to typeface legibility is one at last liberated of ideology. It may seem that Gray and *Typography*'s doctrine of diversity has been accepted by that ever-present coterie within typographic discourse, of those hell-bent on uncovering 'objectively' superior typefaces. But this acceptance is not an acceptance to the adventure first celebrated by Gray and later practised by *Typography*. The aesthetic joy to be found in navigation of the Semiotic terrain of type, so wonderfully embodied by Graphik, is re-presented by typography's would-be scientists in diluted form; merged with an equally diluted re-presentation of modernism's scientism and utopian universalism; united under the banner of 'accessibility'.

At the same time, a seemingly opposing tendency from outside of typography seeks to limit the use of typefaces to Grotesques, also in the name of 'accessibility'. Despite a poverty of evidence, the hunger for policy allows bureaucrats to proclaim that the Grotesque welcomes all into a diverse typographic utopia of equality. Once again the Grotesque is attributed with a magical egalitarianism which it lacks.

- 1 Emigre, 'Dead History' <<http://www.emigre.com/EFfeature.php?di=88>> [accessed 21 September 2015].
- 2 Tracy, *Letters of Credit*, p. 87; Jaspert, Berry and Johnson, pp. 256, 283.
- 3 S. Carter, *Twentieth-Century Type Designers*, pp. 105–106; Jaspert, Berry and Johnson, p. 198.
- 4 Aicher, p. 179.
- 5 Aicher, p. 190.
- 6 Ettore Sottsass, cited in Andrea Branzi, *The Hot House: Italian new wave design* (London: Thames and Hudson, 1984), p. 49.
- 7 Cf. Zuzana Licko and Rudy VanderLans, *Emigre: graphic design into the digital realm* (New York, NY: Wiley, 1993).
- 8 Hoefler & Co., 'Gotham Overview' <<http://www.typography.com/fonts/gotham/overview/>> [accessed 20 August 2015].
- 9 Christian Schwartz, *Graphik Family* (New York, NY: Commercial Type, 2013), p. 1 <https://commercialtype.com/typeface_images/graphik/Graphik-family.pdf> [accessed 20 August 2015].
- 10 Baudrillard, *Political Economy of Sign*, pp. 130–142.
- 11 Crosby and others, *Pentagram: the work of five designers* (London: Lund Humphries, 1972), unpaginated; Frutiger, Osterer and Stamm, p. 214.
- 12 C. Schwartz, *Stag Specimen* (Village, 2015), pp. 4, 6 <<https://vllg.com/schwartzco/stag/specimen>> [accessed 19 August 2015].
- 13 Easterby and Zwaga, *passim*.
- 14 Paul J. Nini, cited in Jenn and Ken Visocky O'Grady, *The Information Design Handbook* (Mies: Rotovision, 2008), p. 111.
- 15 Sofie Beier and Kevin Larson, 'Design Improvements for Frequently Misrecognised Letters', *Information Design Journal* 18/2 (2010), pp. 118–137, p. 118.
- 16 Beier, *Reading Letters: designing for legibility* (Amsterdam: Bis, 2012), p. 104.
- 17 Fontsmith, *Why Me?* (London: Fontsmith, 2009), unpaginated.
- 18 Fontsmith, *FS Me Information Guide Volume 1.0* (London: Fontsmith, 2009), p. 2 <http://fontsmith-assets.com/families/specimen_sheets/18/7ce9e490423277b2615cdf4888f2944/FS%20Me.pdf> [accessed 20 August 2015].
- 19 Fontsmith, 'FS Me Overview' <<http://www.fontsmith.com/fonts/fs-me>> [accessed 20 August 2015].
- 20 Fontsmith, *Why Me?*
- 21 Gavin Lucas, 'This Face is FS Me Bold: designed for legibility', *Creative Review* 28/6 (2008), pp. 44–45.
- 22 Polly Curtis, 'New Typeface to Help with Dyslexia', *Guardian*, 18 April 2005 <<http://www.theguardian.com/education/2005/apr/18/schools.uk>> [accessed 22 August 2015]; Barbara Lantin, 'A Better Read for Dyslexics in Sight', *Daily Telegraph*, 28 October 2003 <www.telegraph.co.uk/news/health/3303006/A-better-read-for-dyslexics-in-sight.html> [accessed 22 August 2015]; Natascha Frensch, *Read Regular: for more effective reading and writing* (London: Natascha Frensch, 2003) <<http://www.readregular.com/pdf/ReadRegular-ENG.pdf>> [accessed 22 August 2015]; J. and K. Visocky O'Grady, pp. 158 – 159.
- 23 Jennifer Nalewicki, 'Bold Stroke: new font helps dyslexics read', *Scientific American*, 26 October 2011 <<http://www.scientificamerican.com/article/new-font-helps-dyslexics-read/>> [accessed 22 August 2015]; Christian Boer, 'Dyslexie Font is the Typeface for People with Dyslexia' <<http://www.dyslexiefont.com/en/dyslexie-font/>> [accessed 22 August 2015].
- 24 Renske de Leeuw, *Special Font for Dyslexia?* (unpublished masters thesis, University of Twente, 2010), pp. 20–24.
- 25 Bruno Maag, 'Type Designers Do Care', *Creative Review* 25/3 (2005), p. 12.
- 26 Robert Alan Hillier, *A Typeface for the Adult Dyslexic Reader* (unpublished doctoral thesis, Norwich School of Art and Design, 2006), p. 6.
- 27 Hillier, p. 63.
- 28 Hillier, p. 56.
- 29 Cf. Hillier, pp. 128–129.
- 30 British Dyslexia Association, *Dyslexia Style Guide* <http://www.bdadyslexia.org.uk/common/ckeditor/filemanager/userfiles/About_Us/policies/Dyslexia_

-
- Style_Guide.pdf?> [accessed 22 August 2015]; British Dyslexia Association, *Typefaces for Dyslexia* <<https://bdanewtechnologies.files.wordpress.com/2011/03/typefaces6.pdf>> [accessed 22 August 2015].
- 31 Charles Bigelow and Kris Holmes, 'Dyslexia and Typography' <<http://bigelowandholmes.typepad.com/bigelow-holmes/dyslexia-typography/>> [accessed 22 August 2015].
- 32 Cheetham, Poulton, and Grimby, p. 48.
- 33 National Adult Literacy Agency, 'Writing and Design Tips' (Dublin: National Adult Literacy Agency, 2011), p. 19 <https://www.nala.ie/sites/default/files/publications/Writing%20and%20Design%20Tips%202011_1.pdf> [accessed 22 August 2013].
- 34 Canadian National Institute for the Blind, 'Clear Print and Accessibility Guidelines' <<http://www.cnib.ca/en/services/resources/Clearprint/Documents/CNIB%20Clear%20Print%20Guide.pdf>> [accessed 22 August 2015].
- 35 Elizabeth Russell-Minda, Jeffrey Jutai and Graham Strong, 'Clear Print: An evidence-based review of the research on typeface legibility for readers with low vision' (Canadian National Institute for the Blind, 2006), pp. 24–25 <<http://www.cnib.ca/en/services/resources/Clearprint/Pages/default.aspx>> [accessed 24 August 2015].
- 36 Orwell, *Nineteen Eighty-Four*, p. 52.
- 37 Plain English Campaign, *Guide to Design and Layout*, (Plain English Campaign, 2009) <<https://www.plainenglish.co.uk/files/designguide.pdf>> [accessed 24 August 2015].

**ABCDEFGHIJK LMNOPQRSTU
ghijklmnopqr stuvwxyz012**

Dead History (1990) by Makela
From Poynor, *No More Rules*, p. 102.

**HANDSOME BIRD SECURED
Printing Convention Opened**

Globe Gothic (c. 1906). From *American
Specimen Book of Type Styles*, p. 765.

ABCDEFGHIJKLMN OPQRSTUVWXYZ
abcdefghijklmno pqrstuvwxyz

Touraine

Above: Peignot (1937). Left: Touraine
(1947). Both by Cassandre.
From Jaspert, Berry, Johnson,
Encyclopedia of Typefaces, pp. 319, 349.

ABCDEFGHIJKLMN NN
abcdefghijklmnopqr stuvwxyz

Optima (1958) by Zapf.
From S. Carter, *Twentieth-Century
Type Designers*, p. 152.

ran ran ran ran
 ran ran ran ran
 ran ran ran ran
 ran ran ran ran

The Rotis family (1988)
 by Aicher. From Aicher,
typographie, p. 189.

Nexus *Serif* transform
 transform
 transform
 transform
 Nexus *Sans* transform
 transform
 transform
 transform
 Nexus *Mix* transform
 transform

Since Rotis many other families
 with serifed and unserifed
 members. Nexus (2004), by
 Majoor, includes Grotesque,
 Roman and Egyptian. From:
 Akers and Hill (eds) *Types for
 the New Century*, p. 36.

Plate 4.2.2: Hybrid families

// Looking back on more than forty years of concern with sans serif typefaces, I felt an obligation to design a 'linear' style of sans serif in the tradition of Erbar, Futura** and to a lesser extent of Gill Sans**. These have 'constructed' characters from which the element of a handwriting movement has been removed.

Constructivist typefaces, such as Futura and Gill Sans, have come back into fashion, but most of the new faces in this style have been limited to display uses and are difficult to read in long texts.

Avenir is intended to be nothing more or less than a clear and clean representation of modern typographical trends, giving the designer a typeface which is strictly modern **//** and at the same time human, i.e. suitably refined and elegant for use in texts of any length.

Avenir (1988) by Frutiger.

From S. Carter, *Twentieth-Century Type Designers*, p. 169.

**McCormick Row House District
New Utrecht Reformed Church
American System Built Houses**

Gotham (c. 2000) Hoefler Frere-Jones.

From *New Typefaces by Hoefler and Frere-Jones* (2006).

**Norður-Ísafjarðarsýsla
Niederkirchnerstraße
Robert Oppenheimer
68,923 people reside**

Graphik (2009) by Schwarz, featuring both one- and two-storey a, and straight and curved t. From Schwartz, *Graphik Family*, p. 9.

b hnmu b hnmu **OD→BEFPR**
b hnmu b hnmu **OD→BEFPR**
b hnmu b hnmu OD→BEFPR

Spencer (c. 2010) by Beier.
 From: Beier, *Reading Images*, p. 80

Sofie Beier

Reading Letters

designing for legibility

Ovink (c. 2010) by Beier.
 From Beier, *Reading Images*, titlepage.

Micro Regular

Micro Italic

Micro Bold

Micor Bold Italic

eco

fja

Text Regular

Text Italic

Text Bold

Text Bold Italic

eco

fja

Display Regular

Display Italic

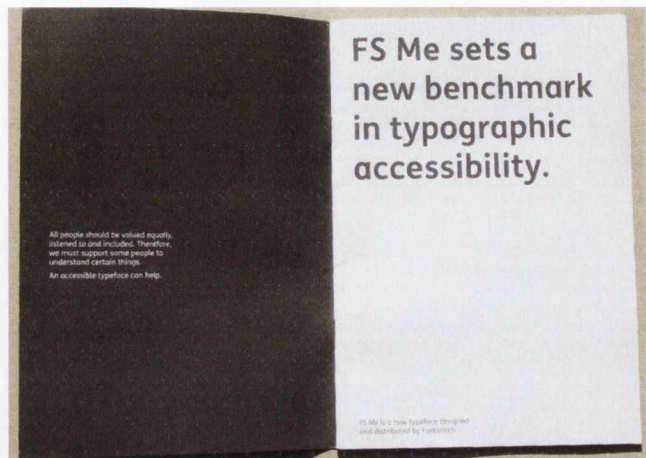
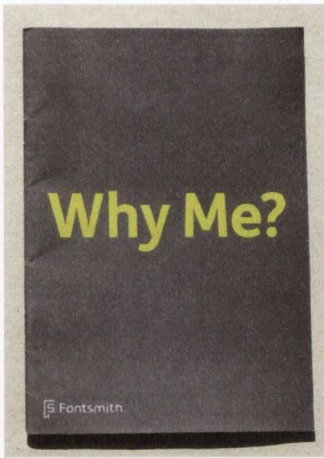
Display Bold

Display Bold Italic

eco

fja

Pyke (c. 2010) by Beier. 'Micro' and 'Text' styles are Beier's interpretation of Transitional and 'Display' is Modern. From Beier, *Reading Images*, p. 104.



Why Me? (2009)
Fontsmith promotional document for FS Me.

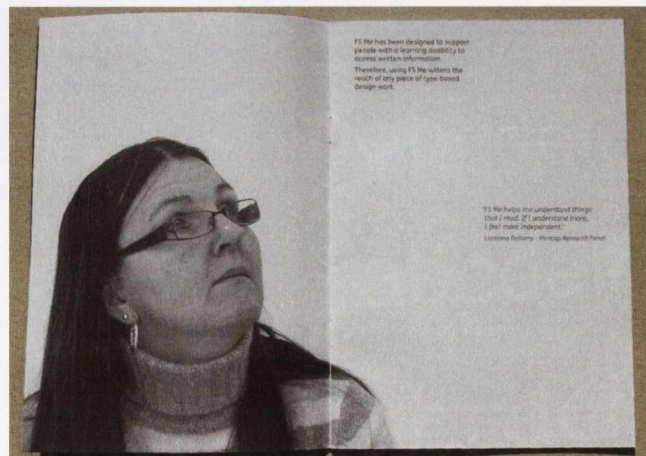
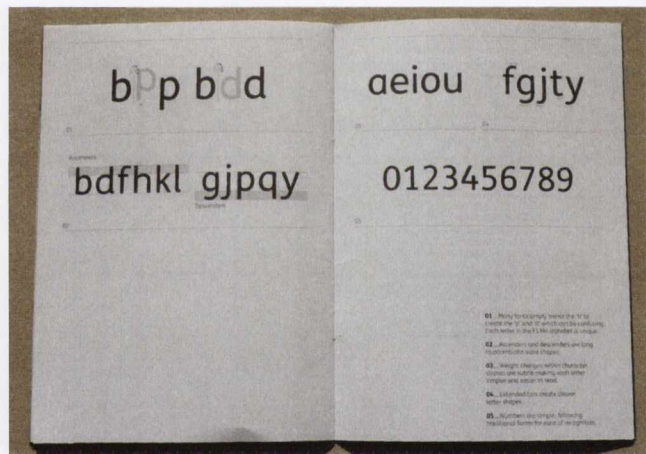


Plate 4.2.5: FS Me

Read Regular

FOR MORE EFFECTIVE READING AND WRITING

Read (2003) by Frensch.
From Frensch, *Read Regular*, cover.

Lucas Meijs, bijzonder hoogleraar
Rotterdam School of Management
Universiteit, wordt vrijwilligerswerk

Dyslexie (2011) by Boer.
From Leeuw, *Special Font for
Dyslexia?*, p. 29.

ABcdeFghIjKlMnOpQrStuVwXyZ

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNopQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNopQRSTUVWXYZ

Top: Dine 1. Centre: Sylexiad Sans.
Below: Sylexiad Serif.
From: Hillier, *Typeface for the Adult
Dyslexic Reader*, pp. 212, 216, 217.

5. CODA: Towards a Semiotics of the Letter

5.0.0 Introduction

Throughout this thesis various semiotic themes have been explored, including the connotative semiotics of letterforms and the semiotics of Isotype. In relation to the development of Grotesque style, the sense in which the term ‘Semiotics’ (with capital S) has been used, has been an atypical sense derived from Baudillard’s analysis of the consumer object. This Semiotics describes the artform of typedesign as an aesthetic of synthesis and reference. It is a Semiotics without a signified — types refer to types refer to types. To revive a once fashionable slogan, it is a ‘formal play of signifiers’.

While the terms ‘Semiotics’, ‘language’ and ‘idiom’ are useful (and in no small part metaphorical) in describing the art of typedesign, there are tools from semiotics and linguistics which are useful in making sense of the communicative and interpretative processes involved in how it is that the primary components of typedesign — letters — function. This question has been addressed in different ways by grammatology and visual semiotics. The aim of this chapter is not to develop nor synthesise grammatology and visual semiotics, but more humbly, to uncover a fundamental semiotics of the letter which underlies both the orthographic and connotative accounts of the letter.

5.0.1 Semiotics and Typography: disciplinary interactions

When examining the letter’s communicative function, (at least) three general areas can be located. Firstly, there is the efficiency of the specific design of a letter as regards its ability to be recognised and distinguished. This is the aspect of the letter which interests the legibility researcher as described in Chapters 4.1 and 4.2. In this context, the question asked is whether a particular letter design is of optimum intelligibility, or whether another design could enhance the ease and speed of its recognition. As this area involves no attribution of a particular communicative role to the letter, other than its ability to be recognised, it will be put aside in this chapter. Secondly, there is the role of the letter within orthography (or any other conventional system). As regards linguistic writing systems, this is the area covered by grammatology, as detailed in Chapter 1.1 and again in Chapter 2.3. In this context what matters is not the positive substantive realisation of the letter, but that the letter fulfils a differential function within a system such that it can be combined and sequenced with others to indicate meanings. Although within an orthography the shapes of letters are arbitrary — another set of

shapes could work in their place — orthography does place a minimal demand on the design of letters: they must be distinguished from one another. The third area is the semantic values a particular designed letter carries. Although this piggybacks on the ‘Semiotics of style’, it is distinct, as it is not a sheer discourse of form but one with signifieds. It occurs when the letter is recognised as not only having its identity as letter, but when a specific styling carries connotative ‘meanings’, such as a national association, or a tone such as ‘organic’, ‘dignified’, etc. (a model of the structure of connotation was supplied in Chapter 2.3). As has been shown, the desire to limit connotation can be found throughout twentieth-century typographic discourse, from New Traditionalism, New Typography to Swiss Modernism. Connotation has also been championed, not only in *Typography*, but also by today’s typodesigners: FS Me is ‘friendly’, Stag is ‘masculine’, etc.

The New Typographers addressed each of these areas when designing their alphabets. They argued that the optical reception of letters was inhibited by the co-existence of styles of letter which carried ‘superfluous’ connotations, and therefore a single universal style of easily distinguished Grotesque letters was sought. In attempting to arrive at letters of optimum legibility, they designed letters according to restrictive geometric programmes, based on an assumption that rudimentary geometric shapes were universally intelligible. The use of geometric shapes was also an attempt to address the issue of the semantic meanings carried by letters. Geometric shapes were believed to transcend associations of the personal and local; therefore geometric letters would carry no semantic values (or, would carry only the connotation of modernity, defined as a post-cultural age in which the personal and local were transcended: a sort of post-connotative age). In pursuit of a rational alphabet, the New Typographer’s waded into grammatology, as they challenged the necessity for the two-case system (as well as other issues such as digraphs), as again involving superfluity inhibiting ease of recognition, and therefore (although not stated in such terms) the letters ability to fulfil its differential function.

The above paragraph as a translation, so to speak, of New Typography theory and practice into a vocabulary derived from semiotics and grammatology serves to demonstrate that concern with the semiotics (as a general, rather than disciplinary, term) of typography has been central in twentieth-century typographic discourse. From around the 1960s onwards there have been frequent explicit efforts to apply theoretical tools from semiotics to both the analysis and the praxis of typography. Setting aside the recurrence of typographers interested in grammatology (already outlined in Chapter 1.1), below we offer a partial and roughly sketched overview of several moments of such disciplinary interaction.

Tomás Maldonado (who joined the faculty of HfG Ulm in 1957 and took over the

directorship of the school from Max Bill in 1962) with his colleague Gui Bonsiepe, introduced semiotics to the syllabus at Ulm.¹ Ulm semiotics was of a particular sort. In large part derived from the semiotics of Charles Morris, Maldonado and Bonsiepe developed not a semiotics of analysis (as it is normally considered) but a semiotics of praxis — an understanding of systems of communication that was to aid the development of more efficient design.² Their influence can be seen in the writings of others from the Ulm faculty, including typographer Anthony Froshaug.³ More significantly, Aicher (a founder of Ulm), was informed by a Morris- and Maldonado-influenced semiotics in the development of his system of ‘pictograms’.⁴

As with other areas of intellectual activity, French structuralist and post-structuralist semiotic theory made some incursions into typographic discourse, beginning in the late 1970s and peaking perhaps in the mid-1990s. *Visible Language*, for example, devoted its July 1977 issue to the writings of Roland Barthes, and the July 1978 issue, entitled ‘French Currents of the Letter’, explored post-structuralist literary theory, particularly the writings of Jacques Derrida.⁵ In the late 1980s at the Cranbrook Academy, Katherine McCoy produced typography structured according to Algirdas Julien Greimas’s ‘semiotic square’ and sprinkled with ‘Derridean oppositions’.⁶ By the mid-1990s ‘Barthes’ was an obligatory entry in every typographer’s lexicon, and he and his poststructuralist compatriots were frequently championed as having in some way been the impetus for a new digitally-produced chaotic typography. As a generational rebellion against the strictures of the International Style, such theory-informed typography served its formal purpose, although the theoretical rigour of such endeavours, as Lupton and Miller have argued, was at times questionable.⁷ The same generation gave us Lupton and Miller’s *Design/Writing/Research*, whose ‘Laws of the Letter’ described the Modern as having introduced ‘structuralist typography’ as ‘a code of relationships that could yield infinite variations’, a concept which (combined with Gray’s history of nineteenth-century types and Baudrillard’s analysis of the transition from Symbolic to Semiotic objects) has informed the analysis of style in this thesis.⁸

Semiotics in typographic discourse (and Deconstruction, the two generally came bundled together) came to be seen by some, not entirely without reason, as modish jargon or the obvious wrapped up in gobbledygook.⁹ Some of the resistance to semiotics came in the form of a description of semiotics as concerned with ‘ideal’ or ‘abstract’ ‘structures’ incapable of dealing with the ‘material’ nature of the products of typographic design.¹⁰ In recent years academics from outside of typographic discourse have attempted to address this concern, and have begun to examine the extra-linguistic meanings attributed to ‘visual’ or ‘material’ aspects of letters — notably in sociolinguistic investigations of the semiotics of typography. The most prominent

examples are two essays published by Theo van Leeuwen from 2005 and 2006.¹¹ Van Leeuwen's 'semiotics of typography', involves a near-exclusive focus on the semantic values of letterforms (and not only typographically-rendered letters), beyond their orthographic functions.¹² Van Leeuwen attempts an inventory of letterforms' 'distinctive features' (weight, expansion, etc.), in analogy with Roman Jakobson, Gunnar Fant, and Morris Halle's analysis of distinctive features in speech sounds.¹³ Whereas Jakobson, Fant and Halle's distinctive features were differential, Van Leeuwen attributes semantic values to his.¹⁴ As he deals not with the letter's primary orthographic function, but only with secondary semantic values, his is a semiotics of connotation. Unfortunately, as with legibility studies, there are occasions of absence of domain knowledge, irksome to the typographically-informed. Minor irks come in the form of his odd readings of typeface connotations, such as the following:

[Century Gothic] readily lends itself as a metaphor for 'organicness', 'naturalness', 'femininity' and other related concepts. Ascenders can be longer than descenders, as in the case of Poor Richard, and this can for instance convey a sense of 'aspiring to higher things'.¹⁵

More significant are Van Leeuwen's misapprehensions about the history of typography and typographic discourse. Van Leeuwen implies that typographers, until recently, have been unaware of the connotative aspects of letterforms, and that the expressive use of letterforms (and even that the revival of the Victorian practice of designing letters which are also depictions of objects) is a newly developing area.¹⁶ Yet, even those who sought the absence of connotation (the New Typographers or Beatrice Warde, for example), were hypersensitive to it (and tired of seeing its frequent occurrence already in the 1920s!) — they simply thought it to be in poor taste, and, as secondary sign-function, a potential impediment to the primary linguistic-orthographic function.

Setting issues of domain knowledge aside, we will focus on a seeming controversy between the 'material' or 'visual' semiotics of the letter, and the description of the letter's function within a system as non-positive and differential. For the grammatologist, letters are differential units of orthography; for the visual-semiotician or sociolinguist the letter is often a polysemous aggregate of connotations. The non-positive, differential account of the letter and discussion of the semiotics of the embodied letter have at times been presented as fundamentally at odds with one another.¹⁷ It will here be argued that rather than these two positions contradicting one another, each describes the letter in a different semiotic context.

Nevertheless the primacy of the differential nature of the letter will be asserted; and at

the same time it will be argued that the differential letter is independent of language and orthography. A provisional sketch of a fundamental semiotics of the letter will be proposed, underlying both the grammatological and visual-semiotic. By 'fundamental semiotics of the letter' it is meant the semiotics of the letter prior to its exploitation in any particular sign-function or semiotic system. Regardless of any semiosis the letter enters into (be it within an orthography, a mathematical notation system, or in the 'linguistic landscape'), the letter is in some sense, prior to any functional context, semiotic.

5.0.2 The Immaterial Controversy

Saussure famously explained the non-positive nature of the phoneme by metaphorical reference to the letter <t>. ¹⁸ Saussure provided three renderings of the letter and argued that they remain functionally identical whether rendered on a different surface or in a different manner. All that is necessary for a mark to function is recognition of its identity as <t> and recognition that it does not have another identity, such as <l>, etc. That Saussure was not attempting to directly propose a theory of writing, but to explain the nature of the phoneme is sometimes overlooked. ¹⁹ Nevertheless, we can accept that Saussure did (albeit indirectly) assert a theory of the semiotics of the letter through use of this metaphor. Saussure's simple statements about the letter — that its identity is not tethered to any particular graphic realisation; that its purpose is to be differentiated from other letters — does not imply that the *only* possible semiotic function a letter can have is non-positive and differential.

Van Leeuwen, in the opposite manner to Saussure, explains writing with reference to speech:

This view of the 'distinctive' role of speech sounds is quite similar to the view that letterforms have no meaning in themselves [...] In my view, however, distinctive features can become meaningful [...] The same reasoning can be applied to the distinctive features of letterforms. ²⁰

Van Leeuwen is of course correct: an embodied speech segment, or a letter, can enter into any number of semioses. Yet it is vital to note that phonetic or graphetic qualities communicate in addition to, not in contradiction with, the differential role of the phoneme in a phonology, or the letter in an orthography. As Umberto Eco wrote, following Louis Hjelmslev,

a sign-function is realised when two functives (expression and content [signifier and signified in Saussurean terms]) enter in a mutual correlation; the same functive can also enter into another correlation, thus becoming a different functive and therefore giving rise to a new sign-function.

Thus signs are the provisional result of coding rules which establish *transitory* correlations of elements, each of these elements being entitled to enter — under given coded circumstances — into another correlation and thus form a new sign.²¹

That is to say, whether a letter is taken as a ‘purely negative and differential’ unit — whether three renderings of the letter ⟨t⟩ are taken to be functionally identical — or whether three renderings provide independent meanings, depends upon what we are asking of the letter. Whether the three ⟨t⟩s are dispersed in a text whose linguistic content is being deciphered, or whether they are seen as indexical evidence of the presence of particular authors (or any other semiosis) is not fixed. As expression functive substance, the graphic mark is not obligated to any content.

Nevertheless, all things are not equal. There is a fallacy in arguments that suggest that recognition of meaningful differences in rendering of letters contradicts the Saussurean point that letters are first of all differential units independent of any substantial realisation. As will be elaborated below, the fallacy lies in the fact that recognition of such ‘visual’/‘material’ significance is in fact dependent upon a prior recognition of the differential and non-material nature of the letter. It is only when a letter’s identity is recognised, that a particular embodiment can be taken as meaningful.

5.0.3 Potestas

Abercrombie defined the three attributes of the letter in classical grammar as follows — ‘*figura* was the letter as written, *potestas* as pronounced, and by its *nomen* it could be identified for discussion’.²² Although Abercrombie was concerned with the letter within orthography, we can use expanded understandings of these three terms to describe the more general (pre-orthographic) fundamental semiotics of the letter.

As described in Chapter 1.1, according to the alphabetic principle a letter’s *potestas* should be one sound, and one alone (and the failure of orthography to function in this way has aggravated both linguists and typographers alike). That the alphabet was most likely invented (or developed) as a set of symbols standing for individual segments, does not explain the synchronic function of letters in actually existing orthographies. As outlined in Chapter 1.1, the alphabetic principle does not account for English orthography, nor can an exhaustive account of English orthography be made in terms of the alphabetic principle plus anomalous deviations. Even those orthographies which are said to be highly alphabetical, such as Finnish, depart from the alphabetic principle in their use of upper- and lowercase letters, as differences in symbols

occur for reasons other than differences in sound. As Bradley, Householder, Sampson, and others have argued, often letters make visual distinctions that the spoken language fails to represent. Sampson also argues that English orthography has tendencies towards logography, as letters combine not only to stand individually for sounds, but to form word symbols (logographs), allowing graphic distinction of homophones such as the various meanings and spellings of [rait] (<write>, <rite>, <right>).²³ Des Ryan has examined aspects of writing normally considered to fall outside of the English writing system, including grammaphonology (a specific form of non-standard spelling), the use of colour and characters intentionally rendered to have more than one reading.²⁴ Ryan argues that these fringe activities serve to demonstrate the interaction of phonetic and non-phonetic functions given to letters in all English writing. There have also been numerous sociolinguistic studies into the role of non-standard orthography (or transgression of 'highly-regulated' orthography) in the construction of cultural identity.²⁵

We need not go through this in further detail. It suffices to say that even within standard orthography, the roles which letters play are varied and not yet fully understood. We can therefore expand Abercrombie's sense of *potestas* from 'sound' to any use to which the letter is put in a given system. Rather than thinking of a letter as relating to a particular sound in a given language, a letter is better thought of as a component used in writing; a component that we can put to various uses. The same components are used in various orthographies, in which they may have similar or entirely different functions. We can expand the meaning of *potestas* further, beyond the linguistic-orthographic, as letters can be, and in fact are, used in numerous notation systems, such as algebra and symbolic logic. Therefore the *potestas* belongs to a system but the letter does not. That a letter is not tethered to a *potestas* can be clarified with reference to Saussure's explanation of linguistic identity with the '8:25 pm Geneva-to-Paris train' metaphor. Regardless of whether the train is composed of new carriages and passengers each day, we recognise that it is the same train each day owing to its being functionally identical.²⁶ Now we need to reverse this metaphor to understand the letter. To rely on the letter's *potestas* as its definition is akin to calling an automobile that once carried passengers to the capital of Northern Ireland, 'to Belfast'. The letter has an identity (structurally) prior to any of its functions.

The term 'grapheme', in analogy with 'phoneme', has been used to describe the functional nature of letters within orthographies.²⁷ What exactly constitutes a grapheme (whether uppercase and lowercase letters are independent graphemes or graphetic variants) is not generally settled.²⁸ We will retain 'potestas', as the point being made is that letters are attributed with various functions, not only linguistic-orthographic ones. A more important reason to avoid the phoneme analogy is that it implies a physical thing is supplied with a

function. But letters are not like speech sounds. The sounds to which language supplies phonemic functions have a physical existence. That to which is given a graphemic (or any other) potestas — the letter — although it is realised physically, is itself not a physical entity. The letter has an identity outside of its physical realisation. It is already non-positive and differential prior to the attribution of potestas.

As Sampson notes, a Blackletter character and its Roman type equivalent can be considered to be functionally identical despite differences in style.²⁹ *The Complete Works of Shakespeare*, whether printed in Blackletter or Roman, involves functionally identical strings of letters: a sonnet read from either book would be the same sonnet. Within this specific semiotic context the visual difference would be functionally irrelevant. Another useful example is the 1916 Proclamation of the Irish Republic, which was printed in such haste that more than one typeface was used in the body of the text. These switches in typeface are orthographically irrelevant (however, their orthographic irrelevance does not preclude other semiotics functions, and the presence of variations in character style is a necessary index of an authentic 1916 copy). But there are notation systems which rely on letters in a similar manner to linguistic-orthographies, as differential units, in which differences in typeface style are of vital importance. In the mathematical notation shown below, Blackletter and Roman characters have been assigned precise potestates such that if the characters set in Blackletter were set in Roman the equation would cease to make sense.³⁰ This greater precision in differentiation does not mean the letters now function owing to graphic substance, or due to their ‘materiality’. What matters is that a distinct potestas has been applied not only to letters (e.g. $\langle A \rangle \neq \langle B \rangle$) but to the particular style of the letters (e.g. $\langle A \rangle \neq \langle A \rangle$).

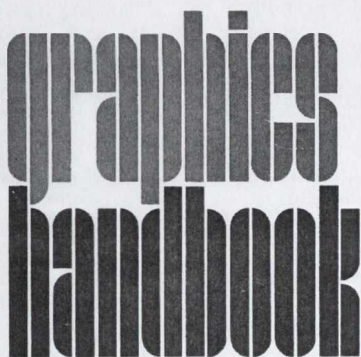
$$\mathfrak{S} = \text{Alg}\{I, S(\xi), \rho(a) : \xi \in E, a \in \overline{\mathcal{A}}\}^{\text{WOT}}$$

5.0.4 Figura

If the letter is not defined according to a particular potestas, but is rather that to which a potestas is given, must it be defined as figura — as shape? As we have already shown, letters come in different shapes, and we have seen that sometimes these different shapes are given precise potestates (as in the mathematical notation example), and sometimes variations in letter style will not carry such a precisely defined function (as in the Proclamation of the Irish Republic). In each of the seemingly endless typefaces available the letters will be rendered slightly differently. The typefaces will further be rendered differently depending upon the quality of printing or digital display they are realised through. And of course each person’s handwriting will render

letters differently again. Yet, we recognise these renderings not as unique symbols but as different renderings of the same letter. This identity is independent of attributed potestas: the mathematical notation supplies potestas to different versions of *the same letter*, and the Proclamation does not.

On the cover of Ken Garland's *Graphics Handbook* of 1966 (see below), there are two styles of letter. Orthographically, the letter ⟨a⟩ as it appears in ⟨graphics handbook⟩ and as it appears in ⟨Ken Garland⟩, are identical. Yet clearly their shapes are communicatively different. It is not my intention to develop an analysis of the connotative visual semiotics involved here, but let us say, for the sake of demonstration, that the author's name set soberly in Univers connotes matter-of-factness and the title lettering, composed of modular units, is iconic of the modernist systematic approach to graphic design that the book endorses. Whatever the meaningful difference between the styles, this connotative semiotics of the letter is not quite of the same differential nature as the Roman and Blackletter characters found in the mathematical notation example. The differences between the meaning of variation in letterstyle on the book cover and variation in letterstyle in the mathematical notation, resides in the fact that in the mathematical notation a precisely and unambiguously defined difference in potestas exists for each letterstyle, and on the book cover it does not. Nevertheless, the following point is crucial: just as in the mathematic-orthographic context, the recognition of connotative meaningful differences in the styling of letters on Garland's cover is also dependent, firstly, on the recognition of the two differently-styled shapes sharing, in an abstract sense, the same identity. The different meanings attributed to each letter ⟨a⟩ must follow recognition that both are in fact ⟨a⟩ (one is a 'matter-of-fact' ⟨a⟩ and one is a 'systematic' ⟨a⟩). Both belong to the same abstract conventional category, and it is the differences in realisation of this identical abstraction that allows semantic/connotative meaning to enter.



The image shows the cover of the book 'Graphics Handbook' by Ken Garland. The title is rendered in a very bold, black, modular sans-serif typeface. The letters are constructed from thick, rectangular blocks, giving them a three-dimensional, architectural appearance. The word 'graphics' is stacked above 'handbook'. The overall design is minimalist and typographic.

Ken Garland

5.0.5 Nomen

Ultimately, if a letter is neither its function (its potestas) nor its shape (its figura), the letter is to be understood as nomen. Here nomen does not literally mean 'name', as name varies across languages. Rather, nomen indicates the associative category to which the letter belongs. This is Charles S. Peirce's *symbol* at its fullest degree of abstraction; its meaning conventionally established and maintained independent of particular instances of its occurrence. Peirce's explanation of the symbol through written and spoken words as examples applies equally to the letter:

[the symbol is] itself a kind and not a single thing. You can write down the word 'star', but that does not make you creator of the word, nor if you erase it have you destroyed the word. The word lives in the minds of those who use it.³¹

And,

we speak of writing or pronouncing the word 'man'; but it is only a *replica*, or embodiment of the word, that is pronounced or written. The word itself has no existence although it has a real being, *consisting* in the fact that exists *will* conform to it.³²

Likewise, the embodied letter, regardless of the peculiarity of its embodiment, is a token of a non-embodied abstraction.

This definition of the letter as nomen is similar to the first definition of letter supplied by Florain Coulmas in *The Blackwell Encyclopedia of Writing Systems*:

[a letter is] one of a class of shapes which are recognized as instances of abstract graphic concepts which represent the basic units of an alphabetic writing system. Each of these units has a name, for example ei, si, kei. Thus the letter em is the class of all Ms no matter how they are shaped; more precisely, it is the class of all conceivable letter shapes to which the name em applies.³³

To this we must add some qualifications. Firstly, letters are not united under a 'name' tethered to a specific phonetic/orthographic realisation such as 'em', but are held in a general category here called a nomen. More importantly, the 'alphabetic writing system' to which a letter belongs need not be linguistic-orthographic. Finally, Coulmas provides this definition with several others, including one in terms of orthography ('a graphic symbol that represents one or more phonemes of a language [...] defined in terms of its function within a system that represents speech'). We

need to stress that the definition of letter as an associative category uniting various shapes is not one definition of the letter sitting next to the orthographic one, but structurally must precede the exploitation of the letter with attributed potestas in a given orthography or system.

5.0.6 Paradigm Figura

Coulmas observes that regarding the variety of shapes held to be the same letter, 'it is difficult, if not impossible, to define these prototypes in terms of invariant graphical features'. Coulmas is correct that a definitive inventory of the shapes united under a nomen cannot be provided. However we can, with the aid of a metaphor of Peirce's, shed some light on how it is that certain letter-tokens are united under the same nomen.

Between the pure abstraction of the symbol and its particular substantial realisation as token, there are what are here called *paradigm figurae*. On the one hand, these paradigm figurae are what particular letter tokens approximate, and at the same time, the paradigm figurae result from a generalisation of all prior letter tokens. They are not '*urformen*', but are transient and historically formed. Nevertheless their movement is generally slow, and a stability of paradigm figurae exists. When the typeface designer opens FontLab, or when we lift a pen, we attempt to approximate a particular paradigm figura, and at the same time, the sum of such approximations leads to a continual morphing of the paradigm itself.

Peirce's metaphor of the composite photograph is here useful. The composite photograph was a nineteenth-century technique in which photographic portraits were exposed onto one another in an attempt to determine human types. Despite the scientifically dubious nature of this practice, Peirce found it useful in metaphorically describing the nature of certain concepts. The idea of 'yellow' is not held mentally as a specific light-wave frequency, but rather as an approximation based on previously experienced yellows.³⁴ Likewise, when we think of an object, such as a 'chair', we conceive of a mental composite image of previously encountered chairs, the overlay of which forms the general idea of chair. In a similar way we can think of paradigm figurae of letters not as precisely defined schemas, but as soft-edged composite images.

The uppercase <A> in most Roman typefaces and non-cursive handwriting adheres approximately to the following structure: two lines descend diagonally, left and right, from an apex, linked by a horizontal line. An inscribed letter that adheres to these rules is a *token* of this paradigm figura. That a serifed <A> has 'feet' and a bold Grotesque <A> may have a flat rather than pointed apex are the details with softer edges in the composite image of the paradigm: their presence or absence should not inhibit recognition of the figura.

The symbol is entirely abstract. All that the symbol demands of its paradigm figura is that they are agreed to be, by convention, paradigm figura of the symbol. The paradigm figura is also abstract, in that it is independent of any substantial realisation. However, unlike the relationship of symbol to paradigm, the relationship of token to paradigm figura does demand that certain attributes be approximated. As Eco would put it, the type/token ratio is one of *ratio facilis*, meaning that for the token only 'some features are pertinent and some others are variable and inessential for the isolation of the given-unit'.³⁵

Yet, letter-tokens are not independent realisations of paradigm figurae: tokens are most often realised as members of alphabets — typeface or lettering styles. These alphabets themselves impose constraints and conventions on how the token realises the paradigm. In a Grottesque alphabet — such as that of Helvetica — every stroke will most likely be in reference to a paradigm figura. In contrast, in a script typeface some of the strokes may be flourishes that do not relate to a paradigmatic form but to the typefaces own native stylistic conventions. In essence each alphabet establishes what we can call *native conventions* determining how the letter-tokens fulfil the paradigm. This is true of all letters: Helvetica likewise, though more skeletal, is governed by conventions determine the weighting of its strokes and the relationship of its x-height to extruders, etc. Such native conventions are unique to each alphabet, but they are not entirely freely invented, as native conventions are themselves often governed by more general conventions — *paradigm conventions*.

The Bauhaus alphabets of the 1920s, such as Albers's geometric stencil letters and Bayer's 'universal' alphabet, make explicit the role of native conventions in determining how a letter-token realises a paradigm figura. Bayer and Albers attempted to construct entire alphabets with a minimum of possible shapes (all letters to be one width, all strokes to be the same thickness, all curves to be perfect circle arcs, etc): thus their design method forced their letters to depart from paradigm figurae owing to adherence to native conventions.

In contrast, a more conventional printed alphabet, such as that found in Times New Roman, is governed by conventions not only found in Times. Certain strokes are heavier than others — it is 'stressed' — and serifs of a particular style occur at particular points. The placings of serifs and stress are more or less the same as many other Roman typefaces. In that sense they follow paradigmatic sets of conventions. But what makes Times Times is the subtleties in the exact application of the conventions. It is in this sense that they are 'native' to Times. Further native conventions determine, among many other things, the relative proportions of the letters — in the case of Times there is a large x-height and short ascenders and descenders — and equally all exceptional 'conventions' which may have only one application.

The above is not an attempt at an exhaustive account of the nuances of form letters take in typedesign. If it were it would be excessively reductive — typedesign operates at a much greater degree of nuance in terms of analysis of form and the consideration of the relation of form to prior form. Rather it is intended as a schematic account of how it is that letters retain an identity independent of realisation and variation in realisation, while at the same adhering to general conventions.

Conclusion

Letters pre-exist — structurally if not historically — the systems (or contexts) that supply them with functions. Nevertheless, letters are not semiotically neutral prior to their exploitation in particular semiotic systems. Letters have been developed into a uniquely vast range of styles that can be rendered and recognised with ease in an array of functional contexts. What allows this is recognition of the letter as nomen — it is only when the identity of letters is recognised that visual similarities and differences can become meaningful. Saussure was more or less correct in his description of the letter as non-positive and differential, but this applies to letters more broadly, not just within alphabetic-orthographies. Whether ⟨t⟩ looks like any of his three examples is not at first important, as long as each is recognised as ⟨t⟩. It is only after this recognition of identity that the visual semiotician can attend to differences in renderings of ⟨t⟩, and thus detect a specific content. The semiotic richness of the letter resides in the fact that prior to its exploitation in a particular sign-function or semiotic system, there are several stages to its realisation, and at each of which a precise potestas can be applied, or a visual-semiotic distinction can be made. This is the fundamental semiotics of the letter, which underlies the use of letters in any particular semiotic context. In standard orthographies the potestas is applied at the level of symbol. As we have seen, in certain forms of mathematical notation, different paradigm figurae of a symbol can be supplied with potestates creating a greater degree of differentiation than is found in standard orthographies. The example of the Proclamation of the Irish Republic demonstrates that this richness is also at work in semiotic contexts not governed by strict potestates. Orthographically all the symbols that are realised as differently styled tokens on the Proclamation have the same potestas. However, because the symbols have slight differences in their approximation of paradigm figurae, the tokens are then able to serve as indices of the authenticity of the document.

- 1 Rathgreb, p. 55.
- 2 Cf. Bonsiepe; Maldonado; Maldonado and Bonsiepe.
- 3 Cf. Froshaug, 'Roadside Traffic Signs'. The influence of Maldonado is evident in 'Roadside Traffic Signs', despite the fact that elsewhere Froshaug was extremely critical of Maldonado claiming him to be an 'amateur, often naive and muddled in his thinking', and that Maldonado's writings in *Uppercase 5* were 'incomprehensible theoretical articles', Froshaug, 'Review: *Uppercase 5*', *Design* 161 (1962), pp. 85, 87. In defence of Maldonado, Froshaug's own understanding of semiotics was vague and muddled. Cf. Froshaug's definitions of 'symbol and emblem' in 'Roadside Traffic Signs', p. 38: 'An "icon" is a sign which has analogies and resemblances to thing it stands for. A photograph or painted portrait are iconic signs. In the case of a 'symbol' the connection of the sign to its original reference is looser. When a symbol becomes highly abstracted and institutionalised, the resulting "emblem" may seem to have no connection with its original referent'.
- 4 Cf. Rathgreb, pp. 16–17.
- 5 Steven Ungar (ed.), *Visible Language* 11/4 (1977), 'The Work of Roland Barthes'; George H. Bauer (ed.), *Visible Language* 12/3 (1978), 'French Currents of the Letter'.
- 6 Cf. Poynor, *No More Rules: postmodernism and graphic design* (London: Laurence King, 2003), p. 50.
- 7 Lupton and Miller, 'Deconstruction and Graphic Design', in *Design Writing Research*, pp. 3–23, p. 9.
- 8 Lupton and Miller, 'Laws of the Letter', p. 54.
- 9 Kinross, *Unjustified Texts*. Cf. 'Semiotics and Designing', pp. 313–327 and 'Fellow Readers: notes on multiplied language', pp. 335–370.
- 10 Kinross, *Unjustified Texts*, p. 344; Johanna Drucker, *The Visible Word* (Chicago: University of Chicago Press, 1994), pp. 9–47.
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Conclusion

It is often said of graphic design that, not just the profession, but the practice, did not exist before the twentieth century. The same can, in a sense, be said of typesetting. Prior to the nineteenth century there were typefaces, some artfully designed, but not an art of typesetting in the sense in which one exists today. The proliferation of co-existing optional styles throughout the nineteenth century led not only to a diversification, but to a specification, as typefaces became increasingly nuanced in their differences from one another. Although it is impossible to place a precise date on the birth of the artform as it exists today, a significant (or at least emblematic) event was Klingspor's marketing of their types as the works of named designers in the first years of the twentieth century. What this involved was not simply an elevation of the designer, but an elevation of the type. Soon, no longer would 'Grotesque' or 'Roman' do; one required Gill's Sans or Dwiggin's Electra. As the artform developed it became increasingly one of synthesis and reference. Even types that at first seemed quite new — Futura for example — demonstrate this. Futura, yes, joins with the modernist 'elemental' aesthetic (an aesthetic which was imagined by some to depart from style and history), but also adopts Old Style ratios of x- to cap- to ascender-heights, and the Modern axis — absorbing the 'elemental' into a combinatory aesthetic.

The beauty of the Grotesque does not reside in the fact that it was once (or twice, or maybe three or four times) championed as the antidote to formal diversity, that it was hoped to be the letter that would inscribe the constitution of a new age, when once again design would not be fashion but a 'true' expression of the epoch. The beauty of the Grotesque resides in the way that it resisted such efforts; in the way that every attempt to limit the Grotesque to function, was absorbed into the Grotesque language of style and transformed into form. A great Grotesque designer, such as Frutiger, is one who produces something new — Avenir — through a sophisticated handling, hybridising, and developing of existing idioms. The complexity of the Grotesque language of style can only increase over time, allowing the design of types richer in nuance, allusion and beauty.

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