

A teleological-reliabilist account of Plato's theory  
of knowledge based on the *Timaeus*,  
the *Republic*, and the *Theaetetus*

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## SUMMARY

Whether, in Plato's epistemology, the Forms can be grasped without using the inferior epistemic capacities, and whether the inferior epistemic capacities contribute to one's grasp of F-ness and the Form F? These are the questions I want to take up in this dissertation. The answer to these questions, I argue, can be found in Plato's illustration of these inferior epistemic capacities in the *Timaeus*, the *Theaetetus*, and the *Republic*. On the basis of my investigation of these dialogues, I argue that all the inferior capacities, including sensation, *phantasia*, *doxa*, and *dianoia*, contribute to one's grasp of the whole truth, and that the Forms cannot be grasped merely by *noesis* alone without using the inferior epistemic capacities.

**Chapter 1** argues that the Forms cannot be grasped without using the inferior epistemic capacities. To answer the question of why the Forms cannot be captured merely by *noesis*, I have argued that the ability to use *noesis* properly requires the mastery of *dianoia*, since only if one is an expert in following the argument downward to the conclusion, is it possible for one to investigate the hypothesis in a reasonable manner, and to follow the argument upward to the first principle. However, the mastery of *dianoia* in turn requires the involvement of the other inferior epistemic capacities, that is, sensation, *phantasia*, and *doxa*, since its usage of an image is carried out through sensation and *phantasia*, while the usage of the hypothesis and following the argument downward to the conclusion by the principle of consistency are carried out, to a certain extent, by both *phantasia* and *doxa*.

**Chapter 2** argues that sensation contributes to one's grasp of F-ness. To explain the conditions under which sensation can be related to F-ness, I have argued that sensation will be Form-related if it imitates correctly the motions of the external object, and if the motions are closely related to the Forms and the Good. To answer the question of how the motions of the external object are closely related to the Forms and the Good, I have argued (a) that the motions of the celestial bodies are good, since they are ordered and indispensable in achieving the purpose of seeing which is good, and (b) that the revolution in the ordinary objects is good, since it unifies the external object by introducing limit and number into its unlimitedness. To answer the question of how sensation can imitate correctly the motions of the external object, I have argued (i) that the formation of the kindred substance ensures its uncontaminated imitation of the motions, since it is regulated by the principle of like unto like, (ii) that the kindred substance, coming into contact with the external objects by collision, imitates correctly the motions of the external objects, since it changes its shape in a certain way according to the wax analogy, and (iii) that the process of sensing a colour ensures that the revolution in the external object can be correctly imitated and delivered to the soul, since it is designed by the demiurge and the lesser gods.

**Chapter 3** explains how *phantasia* contributes to one's grasp of F-ness. To answer the question of whether *phantasia* must be false, I have examined some objections, and I have argued that none of them can exclude the possibility that one can attain a partial truth of the original object by means of *phantasia*, and hence that it is possible for *phantasia* to be Form-related. To explain the conditions under which *phantasia* can be related to F-ness, I have argued that a *phantasia* will be Form-related if it preserves some of the truth of the original object, and that this standard is ensured by the participation of the representation in the truth of the original object. To answer the question of how each procedure of formulating *phantasia* contributes to one's grasp of F-ness, I have argued (a) that the mere presentation is in contact with the truth,

since the formulation of the mere presentation, being interpreted by the wax analogy, can preserve some of the truth of the external object when the non-rational side is regulated by reason; and (b) that the presentation-*cum*-belief is reliable in preserving the truth, since its selection of the imprint of the appropriate act, being interpreted by the model of the anticipatory pleasure, is designed by the lesser gods with the purpose of making the creature as good as possible.

**Chapter 4** explains how *doxa* contributes to one's grasp of F-ness. To answer the question whether it is possible for *doxa* to be related to F-ness, I have refuted Moss' argument that *doxa* cannot be of Forms, by introducing the interlocutors' true beliefs as they occur in Plato's dialogues. To answer the question of how *doxa* allows one to grasp F-ness, I have answered that this is because one recognizes the necessary conditions of F-ness, and one regulates one's assent to a new proposition by conforming to reason. To answer the question of how each procedure of the formulation of *doxa* is related to F-ness, I have shown (a) that the asking and the answering stages in rational generic belief are regulated by properties of F-ness, since asking enhances one's proficiency in obeying reason and prepares for the final confrontation between reason and the non-rational side, and trying to offer an initial answer makes the search for the essence concrete and oriented; and (b) that the affirming/denying stage is governed by the properties of F-ness, since the comparison with the future requires one to recognize and obey the principle that the Forms should be unchanging over time, and the comparison between one another requires one to realize and adhere to the principle that the Forms should be absolute.

**Chapter 5** argues that *noesis* is the completion of *dianoia*. To clarify the formulation of *dianoia*, I have shown that it is composed of the proof stage and the confirmation stage, based on Benson's characterization of the method of hypotheses. To determine the best *dianoia* by which *noesis* is developed, I have suggested that it is a *dianoia* in which one captures the first principle as the effective hypothesis without knowing it, and in which one still *takes* this hypothesis as the first principle. To illustrate the progression from the best *dianoia* to *noesis*, I have argued that one, with the best *dianoia*, can realize that the so-called first principle is the unhypothetical principle and the Form of the Good, and that this realization is achieved by the additional examination in the confirmation stage.

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# Introduction

## 1.1 Preliminaries

My purpose in this dissertation is to offer a teleological-realist account of Plato's theory of knowledge, and my main focus is Plato's *Timaeus*, *Republic* and *Theaetetus*. My thesis in this dissertation is that Plato distinguishes different capacities, and that each of them contributes to the achievement of knowledge. They contribute, I argue, because each and all have a function and a purpose, and these functions and purposes are subsumed under and subserve the function and purpose of the highest capacity. I shall call this 'a teleological-realist account of knowledge' and I shall argue that such is Plato's account.

Suppose that a person, Mr Prophet, finally grasps, and grasps only, though suddenly, all of the Forms, but he cannot explain his grasp of the Forms, since his grasp of the Forms is merely sudden and without any dialectical practice.<sup>1</sup> In this case, are we allowed to qualify him as a person who knows all of the Forms? Even if he knows all of the Forms through intuition, in order to know the whole truth, does he still need to go back to review and regulate his inferior epistemic capacities?

Speaking of the inferior epistemic capacities, I will follow, as a starting point, the division made in the *Analogy of the divided line* at the end of book VI of the *Republic*, and take the inferior capacities as being the following: *eikasia* (as the capacity occupied with images), *pistis* (understood as the capacities of *doxa* and *doxazein*), and *dianoia* (more on which shortly; it is especially displayed in higher mathematics). For reasons that will become apparent, I shall also include the capacity of *phantasia* as an inferior capacity, since *phantasia* is a particular kind of judgement which is occupied with images. The highest capacity is, of course, *noesis*, which alone is occupied with the Forms, and the Forms only.

A traditional answer to the first question would be that Mr Prophet does know all of the Forms, since knowing is the grasp of the Forms, and he grasps all of the Forms, thus he knows the whole truth. However, a different and reasonable answer should still be taken into consideration, that is, that Mr Prophet does not know any truth, but only holds true beliefs at most. The evidence is that "Education isn't what some people declare it to be, namely, putting knowledge

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<sup>1</sup>Of course, according to Plato's theory of knowledge, nobody will suppose that knowledge can be gained randomly or purely by luck, but "suddenly" here just means that knowledge is gained not in the standard manner, e.g. the difficult process in *The Allegory of the Cave* and *The divided line*. One case of this "sudden" manner is implied by the clear cut relation between knowledge and other inferior outcomes, since this position holds that knowledge has nothing to do with these inferior outcomes, thus the outcomes from these inferior capacities will contribute nothing to knowledge. This, I argue, is incompatible with the process in *The Allegory of the Cave*, hence I conclude that those inferior capacities and their outcomes should be included in the grasping of knowledge.

into souls that lack it, like putting sight into blind eyes”[20](*Republic*: 518b; tans. Grube), but to “remove what’s bad in the soul”[20] (*Sophist*: 227d; trans. White), and to *keep* what is good in the soul by ordering each capacity. In other words, by merely putting Forms into the soul of a human being without ordering the soul, it is hard to qualify him as knowing anything, let alone knowing the whole truth.

The case of the jury at *Theaetetus* 201b can give us some hints, since these two cases share the same structure in a certain sense, and Plato’s attitude towards the jury’s epistemic status can also shed some light on Mr Prophet’s case.<sup>2</sup>

SOCRATES: Then suppose a jury has been justly persuaded of some matter which only an eye-witness could know, and which cannot otherwise be known; suppose they come to their decision upon hearsay, forming a true judgment: then they have decided the case without knowledge, but, granted they did their job well, being correctly persuaded?[20] (*Theaetetus*: 201b; trans. Levett)

We can see that both Mr Prophet and the jury grasp the truth, but their processes of grasping the truth are not reliable, since both beliefs are not caused in the right sort of way.<sup>3</sup> The jury’s having a true belief comes from persuasion which has nothing to do with truth. More importantly, by persuasion, the lawyers will make the jury “judge whatever they [the lawyers] themselves choose”, consequently, they can cause the jury to hold the true belief, but they can also cause them to dismiss the same belief by persuasion. In this way, whether the jury can hold the true belief is completely determined by the lawyers’ intention, thus making the jury’s holding the true belief merely a matter of chance. Unfortunately, Mr Prophet is in a similar condition. Although he holds the truth this time, the fact that he cannot check his belief but can only accept whatever appears in his mind, makes his holding this truth merely accidental. It is in this way that the process in the case of the jury and that in the case of Mr Prophet are both unreliable. As a result, Mr Prophet who only grasps all of the Forms suddenly, can not be counted among those who know all of Forms, or who know the whole truth.

If this is the case, then we need to ask the further question: even if Mr Prophet knows all of the Forms not suddenly, but through intuition for example, in order to know the whole truth, does he still need to review and regulate his inferior epistemic capacities, in particular, the capacities of *eikasia*, *pistis*, and *dianoia*?<sup>4</sup> In other words, whether the whole truth can be grasped merely by *noesis*, independent of using the inferior epistemic capacities?

The dominant view among critics is that, for Plato, the object of *noesis* is a Form, hence to know all of the Forms implies to know all of the truth. However, in my view, a different and reasonable answer should be taken into consideration, that is, that Mr Prophet, knowing all of the Forms, still needs to review and order all the other and lower epistemic capacities, and only in this way can he know the whole truth, or as much truth as possible if the whole truth is inaccessible for a human being.

My position does not emerge out of the blue, but is indicated at several places in Plato’s dialogues. The most relevant evidence is *The Allegory of the Cave*, since it indicates why the task of ordering the inferior capacities should be included in knowing the whole truth, or as much

<sup>2</sup>The case of the jury and the case of Mr Prophet are not exactly the same, since the object in the case of the jury is some matter or certain event which belongs to becoming, while the object in the case of Mr Prophet is the Form which is quite different from becoming.

<sup>3</sup>As Appiah (2003) characterizes it, “Though in each case the belief is true and justified, the fact that it is true plays no part in explaining why it is justified”[45](Appiah: 68). The reason I call their grasp of the truth as beliefs, is merely that they do not know the truth.

<sup>4</sup>The case from intuition is merely an example, and it refers to the account which separates completely the capacity of *noesis* from the other inferior capacities.

truth as possible if the whole truth is inaccessible for a human being. In the latter part of the *The Allegory of the Cave*, when the person knows all of the Forms, although he is unwilling to go back to the Cave, he is forced to go back.

It is our task as founders, then, to compel the best natures to reach the study we said before is the most important, namely, to make the ascent and see the good. But when they've made it and looked sufficiently, we mustn't allow them to do what they're allowed to do today.

What's that?

To stay there and refuse to go down again to the prisoners in the cave and share their labors and honors, whether they are of less worth or of greater.[20] (*Republic*: 519c-d; trans. Grube)

If one is allowed to paraphrase the journey in *The Allegory of the Cave* as one's arriving at the whole truth, then the journey can be interpreted in the following way: (a) one realizes the inferiorities of the capacities, their objects, and their limitations, etc.; (b) one comes to know all of the Forms; (c) one reviews the inferior capacities, and orders them with the help of the knowledge of the Forms. If this is the case, then only when each epistemic capacity is ordered is one able to grasp the whole truth. A model to illustrate this thought is the gear set: the highest gear in this set is the capacity of *noesis*, the lowest gear is the capacity of *eikasia*, and there are also other gears, for example, the capacity of *pistis*, and *dianoia*, etc. Although the capacity of *noesis* is the highest and most important gear, knowing the whole truth can only be guaranteed by the joint cooperation of all the gears. It is in this sense that merely knowing all of the Forms cannot count as knowing the whole truth, and that the one who knows all of the Forms must be compelled to go back to the Cave to teach the other prisoners.

This model of a gear set is not a wild guess based on my interpretation of *The Allegory of the Cave*, but is supported by Plato's texts. To begin with, the outcomes reliably produced by the inferior capacities do contribute something to the whole truth, since they each captures some of the truth, though the share is quite limited. This position can be supported by the *Analogy of the divided line* and the likely story of the creation of human beings in the *Timaeus*. Firstly, according to the *Analogy of the divided line*, the ratios of each line "participate in clearness and precision in the same degree as their objects partake of truth and reality"[58] (*Republic*: 511e; trans. Shorey), thus the results reliably produced by the inferior capacities should also partake in truth, although to a limited extent. Secondly, in regard to the creation of human beings, at *Timaeus* 71d it is said: "For the gods who created us bore in mind that their father had ordered them to make the human race as good as possible, and so they organized even our base part so that it might have some kind of contact with truth, and established the seat of divination in it"[36] (*Timaeus*: 71d; trans. Waterfield). Thus our base part, including the inferior epistemic capacities, also contributes something to the whole truth. Consequently, not only the capacity of *noesis*, but also the inferior capacities have contact with the truth.

In addition, the outcomes produced by the reliable inferior capacities are necessary for the mastery of *noesis*, that is, they are indispensable in the process of gaining the whole truth. In terms of the primary cause of vision at *Timaeus* 47b-c, when vision functions properly, it will bring us to philosophy, since "the god invented sight and gave it to us so that we might observe the orbits of intelligence in the universe and apply them to the revolutions of our own understanding"[20] (*Timaeus*: 47b-c; trans. Zeyl), and in this way, it can gain the whole truth. Consequently, for a human being, if he is incapable of seeing in the appropriate way, then he is unable to master *noesis* in this way. Of course, vision is only one means which helps one

to grasp the revolution of the universe, and this purpose can also be achieved by other inferior capacities, for example, hearing. However, if one is incapable of operating any inferior capacities in an appropriate manner, then one is definitely unable to master *noesis*, let alone gain the whole truth. This is the reason why inferior capacities are necessary for the mastery of *noesis*.

As a result, to know the whole truth, one needs to know every part of the truth, and this includes both the truth produced by the capacity *noesis*, and the truths produced by the inferior capacities, for example, the capacities of *eikasia* and *pistis*.

Moreover, ordering the inferior capacities is indispensable in knowing the whole truth, granted the holistic view of the truth which is emphasized by Plato at *Charmides* 156e.

“But our king Zalmoxis,” he said, “who is a god, says that just as one should not attempt to cure the eyes apart from the head, nor the head apart from the body, so one should not attempt to cure the body apart from the soul. And this, he says, is the very reason why most diseases are beyond the Greek doctors, that they do not pay attention to the whole as they ought to do, since if the whole is not in good condition, it is impossible that the part should be.”[20] (*Charmides*: 156e; trans. Sprague)

Indeed, without the whole being in good condition, namely, being ordered, it is impossible that the part should be.<sup>5</sup> In other words, only if the whole is in order can we finally be in harmony, that is, know the whole truth. The footnote in the Loeb edition at *Republic* 402b points out that what matters is everything, not merely some important things, “It is fundamental Platonic doctrine that truth is not concerned with size or seeming importance”[57] (Shorey: 259). Granted the purpose of knowing the whole truth, and the holistic view of the truth, one is required to review and regulate the inferior capacities.

In conclusion, even if Mr Prophet knows all of the Forms, in order to know the whole truth, he still needs to go back to review and regulate his inferior epistemic capacities. Because the outcomes produced by the reliable inferior capacities not only contribute something to the whole truth by having contact with truth, but their contributions are also indispensable for the knowledge of the whole truth. Therefore, in order to know the whole truth, or as much truth as possible if the whole truth itself is inaccessible for a human being, a human being should not only grasp the truth produced by the capacity of *noesis*, but must also grasp the truth reliably produced by the inferior capacities, in particular, the truth in *eikasia*, *pistis*, and *dianoia*.

## 1.2 Methodology

### 1.2.1 How can an inferior capacity partake in its share of truth?

Although the inferior capacities have some contact with the truth, it does not follow that any outcome produced by them is the corresponding truth. Consequently, in order to acquire the truth disclosed by these inferior capacities, I need to solve the problem of how these capacities can, at their best, “participate in clearness and precision in the same degree as their objects partake of truth and reality”[58] (*Republic*: 511e; trans. Shorey). This question, again, can be reduced to two sub-questions: firstly, whether it is possible for the inferior capacity to partake in its share of truth; secondly, under what condition the inferior capacity can obtain this possibility.

<sup>5</sup>As “the soul is the source both of bodily health and bodily disease for the whole man” (*Charmides*: 156e; trans. Sprague), this means that healing the soul is the most important and the first thing to do, but it does not mean that merely curing the soul solves all of the problems. This has been illustrated later at *Charmides* 157c, “to submit your soul to be charmed with the Thracian’s charms first, then I shall apply the remedy to your head” (*Charmides*: 157c; trans. Sprague), thus merely healing the soul is not enough to heal the body.

Now I will answer the first question by taking the capacity of vision as the example. Obviously, vision is an inferior capacity, but it can offer us the art of number, the notion of time and philosophy.<sup>6</sup>

As it is, however, our ability to see the periods of day-and-night, of months and of years, of equinoxes and solstices, has led to the invention of number, and has given us the idea of time and opened the path to inquiry into the nature of the universe. These pursuits have given us philosophy, a gift from the gods to the mortal race whose value neither has been nor ever will be surpassed. I'm quite prepared to declare this to be the supreme good our eyesight offers us.[20] (*Timaeus*: 47a-b; trans. Zeyl)

This position can also be confirmed from the design plan of vision, apart from the direct confirmation above. For the purpose of answering the question whether vision can lead us to grasp its share in the art of number and philosophy, we can get some hint from the demiurge's motivation in creating the universe, also the lesser gods' motivation in creating the capacity of vision. If the design of vision is to help us to gain the art of number and philosophy, and neither the demiurge nor the lesser gods will deliberately mess us around, then I am justified in holding that our vision, provided it is ordered, can offer its share in securing the art of number and philosophy.<sup>7</sup>

To begin with, the design of vision can help us to gain its share in the mastery of the art of number, the notion of time, and the securing of philosophy. Firstly, vision can help us to gain its share in truth, since everything created and organized by the demiurge should aim at bringing us order and truth. This can be confirmed from the reason why the demiurge brought the universe "from a state of disorder to one of order", that is, "because he believed that order was in every way better than disorder"[20] (*Timaeus*: 30a; trans. Zeyl). Secondly, vision can help us to gain its share in truth, since it is created by the lesser gods, who received the command from the demiurge. This can be confirmed by the reason why the lesser gods invented vision, and it is that by vision that "we might observe the orbits of intelligence in the universe and apply them to the revolutions of our own understanding"[20] (*Timaeus*: 47b-c; trans. Zeyl). In this way, vision, provided it is ordered and in harmony, can give us the ability to see the stable periods, and this ability will, to some extent, lead us to grasp the art of number and philosophy. In other words, the design of vision can help us to gain a share in the mastery of the art of number and the securing of philosophy.

In fact, the illustration above not only confirms that it is possible for vision to partake in its share of truth, but also uncovers the purpose of vision, that is, to allow us to gain a share in the mastery of the art of number, the notion of time, and the securing of philosophy. The purpose is also viewed as the primary cause. The purpose of vision, in my view, constitutes the first condition under which vision can partake of its share of truth.

Not only is the purpose of vision, by itself, to enable us to master the art of number and philosophy, but also the demiurge will not mess us around like Descartes' Evil demon. We can see this clearly from the very beginning of the demiurge's creation of the universe, "he [the demiurge] was good, and one who is good can never become jealous of anything. And so, being free of

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<sup>6</sup>Although the text here tends to suggest that in order to secure the art of number, the notion of time, and philosophy, the only capacity we need is vision, I think the more plausible interpretation would be that vision only plays a partial role in the task of securing these notions. In fact, leading us to these notions is not only the purpose of vision, but also the purpose of hearing. Along this line, I take this task to apply not only to *eikasias*, like vision and hearing, but also to all the epistemic capacities, for example, *pistis* and *dianoia*.

<sup>7</sup>This line of thought is clearly exhibited by Descartes and Plantinga, and I maintain that Plato's thinking is in line with them, based on the account of the creation of the universe in the *Timaeus*.

jealousy, he wanted everything to become as much like himself as was possible”[20](*Timaeus*: 29e; trans. Zeyl). Since the demiurge wants everything to become as much like himself as possible, he would want vision not only, by itself, to help us to grasp its share in the art of number and philosophy, but also, *in fact*, to help us to attain a share in mastering philosophy. As a result, vision can lead us to grasp a share in the art of number and philosophy, and this is achieved when vision is ordered.

However, these conditions are still not enough to ensure that vision actually maintains its share of truth, since it still requires that its capacity, when functioning well, can produce its share of the truth. The example of cooking a pizza according to the instructions might be useful here. Ideally, if one wants to cook a pizza as it is supposed to be cooked, one needs to find an appropriate tool which serves for this purpose, for example, an oven, and one still needs to make sure both that the oven, when operating properly, can achieve the purpose, and that this oven is indeed functional.<sup>8</sup> Similarly, for one to actually maintain the share of truth in vision, one needs not only to offer the primary cause of vision, but also to explain the specific procedures of seeing and its contribution to achieving the purpose. This leads one to the second condition under which vision can partake of its share of truth, that is, the auxiliary cause.

To serve him in his work, he made use of causes and their necessary effects, but he took personal responsibility for fashioning the goodness in all created things. And that is why we should distinguish two kinds of cause, the necessary and the divine, and should search in everything for the divine cause, if we are to attain as blessed a life as our nature permits. But our concern with divine causes should lead us not to ignore necessary causes either, because it is impossible to discern the divine causes that interest us on their own, apart from necessary ones, or to understand them, or in fact to have anything to do with them.[36](*Timaeus*: 68d; trans. Waterfield)

This strategy is not merely a theoretical possibility, since this is exactly what Timaeus does in the dialogue *Timaeus*, that is, offer both the auxiliary cause and the primary cause of vision, “Let us conclude, then, our discussion of the accompanying auxiliary causes that gave our eyes the power which they now possess. We must next speak of that supremely beneficial function for which the god gave them to us”[20](*Timaeus*: 46e-47a; trans. Zeyl).

As a result, the primary cause and the auxiliary cause of vision, being together, determine the correct way for vision to perform. When vision operates as the design plan requires, it is ordered, and when it does not, it is disordered. Specifically, if one offers the primary cause and the auxiliary cause of vision, then one has answered the question of under what condition vision can partake in its share of truth, since these causes determine the way that vision is supposed to perform. More importantly, if one offers the primary cause and the auxiliary cause of vision, then one has also answered the question of how vision is to enable us to master the art of number and philosophy, since this purpose is inherent in the design plan, and this purpose will be achieved when vision performs according to the design plan.

Although both the auxiliary cause and the primary cause are necessary parts of the explanation, that is, neither of them is dispensable, these two causes are not equal in their importance. Specifically, the real cause should precede the auxiliary cause, and this is why the real cause is called the primary cause, and the auxiliary cause, the secondary cause. Indeed, the real cause is primary in the sense that it is the most important cause, since without the primary cause, the auxiliary cause will be purposeless. This relation between these two causes is clarified at *Timaeus* 46c-e.

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<sup>8</sup>I assume that one will operate the oven exactly as the instructions say.

So anyone who is a lover of understanding and knowledge must of necessity pursue as primary causes those that belong to intelligent nature, and as secondary all those belonging to things that are moved by others and that set still others in motion by necessity. We too, surely, must do likewise: we must describe both types of causes, distinguishing those which possess understanding and thus fashion what is beautiful and good, from those which, when deserted by intelligence, produce only haphazard and disorderly effects every time.[20] (*Timaeus*: 46c-e; trans. Zeyl)

Consequently, in order to account for vision, that is, the share of vision in securing the art of number, the notion of time, and philosophy, I need (a) to provide the primary cause of vision, namely, why the capacity of vision functions in this way and what its purpose is; and (b) to explain how the capacity of vision functions.

If I extend this procedure from vision to other capacities (*eikasia* in general, *pistis*, and *dianoia*, etc.), then I shall have described a person with each of his epistemic capacities as being ordered, so as to achieve his purpose which is to “stabilize the straying revolutions within ourselves by imitating the completely unstraying revolutions of the god”[20] (*Timaeus*: 47c; trans. Zeyl). More importantly, only in this way will Mr Prophet know the whole truth.

### 1.2.2 A teleological-reliabilist account of the two causes

As I have argued earlier, in order to know the share of vision in securing the art of number, the notion of time, and philosophy, I must determine the primary cause, then the auxiliary cause.

Unfortunately, the promise of this plan seems to falter when one pays close attention to the auxiliary cause, especially since this is rarely discussed by contemporary critics. In particular, in order to show the auxiliary cause of vision, one needs to show how vision is supposed to operate. It is clear that the solution should include the object of vision, the capacity of vision, the function or mechanism of vision, and the outcome of vision, namely, the sensation of colours.<sup>9</sup> In addition, if one holds that vision is not totally passive, one might also add the agent or soul into the consideration of the operation of vision. However, it is unclear whether these elements are sufficient for a systematic account of the auxiliary cause of vision, and even if they are sufficient, what their relations are. In other words, it is unclear what is required in elaborating the operation of vision for Plato, since Plato himself does not explicitly explain this.

Obviously, in order to determine what should be included in the account of the auxiliary cause, one can collect, for example, all the passages which discuss the auxiliary cause of vision, then select all the possible elements found in the context, and the relations between these elements, and thus generate an account of the auxiliary cause based on this particular case of vision. This procedure definitely has its advantages, but it might lose sight of the auxiliary cause as a whole, since it focuses more on the details rather than the whole. More importantly, even if one can develop an account of the auxiliary cause, it is hard for one to justify this account, especially to justify why Plato includes just these elements into the account, and why Plato relates them as he does.

To order the inferior capacities, the accounts of the two causes are required. Since developing the account purely based on Plato might be difficult, there is another way, that is, to try to find something useful from another philosopher. The general idea is that if there is a mature model from elsewhere, and it can help us to understand Plato’s account of the two causes, then

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<sup>9</sup>These are the elements included in the *Analogy of the divided line*. For more detail, see Rescher(2010).

perhaps, it can work as the basis of understanding the two causes. The model I have in my mind is Plantinga's notion of *warrant*, which can cover both the auxiliary cause and the primary cause.

However, I have to confess that to bring Plato and Plantinga together in this way might be to stray from the standard practice, since this initially comes from my personal experience. Here is the story: I came to Plato from the outside, since I previously majored in analytical philosophy, and attempted to study Plantinga's reliabilist theory of knowledge when I pursued my degree in China. When I took up the study of Plato's theory of knowledge, my prior understanding of Plantinga's notion of *warrant* helped substantially in understanding Plato's theory of knowledge. It was at this moment that I came to realize that Plantinga's notion of *warrant* might be a big help in explaining the two causes of the capacities, and that it might even function as a model or basis for understanding Plato's two causes.

Nevertheless, the reason why I am sure of the affinity between Plato's two causes and Plantinga's notion of *warrant* is not my personal experience, but the numerous similarities between them.<sup>10</sup> Indeed, the reason why I came to Plantinga's notion of *warrant* might be accidental and personal, but the reason I am sure that Plantinga's notion of *warrant* can help us to understand Plato's two causes is not groundless, since there is a close affinity between them.

Indeed, Plantinga himself divides the notion of *warrant* into three parts: (a) the proper function of the capacity, (b) the purpose of the design plan, and (c) the reliability of the capacity.<sup>11</sup> The proper function of the capacity means that the outcome is "produced by my cognitive capacities functioning properly in a congenial environment"[61] (Plantinga: 17). While the purpose of the design plan, if it is an epistemic capacity, must be aimed at truth rather than wishful thinking. The reliability emphasizes that "it is objectively highly probable that a belief produced by cognitive faculties functioning properly according to that module (in a congenial environment) will be true or verisimilitudinous"[61] (Plantinga: 17).

If one accepts Plantinga's characterization of proper function to explain the auxiliary cause of vision, that is, that "your faculties must be in good working order, and the environment must be appropriate for your particular repertoire of epistemic powers"[61] (Plantinga: 7), then one needs to clarify (i) under what condition vision functions; (ii) what the process is; and (iii) which environment is appropriate for the eye. This characterization of the proper function allows one to understand the auxiliary cause more thoroughly.

With this compass in hand, we can easily understand the discussion of vision from *Timaeus* 45b to 46c. It starts with the illustration of the proper function of the eyes: the capacity works through the eyes; the input is the pure fire within us, the non-burning fire, and the object; the appropriate environment is when "daylight surrounds the visual stream"[20] (*Timaeus*: 45c; trans. Zeyl). Then he turns to the design plan of the eye which includes both sending and receiving. In terms of the sending part, he says that "whenever daylight surrounds the visual stream, like makes contact with like and coalesces with it to make up a single homogeneous body aligned with the direction of the eyes"[20] (*Timaeus*: 45c; trans. Zeyl). In regard to the receiving part, he says that "this body of fire has become uniform throughout and thus uniformly affected, it transmits the motions of whatever it comes in contact with as well as of whatever comes in contact with it, to and through the whole body until they reach the soul"[20] (*Timaeus*: 45c-d; trans. Zeyl),

<sup>10</sup>Suppose I studied Confucianism in the past, I trust that the prior understanding of Confucianism will not help me a lot in understanding Plato's theory of knowledge, if there is not much common ground between their theories of knowledge. Thus, what really matters is not my personal experience, but the actual similarities between them.

<sup>11</sup>The proper function and the purpose together constitute the design plan of the capacity. However, if one were to follow Plantinga's notion blindly in Plato's context, this would make the substantial difference between the auxiliary cause and the primary cause inconspicuous. Therefore, in order to show the difference between these two causes, I divide the design plan into two parts, one is the proper function which focuses on the auxiliary cause, another is the purpose which emphasizes the primary cause.



giving us different colors. After illustrating the proper function of the eyes, Timaeus starts to list the cases when the eyes are not properly functioning. Both seeing at night and seeing when sleeping are cases in which vision is not properly functioning, since the “kindred fire vanishes into night”, and this makes the environment for seeing inappropriate. Seeing in a mirror can not count as properly functioning, since the mechanism or the process is not quite the same as the design plan requires.<sup>12</sup>

At the close of his account of the different kinds of seeing in the mirror, Timaeus’ explanation of the auxiliary cause comes to an end. Obviously, everything Timaeus covers under the notion of auxiliary cause can be grouped into the notion of proper function. More importantly, the steps in Timaeus’ illustration are quite clear: firstly, it is the proper function of the eyes, then the improper function caused by the inappropriate environment, finally it is the improper function caused by a different operation of the eyes, which differs from the instruction on how to use the eyes. As a result, it is reasonable for me to use the notion of proper function as a model for understanding Plato’s auxiliary cause.

Regarding the purpose of the design plan, Plantinga distinguishes different types of purpose. The most important one is that the capacity should aim at the truth, for example, the capacity of sensation and reasoning, etc. However, there are also other ways of producing belief, for example, wish fulfilment, and this has been considered by Plantinga (1993).

Well, consider the elements of our cognitive faculties responsible for beliefs of the above sorts—those produced by wishful thinking, or by the optimism that enables one to survive a deadly illness—one thinks that the purpose of these modules of our cognitive capacities is not to produce true beliefs. They are instead aimed at something else: survival, or the possibility of friendship, or (Freud thinks) the capacity to carry on in this bleak and nasty world of ours.[61] (Plantinga: 13)

Obviously, the purpose of vision is to grasp the truth, or to know its share in securing the art of number, the notion of time, and philosophy. This can be shown clearly at *Timaeus* 47b-c, “the cause and purpose of this supreme good is this: the god invented sight and gave it to us so that we might observe the orbits of intelligence in the universe and apply them to the revolutions of our own understanding”[20] (*Timaeus* 47b-c; trans. Zeyl). Since understanding is the capacity whose purpose is to know the truth, and the primary purpose of vision is to stabilize the variable revolvings of the reasoning within us, it is plausible to take the purpose of vision as being to grasp its share in the truth. Thus, Plantinga’s notion of purpose in the design plan can play the same role as Plato’s primary cause.

Although the last factor in Plantinga’s notion of *warrant*, namely, reliability, does not appear in the discussion of vision from *Timaeus* 45b to 46c, this does not mean that it has slipped from Plato’s consideration. According to Plantinga, reliability means that “When our faculties function in accord with our design plan (in an appropriate environment), the beliefs they produce are for the most part true”[61] (Plantinga: 18), or, in Descartes’ terms, God will not deceive us. This condition has been clearly addressed at the very beginning of the account of the demiurge’s creation of the universe: “he [the demiurge] was good, and one who is good can never become jealous of anything. And so, being free of jealousy, he wanted everything to become as much like himself as was possible”[20] (*Timaeus*: 29e; trans. Zeyl). Consequently, it means not only that Plato takes reliability into consideration, but attributes to it the highest importance.

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<sup>12</sup>This does not mean that we can not grasp the truth through the image produced by a mirror. However, even if we can grasp some of the truth through the image produced by a mirror, it is the intelligence which is responsible for the grasping, rather than merely vision itself.

I have roughly interpreted Plato's discussion of vision in the *Timaeus* from 45b to 46c by using Plantinga's notion of *warrant*.<sup>13</sup> It turns out that Plantinga's notion of *warrant* not only covers all the elements in the discussion of vision in the *Timaeus*, but also captures their relations and their sequence in priority. Therefore, it is plausible for me to use Plantinga's notion of *warrant* to interpret Plato's notion of the two causes.

However, the affinity between Plantinga and Plato in the case of vision does not by itself imply that this is the only way to understand Plato's two causes, or even that this is a correct way to understand Plato's two causes, since I still need to apply this model to other capacities like *eikasia* in general, *pistis*, and *dianoia*, etc. Nevertheless, I do not intend to persuade anyone to accept this position at the very beginning of my dissertation, since this is the aim of my whole project, and more importantly, this is only a promise at the moment. I only hope that by reading my interpretation of the two causes, the reader may discover some new and interesting ways to understand Plato's theory of knowledge.

With the general idea of my method being stated, it is time to coin a term for my approach. The core of my approach is the two causes, and since the auxiliary cause is closely related with a reliable process, while the emphasis on the purpose is normally called teleological, I will call my approach "a teleological-reliabilist account of Plato's theory of knowledge".

### 1.2.3 Hypotheses

Let us recap the whole journey so far, and thus establish a general grasp of the situation. I started with the problem as to whether Mr Prophet finally grasps, though suddenly, all of the Forms and nothing else, but cannot explain his grasp of the Forms, whether he *knows* all of the Forms. My position is that he does not know the Forms, since his process of grasping the Forms comes from mere chance, and thus it is not justified or warranted.

Next, I turned to the question: suppose Mr Prophet knows all of the Forms and nothing else by means of intuition, then in order to know the whole truth, does he still need to go back to review and regulate his inferior epistemic capacities, in particular, the *eikasia*, *pistis*, and *dianoia*? My position is that he must go back to regulate and order his inferior epistemic capacities. My position is based on the following premises: (a) there are some truths produced by the inferior epistemic capacities, if and when these capacities are ordered; (b) without the inferior capacities being ordered, the soul itself will not be ordered, consequently, the whole truth cannot be grasped; (c) in order to know the whole truth, one needs to order each of the epistemic capacities.

Naturally, I moved to the question: how can one order an epistemic capacity? Taking the capacity of vision as an example, I concluded that, in order to grasp the due truth produced by vision, that is, the share of vision in securing the art of number, the notion of time, and philosophy, one needs (i) to provide the primary cause of vision, namely, what its purpose is; (ii) to determine how one should operate the capacity of vision, namely, the instructions for the use of vision; and (iii) to operate vision carefully according to the design plan, and hence to establish the outcome reliably produced as truth, and unreliably produced as falsity. This solution which is to establish that what is arrived at by vision is its due share of truth, can be arrived at by resorting to the two causes (the auxiliary cause and the primary cause).

Finally, I turned to the problem of how we should understand the two causes. By borrowing Plantinga's notion of *warrant*, I will take the auxiliary cause to include conditions under which

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<sup>13</sup>Of course, later at *Timaeus* 67c-68d, there is the discussion of the different kinds of outcomes produced by vision. However, all these discussion are focused on the auxiliary cause of the outcome, that is, the color. Consequently, it contributes nothing new to the account of the auxiliary cause, but only adds some new data to it.

vision function, and what the process is. The primary cause, on the other hand, requires one to offer the purpose of the capacity and explain why this capacity can in fact grant us the truth without the demiurge's deceiving us.

This is the background of my entire dissertation. As one may realize, there are different positions regarding whether Mr Prophet knows the whole truth, whether there is any truth in the inferior epistemic capacities, whether knowledge depends on the two causes, and whether borrowing Plantinga's notion to understand Plato's notion of two causes is appropriate, etc. I admit that these issues are not cast in stone, and I admit that my entire solution depends on a certain position on these issues, perhaps a controversial position.

I do not want to pretend that there are no problems here, so I will flag them clearly here as hypotheses in my dissertation. Consequently, the more appropriate characterization of my approach is that: if one accepts that Mr Prophet does not know the whole truth, and to know the whole truth means to order each of the epistemic capacities, and to order a capacity means both offering the two causes of the capacity, and it is plausible to adopt Plantinga's notion of *warrant* to illustrate Plato's two causes, then it seems likely that only when one determines the two causes of each of the epistemic capacities distinguished in the *Analogy of the divided line*, has one finally the ability to know the whole truth.<sup>14</sup>

Finally, I still need to add one more hypothesis: the capacity of *phantasia* will also be included among the inferior epistemic capacities. As I have argued earlier, I took for granted the general distinction of epistemic capacities at the *Analogy of the divided line*, and these four capacities are: *eikasia*, *pistis*, *dianoia*, and *noesis*.<sup>15</sup> However, I will argue that the capacity of *phantasia* should also be included in the inferior epistemic capacities.

Unfortunately, it is unclear whether the capacity of *phantasia* should be put down as *eikasia* or *pistis*. According to Grönroos, the characterization of *phantasia* is "a judgement occurring through sense perception"[38](Grönroos: 118), though it is not a belief "based on an exercise of reason"[38] (Grönroos: 110). Consequently, the capacity of *phantasia* should be put down as *pistis* which is responsible for producing judgements in general. On the other hand, based on the characterization of *phantasia* at *Sophist* 260c, "if deceit exists, all things must be henceforth full of images and likenesses and fancies [*phantasia*]"[35] (*Sophist*: 260c; trans. Fowler), Grönroos also argues that the reason why *phantasia* is introduced here is that *phantasia* is a particular kind of image, "it [*phantasia*] somehow follows from, or is contingent on, there being such things as images and likenesses"[38] (Grönroos: 10). Consequently, it is reasonable for Grönroos to take *phantasia* as produced by *eikasia*, since the characterization of *phantasia* satisfies the requirement of *eikasia*, that is, it should consist of images, thus the capacity of *phantasia* should be put down as *eikasia*. As a result, it seems that even the same person might hold different opinions over whether *phantasia* should be put down as *eikasia* or *pistis*.

However, it is unfair to criticize Grönroos for being inconsistent, since *phantasia*, by itself, is "a judgement occurring through sense perception"[38] (Grönroos: 118), thus a mixture of sensation and *doxa*. It is the mixture of sensation and *doxa* that makes it ambiguous as to whether *phantasia* should be put down as *eikasia* or *pistis*. Although both sides dispute over the issue, they both agree that the capacity of *phantasia* should be included in the inferior epistemic capacities, and this would be enough for my purpose.

<sup>14</sup>Of course, new problems will arise in the future, and this might lead someone to raise an *aporia* about them, thus forming some "new" piece of knowledge. This might be possible, and this makes my notion of the whole truth problematic to some extent. To cope with this case, I will call the person who ordered himself perfectly the person who has the ability to know the whole truth. Consequently, I will use these two notions interchangeably in my dissertation.

<sup>15</sup>For more information, see the footnote at Cooper (1997): 1130.

The introduction of *phantasia* not only adds one more capacity into the inferior capacities, but also changes the division made in the *Analogy of the divided line*, since the definition of *phantasia* presupposes the existence of sensation and *doxa*. This definition of *phantasia* comes at *Sophist* 264a, “what if that [affirmation and negation] doesn’t happen on its own but arises for someone through perception? When that happens, what else could one call it correctly, besides appearance [*phantasia*]”[20](*Sophist*: 264a; trans. White), and it is also abbreviated as the mixture of sensation and *doxa*. Based on the definition of *phantasia*, it presupposes two other capacities: one is the sense which is responsible for producing the sensation, another is the capacity of *doxa*.

I admit that it is not unproblematic to divide the sensory apprehensions into sensation, *phantasia* and *doxa*, and I realize that there is another option, that is, to divide it into the production of *eikasia* and *pistis* based on the *Analogy of the divided line*, but I will adopt the former as the hypothesis in my dissertation, and not pursue this issue further. As a result, I will follow the definition of *phantasia* as a mixture of sensation and *doxa*, and take the inferior capacities to include the senses, the capacity of *phantasia*, the capacity of *doxa*, and *dianoia*. Therefore, to grasp the whole truth, one needs to order each of these four inferior capacities, and only by doing so, is one able to grasp the whole truth.

Now I will turn to the dialogues which I will use in my dissertation. They include the *Timaeus*, which elaborates the two causes of sensation, and the *Theaetetus*, which treats of *phantasia* and *doxa*, and the *Republic*, which covers all of the above as well as *dianoia* and *noesis*. Of course, I will also cite other dialogues such as the *Philebus* and the *Greater Hippias*, but their contribution to my dissertation is quite minor.

Before justifying my usage of these dialogues, I need first to clarify my purpose here: what I want to show is that the teleological-reliabilist account of perception found in *Timaeus* can also be applied to other kinds of cognition, and that this application can be supported by multiple dialogues. However, there are several critical concerns with this method: (i) it seems like cherry picking these pieces without paying attention to the context, (ii) it does not show whether the other passages support or contradict my account, and (iii) it does not show whether these passages from the different dialogues are making the same point or a different one. Consequently, to explain why my approach should be adopted, rather than being a problematic cherry-picking, I have to explain (a) why these dialogues are used, and (b) why it is acceptable to combine passages from different dialogues into a single “Platonic” account of knowledge.

Regarding the former question why these dialogues are used rather than other dialogues, two related issues are raised here: one is why these dialogues are relevant to the account of knowledge, another is why these relevant dialogues can support my position that there is a *single* “Platonic” account of knowledge, given that the *Timaeus* is viewed as a late dialogues, but the *Theaetetus* and the *Republic* are viewed as middle dialogues. In terms of the first issue, these dialogues are relevant to Plato’s teleological-reliabilist account of knowledge, because each of them covers at least one kind of cognition which contributes to the development of *noesis*. Specifically, the *Timaeus* elaborates the two causes of sensation, and the *Theaetetus* treats of *phantasia* and *doxa*, while the *Republic* covers all of the above as well as *dianoia* and *noesis*.

Now I will turn to the second issue why dialogues from different periods can support my position that there is a *single* “Platonic” account of knowledge. The question asked here is actually whether Plato’s doctrines of epistemology change over the course of these dialogues, since it appears that there will be no such *single* account if there are different notions of Platonic epistemology. However, this is not a settled case yet, since two different interpretations have been offered. Specifically, Unitarianism argues that Plato’s central doctrines of epistemology do not change over the course of the dialogues, “Plato’s works display a unity of doctrine and

a continuity of purpose throughout”[19] (Chappell: 3). However, the Revisionist view argues that Plato’s doctrines do change, “Revisionists retort that Plato’s works are full of revisions, retractations, and changes of direction”[19] (Chappell: 3). Consequently, to establish my position that there is a *single* account of knowledge, I have to respond to the objection that there will be no such *single* account of knowledge from the very beginning, if Revisionism is correct.

In respond to this challenge, I have two options: one is to argue that the Revisionist account cannot be correct, and another is to argue that my position will not be affected, even if the Revisionist account is correct. I will illustrate the first option here, and then elaborate the second option afterwards. The objection appears to work that there is no such *single* account of knowledge, since according to Revisionism, Plato’s account of knowledge in the middle period differs from the account in the late period, and the combination of these accounts cannot be a unity, but only a mixture of many, or even an inconsistent mixture. The simple response to this objection is to reject Revisionism, since this enables one to accept Unitarianism, and to hold that “Plato’s works display a unity of doctrine and a continuity of purpose throughout”[19] (Chappell: 3), and hence it is possible for one to accept that there is a *single* “Platonic” account of knowledge. Although this approach is clear and direct, it is quite hard to determine which interpretation is correct in such a short note, since each of them can be supported by many textual examples. Having acknowledged that the debate over the interpretation has reached a stalemate here, I will mainly focus on the second option, and I will not try to persuade one to accept the first option, if one is not a Unitarian.

Now, I will turn to the second option, and I will argue that even if the Revisionist account is correct, it will not falsify my position that the inferior epistemic capacities contribute to one’s grasp of F-ness or the Form F. To show how this purpose is achieved, I need first to set the stage by clarifying the relevant claims of Revisionism. It has been argued that the essential difference between Revisionism and Unitarianism is whether the theory of Forms is still adopted by Plato in the late dialogues, “The contrasts between the *Charmides* and the *Phaedo*, and the *Protagoras* and the *Gorgias*, tell us little about the question whether Plato ever abandoned the theory of Forms. And that has usually been the key dispute between Revisionists and Unitarians”[19] (Chappell: 3). Following this line of thought, now the problem is whether the abandonment of the theory of Forms will make my position untenable.

I do not think I can settle this issue here completely and finally, but I will try to use the *Theaetetus* as an example, to illustrate that it is possible that my position will not be affected when the theory of Form is abandoned. It is argued by the Revisionists that Plato offers a theory of knowledge without resorting to Forms at the *Theaetetus*, “There are no explicit mentions of the Forms at all in the *Theaetetus*, except possibly (and even this much is disputed) in what many take to be the philosophical backwater of the Digression”[19] (Chappell: 4). In the *Theaetetus*, Plato tries to define knowledge by perception, or by true judgement, or by true judgement with an account, but none of them resorts to Forms, and it is in this sense that Plato offers a theory of knowledge without resorting to Forms, “But according to what is probably now the standard modern interpretation, at least in the Anglophone world, there is hardly a whisper of it [‘form’ or ‘the good itself’] in either work”[69] (Rowe: xiii).

However, if one pays closer attention to the details, then one will recognize the presence of the Forms in the notion of knowledge in the *Theaetetus* by their peculiar characterizations. Firstly, the characterizations of knowledge in the *Theaetetus* are similar to the descriptions of the Forms, since each is described as being by “itself”. In the *Theaetetus*, what is being investigated is knowledge itself, “because we wanted to know what the thing, knowledge, might be in itself”[69] (*Theaetetus*: 146e; trans. Rowe), and this usage of *itself* is peculiar to the characterization of the Forms, “[itself] sounds not unlike the sort of description usually attaching to ‘forms’”[69] (Rowe: xiii). Secondly, not only is the description of “itself” shared by the notion of knowledge in the

*Theaetetus*, “being” is also shared by both the notion of knowledge and Forms. On the one hand, what knowledge pursues is being in the *Theaetetus*, “Whereas what our soul tries to judge by itself, going close up to them and comparing them with each other, is their being”[69] (*Theaetetus*: 186b; trans. Rowe). On the other hand, the Forms are a way to cash out the term “being”. Specifically, if being should be interpreted predicatively, then the soul determines “whether x is really F (for some predicate F)?”, that is, whether x is always F and can never be not F. The feature of never changing and never perishing is also a classical description of the Forms, “who reduce the things that are to forms that remain forever exactly as they are”[69] (*Sophist*: 252a; trans. Rowe), and “But Tallness, being tall, cannot venture to be small”[20] (*Phaedo*: 102e; trans. Grube). Thirdly, the reason why the Forms are absent, is not that such an entity is discarded by Plato, but that another name for the Forms is used by Plato, “‘Forms’ are central to *Theaetetus* and *Sophist*. At any rate, both dialogues, and particularly the latter, are full of talk about things called *eidē*”[69] (Rowe: xiii). Consequently, in describing the notion of knowledge in the *Theaetetus*, the notion of Forms is not absent. Following this line of thought, the abandonment of the theory of Forms in the late dialogues does not affect my position that the inferior epistemic capacities contribute to one’s grasp of F-ness and the Form F.

Now I can move to the latter question why it is acceptable to combine passages from different dialogues into a single “Platonic” account of knowledge. I will also use the *Theaetetus* as an example, to illustrate that this method is acceptable. The real worry here is whether the account of knowledge that I choose at the *Theaetetus* is also adopted by Plato, rather than being rejected by Plato in the *Theaetetus* or in the late dialogues. Indeed, if I succeed in only establishing that the account of knowledge, for example, knowledge as true judgement with an account, is both reliable and teleological, this is insufficient to show that Plato holds a reliabilist-teleological account of knowledge, since it is still undetermined whether this account is adopted by Plato in the *Theaetetus* and in the late dialogues. Specifically, if it is adopted, then I am justified in combining the passages from different dialogues. Otherwise, my position will be unjustified.

Consequently, to reach my conclusion that there is a single “Platonic” account of knowledge, I have to argue that the feature of being both reliable and teleological is inherent in the definition of knowledge adopted by Plato in the *Theaetetus* and in the late dialogues. Specifically, I will argue (i) that the definition of knowledge as true judgement with an account is adopted by Plato in the *Theaetetus* and in the late dialogues, and (ii) that this definition of knowledge is both teleological and reliable.

I will begin by arguing that the definition of knowledge as true judgement with an account is both teleological and reliable. Plato offers three definitions of knowledge in the *Theaetetus*. I will, based on the definition of true judgement with an account at the *Theaetetus* 201c-d, show that knowledge is both reliable and teleological by arguing that rational generic belief is both reliable and teleological. It is teleological, because it aims at being, and when it is interpreted predictively, one with the rational generic belief attempts to grasp the Forms by one’s recognition of the formal properties of F-ness.<sup>16</sup> It is reliable, because the asking stage and the answering stage are regulated by the requirement of consistency, and the calculation stage is regulated by the principle that the Forms should be unchanging over time, together with the principle that the Forms should be absolute, and these principles are stable and well constructed. Consequently, the definition of knowledge as true judgement with an account in the *Theaetetus* is both teleological and reliable.

With these being determined, now I can turn to the question whether the definition of knowledge as true judgement with an account is adopted by Plato in the *Theaetetus* and in the late dialogues, and I will argue that this definition is adopted by Plato. Firstly, although it seems that the definition of knowledge as true judgement with an account is rejected in the *Theaetetus*,

<sup>16</sup>This will be illustrated in the chapter of *Doxa*.

this definition of knowledge persists in dialogues other than the *Theaetetus*, “Given this reading of *Republic* and *Timaeus*, they constitute no reason for excluding belief from figuring in Plato’s account of knowledge, in *Theaetetus*, *Sophist*, or anywhere else”[69] (Rowe: xix). Consequently, the definition of knowledge as true judgement with an account seems to be adopted by Plato in the other dialogues, “In which case, it seems, that last account of knowledge from the *Theaetetus* lives on”[69] (Rowe: xvii). Secondly, the persistence of this definition, that is, knowledge being true judgement with an account, shows that the rejection of the third definition of knowledge at *Theaetetus* is not aimed at the requirements of being a particular judgement, but at the content of the account, “the failure may only be for want of a serviceable model of ‘account’ (not because of its reference to belief), and another model might have saved it”[69] (Rowe: xxi). Thirdly, it is also defended by the critics that this explanation of knowledge is adopted by Plato, “Thus Socrates appears perfectly content, here in the *Theaetetus*, to put thinking in general under the heading of *doxa*; and not only that, the kind of thinking ... that has just been treated as a requirement of attaining being, truth, and knowledge”[69] (Rowe: xx). As a result, the definition of knowledge as true judgement with an account is adopted by Plato in the *Theaetetus* and in the late dialogues, and hence I am justified in holding that the feature of being both reliable and teleological is inherent in the definition of knowledge adopted by Plato in the *Theaetetus* and in the late dialogues, given that this definition of knowledge is both teleological and reliable.

In fact, even if this definition of knowledge were somehow rejected in the late dialogues, this does not imply that knowledge is neither teleological nor reliable, since these two features are emphasized in multiple dialogues, apart from the definition of knowledge as true judgement with an account. Firstly, the teleological-reliabilist account can be seen from other dialogues, given that it emphasizes the two causes, that is, the mechanism and the purpose. The confirmation of the two causes can be seen from *Phaedo* 99b where the distinction between the real cause and the necessary conditions is developed, “Imagine not being able to distinguish the real cause from that without which the cause would not be able to act as a cause”[20] (*Phaedo*: 99b; trans. Grube). It can also be supported by the explanation of vision in the *Timaeus*, since the explanation is completed only when both the primary cause which is the purpose and the auxiliary cause which is the mechanism are explained, “Let us conclude, then, our discussion of the accompanying auxiliary causes that gave our eyes the power which they now possess. We must next speak of that supremely beneficial function for which the god gave them to us”[20] (*Timaeus*: 46e-47a; trans. Zeyl). Secondly, the general implication of the teleological-reliabilist account prevails among the other dialogues. When I argue that knowledge is teleological, I do not mean that it has any purpose, but only the purpose that is related to Forms or anything that is uniform by itself and has genuine causal power. Obviously, this general implication is present in multiple dialogues: it appears in the *Republic* where the divided line illustrates both the purpose of knowledge and the mechanism of knowledge, in the *Timaeus* where the explanation of vision is given by its two causes, in the *Phaedo* where the real cause is differentiated from the necessary conditions, and in the *Philebus* where both the limited and unlimited are introduced in the particulars. More importantly, given that the emphasis of the Forms or being or the real cause is the main theme in most of Plato’s dialogues, the teleological-reliabilist account can be supported, if Plato also offers some mechanism to link this purpose with the actions carried out by particulars, rather than a mere fantasy. Consequently, the teleological-reliabilist account should be adopted, since the Forms or being is always the main theme in Plato’s dialogues which confirms the teleological aspect, and Plato tries to explain how to achieve this purpose in these dialogues which shows the reliable aspect.

Therefore, I have established that it is acceptable to combine passages from different dialogues into a single “Platonic” account of knowledge, since on the one hand, even if Revisionism is correct, it will not falsify my position that the inferior epistemic capacities contribute to one’s grasp of

F-ness or the Form F, and on the other hand, the definition of knowledge as true judgement with an account, which is both teleological and reliable, is adopted by Plato in the *Theaetetus* and in the late dialogues.

In the following part, I will show how each capacity can contribute to the grasp of the whole truth based on the teleological-reliabilist account.

### 1.3 How can each inferior capacity contribute to the grasp of the whole truth?

After the illustration of my general idea of the teleological-reliabilist account, now I must turn to the details of how each capacity can contribute to the grasp of the whole truth. Specifically, I will determine how the senses, the capacity of *phantasia*, the capacity of *doxa*, and *dianoia* contribute to the mastery of *noesis* here, and show their own contribution to F-ness in the road map of each chapter.

According to the *Republic*, one can properly operate the capacity of *noesis* in the following manner.

The reason itself lay hold of by the power of dialectics, treating its assumptions not as absolute beginnings but literally as hypotheses, underpinnings, footings, and springboards so to speak, to enable it to rise to that which requires no assumption and is the starting-point of all, and after attaining to that again taking hold of the first dependencies from it, so to proceed downward to the conclusion, making no use whatever of any object of sense but only of pure ideas moving on through ideas to ideas and ending with ideas.[58] (*Republic*: 511b-c; trans. Shorey)

In other words, if one explains the hypothesis in the initial argument by the power of dialectics, and arrives finally at the first principle, and also follows the whole argument from the first principle to the initial conclusion, then one will acquire the highest knowledge of all of the Forms.

If one is going to argue that the operation of each inferior capacity contributes to the acquisition of the highest knowledge, the most direct strategy is that one explains how each of them can contribute to a certain condition of the operation of *noesis*, for example, how the operation of *pistis* can contribute to following the argument downward to the conclusion.

Although this general idea seems correct and direct, it is not my exact solution to the problem since it does not serve my purpose. Specifically, my purpose in this dissertation is to show how a human being makes progress toward the whole truth by regulating his inferior capacities, and that by merely resorting to the operation of *noesis* one will miss the contributions made by the inferior capacities in one's acquiring the ability to operate *noesis*.<sup>17</sup> For example, although sensation and image are not present in the operation of *noesis*, it does not mean that they contribute nothing to the ability to operate *noesis*, since they do contribute to the ability to use *dianoia* which is indispensable to acquiring the ability to operate *noesis*.

With this in mind, I will propose an indirect strategy to establish the conclusion that the operation of each inferior capacity contributes to the acquisition of the highest knowledge. Specifically, I will explain how the operation of *dianoia* contributes to that of *noesis*, and how each of them can contribute to a certain condition of the operation of *dianoia*.

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<sup>17</sup>The inferior capacities are indispensable in two respects: one is that they are indispensable in formulating *noesis* which has been shown as the upward path in the cave analogy, another is that they are necessary for the knowledge of particulars, which has been shown as the downward path in the cave analogy.



The indirect strategy should be adopted, since using *dianoia* properly is indispensable to acquiring the ability to use *noesis*. To begin with, *dianoia*, as “something intermediate between opinion and reason”, is not only a stage prior to *noesis*, but also a required stage for one’s acquiring the highest knowledge or one’s being able to use *noesis*. This can be supported by the fact that they share the same agent and object, though they differ in dealing with these intelligibles, “Mathematical ideas are ideas or concepts like other ideas; but the mathematician does not deal with them quite as the dialectician deals with ideas and therefore does not possess nous or reason in the highest sense”[58] (Shorey: 116). Consequently, it is plausible to argue that *dianoia* and *noesis* are two different capacities of the rational soul, and that the rational soul can develop the ability to use *noesis* only if it has built on the ability to use *dianoia* properly. In other words, only if one is an expert in following the argument downward to the conclusion, is it possible for one to investigate the hypothesis in a reasonable manner, and to follow the argument upward to the first principle.

In addition, going beyond the image makes the operation of *dianoia* indispensable to the mastery of *noesis*, since the image in the operation of *dianoia* not only offers a tool for the rational soul to use in operating *dianoia*, but also motivates it to “extricate itself from and rise above”[58] (*Republic*: 511a; trans. Shorey) the particular image. This has been argued quite clearly in the case of students of geometry: on the one hand, these students have to rely on a particular image, otherwise they would be in possession of *noesis*, on the other hand, they are not investigating this particular image *per se*, but “for the sake of the square itself and the diagonal itself”[20] (*Republic*: 510d; trans. Grube). In other words, though the image might be productive and helpful in *phantasia* and *doxa*, its function is quite limited in the investigation of the intelligibles by *dianoia*, and it is the recognition of its limitation that motivates the soul to go beyond the particular image, and turn to *noesis*. Therefore, an image is indispensable in operating *dianoia*, since it works as a tool for using *dianoia*, and it can motivate the rational soul to go beyond *dianoia*.

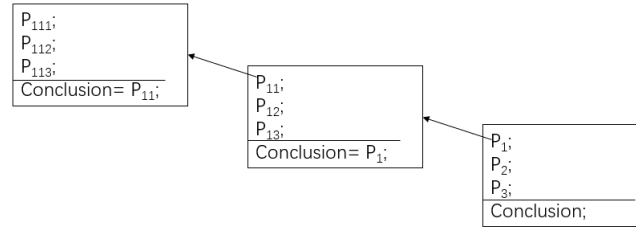
Moreover, the specific manner of investigating the hypothesis in operating *noesis* also requires the ability to use *dianoia* properly. The most important difference between *noesis* and *dianoia* is that *noesis* “advances from its assumption to a beginning or principle that transcends assumption”[58] (*Republic*: 510b; trans. Shorey), while *dianoia* is limited to its assumption. However, when one comes to the question of how one can transcend the assumption in the initial argument, the more plausible answer would be that one will investigate this hypothesis by offering another argument which includes further hypotheses, and investigate these further hypotheses in a similar manner until one reaches the first principle. This process is illustrated in the figure below.<sup>18</sup>

If the above is the case, then the operation of *dianoia* can be found in each argument when the rational soul tries to transcend the present hypothesis, that is, to explain the present hypothesis by offering a further argument.

Finally, when the rational soul arrives at the first principle, it does not complete the process of *noesis*, since it still needs “to proceed downward to the conclusion”. Although this process

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<sup>18</sup>A more formal characterization of this process will be the following: firstly, one needs to use *dianoia* by offering a valid argument; secondly, by using *noesis*, one recognizes the hypothesis in this argument, and realizes that it needs further explanation; thirdly, one offers another valid argument which explains the hypothesis above, and this process is similar to the operation of *dianoia*; fourthly, one repeats step 2 and 3 until one reaches the first principle, and only then does one acquire the highest knowledge. Of course, the actual case of acquiring the highest knowledge may include more than one hypothesis in the initial argument, and more than one hypothesis in each further argument. I admit that this characterization assumes that there is only one hypothesis in each argument, and this is the simplest case of acquiring the highest knowledge which is true for Plato. However, I do not think this is a fatal disadvantage, since my point is to show how this can be carried out, and this purpose can be fulfilled by even the simplest case.

Figure 1.1: From *dianoia* to *noesis*

moves from the first principle to the initial conclusion, it is still an instance of following the argument downward to the conclusion which is both the essential feature and the defect of *dianoia*, since “They take their start from these, and pursuing the inquiry from this point on consistently, conclude with that for the investigation of which they set out”[58] (*Republic*: 510c-d; trans. Shorey).

Consequently, the operation of *dianoia* contributes to the mastery of *noesis* by motivating the rational soul to go beyond the image, and by offering the tools with which to follow the argument downward under the principle of consistency allowing the rational soul to go beyond the hypothesis.

If this is the case, then one can solve the problem of how each of the inferior capacities can contribute to the grasp of *noesis* by dividing it into two questions: firstly, how each of the inferior capacities can contribute to the mastery of *dianoia*, and secondly, how the mastery of *dianoia* can contribute to developing the ability to use *noesis* properly. The first question will be answered here, and the second question will be answered in the final chapter.

In order to answer the question of how each of the inferior capacities can contribute to the mastery of *dianoia*, one needs to examine the requirements of mastering *dianoia*, and only by these requirements can one show why each of the inferior capacities contributes to the acquisition of the highest knowledge.

I shall first argue that the image, the hypothesis, doubting the appearance, and following the argument downward by the principle of consistency are all essential to the proper use of *dianoia*. Firstly, using an image is required in the mastery of *dianoia*, and this can be seen from the definition of *dianoia* in the divided line analogy, “They further make use of the visible forms and talk about them”, and this distinguishes it from *noesis*, which “makes no use of the images”[58] (*Republic*: 510d; trans. Shorey). Secondly, the hypothesis is required in the mastery of *dianoia*, since “the soul is forced to use hypotheses in the investigation of it”[20] (*Republic*: 511a; trans. Grube), and it is the improper treatment of the hypothesis that prevents the operation of *dianoia* from seeking the highest knowledge. Thirdly, since the investigation of intelligibles is essential to the mastery of *dianoia*, doubting the appearance which is the preparation for such investigation is also essential to the mastery of *dianoia*. The fact that the operation of *dianoia* investigates intelligibles can be confirmed at the *Republic* 510d, “They make their claims for the sake of the square itself and the diagonal itself, not the diagonal they draw”[20] (*Republic*: 510d; trans. Grube), and the footnote in the Loeb edition of *Republic* 511e, “Mathematical ideas are ideas or concepts like other ideas”[58] (Shorey: 116). Fourthly, following the argument downward to the conclusion is essential to the proper use of *dianoia*, too, since “it proceeds not up to a first principle but down to a conclusion”[58] (*Republic*: 510b; trans. Shorey).

Finally, following the argument downward by the principle of consistency is also required in the mastery of *dianoia*, since it pursues “the inquiry from this point on consistently”[58](*Republic*: 510d; trans. Shorey).

As I argued earlier, image is indispensable in grasping the highest knowledge, since it works as a tool for using *dianoia*, and motivates the rational soul to go beyond *dianoia*. Consequently, in order to make the operation of *dianoia* possible, there must be a capacity which serves to produce images, and this makes the capacity of sensation, and indeed imagination (*phantasia*), indispensable. As I will show later, the mere presentation in *phantasia* is a determinate impression which is neither conceptualized nor judgemental, but is caused in the memory by the special perceptibles and regulated by the non-rational side. Given that the image is produced by the capacity of sensation and the capacity of *phantasia*, and that the image is indispensable for the formulation of *dianoia*, both sensation and *phantasia* will be necessary for the ability to use *noesis* properly.

Similarly, in order to make the operation of *dianoia* possible, there must be a capacity which serves to formulate judgement, and this makes the capacity of *phantasia*, and capacity of *doxa*, indispensable. As I will show later, presentation-*cum*-belief in *phantasia* is judgemental since one selects the imprint of the appropriate act in the memory among multiple alternatives by means of *phantasia*. In addition, I will show in the chapter on *Doxa*, the capacity of *doxa* is indispensable in formulating *dianoia*, since the process of producing a *doxa*, especially the process of producing the rational generic belief, enables one to make judgements about the particular object and motivates one to doubt the appearance and evaluate the reasons for the judgements about the particular object by the principle of consistency. Specifically, firstly, the asking stage in the rational generic belief enhances one’s proficiency in obeying reason and prepares one for the final confrontation between reason and the non-rational side; secondly, the answering stage, that is, trying to offer an initial answer, makes the search for the essence concrete and oriented; and thirdly, the comparison with the future in the rational generic belief requires one to recognize and obey the principle that the Forms should be unchanging over time, and the comparison between one another requires one to realize and adhere to the principle that the Forms should be absolute. As a result, both the capacity of *phantasia* and the capacity of *doxa* are indispensable for the mastery of *dianoia*.

Although I argue that sensation, *phantasia* and *doxa* all contribute to the mastery of *dianoia*, I do not mean that they are sufficient for the mastery of *dianoia*. In fact, I hold that even if one can operate the senses, the capacity of *phantasia*, and *doxa* properly, one is not necessarily in a position to master *dianoia*, let alone to master *noesis*. In other words, the mastery of *dianoia* cannot be reduced entirely to the mastery of the senses, the production of *phantasia*, and *doxa*. Therefore, I am convinced that the senses, the capacity of *phantasia*, and *doxa* all contribute to the ability to master *dianoia* and thus *noesis*, but they are not sufficient to master *dianoia*.

Having sketched out how each inferior epistemic capacity is required in formulating *dianoia*, and hence *noesis*, I will, in what follows here in the *Introduction*, outline the content of each chapter by summarizing how exactly each of the accounts of inferior capacities contributes to the overall argument of the thesis. Specifically, in each chapter, I will try to illustrate (a) my account of each epistemic capacity, (b) that each of my accounts fits with the view that Plato defends a teleological reliabilist account, (c) that each of the inferior capacities is necessary for having some grasp of the Forms, and (d) that each of them can be reordered in light of our knowledge of the Forms.

In chapter 2, I will attempt to demonstrate that sensation provides a human being with special perceptibles which contribute to the production of an image, and that it contributes to

one's grasp of F-ness. Specifically, I will rely on the definition of seeing at *Timaeus* 45c-d, and by investigating the reliable processes of seeing, I will examine how they can produce the special perceptible which imitates a certain aspect of the particular object, and how they can contribute to the production of the image which is a mere imitation of the particular object.

According to *Timaeus* 45c-d, Timaeus divides the whole process of seeing into three stages: stage 1 is the formation of the kindred substance; stage 2 is the process of the collision which occurs between the kindred substance and the external objects; stage 3 is the process of sensing a colour. All these processes are essential to producing the special perceptible which is a mere imitation of a certain aspect of the particular object.

I will try to explain that sensation is teleological and reliable, and this is the starting point of the whole project of Plato's teleological-reliabilist account of knowledge. The sensation, especially vision, is reliable, since the formation of the kindred substance is regulated by the principle of like unto like, and the collision between the kindred substance and the external objects is regulated by the wax model and the mechanism of the one-dimensional collision, and the process of sensing a colour is regulated by the wax model, and each of these models, mechanisms, and principles is stable and well constructed. It is teleological, since the purpose of the formation is to produce the kindred substance which is a single homogeneous body, the purpose of collision is to carry out the imitation of the revolutions and to initiate the delivery of them back to the eyes, and the purpose of sensing a colour is to ensure that a human being can recognize the revolution in the sensation. More importantly, all these help one to recognize the correct motions of the external object, and hence allow one to be in contact with the Forms, "the god invented sight and gave it to us so that we might observe the orbits of intelligence in the universe and apply them to the revolutions of our own understanding"[20] (*Timaeus*: 47b-c; trans. Zeyl).

This account of sensation is indispensable for having some grasp of the Forms, since one, as a human being, is forced to start from the perception of sensibles in order to achieve any cognition, "when the soul makes use of the body to investigate something ... for to investigate something through the body is to do it through the senses"[20] (*Phaedo*: 79c; trans. Grube). This is also consistent with the development of *noesis* which requires one to use sensibles, since one's soul is embodied, and the direct apprehension is inaccessible to human beings, "it [the soul] is imprisoned in and clinging to the body, and ... it is forced to examine other things through it as through a cage and not by itself"[20] (*Phaedo*: 82e; trans. Grube).

When one is equipped with the knowledge of the Forms, the capacity of sensation will be reordered, because the capacity of sensation will be working in the correct way, it will have the correct relationship with the other epistemic capacities, and be regulated by the Form of the Good. Firstly, the capacity of sensation will be working in the correct way, since one will recognize its design plan and reach the truth based on the sensation. When one is equipped with the knowledge of the Forms, one will be able to distinguish between the unfaithful sensation and the reliable sensation, and one will recognize how each of them is produced, and hence attain the truth of the original even by means of the unfaithful sensation. As I have argued earlier, the sensation will be unfaithful when the soul-wax is neither smooth nor abundant, but one can still attain the truth of the original by deciphering the coefficient correctly, given that one is offered the design plan of the sensation and that one is regulated by reason. In this way, the capacity of sensation can be led by its design plan, and turn to its correct way of working. Secondly, the capacity of sensation will have the correct relationship with the other epistemic capacities. For example, the sensation fomulates the basis of *phantasia*, "Human sense-perception or *phantasia* is therefore something different from and higher than sensation from which it springs and with which it is so closely related"[79] (Watson: 4), and it is also the indispensable starting point of other cognitions, since one, as a human being, is forced to start from the perception of sensibles in order to achieve any cognition. In this way, the cognition of sensation, by partaking in its

own share of the truth of the whole, will live in harmony with the other cognitions. Thirdly, the operation of developing the sensation is regulated by the Form of the Good. For example, the whole process of seeing is to ensure that one can recognize the correct imitation of the revolution in the sensation which comes from the external object, and in this way, the supreme good of vision will be achieved, since “our ability to see the periods of day-and-night, of months and of years, of equinoxes and solstices, has led to the invention of number, and has given us the idea of time and opened the path to inquiry into the nature of the universe”[20] (*Timaeus*: 47a-b; trans. Zeyl). Consequently, one restores the cognition of sensation by the Form of the Good, and in this way, the imprint or sensation produced in the soul will be reliable and correct, and one becomes good as a whole in the respect of sensation.

In chapter 3, I will attempt to demonstrate that *phantasia* provides a human being with images and with a proto-judgement developed by the non-rational soul, and that it contributes to one’s grasp of F-ness. Specifically, I will rely on the *Theaetetus*, the *Philebus* and Silverman’s (1991) characterization of Plato’s *phantasia*, then offer my own interpretation of Plato’s *phantasia*.<sup>19</sup> After investigating the reliable processes of forming *phantasia*, I will determine how they can produce the image by unifying the special perceptibles, and how they can enable the non-rational soul to come up with proto-judgements.

The reason why I treat a *phantasia* as a proto-judgement is that it is both prior to the production of *doxa*, and inferior to *doxa*, that is, the judgement proper, though it is a kind of judgement. To begin with, a *phantasia* is a particular kind of judgement, since it is “a judgement occurring through sense perception”[38] (Grönroos: 118), thus a mixture of sensation and *doxa*. In addition, it is prior to the production of *doxa*, since the newly born baby is capable of producing *phantasia*, but not *doxa*, either by being unable to operate her rational soul or by lacking language. Moreover, it is inferior to *doxa*, since it is produced by the non-rational soul, and it can also be produced by the beast, while *doxa* is produced by the rational soul, and it can only be produced by a human being. These are just the first of the differences between the proto-judgement (*phantasia*) and the judgement proper (*doxa*). More essential differences will be examined in chapter 3 and chapter 4.

According to my interpretation of Plato’s *phantasia*, forming *phantasia* includes two stages: stage 1 is the formulation of the mere presentation; stage 2 is the process of developing the presentation-*cum*-belief/judgement.<sup>20</sup>

I will try to explain that *phantasia* is teleological and reliable. *Phantasia*, being composed of the mere presentation and the presentation-*cum*-belief, is reliable, since the development of the mere presentation is explained by the model of the wax tablet, and the formulation of the presentation-*cum*-belief is explained by the model of the anticipatory pleasure, and these two models are stable and well constructed. It is teleological, since each of them is aimed at providing human beings with some of the truth of the external object, and hence to help the human being to navigate the external world successfully. Specifically, the mere presentation can provide one with some of the truth of the external object when the non-rational side is regulated by reason, and the basic presentation-*cum*-belief is always true, since it allows one to satisfy the basic desire in the correct way.

This account of *phantasia* is indispensable for having some grasp of the Forms, since the image is indispensable for the formulation of *dianoia* which in turn is required in the mastery of *noesis*, and *phantasia* is the distinctive capacity for producing images, given that the mere presentation and the presentation-*cum*-belief are images produced by the capacity of *phantasia*.

<sup>19</sup>These relevant texts include *Theaetetus* 152c, 161e, 167b, and 184e-185a; and *Philebus* 38c-39b, etc.

<sup>20</sup>These two terms, that is, the mere presentation and the presentation-*cum*-belief, are used by Silverman (1991) when he characterizes the notion of *phantasia*, and I will borrow these two terms in my dissertation only with certain qualifications.

When one is equipped with the knowledge of the Forms, the capacity of *phantasia* will be reordered, because the capacity of *phantasia* will be working in the correct way, and it will have the correct relationship with the other epistemic capacities, and be regulated by the Forms. Firstly, the capacity of *phantasia* will be working in the correct way, since one will recognize its design plan and reach the truth based on the *phantasia*. When one is equipped with the knowledge of the Forms, one will be able to distinguish between the mere presentation and the presentation-*cum*-belief, and one will recognize the design plan or the structure of them, and hence attain the truth of the original. As I have argued earlier, the representation will be unfaithful when the soul-wax is neither smooth nor abundant, but one can still attain the truth of the original by deciphering the coefficient correctly, given that one is offered the design plan of the *phantasia*. In this way, the capacity of the *phantasia* can be led by its design plan, and turn to its correct way of working. Secondly, the capacity of *phantasia* will have the correct relationship with the other epistemic capacities. For example, the operation of *phantasia* contributes to the mastery of *dianoia* by producing images which are indispensable for the formulation of *dianoia*, and it has the good relationship with sensation, since *phantasia* originates from sensation, “Human sense-perception or *phantasia* is therefore something different from and higher than sensation from which it springs and with which it is so closely related”[79] (Watson: 4). In this way, the cognition of *phantasia*, by partaking in its own share of the truth of the whole, will live in harmony with the other cognitions. Thirdly, the operation of developing *phantasia* is regulated by the properties of the Forms. For example, the basic presentation-*cum*-belief is always true in the sense of satisfying the desire, since its selection of the imprint is designed by the lesser gods with the purpose of making the creature as good as possible (see the *Timaeus*), and this is confirmed by its share of truth in the line analogy (see the *Republic*). Consequently, one restores the cognition of *phantasia* by the Form of the Good, and in this way, the soul-wax becomes smooth and abundant, and one becomes good as a whole in the respect of *phantasia*.

In chapter 4, I will attempt to show that the process of producing a *doxa*, especially the process of producing the rational generic belief, enables one to make judgements about the particular object and motivates one to doubt the appearance and evaluate the reasons for the judgements about the particular object by the principle of consistency, and that it contributes to one’s grasp of F-ness. I will rely on the definition of *doxa* at *Theaetetus* 189e-190a. Specifically, I will investigate the reliable processes of making a judgement, especially forming the rational generic belief, and I will examine how they are related to F-ness, and how they enable one to make judgements about the particular object, and motivate one to doubt the appearance and evaluate the reasons for the judgements about the particular object by the principle of consistency.

According to the definition of *doxa* at *Theaetetus* 189e-190a, Socrates divides the whole process of forming a rational generic belief into three stages: stage 1 is that the subject asks himself the question and answers the question, stage 2 is that the subject makes affirmations and denials of these answers, and stage 3 is that the subject comes to a decision, which is *doxa*.

I will try to explain that *doxa* is teleological and reliable. *Doxa*, especially the rational generic belief, is reliable, since the asking stage and the answering stage are regulated by the requirement of consistency, and the calculation stage is regulated by the principle that the Forms should be unchanging over time, together with the principle that the Forms should be absolute, and these principles are stable and well constructed. It is teleological, since one who develops the *doxa* as the design plan requires, will recognize the principles which are implied by the Forms, and will formulate the *doxa* based on these principles, given that one attempts to obtain the truth when one has “(a) the conscious recognition of the basic norm of truth and (b) the intention to respect and maintain this norm in the formation of one’s beliefs”[25] (Engel: 84). Specifically, the requirement of consistency, the principle that the Forms should be unchanging over time,

and the principle that the Forms should be absolute are all implied by the formal properties of F-ness, and the adherence to these principles enables one to be closer to the grasp of the Forms.

This account of *doxa* is indispensable for having some grasp of the Forms, because *doxa* in general is a judgement which is required in the mastery of *dianoia*. Apart from its contribution as a judgement, it also contributes to one's grasp of the Forms in other ways, since the process of producing the rational generic belief enables one to make judgements about the particular object, and it motivates one to doubt the appearance, and evaluates the reasons for the judgements about the particular object by the principle of consistency. All of them are required in the mastery of *dianoia*, and which in turn is required in the mastery of *noesis*.

When one is equipped with the knowledge of the Forms, the capacity of *doxa* will be reordered, because the capacity of *doxa* will be working in the correct way, and it will have the correct relationship with the other epistemic capacities, and be regulated by the properties of the Forms. Firstly, the capacity of *doxa* will be working in the correct way, since one will regulate the development of *doxa* by its design plan and one will do so voluntarily. When one is equipped with the knowledge of the Forms, one will be able to distinguish among the rational generic beliefs, the irrational generic belief and the passive perceptual belief, and one will recognize the design plan or the structure of them. Given that one has the desire to operate the capacity of *doxa* in the correct way, one will consciously operate the development of *doxa* according to the design plan of *doxa*, and thus, the capacity of *doxa* will function in the correct way in different situations. Secondly, the capacity of *doxa* will have the correct relationship with the other epistemic capacities. For example, the development of the rational generic belief is necessary to the mastery of *dianoia*, since the hypothesis, doubting the appearance, and following the argument downward by the principle of consistency are all essential to the proper use of *dianoia*, and all of these are derived from the correct operation of the *doxa*. In this way, the cognition of *doxa*, by partaking in its own share of the truth of the whole, will live in harmony with the other cognitions. Thirdly, the operation of developing the *doxa* is regulated by the properties of the Forms. For example, when one consciously formulates the rational generic belief in the correct way, each stage of the mechanism contributes to one's attempt to grasp the Forms. Specifically, the asking stage in the rational generic belief enhances one's proficiency in obeying reason and prepares one for the final confrontation between reason and the non-rational side, the answering stage makes the search for the essence concrete and oriented, and the comparison stage requires one to realize and adhere to the principle that the Forms should be absolute. Consequently, one restores the cognition of *doxa* by these requirements which are implied by the Forms, and in this way, one, being regulated by the Form of the Good, becomes good as a whole in the respect of *doxa*.

Once I have shown that the senses, the capacity of *phantasia*, and the process of producing a *doxa* all contribute to the mastery of *dianoia*, I will turn to *dianoia* and *noesis* in chapter 5. In chapter 5, I will offer my account of *dianoia* which is composed of the proof stage and the confirmation stage by resorting to Benson's characterization, and my account of *noesis* which is developed by examining the best *dianoia* through the confirmation stage, and that it is in this sense that *noesis* is the completion of *dianoia*.

Based on my account of *dianoia*, I will try to explain that *dianoia* is teleological and reliable. *Dianoia* is reliable, since in the proof stage, the universality of the hypothesis is derived from one's awareness of F-ness, and in the confirmation stage, the upward path is regulated by the theoretical consistency which is a property of F-ness, while the downward path is regulated by the participation relationship which is implied by F-ness. Each of these is stable and well constructed. It is teleological, since the principles by which the development of *dianoia* are regulated are implied by F-ness, and being regulated in this way, the development of *dianoia* is aimed at

grasping the Forms. Specifically, one's awareness of F-ness, and the theoretical consistency, and the participation relationship are all implied by the formal properties of F-ness, and the adherence to these principles enables one to be closer to the grasp of the Forms. Following this line of thought, *noesis* is also teleological and reliable, given that *noesis* is developed by examining the best *dianoia* through the confirmation stage, and that they share a similar methodology, "Dialectic looks more like the completion or the result of some methodology, rather than the methodology itself"[12] (Benson:254).

This account of *dianoia* is indispensable for having some grasp of the Forms, since it provides the motivation to the rational soul to go beyond the image, and offers the tools with which to follow the argument downward under the principle of consistency, and allows the rational soul to go beyond the hypothesis. All of these are necessary to the operation of developing *noesis*.

When one is equipped with the knowledge of the Forms, the capacity of *dianoia* will be reordered, because the capacity of *dianoia* will be working in the correct way, and it will have the correct relationship with the other epistemic capacities, and be regulated by the Forms. Firstly, the capacity of *dianoia* will be working in the correct way, since one will regulate its development by its design plan and one will do so voluntarily. When one is equipped with the knowledge of the Forms, one will be able to distinguish among the *dianoia*, the simple *dianoia*, the complex *dianoia*, and the best *dianoia*, and one will recognize the design plan or the structure of them. Given that one has the desire to operate the capacity of *dianoia* in the correct way, one will consciously operate the development of *dianoia* according to the design plan of *dianoia*, and in this way, the capacity of *dianoia* will function in the correct way in different situations. Secondly, the capacity of *dianoia* will have the correct relationship with the other epistemic capacities. For example, the operation of *dianoia* contributes to the mastery of *noesis* by motivating the rational soul to go beyond the image, and by offering the tools with which to follow the argument downward under the principle of consistency allowing the rational soul to go beyond the hypothesis. In this way, the cognition of *dianoia*, by partaking in its own share of the truth of the whole, will live in harmony with the other cognitions. Thirdly, the operation of developing the *dianoia* is regulated by the properties of the Forms. For example, in the proof stage, the universality of the hypothesis is derived from one's awareness of F-ness, and in the confirmation stage, the upward path is regulated by the theoretical consistency which is a property of F-ness, while the downward path is regulated by the participation relationship which is implied by F-ness, and each of these is regulated by the properties of F-ness. Consequently, one restores the cognition of *dianoia* by these requirements which are implied by the Forms, and in this way, one, being regulated by the Form of the Good, becomes good as a whole in the respect of *dianoia*.

With this being said, now we can set sail and begin our adventure.



# The senses

Critics do not agree upon how to answer the question “Does Plato’s sensation correctly imitate the external object?”. They are generally divided into two groups by their answers, that is, yes and no. Those who give the affirmative answer include Rowett (2018), Fletcher (2016), Silva (2013), Ganson (2005), and Grönroos (2001). The negative answer has been defended by Larsen (2012), Modrak (2006), and Cornford (1937).

Regarding this question, I will follow the affirmative tradition, and I will argue that sensation can correctly imitate the motions of the external object, and hence that it is Form-related. Although my strategy is in line with Rowett’s iconic method in which one can use “shadows to discover the truth about the things which cast them”[70] (Rowett: 156), my approach goes even further, since I not only connect the sensation and the original object by the iconic method, but I also explain in detail that this connection is achieved by the complete process of seeing.

Regarding the complete process of seeing, although my position is in accord with Grönroos’ contact model, “The sense organ is extended in virtue of the stream of fire issuing forth from the eyes and reaches out to objects in the world”[37] (Grönroos: 32), I will refine his account by arguing that it includes the formation of the kindred substance, the collision process, and the process of sensing a colour. Moreover, I will illustrate that each sub-process in the process of seeing contributes to the correct imitation of the motions of the external object, and hence that each sub-process allows one to grasp F-ness.

## 2.1 How sensation allows one to grasp F-ness

In this section, I will argue: (1) that if the motions in the external object are related to the Forms and the Good, and if these motions can be imitated correctly by the senses, then the sensation will lead one to investigate the nature of the universe, to maintain some truth of the external object, and hence be Form-related; (2) that both the motions in the celestial bodies and the revolution in the non-celestial bodies are good and Form-related; and (3) that the complete process of seeing includes the formation of the kindred substance, the collision process, and the process of sensing a colour.

### 2.1.1 Sensation contributes to one’s grasp of F-ness

Senses are epistemic capacities which can contribute to the grasp of Forms, since the senses are designed by the lesser gods, and they help one to become good by grasping the Forms, “the gods who created us bore in mind that their father had ordered them to make the human race as good as possible, and so they organized even our base part so that it might have some kind

of contact with truth”[36] (*Timaeus*: 71d-e; trans. Waterfield).<sup>1</sup> In addition, sensations, as a section in the divided line analogy, should *somehow* have a contact with the Forms, though its share must be quite limited, “they [these divided lines] participate in clearness and precision in the same degree as their objects partake of truth and reality”[58] (*Republic*: 511e; trans. Shorey).

Although it is clear that the senses can contribute to the grasp of the Forms, it is unclear how this can be achieved. Fortunately, Rowett’s (2018) interpretation of the divided line can show us a way out. Rowett interprets the line as a chart of clarity which shows “how directly the agent is in contact with the relevant Form”[70] (Rowett: 153), and analyses the divided line according to the degree of directness as follows:

So a complete list of the stages on the Line, if it included that lowest grade, would comprise: (a) taking shadows for real; (b) using shadows to discover the truth about the things which cast them; (c) taking the things for real; (d) using the things to discover the truth about the ideas that they illustrate; and (e) investigating those ideas in themselves, taken as what is real.[70] (Rowett: 156)

In other words, the external objects are more obscure in truth than the Forms themselves, since they are the images of the Forms; the shadows are even more obscure in partaking in the Forms than the external objects, since they are the images of the external objects.

However, the factor that is worth emphasizing here is not the degree of directness alone, since it also explains the feature of “turning around” in the cave analogy. For example, although cases (a) and (b) are about the shadows, one has not turned around from the shadows until one takes them as a tool to consider the external object which is the original of the shadows as in case (b), or even to consider the corresponding Form which is the original of the external object as in case (d). Consequently, the sensations of colour of the external object, when being seen as the image of the original, may provide an informative image of the object, and this image, when being interpreted through Rowett’s iconic method, may provide a glimpse of the corresponding Form. Consequently, if Rowett’s interpretation works, then sensations, as the indirect imprint of the corresponding Forms, can contribute to one’s grasp of Forms, when they are investigated through the iconic method.<sup>2</sup>

This approach should be adopted, since it relies on the participation relation. The reason why a certain example of F can enlighten one about the F-ness to a certain extent is that it is an instantiation or image of the F-ness. This has been emphasised by Rowett herself, “This imprint of justice served conveniently as our source (*arche*) of knowledge of what the seal that stamped it must be like: a familiar procedure from the use of imprints of seals to demonstrate the origin of something sealed with the correct image”[70](Rowett: 125).

Apart from the support from the participation relation, this approach can also be confirmed at *Timaeus* 47a-b, where the demiurge and the lesser gods have determined that the supreme good of sight is that “our ability to see the periods of day-and-night, of months and of years, of equinoxes and solstices, has led to the invention of number, and has given us the idea of time and

<sup>1</sup>According to Rowett (2018), there are two kinds of truth. On the one hand, it is the folk sense of “truth” which correctly labels external objects, and on the other hand, it is a more sophisticated sense of “truth” which grasps the Form. I refer to the latter sense of “truth” in my dissertation.

<sup>2</sup>Sensations not only contribute to one’s grasp of the Forms, they are also indispensable. According to Rowett’s interpretation, for one to grasp the Forms indirectly, there are only two possible ways: either to consider them by the shadows or by the external objects. Since the investigation of the external objects is still dependent on the examination of the shadows, any grasp of the Forms must start from the consideration of the shadows. Consequently, if one lacks senses or is incapable of correctly operating one’s senses, one will be able to investigate neither the external objects nor the Forms through sensation, hence one will never gain a reliable grasp of the Forms, or even a trustworthy glimpse of the Forms.

opened the path to inquiry into the nature of the universe”[20] (*Timaeus*: 47a-b; trans. Zeyl), since it seems that the correct imitation of motions in the celestial bodies, that is, sensation, is good, and hence sensation is Form-related. To put it another way, suppose that the revolutions of the celestial bodies are true representations of “numbers of time and intelligence”, and that one observes these revolutions by seeing, but the imitations of the revolutions are contaminated, then these imitations in the soul are different from the revolutions of the celestial bodies, and through them, one cannot grasp the number of time, intelligence and harmony in the universe.

As a result, if the motions in the external object are related to the Forms and the Good, and if these motions can be imitated correctly by the senses, then the sensation will lead one to investigate the nature of the universe, to maintain some truth of the external object, and hence be Form-related.

### 2.1.2 The motions of the external objects are Form-related

To establish that the sensation contributes to one’s grasp of F-ness, one must argue that the motions of the external object being imitated are closely related to the Good, and that these motions can be correctly imitated by sensation, though only in certain respect. In this part, I will explain why the motions of the external objects are good and Form-related, and I will explain why sensation can imitate correctly the external object in certain respect in the subsequent sections.

Specifically, I will explain: (1) why the motions in the celestial bodies are good and Form-related, and (2) why the revolution in the non-celestial bodies is good and Form-related.

I will first turn to the question of why the motions of the celestial bodies are good, and I will try to demonstrate that these motions are good in two ways: on the one hand, they are good because they are ordered, on the other hand, they are good because they are indispensable to the purpose of seeing which is good.

To begin with, one has to realize that there are two kinds of motions in the celestial bodies: rotation and revolution, and this can be confirmed at *Timaeus* 40a-b.

And he bestowed two movements upon each of them. The first was rotation, an unvarying movement in the same place, by which the god would always think the same thoughts about the same things. The other was revolution, a forward motion under the dominance of the circular carrying movement of the Same and uniform.[20] (*Timaeus*: 40a-b; trans. Zeyl)

However, the other five motions, that is, left and right, upward and downward, also backward, are not instantiated in the celestial bodies, “With respect to the other five motions, the gods are immobile and stationary”[20] (*Timaeus*: 40b; trans. Zeyl). As a result, there are two and only two motions in the celestial bodies, that is, rotation and revolution.

In addition, the motion of rotation is good, since it is correlated with intelligence. Obviously, intelligence is good, since in order to “produce a piece of work that would be as excellent and supreme as its nature would allow”, the demiurge “brought our world into being as a truly living thing, endowed with soul and intelligence”[20] (*Timaeus*: 30b-c; trans. Zeyl). Given that intelligence is good, rotation is closely correlated with good, since rotation is related to intelligence, “[rotation] specially belongs to reason and intelligence; wherefore He spun it round uniformly in the same spot and within itself and made it move revolving in a circle”[59] (*Timaeus* 34a; trans. Bury).

Moreover, the motion of revolution is good. Firstly, the motion of revolution is good since it is ordered. Although revolution is a particular forward motion, it is not any forward motion,

but a forward motion “under the dominance of the circular carrying movement of the Same and uniform”[20] (*Timaeus*: 40b; trans. Zeyl). In other words, revolution is a forward motion which is dominated by rotation, and which is ordered by demiurge.<sup>3</sup> Since ordered motion is good, “order was in every way better than disorder”[20] (*Timaeus*: 30a; trans. Zeyl), the motion of revolution is good. Secondly, the motions of revolutions are good, since they determine the numbers of time, which are good. According to *Timaeus* 39d, the motions of revolution determine the numbers of time, “time really is the wanderings of these bodies”[20] (*Timaeus*: 39d; trans. Zeyl). This can also be confirmed by demiurge’s reason for creating the celestial bodies, “in order that time might be created, the sun and the moon and five other heavenly bodies—the so-called planets—were created to determine and preserve the numbers of time”[36] (*Timaeus*: 38c; trans. Waterfield). Given that the purpose of seeing is to create the art of number, the notion of time by observing the motions of the celestial bodies, and that this purpose is “the supreme good our eyesight offers us” [20] (*Timaeus*: 47b; trans. Zeyl), the revolutions of the celestial bodies, being indispensable to the fulfilment of grasping the numbers of time, are good.

Having established that the motions of the celestial bodies are good, now I will turn to the question of why the revolutions of the non-celestial bodies are good, or why the revolutions of the ordinary bodies are Form-related. Specifically, I will argue (a) that revolution can also be used to characterize ordinary bodies, (b) that the revolution of an ordinary body refers to the body’s being the same and uniform, and (c) that the revolutions of the ordinary bodies are Form-related, because the recognition of the revolution is indispensable in one’s measuring the object by equal unit, and in one’s grasping of philosophy.

One may argue that an ordinary body, being a non-celestial body, cannot have the motion of revolution. This objection fails, since one can imitate some of the truth or reality of the ordinary body which is secured by the motion of revolution.

Obviously, the motions of the ordinary bodies can be imitated by vision, since one not only sees the celestial bodies, but also the colours of a book, etc. Given that an ordinary body can be seen by one’s vision, and that the vision is partially caused by the imitation of the motions of the ordinary body, the motions of the ordinary bodies can be imitated by vision.

I have to admit that the disordered motions of the ordinary bodies can be imitated by vision, since the living thing, being disturbed by these disordered motions, “would go forwards and backwards, then back and forth to the right and the left, and upwards and downwards, wandering every which way in these six directions”[20] (*Timaeus*: 43b; trans. Zeyl). If the soul is disturbed, and it is caused by the disordered motions in the sensation, the disordered motions in the external object will be imitated by vision.

However, sensation imitates not only the the disordered motions, but also some of the truth or reality which is secured by the motion of revolution. This can be confirmed by the divided line analogy in which the ratios of each line “participate in clearness and precision in the same degree as their objects partake of truth and reality”[58] (*Republic*: 511e; trans. Shorey), and by the lesser gods’ design plan of sensation, “For the gods who created us bore in mind that their father had ordered them to make the human race as good as possible, and so they organized even our base part so that it might have some kind of contact with truth, and established the seat of divination in it”[36] (*Timaeus*: 71d-e; trans. Waterfield). More importantly, when the same sensation is analysed by the philosopher, it will no longer disturb the soul but restore the soul to its original status, “And harmony ... is a gift of the Muses, if our dealings with them are guided by understanding, not for irrational pleasure, for which people nowadays seem to make use of it, but to serve as an ally in the fight to bring order to any orbit in our souls that has become

<sup>3</sup>If this is the case, then revolution can be seen as the mixture of rotation and disordered forward motion, that is, an intermediate motion between the ordered rotation and other disordered motions.

unharmonized”[20] (*Timaeus*: 47d; trans. Zeyl). This also implies that there must be a certain ordered motion in the sensation, and this is the revolution which is achieved by the imitation of the revolution in the external object.<sup>4</sup> Consequently, revolution can also be used to characterize ordinary bodies, although it is typically used to characterize the motions of the celestial bodies.

The motion of revolution can also be used to characterize ordinary bodies, because the revolution of an ordinary body refers to the body’s being the same and uniform. Firstly, the revolution of the ordinary body does not always refer to the motion of revolving around a certain point, since it is not always the case that each ordinary body is revolving.<sup>5</sup> As a result, it is plausible for the term revolution of the ordinary body to have a meaning other than its literal meaning, that is, the motion of revolving around a certain point.<sup>6</sup> Secondly, what is essential to the motion of revolving around a certain point is sameness and the uniformity. Actually, the revolution is a combination of forward motion and the principle of the Same, since it is characterized as “a forward motion under the dominance of the circular carrying movement of the Same and uniform”[20] (*Timaeus*: 40b; trans. Zeyl), just as a human being is an animal which is dominated by rationality. However, among these two factors, the essential factor is the principle of the Same rather than the forward motion. This can be confirmed from some occurrences of “revolution”, since they are characterized by sameness and the uniformity rather than the forward motion. When Timaeus explains the demiurge’s creation of the motion of revolution at *Timaeus* 36d, the revolution is regulated by the principle of the Same, “he [the demiurge] made the revolution of the Same, i.e., the uniform”[20] (*Timaeus*: 36d; trans. Zeyl). Similarly, when Timaeus explains the transformations of human soul at *Timaeus* 42c, the revolution is also regulated by sameness and the uniformity, “he had dragged that massive accretion of fire-water-air-earth into conformity with the revolution of the Same and uniform within him”[20] (*Timaeus*: 42c; trans. Zeyl). Thirdly, even in the case of the revolution of souls where the principle of the Same is absent, it is still correlated with uniformity. This can be confirmed by Timaeus’ demonstration of harmonious sound in which the revolution of the sound is akin to the revolution of the soul, “On the contrary, they graft onto the quicker movement, now dying away, the beginning of a slower one that conforms to it, and so they produce a single effect, a mixture of high and low”[20] (*Timaeus*: 80b; trans. Zeyl). Since the revolution of the harmonious sound is akin to the revolution of the soul, and the distinctive feature of the harmonious sound is that it is a single effect, then the revolution of the soul should also be uniform. As a result, although the motion of revolving around a certain point is a combination of forward motion and the principle of the Same, the essential factor is sameness and the uniformity.

To support this account of the revolution, one can resort to the characterization of becoming at *Philebus* 25d-e, “That of ‘equal’ and ‘double’, and any other that puts an end to the conflict of opposites with one another, making them well-proportioned and harmonious by the introduction of number”[39] (*Philebus*: 25d-e; trans. Hackforth). In other words, in order for any ordinary body to be uniform, number and limit have to be introduced into the unlimited, and only by the introduction of limit can the ordinary body be harmonious and ordered. Indeed, for an object

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<sup>4</sup>The actual process of imitating runs as follows: (i) when one sees an ordinary body, the kindred substance will imitate correctly all its motions, including both its revolutions and other disordered motions; (ii) when one’s soul is disordered, one will only recognize the disordered motions but ignore its revolution; and (iii) when one’s soul is ordered, one will recognize its revolution, and begin to order the disordered motions by the motion of revolution.

<sup>5</sup>Even if there were a motion of revolving in the parts of the ordinary bodies, the revolution in the ordinary bodies would be different from the revolution of the celestial bodies, because the ordinary bodies are not “created to determine and preserve the numbers of time”.

<sup>6</sup>The relation between the revolution of an ordinary body and the revolving of a celestial body is as follows: revolution, as a kind which instantiates sameness and the uniformity, includes two sub-kinds, one is the revolving of a celestial body, another is the ordinary body which is not revolving at all.

to be uniform is to introduce limit and number into its unlimitedness by which it will become well-proportioned and harmonious.

I am justified in using this characterization to interpret an object's being uniform in the *Timaeus*, since it matches the descriptions of the revolution and other disordered motions. Firstly, the relation between limit and the unlimited is same as the relation between the revolution and other disordered motions. Specifically, it is the revolution that ends the disordered motion when it regains its composure, just as it is the limit that ends the conflicts between the unlimited opposites. Similarly, it is the revolution which controls the disordered motions, just as it is the limit which controls the unlimited opposites, "It is then that these revolutions, however much in control they seem to be, are actually under their control"[20] (*Timaeus*: 44a; trans. Zeyl). Secondly, the introduction of limit is understood as the introduction of number in this characterization, and this is the same as the introduction of number by the revolutions of the celestial bodies. In terms of the former characterization, if one recognizes the limit in becoming, then one will recognize the numbers in it, "when the unlimited and what has limit are mixed together, we are blessed with seasons and all sorts of fine things of that kind"[20] (*Philebus*: 26b; trans. Frede). In terms of the latter characterization, if one recognizes the revolution of the celestial bodies, then one will recognize the numbers of time, "A month has passed when the Moon has completed its own cycle and overtaken the Sun"[20] (*Timaeus*: 39c; trans. Zeyl). Consequently, the numbers of time can be equally explained by both the characterization of the limit and of the revolution, since they both obey the principle of the Same.

Having established that the revolution of an ordinary body refers to the body's being the same and uniform, I can now turn to the question why correct imitations of these revolutions in the ordinary bodies are Form-related. The correct imitations of the revolution of the ordinary bodies are good, because it allows one to measure the ordinary body by unit, and this measurement is indispensable for the measurement by equal unit, that is, the grasping of philosophy.

Given that the distinction between the revolution and disordered motions or the distinction between limit and the unlimited, there are at least two ways for one to see the ordinary body: one is to focus on the multiplicity or the unlimited, another is to focus on the unity or the limit. Both approaches are highlighted in the *Timaeus*.

And harmony, whose movements are akin to the orbits within our souls, is a gift of the Muses, if our dealings with them are guided by understanding, not for irrational pleasure, for which people nowadays seem to make use of it, but to serve as an ally in the fight to bring order to any orbit in our souls that has become unharmonized, and make it concordant with itself.[20] (*Timaeus*: 47d; trans. Zeyl)

Consequently, when one recognizes the revolution of the ordinary body, one is focusing on the unity of a certain object, for example, as an ordinary arithmetician does, and one is measuring the object by operating "with unequal units: his 'two' may be two armies or two cows or two anythings from the smallest thing in the world to the biggest"[39] (*Philebus*: 56d; trans. Hackforth).

However, if one develops this way of measurement to its greatest degree, then one will measure the ordinary object by equal unit, and one is measuring things as a philosopher, "[the philosopher] consents to make every single instance of his unit precisely equal to every other of its infinite number of instances"[39] (*Philebus*: 56e; trans. Hackforth). In other words, without the ability to measure the object by unit at all, it is impossible for one to measure the object by equal unit, thus one would grasp neither the philosophy nor the Forms. As a result, the recognition of the revolution in the ordinary body is indispensable in one's measuring the object by equal unit, and in one's grasping of Forms.<sup>7</sup>

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<sup>7</sup>Although the objects in the universe are designed by the demiurge and the lesser gods, and they are good

In summary, I have explained (a) that the motions in the celestial bodies are good, and hence Form-related, (b) that the revolution of an ordinary body refers to the body's being the same and uniform, and (c) that the revolutions of the ordinary bodies are Form-related, because the recognition of the revolution is indispensable in one's measuring the object by equal unit, and in one's grasping of philosophy.

### 2.1.3 The complete process of seeing

Having established that the motions of the celestial bodies are good, and that the revolutions of the ordinary bodies are good and Form-related, I will argue that the senses are capable of imitating correctly these motions, and hence that sensation is Form-related. To achieve this purpose, I will sketch the complete process of seeing here, and in the subsequent sections, I will turn to argue that each stage of the process is designed to correctly imitate the motions of the external object, and hence that each stage is correlated with F-ness.

Timaeus offers a simplified causal mechanism of seeing at *Timaeus* 45d-e. This causal mechanism is illustrated in the figure below. It seems that this quotation summarizes the reliable process of seeing, and includes everything that one needs to explain the reliable process of seeing.

And because this body of fire has become uniform throughout and thus uniformly affected, it transmits the motions of whatever it comes in contact with as well as of whatever comes in contact with it, to and through the whole body until they reach the soul. This brings about the sensation we call "seeing." [20] (*Timaeus* 45d-e; trans. Zeyl)

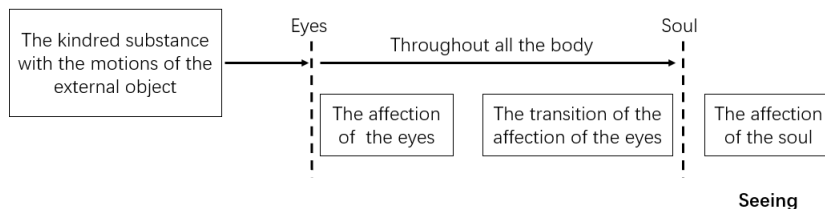


Figure 2.1: The simplified mechanism of seeing

The term *this substance with motions* requires further explanation. Obviously, this notion is quite important, since it is *this substance with motions* that affects the eyes and the soul, and causes the sensation in the soul. However, important as this substance is, it is far from clear what *this substance with motions* is, if one merely resorts to the above definition of seeing. Consequently, in order to clarify what the reliable process of seeing is, one needs to be crystal clear about what *this substance with motions* is.

This task leads one back to the formation of *this substance with motions* at *Timaeus* 45c-d.

and ordered, this does not mean that a human being can grasp the reality of them merely by sensation. In fact, she can only be a philosopher when she uses her reason and intelligence to analyse her sensations, even when she goes beyond the limits of these sensations. Nevertheless, sensation, being a starting point for this journey, is indispensable in helping one to grasp the Forms.

So whenever the stream of vision is surrounded by mid-day light, it flows out like unto like, and coalescing therewith it forms one kindred substance along the path of the eyes' vision, wheresoever the fire which streams from within collides with an obstructing object without.[59] (*Timaeus* 45c-d; trans. Bury)

Obviously, *this substance with motions* is the outcome of the collision between the kindred substance and the external objects. Consequently, it is produced by two consecutive processes: (a) the formation of the kindred substance, and (b) the collision between the kindred substance and the external objects.

If one combines the simplified mechanism of seeing with the demonstration of *this substance with motions*, then one has sketched the complete process of seeing. Specifically, the process should include three stages: (i) the formation of the kindred substance, (ii) the collision between the kindred substance and the external objects, and (iii) the process of sensing a colour.

As is required by my teleological-reliabilist account, taking the capacity of vision as an example, I must answer these two questions: firstly, what is the reliable process of sensing a colour; and secondly, how to describe this reliable process “in a way that links them to a specific sort of outcome which is considered good”[43] (Johansen: 115) and which has a certain contact with truth. In order to answer these two questions, I will not only demonstrate the process of sensing, but also explain how this process can allow one to grasp F-ness and good.

Therefore, in the subsequent sections, I will try to identify the specific stages of each process, and try to argue that each stage allows one to imitate correctly the external object, and hence to be Form-related.

## 2.2 The kindred substance is related to F-ness

In order to explain why the formation of the kindred substance is related to F-ness, I will focus on two issues: (1) what the formation process is, and (2) how this formation allows one to imitate correctly the external object.

### 2.2.1 The formation of the kindred substance

In this part, I will show the formation of the single homogeneous body. Based on the reliable process of producing “this substance” at *Timaeus* 45c-d, one can see that the term “this substance” in *this substance with motions* is the kindred substance, that is, the coalescence of the stream from the eyes and the daylight. Consequently, the formation of the substance can be summarized as follows: every time the eyes issue forth a visual stream in the appropriate environment, for example, in daylight, the visual stream will unite with the daylight, and the result of their union will be a kindred substance.

Before I turn to the details, I have to say a few words about my usage of the key terms, since some of them are derived from translations rather than from the Greek. Ideally, the introduction of the key term should be based on the Greek, and this procedure, in my view, is also the best way in which to coin the key terms. However, I must admit that I am not as capable as the translators in interpreting the Greek, so I have to choose the second-best solution which is to adopt one of the English translations of the Greek as the key Greek terms. However, to help the reader to trace back to the Greek, I will add the Greek to the key terms when I introduce them, with their English translations.

Regarding *σῶμα οἰκειωθέν* at *Timaeus* 45c, I will refer to it as “the kindred substance” as it is translated by Bury. There are three reasons for my adoption of this translation. Firstly,



the part “substance” in the term emphasizes that this body is one rather than many, and this is a distinctive feature of the kindred substance. The same point is also emphasized by “the single body” in Zeyl’s translation “the single homogeneous body”. Secondly, the part “kindred” in the term highlights that its components are akin to each other, that is, the daylight and the stream from within are both non-burning fires. This is quite important for the formation of the kindred substance, since it explains how it can be a single unity rather than a cluster of many. The same point is also emphasized by the word “homogeneous” in Zeyl’s translation “the single homogeneous body”. Thirdly, the adoption of “the kindred substance” rather than of “the single homogeneous body”, is based on a practical consideration, since compared to the latter, the former is shorter, granted that they both emphasize the unity and the kinship between its components.<sup>8</sup>

One may even reconstruct the process based on the model of input/output: when the input of the stream from within combines with the input of the daylight, they will coalesce with each other under a certain principle, and the output of the coalescence is the kindred substance. However, pointing out the input and output is merely the starting point of the explanation of its reliability, since one still needs to explain in detail what these inputs and outputs are, and how these inputs are united.

Regarding the inputs in the formation of the kindred substance, the stream from within and the daylight are not two random things, but two things which have similar qualities.<sup>9</sup> This can be confirmed by the fact that both the visual stream and the daylight are pure fire which does not burn. Firstly, both the visual stream and the daylight are mild. The visual stream is mild since it has the property of not being “burning but for providing a gentle light”[20] (*Timaeus* 45b; trans. Zeyl). The daylight is also a mild light, since “there is a play here on the words ἡμερον (‘mild’)... ἡμέρας(‘day’)”[59] (Bury :100), that is, the term “daylight” means the same thing as the term “mild light”. Secondly, *Timaeus* highlights that the stream from within is “akin to” the daylight several times in *Timaeus* 45b-d. For example, this can be confirmed when “they made the pure fire within us, which is naturally akin to this daylight” and “whenever the ray that flows through the eyes issues forth into surrounding daylight, like meets with like”[36] (*Timaeus*: 45b-c; trans. Waterfield). These definitely confirm that the relationship between them must be affinity. Thirdly, the process of coalescence takes place under the principle of like unto like, “Vision is explained on the principle that ‘like is known by like’: a fire-stream issuing from the eye meets a fire-stream coming from the object of vision”[59] (Bury :100). This principle requires that the visual stream and the daylight should have similar qualities.

Regarding the output of forming the kindred substance, it is not something random, but a *single homogeneous body* whose composition is uniform throughout the whole body. Here, I need to say a few words about the requirements of a *single homogeneous body*. Actually, for an object to be a “single homogeneous body”, it should satisfy two conditions: (i) it is composed of only one kind of element, and (ii) the densities of this elements are always the same throughout the whole body. For example, the tap water in my tea cup can be considered as a single homogeneous body, since it is only composed of H<sub>2</sub>O, and the densities of its molecules are always the same

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<sup>8</sup>In other words, the term adopted is not indispensable for me, since each of them is equally effective in its content, if it is a correct translation.

<sup>9</sup>Although daylight is considered as an input in the formation of the kindred substance, it does not mean that it can function only as its input, since the environment of the reliable process of seeing is also *under the daylight*. If one adheres to Plantinga’s notion of *warrant*, one will take the condition of *under the daylight* as the appropriate environment for the reliable process of seeing. If this is the case, then daylight can function as both the input and the congenial environment for the reliable process of seeing. Interesting and insightful as this dual function of the daylight seems, I do not want to argue for it at this moment, since the quotation above clearly supports the daylight being the input rather than the environment.

throughout the water in my tea cup.<sup>10</sup> However, when I am going to make a cup of Irish tea by adding some milk and sugar into it, it will no longer be a single homogeneous body. Not only because it is composed of multiple kinds of elements, namely, H<sub>2</sub>O, milk and sugar, but also because the density of sugar at the surface will be lower than it is at the bottom, hence making the densities in different parts not the same throughout the mixture in the tea cup.

In fact, what Timaeus says about the kindred substance does satisfy the requirements of a single homogeneous body. Firstly, the kindred substance is composed of only one kind of element, that is, the non-burning fire. As I have argued earlier, the inputs in the formation of the kindred substance are the visual stream from within and the daylight. Since both of them are non-burning fires, the kindred substance is composed of only one kind of element, that is, the non-burning fire. Secondly, it can be confirmed that the “densities” of non-burning fire are always the same throughout the whole body based on Timaeus’ highlighting of the kindred substance’s being a unity. In particular, there are at least two places in the *Timaeus* which confirm that the kindred substance should be a single unity rather than a body with different densities in difference parts: (i), Timaeus’ highlighting of the “coalescing” and the “one single kindred substance” when he demonstrates the process of seeing at *Timaeus* 45c, “like makes contact with like and coalesces with it to make up a single homogeneous body”[20] (*Timaeus*: 45c; trans. Zeyl); and (ii), Timaeus’ highlighting of the terms “combination” and “unite” when he demonstrates the process of seeing by the mirror at 46a-b, “On such occasions the internal fire joins forces with the external fire, to form on the smooth surface a single fire”[20] (*Timaeus* 46a-b; trans. Zeyl). It follows then that the kindred substance is a uniform body rather than a body with different densities in difference parts. In other words, the kindred substance is a single homogeneous body whose composition is uniform throughout the whole body.

Although the process of coalescence is not explicitly explained in the quotation above, it is still crystal clear that it is not a mixing process without any limitation, but a process under the principle of like unto like. More importantly, it is this principle of like unto like that implies that the inputs of the kindred substance must be of the same kind, and results in the output, that is, the kindred substance’s being a single homogeneous body. I will return to the process of coalescence later, and add more details about this process in the next section.

Now I can summarize the reliable process of formation of the single homogeneous body as follows: (a) the inputs of this process include the stream from the eyes and the daylight, and they are akin to each other, (b) the output of this process is a kindred substance, and it is a single homogeneous body whose composition is uniform throughout the whole body, and (c) the mechanism under which the process takes place is the principle of like unto like.

### 2.2.2 The kindred substance and the correct imitation of the motions

Now it is time to explain how the formation of the kindred substance allows one to imitate correctly the external object. Specifically, I will argue: (a) that the purpose of the kindred substance is to produce the true representation of the external object; (b) that the kindred substance is devoid of any characteristics in respect of motion, and that it is able to imitate correctly the motions of the external object; and (c) that the lesser gods are forced to design the formation of the kindred substance in this way.

The formation of the kindred substance is teleological, since it is the lesser gods who created the eyes in such a way that the visual stream should be akin to the daylight, “so they [lesser

<sup>10</sup>Actually, the tap water is not the liquid which is purely composed of H<sub>2</sub>O, since there will be trace elements or minerals in it. Here, I am only taking the tap water as a vivid example to represent the liquid which is purely composed of H<sub>2</sub>O.

gods] made the eyes...close-textured, smooth and dense, to enable them to keep out all the other, coarser stuff, and let that kind of fire pass through pure by itself”[20] (*Timaeus*: 45b-c; trans. Zeyl).

As a result, I must determine the purpose of the formation of the kindred substance. As I have mentioned earlier, the purpose of seeing is to have a partial contact with the truth by producing the special perceptible which correctly imitates the revolution of the external object. With this purpose being established, each stage of the process of seeing should contribute its share in fulfilling this purpose. In terms of the formation of the kindred substance, it contributes to the production of special perceptibles by producing the kindred substance which is the medium through which to correctly imitate the motions of the external object.

In fact, it is not a new idea to correlate the kindred substance with the correct imitation of the motions in the external object, since this correlation has been recognized by scholars. When Fletcher(2016) articulates the purpose of the kindred substance, she is actually attributing it the function of producing the true representation, “Instead of giving rise to pleasure or pain, the motions which cause like-to-like *aisthēsis* produce representations in the soul of the external objects which cause them”[26] (Fletcher: 405). If this is the case, then the purpose of the kindred substance will be to produce the true representation of the external object by imitating correctly the motions in the external object.

Although the purpose of the formation shows the direction in which I must march, I still need to determine how the kindred substance is able to imitate the motions in the external object without contamination. Specifically, by resorting to the explanation of the receptacle in the *Timaeus*, I will argue that the kindred substance lacking motions can correctly imitate the motions in the external object.

Here is my general solution: since the receptacle which is devoid of any characteristics can imitate correctly all the things that enter it, and the kindred substance is devoid of any characteristics in respect of motion, the kindred substance can imitate correctly the motions in the external object which collides with it.

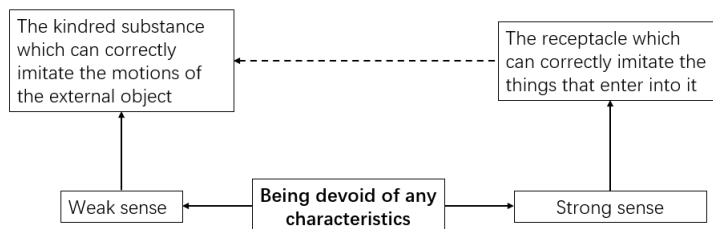


Figure 2.2: Why the kindred substance can imitate the motions correctly?

Obviously, the receptacle which is devoid of any characteristics can imitate correctly all the things that enter it. Firstly, the receptacle can receive or imitate all of the things that enter it, since its essence is to receive impressions, “Its essence is to be available for anything to make its impression upon, and it is modified, shaped and reshaped by the things that enter it”[20] (*Timaeus*: 50c; trans. Zeyl). Secondly, the correct imitation is caused by the receptacle’s being devoid of any characteristics, “if the thing that is to receive repeatedly throughout its whole self the likenesses of the intelligible objects, the things which always are – if it is to do so successfully, then it ought to be devoid of any inherent characteristics of its own”[20] (*Timaeus*: 51a; trans. Zeyl).

Doubtlessly, it is because the receptacle is devoid of any characteristics that it can imitate correctly *all the things* that enter it. Given that my purpose is not to explain why a medium can imitate correctly *all* the aspects of the external object, but only to explain under what condition a medium can correctly imitate a certain aspect of the external object, I will offer the two senses of the term “being devoid of any characteristics”. Specifically, this term can be interpreted in two senses: one is the strong sense in which it is devoid of characteristics in all respects, for example, the standard reading of the receptacle; another is the weak sense in which it is devoid of characteristics only in the relevant respect. In the following part, I will argue that for a medium to correctly imitate a certain aspect of the external object, it is not necessary for it to be devoid of characteristics in all respects, but only in the relevant respect, that is, the weak sense of “being devoid of any characteristics”.

The introduction of the weak sense of “being devoid of any characteristics” is not merely a verbal distinction, and this is confirmed by Plato’s text. Actually, apart from the receptacle which is devoid of characteristics in any respects, Timaeus also uses three other examples in *Timaeus* 50b-51b: the gold that is to receive shapes, “the liquids that are to receive the fragrances”, and the soft materials that are to receive impressing shapes. All these examples are not devoid of characteristics in any respects, for example, gold has the character of being yellow and the liquid of flowing. However, all of them are capable of imitating something without contamination, for example, gold can correctly imitate the shape, and the liquid can correctly imitate the fragrances. Consequently, for a medium to correctly imitate a certain aspect of the external object, it is not necessary for it to be devoid of characteristics in all respects.

If this is the case, then the problem is in which respect the medium should be devoid of any characteristics. I will argue that if the medium is to correctly imitate the aspect X of the external object, for example, the motions of the external object, then the medium should be devoid of characteristic in respect of X, for example, the medium should lack any motions when it is to correctly imitate the motions. When Timaeus explains why the perfect medium must be devoid of any characteristics, his reasoning is that “if it resembled any of the things that enter it, it could not successfully copy their opposites or things of a totally different nature whenever it were to receive them”[20] (*Timaeus*: 50e; trans. Zeyl). For example, if a brown floor can successfully receive the black color of black paint, it is probable that it will not successfully receive the white colour of white paint, since the floor will show its own face, that is, the color brown, in its receiving the white colour of the white paint, and in this way, it contaminates the imitation of the white colour of the white paint.<sup>11</sup> Consequently, as long as the medium shows its face in its imitation of the object in this respect, its imitation must be incorrect, although it is not always incorrect in every respect. It is in this sense that liquid which is to receive fragrances should be devoid of odour or “as odorless as possible”[20] (*Timaeus*: 50e; trans. Zeyl), otherwise its imitation of fragrances will be contaminated by the its own odour. Therefore, if the medium is to correctly imitate the aspect X of the external object, then the medium should be devoid of characteristic in this aspect X.

With this standard in mind, now I will show that the kindred substance is devoid of any characteristics with respect to motion. As I have mentioned earlier, the kindred substance, being a single homogeneous body, contains no conflicting parts, “there is absolutely no violence involved”[20] (*Timaeus*: 64e; trans. Zeyl). This is also confirmed by the relation of like to like, “He will not allow one hostile element to position itself next to another and so breed wars and diseases in the body. Instead, he will have one friendly element placed by another, and so bring

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<sup>11</sup>I have to admit that in the actual case, the floor will neither correctly imitate the black colour of the black paint, nor the white colour of the white paint, since the floor will show its own face, that is, the color of brown, in both of these cases. However, the point is still the same, that is, since the medium shows its face in its imitation at this aspect, its imitation of something must be wrong, though it is not always wrong.

about health”[20] (*Timaeus*: 88e-89a; trans. Zeyl). In other words, the similar components in the kindred substance will cause no disturbance in it, but only bring peace, while the hostile components will “wage a destructive and devastating war against the constituents of the body that have stayed intact and kept to their posts”[20] (*Timaeus*: 83a; trans. Zeyl). Consequently, it is plausible to argue that there is no disturbance but only peace in the kindred substance which is composed of non-burning fire only, hence it is devoid of characteristics in the respect of motion.<sup>12</sup>

As a result, I have established that the kindred substance is at peace, and is devoid of any characteristics with respect to motion, and hence that it is capable of imitating correctly the motions of the external objects that collide with it.

I will now turn to the question of why the lesser gods must design the reliable process in this way, and I will argue that this is required for the production of the kindred substance. Specifically, given that the purpose of the formation is to produce the kindred substance which is a single homogeneous body, and that the condition of seeing is seeing by the mild light, the lesser gods realize that the stream from the eyes must be akin to the daylight, and that the mechanism under which the coalescence is carried out must be *the principle of like unto like*.<sup>13</sup>

The requirement that the visual stream must be akin to the daylight is an inference from the purpose of the formation and its congenial environment. Granted that the purpose of the formation is to correctly imitate the motions in the external object that enters it, the kindred substance should be devoid of any characteristics in respect of motion. However, there must be non-burning fire in the kindred substance since the condition for seeing is under the daylight, and this rules out the option of receptacle and the options of other elements apart from the non-burning fire particles.

The characterization of the kindred substance not only requires that it can only include mild fire, but also that the process of coalescence must be regulated by the principle of like unto like. Granted that the purpose can only be achieved by a pure medium, and that the inputs are the visual stream and the daylight, there is no choice for the lesser gods other than the principle of like unto like. In particular, the lesser gods have to put them together first, since the inputs come from different sources, then they have to unite them into one pure medium by stirring them thoroughly and completely. These two functions are achieved by way of the principle of like unto like. If one were to suppose that it is not the principle of like unto like operating here, but the operator “NOT”, then the result would be either (visual stream NOT daylight) or (daylight NOT visual stream), and neither of them can be a pure medium since they are inconsistent in themselves.

Given that the purpose of the formation is to produce the kindred substance which is a single homogeneous body, and that the congenial environment for seeing is seeing under the mild light,

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<sup>12</sup>However, the kindred substance’s being at peace does not mean that it is insensitive to motions that enter into it, since “Its perceptions are the more vivid and clear the more it is affected and the greater the number of things it encounters and makes contact with”[20] (*Timaeus*: 64e; trans. Zeyl). Although this is not explained by kindred substance being a homogeneous body, it can be explained by the fact that it is only composed of *non-burning fire* particles. As Timaeus argues in *Timaeus* 64e, the sensitivity depends on the size of the particles, “Bodies consisting of larger parts, on the other hand, won’t easily give way to what acts upon them”[20] (*Timaeus*: 64e; trans. Zeyl). That is to say, the particles of earth whose size is larger are insensitive to the motions that enter into it. Consequently, the fire particle, being the smallest particle among all the particles, should be most sensitive to motions that enter into it. As a result, the kindred substance can result in the most intense and clear imitation of the motions in the external objects.

<sup>13</sup>I still need to highlight another distinctive feature of the creation in the *Timaeus*, that is, demiurge and the lesser gods are reorganizing the given material rather than changing their essences. This explains why the lesser gods cannot merely create anything from nothing, but have to take certain conditions as a given requirement in their creation.

the lesser gods realize that the stream from the eyes must be akin to the daylight, and that the mechanism under which the coalescence occurs must be *the principle of like unto like*. This summarizes the relations between these features of the formation of the kindred substance.

With this teleological background in mind, I am now armed to cope with a misunderstanding in the formation of the kindred substance. According to Grönroos(2001), the reason why the daylight is necessary in the formation of kindred substance is that the visual stream by itself is not strong enough to travel for a long distance, “daylight is needed in order to trigger the internal fire so as to make it issue forth” and “daylight is needed in order to make the internal fire reach out to objects in the world”[37] (Grönroos: 32). In other words, if one wants to see an object in the further distance, the visual stream must be fueled by the daylight, just as a car is fueled by gasoline (in order for it to run a long distance). Of course, Grönroos’ interpretation has its own advantages, since it can explain certain claims in the *Timaeus*. For example, when Grönroos explains the process of seeing based on the model of touching, he assigns the function of touching in seeing to the visual stream, and the function of carrying visual stream to the daylight, and this interpretation is consistent with the fact that “we described the ray of sight as a body that comes into being with the daylight as an extension of ourselves”[20] (*Timaeus*: 64d; trans. Zeyl). This also explains why one can see the things nearby in the dark, but not the things in the distance, since there is no no daylight to fuel our visual stream to make contact with the object.<sup>14</sup>

However, useful as Grönroos’ interpretation seems, it misses the larger picture. This situation can be illustrated by the jigsaw puzzle: one might easily put some pieces together as a part of the whole by assembling some incorrect pieces, and because of this incorrect use of some pieces, the whole picture will be incomplete. Similarly, the reason why Grönroos’ interpretation seems to work is also based on his misuse of some pieces, and this will lead the whole picture to be inconsistent and incomplete. Firstly, Grönroos’ interpretation should be rejected, since it cannot explain why the stream from within must be akin to the daylight. According to Grönroos’ interpretation, the relation between the visual stream and the daylight is like the relation between gasoline and a car, but it is not necessary for the car to be akin to the gasoline which enables it to move to a greater distance. If this is the case, then there is no need to require the affinity between the visual stream and the daylight. Consequently, Grönroos’ interpretation is unable to explain the requirement that the visual stream must be akin to the daylight. Secondly, Grönroos’ interpretation should be rejected, since it cannot explain why the visual stream can correctly imitate the motions in the external object, which is the most important feature in formation of the kindred substance. If the visual stream and the daylight are two different kinds of things in essence, then their mixture will be a body with two different parts, and this will definitely create conflict between these parts. This will cause disturbance in Grönroos’ mixture, and causes it to contaminate in its reception of the motions of the external object. Consequently, it will be made incapable of imitating correctly the motions of the external object and incapable of achieving its purpose.

In summary, I have explained: (a) that the purpose of the kindred substance is to produce the true representation of the external object; (b) that the kindred substance is devoid of any characteristics in respect of motion, and that it is able to imitate correctly the motions of the

<sup>14</sup>This is obviously inconsistent with the location of the coalescence. If Grönroos is correct, then the daylight should fuel the visual stream as soon as it issues forth from the eyes, hence the location of coalescence between them should be near the eyes. However, the location of coalescence is obviously at the location of collision, that is, near the surface of the external object, “This [the coalescence] happens wherever the internal fire strikes and presses against an external object it has connected with”[20] (*Timaeus*: 45c; trans. Zeyl). Consequently, Grönroos’ account will be inconsistent with the formation of the kindred substance and the location of the collision, hence it should be rejected.

external object; and (c) that the lesser gods are forced to design the formation of the kindred substance in this way. Consequently, the formation of the kindred substance contributes to the purpose of seeing, by resulting in the medium, by which imitates correctly the motions of the external object, and this allows one to be related to F-ness.

## 2.3 The collision process

As I have argued earlier, the reliable process of seeing should include three stages: firstly, the formation of the kindred substance, secondly, the collision between the kindred substance and the external objects, and thirdly, the process of sensing a colour. Now that I have demonstrated the formation of the kindred substance, in this section, I will turn to the collision between the kindred substance and the external objects.

In order to explain how the collision process is related to F-ness, I will focus on two issues: (1) what the collision process is, and (2) how this collision process allows one to imitate correctly the external object.

### 2.3.1 The collision between the kindred substance and the external objects

To explain the collision process, I will resort to the demonstration of seeing at *Timaeus* 45c-d. Obviously, there is a collision, “the fire which streams from within collides with an obstructing object without”[59] (*Timaeus* 45c; trans. Bury), and the location of the collision is the place where the kindred substance is produced, “This [the coalescence] happens wherever the internal fire strikes and presses against an external object it has connected with”[20] (*Timaeus*: 45c; trans. Zeyl). Apart from these, one also learns that it is the kindred substance that both collides with the external object and imitates its motions, “this body of fire [the kindred substance] has become uniform throughout and thus uniformly affected”; and that it is the kindred substance that delivers the imprint to the soul, “it [this substance with motions] transmits the motions of whatever it comes in contact with as well as of whatever comes in contact with it, to and through the whole body until they reach the soul”[20] (*Timaeus*: 45c-d; trans. Zeyl). Although these characterizations are multiple, they are not organized, and this state of chaos prevents one from grasping the reliable process of collision between the kindred substance and the external object.

Now I have to say a few words about my usage of the term “imprint”. This term is a translation of *σημεῖα* at *Theaetetus* 191d, and I will refer to it as “the imprint” as it is translated by Fowler. There are several reasons for my adoption of this translation. Firstly, the imprint here is not any imprint, but the imprint whose production is based on the wax model at *Theaetetus* 191d, “we hold this wax under the perceptions and thoughts and imprint them upon it, just as we make impressions from seal rings”[35] (*Theaetetus*: 191d; trans. Fowler). Consequently, the act is imprinting (*ἀποστυποῦσθαι*), and the result is an imprint, and such an imprint is produced by an object’s imprinting on another object. Secondly, the imprint is more like a physiological affection, and consequently, the process of imprinting is a physiological process. In other words, this process occurs automatically, and occurs independent of one’s cognitive status. Thirdly, I will take impression, affection, imitation, and copy as interchangeable with the imprint, and affecting, imitating, and copying as interchangeable with imprinting. I admit that these terms have different denotations, but I will confine them to the imprinting which is based on the wax model, and this is why I insist on showing that the underlying model of the affecting process or imitating process here is the wax model.

In order to organize the information above as a causal mechanism, it is useful to resort

to the contemporary account of collision, since it can offer one a tool to view these multiple characterizations in an orderly way.

A useful tool to my mind is the model of three stages of the collision process: before the collision, the collision, and after the collision. Based on this distinction, I will answer the following questions: (a) what factors are involved before the collision, (b) what happens in the collision and what is its result, and (c) what happens after the collision. These stages are illustrated in the figure below. Specifically, “K\_S” stands for the kindred substance, and “K\_S\_M” stands for the kindred substance with motions.

Before I move to the illustration of the collision process, I need to say a few words about my usage of the term “the kindred substance with motions”. This term is a translation of *κινήσεις διαδιδόν* at *Timaeus* 45d, and I will refer to it as “the kindred substance with motions” as it is translated by Bury. There are several reasons for my adoption of this translation. Firstly, the part “the kindred substance” in the term emphasizes its origin from the kindred substance, since the substance with motions is produced by the collision between the kindred substance and the external object. In other words, this term explains how it is produced by referring to its components. Secondly, the part “with motions” in this term emphasizes that the imprinting part from the external object is the motions of the external object, and this is the second component which produces the kindred substance with motions. As the ring stamp in the wax is produced by the ring’s imprinting on the wax, the kindred substance with motions is also produced by the external object’s motions’ imprinting on the kindred substance. Thirdly, apart from the considerations from the content, this terms should be adopted from the point of view of consistency, since it is in line with the previous adoption of the term “the kindred substance”.

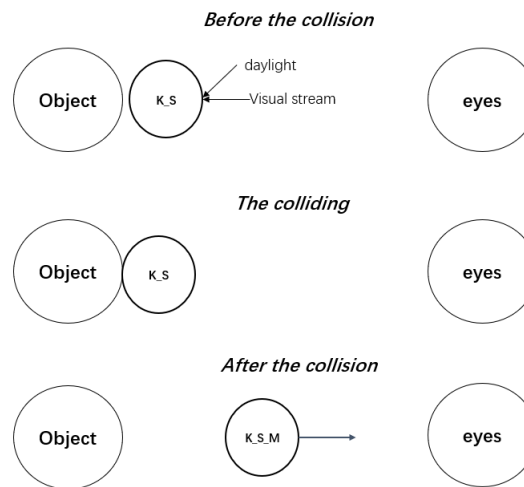


Figure 2.3: Three stages of the collision

Here, I will argue that the factors involved before the collision are the kindred substance and the external object. This is confirmed by *Timaeus*’ general description of the collision at *Timaeus* 45c-d, “this body of fire has become uniform throughout and thus uniformly affected”[20] (*Timaeus*: 45c-d; trans. Zeyl). Firstly, it is “this body” which is affected in the collision, and the thing which affects it is the external object. Consequently, the collision occurs between “this body” and the external object. Secondly, the referent of “this body” must be the kindred substance, since “this body” is uniform throughout, and only the kindred substance is uniform



before the collision. As a result, what happens before the collision runs as follows: the visual stream and the daylight coalesce into the kindred substance, then at the same point, the kindred substance contacts with the external object which results in the collision.

Justified as this position seems, it might still be challenged, since one may argue that the things being involved are not the external object and the kindred substance, but the external object and the visual stream according to *Timaeus* 45c, “the fire which streams from within collides with an obstructing object without”[59] (*Timaeus* 45c; trans. Bury).

However, this understanding cannot be correct. If it were so, then the collision process would run as follows: (i) the visual stream collides with the external object; (ii) the visual stream being affected by the external object coalesces with daylight after its contact with the external object; and (iii) the substance with motions delivers the imitated motions to the eyes. This process cannot be correct, since it is inconsistent with several descriptions of the collision. Firstly, process (ii) is inconsistent with the text, since it is the kindred substance which is affected by the external object rather than the visual stream, “this body of fire has become uniform throughout and thus uniformly affected”[20] (*Timaeus*: 45c-d; trans. Zeyl). Secondly, according to this interpretation, when the visual stream, being affected by the external object, unites with the daylight after the collision, it is probable that the motions being imitated by the visual stream will be diluted by the introduction of the daylight.<sup>15</sup> Consequently, the motions being delivered to the eyes will be different from the motions in the external object, and the process of collision will contaminate the imitation of the motions, hence making this process unable to achieve the purpose of seeing.

Next, let us turn to the second question of what happens in the collision. I will demonstrate the following claims: firstly, that the collision occurs at the surface of the external object, secondly, that the mechanism of such a collision includes the wax model which secures the correct imitation, and the model of the one-dimensional collision which ensures that the “kindred substance with motions” travels back to the eyes by the same route, and thirdly, that the results of the collision are that the kindred substance not only correctly imitates the motions in the external object, but also delivers these imitations back to the eyes by the same route which connects the eyes and the external object.

Regarding the location of the collision, it is clear that they collide at the surface of the external object. Firstly, this is confirmed when *Timaeus* introduces the general description of seeing at *Timaeus* 45c, “This [the coalescence of the kindred substance] happens wherever the internal fire strikes against an external object it has connected with”[20] (*Timaeus*: 45c; trans. Zeyl). In other words, the place where the kindred substance collides with the external object is the place where it presses against or comes to contact with the external object, that is, the surface of the external object. Secondly, this position is also highlighted by Grönroos(2001), “the stream is strong enough to travel all the way to the object and to be affected by the flame at the surface of the object”[37] (Grönroos: 34-35). As a result, the location of collision is at the surface of the external object where the kindred substance is hindered by it.<sup>16</sup>

<sup>15</sup>Obviously, the motions being imitated by the visual stream will be changed by the introduction of the daylight. Although this introduction does not necessarily distort the imitation since the daylight is akin to the visual stream, it will certainly dilute the imitation, and make the imitation differ from the motions in the external object. An analogy of this situation will be that one adds some fresh water into a cup of the salty water. Although the introduction of the extra water will not change the feature of being salty, such as changing salty water into sweet water, it will definitely make the water less salty.

<sup>16</sup>I realize that there is, at least, one more option for the location of the collision, that is, near the external object but not at the surface of the external object. This option has been developed by Silva (2014), since he argues that the external object can “transmit its motions to each of the directions surrounding it that were properly lit”[66] (Remes: 16), and that these particles surrounding the object are called “half-sensations”. If Silva is correct, then the kindred substance is not hindered by the surface of the external object as one normally believes, but by these

Regarding the results of the collision, I will argue that the kindred substance not only correctly imitates the motions of an external object, but also delivers these imitations back to the eyes by the same route which connects the eyes and the external object. This conclusion comes from the following descriptions of the collision process: firstly, the kindred substance is affected by an external object; secondly, at the same time it imitates its motions; and thirdly, it delivers these motions back to the eyes. Clearly, if these descriptions of the collision process are supported by the text, then the descriptions of the results should also be supported by the text.

Here, I will try to demonstrate that these descriptions of the collision process are supported. Firstly, it is obvious that the kindred substance is affected by the external object, “this body of fire [the kindred substance] has become uniform throughout and thus uniformly affected”, and that it delivers these motions to the eyes, “it [this substance with motions] transmits the motions of whatever it comes in contact with as well as of whatever comes in contact with it, to and through the whole body until they reach the soul”[20] (*Timaeus*: 45c-d; trans. Zeyl). Secondly, these two quotations also confirm that the kindred substance imitates the motions of the external object in the collision. In the former quotation, it highlights the feature of being “uniform throughout”, and this feature amounts to the feature of being a single homogeneous body. As I have argued earlier, the purpose of being a single homogeneous body is to imitate correctly the motions of the external object, hence the kindred substance’s being affected by the external object amounts to saying that it imitates correctly the motions of the external object. In the latter quotation, it is emphasized that the things being transferred are “the motions of whatever it comes in contact with as well as of whatever comes in contact with it”, and this clearly points out that the things being imitated are the motions of the external object. More importantly, the kindred substance receives “whatever [motions] it comes in contact with”, and this implies that the imitation should be correct, since otherwise it cannot receive every motion it comes in contact with.

Regarding the question of why the kindred substance bounces back by its coming into contact with the external object, I will argue that it is the mechanism of the one-dimensional collision that causes the “kindred substance with motions” to travel back to the eyes.<sup>17</sup> A vivid example

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particles which are emitted from the external object.

Although the introduction of half-sensation is interesting, it is problematic in its own terms. The urgent question is whether half-sensation will then belong to the external object, if it is emitted by the external object. If it belongs, then the surface of the half-sensation is still the surface of the external object, and this will be the same as my account. If it does not belong to the external object, then there will be some problems about the location of collision which is the surface of the half-sensation.

Firstly, if the half sensation is emitted by the particles in the external object, then it seems that it will emit a further half-sensation of the “half-sensation”, and this will never end. As a result, the visual stream is not hindered by the first half-sensation, but perhaps by the one near the eyes, hence the location of the collision is not near the external object, but near the eyes. Secondly, even if there were no such problem of infinite regress about the half-sensation, the location of the collision would be dependent on the range of the half-sensation, but this is not clearly explained. Thirdly, even if the range of the half-sensation were offered, this range would be dependent on the activity of the external object, that is, the more active the external object is, the larger the range of the half-sensation is. If this is the case, then the range of the half-sensation is not fixed, and it implies that the location of the collision will differ from case to case.

In summary, if the account of half-sensation itself is clearly explained, and it is supported by Plato’s text, then the location of the collision will be at the surface of the half-sensation. However, there are two problems about this account: on the one hand, this is a big “if”, since neither of these requirements are satisfied yet, on the other hand, even if these requirements were satisfied, the location of the collision would still be relative and not fixed according to this account. As a result, I will hold my position until further evidences are offered.

<sup>17</sup>The mechanism that ensures that the “kindred substance with motions” travels back along the straight line from the location of the collision to the eyes, can be explained by the model of the one-dimensional collision. Here I need to say a few words about the model of the one-dimensional collision. Given that the one-dimensional collision characterizes a process in which an object’s direction of motion is changed to its opposite by its coming into contact with another object, this process has been divided into many kinds, for example, the elastic one in which the total kinetic energy of the two bodies remains the same, and the inelastic one in which the total kinetic

of this process would be the case where one hits a tennis ball against the wall horizontally. The tennis ball will bounce back by the same route, just as the “kindred substance with motions” will bounce back to the eyes by the same route. Obviously, the “kindred substance with motions” will travel back to the eyes, since it will “travel from external objects and encounter the visual ray”[36] (*Timaeus*: 67c; trans. Waterfield). Although Timaeus does not refer to the route by which it travels back, the route should be the straight line which starts from the location of the collision and ends at the eyes. Firstly, the route by which the visual stream issues forth is a straight line which starts from the eyes and ends at the location of the collision, “the stream of vision ... coalescing therewith it forms one kindred substance along the path of the eyes’ vision, wheresoever the fire which streams from within collides with an obstructing object without”[59] (*Timaeus* 45c-d; trans. Bury). More importantly, this also implies that the route by which the non-burning fire travels is a straight line. Secondly, when the “kindred substance with motions” travels back, its starting point is the location of the collision, and its destination is the eyes which is the starting point of the visual stream’s issuing forth, since its particles “travel from external objects and encounter the visual ray”[36] (*Timaeus*: 67c; trans. Waterfield). Thirdly, given that the non-burning fire travels along a straight line, and that the “kindred substance with motions” is composed completely of non-burning fire, it should also travel in a straight line just as the visual stream’s issuing forth does.

Regarding the question of why the kindred substance imitates correctly the motions by its coming into contact with the external object, I will argue that it is the wax model that explains the fact that the kindred substance imitates the motions of the external object by changing shape in a certain way.<sup>18</sup> Given that the kindred substance does correctly imitate the motions of the external object by coming into contact with it, now the question is what is the mechanism which secures the shape change. My answer is that it can be interpreted as the wax model, “we hold the wax under our perceptions and thoughts and take a stamp from them, in the way in which we take the imprints of signet rings”[20] (*Theaetetus*: 191d; trans. Levett).

This is for two reasons. Firstly, the three-part structure can also be found in the shape change caused by the collision. When Timaeus demonstrates the production of the sensible objects at *Timaeus* 50d, he likens “the Recipient to the Mother, the Source to the Father, and what is engendered between these two to the Offspring”[59] (*Timaeus* 50d; trans. Bury), and Timaeus takes the offspring explicitly as the *stamp* of the source in the recipient which is a clear reference to the wax model. The similar three-part structure can also be found in the shape change caused by the collision: the recipient is the kindred substance, the source is the external object, and the offspring is the kindred substance with motions which imitates the motions of the external object. If this is the case, then the imitating motion is the *stamp* of the external object in the kindred substance, and this is a clear reference to the wax model. Secondly, when Timaeus explains the distinctive feature of the kindred substance at *Timaeus* 50e, he seems to have the

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energy of the two bodies becomes less. Although it is tempting to attribute this view to Plato, for example the one-dimensional elastic collision based on the descriptions of the collision in the *Timaeus*, this will be too much for Timaeus. This temptation should be resisted, since for Timaeus to have this view, he has to commit to something which is similar to the notion of the kinetic energy, but this is implausible. More importantly, even if Timaeus did commit to something similar to the notion of the kinetic energy, it would be hard to determine whether he holds that the total kinetic energy of the two bodies should remain the same in the collision.

<sup>18</sup>Although I use two separate mechanisms to characterize the collision process, it does not mean that there are two separate processes here: one being the collision, and another being the imitation. Actually, it is the same collision which has two functions: one is to imitate correctly the motions, another is to reverse the direction of the kindred substance’s movement. In fact, the dual function of the collision has been recognized, “Both the linear momentum and the chalk mark communicated to the cue ball by the cue stick are marks transmitted by the spatio-temporally continuous causal process consisting of the motion of the cue ball”[81] (Woodward et al.: 12). Consequently, a good explanation of the one-dimensional collision should explain both the velocity change and the shape change, and this is exactly what Timaeus intends to cover when he attributes both the change of direction and the correct imitation to the collision.

wax model implicitly in mind. When Timaeus explains why the recipient must be devoid of any characteristics, he argues that if this is not the case, then “it could not successfully copy their opposites or things of a totally different nature whenever it were to receive them”[20] (*Timaeus*: 50e; trans. Zeyl), and the verbs used here, such as “copy” and “receive”, clearly remind one of the wax model. Consequently, the kindred substance is supposed to imitate the motions of the external object, and such an act of imitation should be based on the wax model.

Now let us turn to the third question of what happens after the collision. After the kindred substance collides with the external object at the surface of the external object, it imitates the motions of the external object. In addition, by coming into contact with the external object, the kindred substance reverses its direction to the opposite, that is, it travels along the same straight route from the location of the collision to the eyes, and finally to the subject’s soul.

I can now summarize the reliable process of the collision as follows: (a) whenever the kindred substance travels to the surface of the external object, it will make contact with the external object by being hindered by the external object; (b) in the collision between them, there are two separate mechanisms at work: one is the wax model which explains the fact that the kindred substance imitates correctly the motions of the external object by changing shape in a certain way, another is the model of the one-dimensional collision which explains the fact that the “kindred substance with motions” travels back along the straight line from the location of collision to the eyes; and (c) the kindred substance with motions then delivers the motions of the external object to the eyes by the same route, and finally to the subject’s soul.

### 2.3.2 The collision and the correct imitation of the motions

I will now answer the question of how the collision process allows one to grasp F-ness. Specifically, I will argue that this is ensured by the correct imitation of the revolutions of the external object.

Although it seems that there is no intelligent maker involved in the creation of the causal process of the collision in the way that the lesser gods are involved in the creation of the eyes, the demiurge is still involved, in a loose sense, in the collision process, since there is a regularity in the process of collision which is secured by the demiurge. Firstly, the collision process involves the fire particles in the kindred substance and the particles of which the external object is composed, and each fire particle has a determinate characteristic. These determinate characteristics of the particles confirm that the demiurge is still involved, since they are in a chaos in the pre-cosmos, “it is a fact that before this took place the four kinds all lacked proportion and measure”[20] (*Timaeus*: 53a-b; trans. Zeyl), and they are not determinate until they are organized by the demiurge’s persuading the chaos into a certain order, “the first thing the god then did was to give them their distinctive shapes, using forms and numbers”[20] (*Timaeus*: 53b; trans. Zeyl). Secondly, not only is the distinctive movement of each particle secured by the demiurge, but the regularity between the cause and the effect in the collision process is also secured by the demiurge or the lesser gods. Obviously, the reliable process of collision is a process with regularity, rather than an erratic process which “lacks uniformity” or is “caused by inequality”[14] (Brisson: 115), since whenever the kindred substance is hindered by the external object, it will reverse its direction to the opposite and travels back to the eyes. This regularity can only come from the demiurge or the lesser gods, since there “are no necessitating causes in the pre-cosmos because there is nothing in the pre-cosmos with sufficient reality to possess causal efficacy”[43] (Johansen: 97).

Without any doubt, the more remote purpose of the collision here should be the purpose of seeing, that is, to create the art of number, the notion of time, and to give us philosophy by observing the universe, and this is designed by the demiurge. However, apart from the more remote purpose, there is also the proximate purpose of the collision. Given that the purpose of seeing is achieved by the joint efforts of all the sub-processes of seeing, the collision process, as one of these sub-processes, has “a much more circumscribed and specific function”[61] (Plantinga: 13). Given the distinction between the more remote purpose of the collision and its proximate purpose, I now must determine its proximate purpose.<sup>19</sup>

Given that both the distinctive movement of each particle and the regularity in the collision process are secured by the demiurge, I will argue that the proximate purpose of the collision process is to carry out the imitation of the revolutions of the external object and to initiate the delivery of them back to the eyes, and even to the soul. I admit that I take the outcome of the collision as its purpose, and I am justified in doing so for the following reasons. Firstly, it is possible to take the production of the outcome of a reliable process as its purpose. According to Aristotle, if a seed actually becomes the adult plant under the appropriate conditions, then the purpose of a seed is to become an adult plant, “For some plants are generated from the seed of plants”[11](*History of animals*: 539a17; trans. Thompson). Similarly, if the reliable process of the collision functions in its congenial environment, then the produced outcome will achieve its purpose, that is, the kindred substance’s imitating and delivering the motions of the external objects. Secondly, the actual outcome of the collision, when it runs as its design plan requires, should be exactly the same with the creators’ purpose, since this process is designed wholly by the lesser gods and the demiurge, and it is carried out without any impairment. Since the determinate movements of the particles and the regularity in the collision process are secured by the demiurge and the lesser gods, and they constitute the complete process of the collision, it follows that the collision process is wholly designed by the demiurge and the lesser gods. If this is the case, when the collision process in seeing actually takes place, it runs automatically, which leaves no space for any impairment from the subject. Hence this process is carried out perfectly as its design plan requires. As a result, the reliably produced outcome is the purpose in its design plan which is offered by the demiurge and the lesser gods. Thirdly, the collision process is designed in this way, since it can contribute to the achievement of the purpose of seeing. Specifically, the collision process ensures that the revolutions of the celestial bodies can be correctly imitated by the subject when she observes the motions of the celestial bodies, and these correct imitations of revolutions can lead her to grasp the numbers of time and to order her soul whose revolution is akin to the revolution of the celestial bodies.

This function of the collision process can be confirmed not only from its correct imitation of the revolutions of the external object, but also from its *correct* imitation of the disordered motions of the external object. Indeed, the lesser gods seek to secure that the imitations of the revolutions of any object are not contaminated, but they must accept that the kindred substance also imitates the disordered motions in the ordinary bodies.

Clearly, it is only because of the correct imitation that the mechanisms of collision have to include the wax model, and it is only because of the successful delivery of these revolutions to the eyes that they have to include the model of the one-dimensional collision. Firstly, the demiurge and the lesser gods have determined that the supreme good of seeing is that “our ability to see the periods of day-and-night, of months and of years, of equinoxes and solstices, has led to the invention of number, and has given us the idea of time and opened the path to inquiry into the nature of the universe”[20] (*Timaeus*: 47a-b; trans. Zeyl), and this is the top priority for them.

<sup>19</sup>Normally, when I use the term “purpose”, I am always referring to the proximate purpose. For more discussions on this distinction, see Plantinga (1993): 13-14.

Secondly, with this purpose in mind, they begin to design the reliable process of seeing which can help the human being to achieve these purposes. In order to secure human beings' invention of numbers and their grasp of time, the demiurge created the celestial bodies whose revolutions are the numbers of time, then the demiurge and the lesser gods ensured that these revolutions are sensed by human beings, and this is carried out by the kindred substance's correct imitation of these revolutions. Consequently, they must have included the wax model in the design plan of the collision process in seeing.

However, when the lesser gods include the wax model in the design of the collision process, they have to bite the bullet, that is, they have to accept that the kindred substance also imitates the disordered motions in the ordinary objects. Their relation can be illustrated by the relation between the bones' being hard and their being brittle and inflexible when the lesser gods choose the bones to protect the marrow.<sup>20</sup> In other words, when the lesser gods choose the bones which are hard to fulfil the purpose of protecting the marrow, they must also accept the by-product of the bones' being brittle and inflexible, since "You cannot have the hardness of bone without also having its brittleness and inflexibility"[43] (Johansen: 105). Similarly, although the wax model in the collision process ensures that the purpose of seeing is fulfilled by the kindred substance's correct imitation of the revolutions, it also ensures that the imitation of the other six disordered motions in the ordinary bodies inevitable. This explains why the sensation must include the six disordered motions, and why the only good way to cope with them is not to eliminate them, but to order them.

In summary, the purpose of the collision process is to carry out the imitation of the revolutions of the external object and to initiate the delivery of them back to the eyes, and even to the soul. This is confirmed not only from its correct imitation of the revolutions of the external object, but also from its *correct* imitation of the disordered motions of the external object.

## 2.4 The process of sensing a colour

I have demonstrated the formation of the kindred substance, and the collision process, I will now turn to the last stage in the seeing process, that is, sensing a colour. As I have argued earlier, the outcome of the collision is that the kindred substance, imitating correctly the motions of the external object, delivers these motions to the eyes, and this is the starting point for my demonstration of the process of sensing a colour. In this section, I will offer my "teleological-reliabilist account" of the process of sensing a colour by resorting to Timaeus' demonstration of the sensation of colour at *Timaeus* 67c-68d.

Specifically, I will explain the following issues: (1) what the reliable process of sensing a colour is, and (2) how this process of sensing a colour allows one to imitate correctly the external object.

### 2.4.1 The reliable process of sensing a colour

As the figure below shows, the complete process of sensing a colour is a process which begins with the "kindred substance with motions" and ends with the sensations in the soul. As a result, it should include three stages: (a) the fire particles' affecting the eyes which results in the affection of the eyes; let us call it affection-A in short for the moment; (b) the transmission of affection-A from the eyes to the soul; and (c) affection-A's affecting the soul which results in the sensation in the soul. Consequently, to describe the process of sensing a colour requires one to describe

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<sup>20</sup>This relation has been explained by Johansen (2004). For more detail, see Johansen (2004): 105.

the processes of each of these stages. I will first explain the process of “the kindred substance with motions” affecting the eyes.

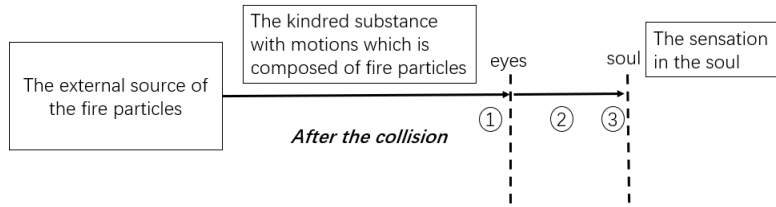


Figure 2.4: The whole process of sensing a colour

The process of “the kindred substance with motions” affecting the eyes has been elaborated at *Timaeus* 67c-e, “The particles that travel from external objects and encounter the visual ray are of various sizes-some smaller, some larger, and some the same size as the particles of the visual ray itself”[36] (*Timaeus*: 67c; trans. Waterfield). Consequently, the input should be “the particles that travel from external objects”. More importantly, these particles refer to the kindred substance which has correctly imitated the motions of an object from the previous collision process, since it is composed of non-burning fire particles and only it travels from the object to the eyes when the eyes are affected.

Actually, apart from these two names, these particles that travel from external objects to the eyes are also called “colours”, “‘white’ is what expands the visual ray, and ‘black’ is the opposite”[36] (*Timaeus*: 67e; trans. Waterfield). If this is the case, then the problem of the ontological status of the colours has been answered quite simply, that is, colours are objective, since they are fire particles which come from the object to the eyes.

One might argue against this position, since *Timaeus* is not consistent in using the term “colour” in the *Timaeus*, and my interpretation is only supported by some but not all of the occurrences of “colour”. For example, *Timaeus* not only uses “colours” to refer to the kindred substance with motions, he also uses “colours” to refer to their sensations, “We have still remaining a fourth kind of sensation, ... which, as a whole, we call ‘colours’”[59] (*Timaeus* 67c; trans. Bury). In fact, as Silverman (1990) clearly summarizes, there are three usages of the term “colour”: the sensation caused in the soul by the particles of fire, the particles that cause these sensations, and the external source of these fire particles.<sup>21</sup>

I admit that *Timaeus* does use the term “colours” in different ways, but these terms more probably refer to the “kindred substance with motions”, since some usages of them should not be taken literally. Specifically, I will focus on two occurrences of “colour” in the explanation of “bright” and “red” in which both refer to a certain sensation, but I will argue that these interpretations of “colour” should not be taken literally, since this would be inconsistent with *Timaeus*’ general idea of how to explain colour. In order to achieve this purpose, I will proceed as follows: (i) I will determine what *Timaeus* intends to do here, (ii) with this general task in mind, I will show how each part contributes to this task, and (iii) I will explain that if one interprets each occurrence of “colour” literally, this this would make Plato inconsistent in explaining the mechanism of fire particles’ affecting the eyes.

To begin with, *Timaeus* intends to explain the process of the “kindred substance with motions” affecting the eyes, and this task is confirmed by the fist paragraph at *Timaeus* 67d-e. When *Timaeus* begins the discussion of the fourth sensation, that is, vision, he argues clearly that

<sup>21</sup>For more discussion on this issue, see Silverman (1990).

it is a process whose input is “a flame that flows from individual bodies”; whose mechanism is dependent on the relation between these particles and the visual ray, “whose particles, being compatible with the organ of sight, produce vision”[36] (*Timaeus*: 67c; trans. Waterfield), and whose output is vision.<sup>22</sup>

In addition, while Timaeus refers to the input, output and the general idea of the mechanism, he also realizes that the core of the mechanism, that is, fire particles “being compatible with the organ of sight”, is unexplained. In order to further explain the mechanism, Timaeus demonstrates different cases of particles’ affecting the visual ray based on their different sizes in the remaining part at 67c-68d. In particular, these cases can be divided into three groups: firstly, the first three cases are “transparent”, “black” and “white”; secondly, the remaining two cases of the basic colours are “bright” and “red”; and thirdly, the other derivative cases of colours, such as “orange” and “purple”, etc.

The first three cases of “transparent”, “black” and “white” are the paradigmatic examples in explaining the process of the fire particles’ affecting the visual ray, since the descriptions of these three colours match the general idea of the mechanism. The explanation goes as follows: if the size of particle has a certain relation  $x$  with the visual ray, then this particle is called  $X$ . This is exactly the explanation of the colour “transparent”: if the sizes of particles are “the same size” as the visual ray, then “they are precisely those things that we call ‘transparent’”. The same structure can also be seen in the explanation of white and black: if the size of the particles is “smaller” than the visual ray, or they “expand the visual ray”, then these particles are called “white”; on the other hand, if the size of the particles is “larger” than the visual ray, or they “contract the visual ray”, then these particles are called “black”.<sup>23</sup> More importantly, apart from two sentences which explain why the smaller particles can expand and why the larger particles can contract by resorting to hot and cold, the explanations above are the only ones given in the account of “transparent”, “black” and “white”. As a result, if the account given that these particles are called  $X$  when the size of them has a certain relation  $x$  with the visual ray, can explain the colours “transparent”, “black” and “white”, and nothing else is required for the explanation of these particles’ affecting the eyes, then the same account should also be sufficient to explain the other colours.

Next, let us turn to the explanation of the colours “bright” and “red” which are the two remaining basic colours for Timaeus. The account of “bright” can be easily identified as follows: if “a more penetrating motion of a different type of fire pounces on the ray of sight and dilates it right up to the eyes, and forces its way through the very passages within the eyeballs”, then “we name [it] *bright* and *brilliant*”[20] (*Timaeus*: 67e-68a; trans. Zeyl). Differing from the account

<sup>22</sup>Although it is tempting to interpret vision here as the affection in the soul, that is, the sensation of colours, this is not necessarily the case. Firstly, both the input and the mechanism serve the process of the “kindred substance with motions” affecting the eyes, hence the output should also serve this same process, rather than the process of affecting the soul. Secondly, if vision here refers to the affection in the soul, then it implies that the affection in the soul is exactly the same as the affection caused by the fire particles affecting the eyes. If this were the case, then the affection in the soul would also occupy space, since the affection in the eyes occupy space. However, this would be inconsistent with the notion of affection in the soul itself, hence the vision here cannot refer to the affection in the soul. Thirdly, as I will show later, all the subsequent demonstrations are about the process of the “kindred substance with motions” affecting the eyes, hence it is plausible to argue that this is what Timaeus has in mind here.

<sup>23</sup>These demonstrations of “transparent”, “black” and “white” are a paraphrase of the text at *Timaeus* 67c-e.

The particles that travel from external objects and encounter the visual ray are of various sizes-some smaller, some larger, and some the same size as the particles of the visual ray itself. Those that are the same size are imperceptible-in fact, they are precisely those things that we call ‘transparent’. Those that are larger contract the visual ray, while the smaller ones expand it, ... ‘white’ is what expands the visual ray, and ‘black’ is the opposite.[36] (*Timaeus*: 67c; trans. Waterfield)



of “black” and “white”, this account includes the explanation of two more by-products: how tears are produced, and how the sensation of “dazzling” is produced. In particular, tears are caused by these particular fire particles’ contracting the eyeballs, and “dazzling” is caused by these particles’ contracting the visual stream from within.

However, when Timaeus explains dazzling, he also calls it colour. Specifically, when these fire particles “encounters fire from the opposite direction”, that is, the visual stream from within, it will result in disturbance or turmoil, and this “turmoil gives rise to colors of every hue”[20] (*Timaeus*: 68a; trans. Zeyl). Since “dazzling” is also called “colours of every hue” which are produced by these disturbances, and dazzling is a sensation, “colours” here should refer to the sensation, hence this is a unharmonised occurrence of “colour” which is inconsistent with my interpretation of colours.

In response to this objection, I agree that it is an occurrence of “colour”, and that it seems that it refers to dazzling which is a sensation, but I do not think this is an objection to my interpretation, since Plato does make the distinction between the cause of the sensation and the sensation, and it is impossible for him to confuse them by calling both of them colours. Firstly, Plato does make the distinction between the cause of the sensation and the sensation. When Timaeus introduces “colour” at *Timaeus* 67c, he clearly distinguishes between the colour which is the cause of the sensation and vision which is the sensation, “We call them all ‘colours’, and each of them is a flame that flows from individual bodies and whose particles ... produce vision”[36] (*Timaeus*: 67c; trans. Waterfield). When Timaeus explains the sensation of dazzling at *Timaeus* 68a, he clearly distinguishes between the cause of sensation and the sensation, “This sensation we term ‘dazzling’ and the object which causes it ‘bright’ or ‘brilliant’”[59] (*Timaeus* 68a; trans. Bury). Secondly, given that all these explanations of the fire particles’ affecting the eyes share the same structure, and that the fire particles are colours, and that the affection caused by these fire particles is different from these fire particles, it is impossible for Plato to hold that the fire particles and their affections are both colours. As a result, Plato must be using the term “colours” here loosely, and it should not be interpreted literally.<sup>24</sup>

Similarly, in the case of “red”, one has to deal with the unharmonised occurrences of “colour” in a similar way by interpreting “the color of blood” as the “sensation of the colour of blood”. This account also shares the same structure as the explanations of “transparent”, “black” and “white”. In particular, if the fire particles is “intermediate between these last two”[36] (*Timaeus*: 68b; trans. Waterfield), that is, larger than the particles of bright but smaller than the particles of white, then it is smaller than the visual ray, and it is called “red”. Actually, the explanation of “red” can help one to understand the by-products in the account of “bright” and “red”, that is, it serves to demonstrate the difference between these particles. Firstly, Timaeus argues that the fire particles are intermediate between the those of “white” and “bright”, and this implies that these fire particles are the referents of “red”, just as the referents of “white” are fire particles. Secondly, the reason why Timaeus believes that the fire particles of “red” are intermediate between them is that these particles only have the character of tears, “It reaches the moisture of the eyes and blends with it”[36] (*Timaeus*: 68b; trans. Waterfield).<sup>25</sup> Although these particles of “red” are

<sup>24</sup>There are three possible options here: (i) each occurrence of “colour” at *Timaeus* 67c-68d refers to the fire particles, (ii) each of them refers to the sensation of colour, and (iii) Plato is inconsistent here, since he refers to them in the cases of “transparent”, “black” and “white” as fire particles, but he refers to them in the cases of “bright” and “red” as sensations. My position here is option (iii). Clearly, option (i) is false, since the “colour” in the case of “bright” and “red” obviously refers to sensations. However, it is still possible for one to choose option (ii), since this would be quite appealing to our contemporary intuition. If this is the case, then one is intentionally ignoring the context here, that is, one is ignoring the general task of explaining colours based on the fire particles’ different sizes. Consequently, one is winning a battle but losing the war by taking option (ii).

<sup>25</sup>If one compares it with the character of tears in the case of “bright”, “it forces apart and decomposes the actual openings in the eyes, and expresses from them a flood of mixed fire and water”[36] (*Timaeus*: 68a; trans. Waterfield), then one can realize that in the cases of both “bright” and “red”, the fire blends with the water in the

smaller than the particles of “white” which enables them to blend with the water in the eyes, they are larger than the particles of “bright”, since they are not small enough to blend with the visual stream from within, and not small enough to cause the sensation of dazzling.

However, this does not mean that these fire particles of “red” cannot produce any sensation in a human being, but only that they cannot produce the sensation of dazzling, since they can produce “the color of blood”[36] (*Timaeus*: 67e; trans. Waterfield). Once again, since Plato recognizes that the cause and the effect in the fire particles’ affecting the eyes are different, and he takes the cause as the colour, it is impossible for him to also take the effect as the colour again. As a result, Plato must be using the term “colour” here loosely, and it should not be interpreted literally.

Finally, one can move to the explanations of the other derivative colours, such as “orange” and “purple”, etc., and these explanations run as follows: when M is mixed with N, we get Z. Although there is no occurrence of “colour” here, these explanations confirm that all these colours, whether they are basic or derivative, are in the same category. Consequently, if the colours “transparent”, “black” and “white” are the fire particles that flow from individual bodies, then each particular kind of “colour” should also refer to the substance which is composed of fire particles, that is, the “kindred substance with motions”.

Therefore, “colour” should refer to the “kindred substance with motions” which travels from the object to the eyes. Although there are two unharmonised occurrences of “colour” in the explanation of “bright” and “red”, and they both refer to a certain sensation, these should not be taken literally, since this would make Plato inconsistent in explaining the mechanism of fire particles’ affecting the eyes. As a result, these unharmonised occurrences of “colour” do not pose a threat to my interpretation of “colours”.

Having explained the stage of the fire particles’ affecting the eyes, I will turn to the transmission of affection of the eyes. As the figure at the beginning of this section shows, Timaeus should offer the explanation for each of these stages. However, it seems that when Timaeus completes giving names to different sizes of the fire particles that travel from the object to the eyes at *Timaeus* 67c-68d, he believes that the explanation of sensing a colour has been completed, since this part serves to demonstrate “The fourth and remaining kind of perception”[20] (*Timaeus*: 67c; trans. Zeyl). Unfortunately, the truth is that Timaeus only accounts for stage (a) the fire particles’ affecting the eyes, and to complete the explanation of sensing a colour, he still needs to add a further demonstration of stage (b), the transmission of affection-A from the eyes to the soul, and stage (c) affection-A’s affecting the soul which results in the sensation in the soul.

Although Timaeus does not demonstrate stage (b) and (c) at *Timaeus* 67c-68d, their demonstrations can be found elsewhere. Regarding the transition of the affection-A from the eyes to the soul, one can gain several clues from the account of the reliable process of hearing at *Timaeus* 67b-c.

To begin with, the destination of this transition should be the appetitive part of the soul which is located in the liver. Firstly, the part of the soul in which sensation is produced is the appetitive part, since sensation belongs to the appetitive part of the soul, “Into the mix they added unreasoning sensation and ever-adventurous desire, and so, constrained by necessity, they constructed the mortal soul”[36] (*Timaeus*: 69d; trans. Waterfield).<sup>26</sup> Secondly, the liver is the location of the appetitive part of the soul, “the gods [the lesser gods] ... had formed the liver and put it in the place where this part of the soul [the appetitive part of the sou] lived”[36]

eyes.

<sup>26</sup>Although this quotation does not state emphatically that the part of the soul referred to is the appetitive part of the soul, unreasoning sensation is a feature of the appetitive part of soul, since it cannot be a feature of the passionate part of the soul which can obey the order from the reasoning part of the soul.

(*Timaeus*: 71a-b; trans. Waterfield). Thirdly, this can also be confirmed by the demonstration of hearing which is “the motion caused by the percussion that begins in the head and ends in the place where the liver is situated”[20] (*Timaeus*: 67b; trans. Zeyl), hence the destination of the transition, that is, the part of the soul in which the sensation of a colour is produced, should be the appetitive part of the soul which is located in the liver.

In addition, with the destination of the transition being determined, the route of the transition should be from the eyes to the liver in a way similar to the process of hearing. According to the explanation of hearing, the route of hearing is from the ears to the brain and to the soul, since sound is taken as “the percussion of air by way of the ears upon the brain and the blood and transmitted to the soul”[20] (*Timaeus*: 67b; trans. Zeyl).

Moreover, the explanation of hearing also confirms that the carrier in the transition from the eyes to the soul should be the blood. According to the explanation of hearing, its carrier is blood, “the percussion of air by way of the ears upon the brain and the blood and transmitted to the soul”[20] (*Timaeus*: 67b; trans. Zeyl), and blood “circulates vigorously throughout the body”.

As a result, the transition of affection-A from the eyes to the soul should run as follows: (i) the kindred substance with motions affects the eyes, and produces the corresponding affection-A, (ii) with the blood being its carrier, this affection-A moves to the brain, and begins its journey from the brain to the liver where the seat of the appetitive part of the soul is situated.

Regarding the production of sensation in the soul, it is clear that the input is the affection-A which is caused by the fire particles affecting the eyes, and the output is the sensation of a colour, but it is unclear what the mechanism is by which this process is carried out. Here, I will argue that the mechanism is still the wax model. Firstly, the sensation of a colour is an imprint in the *soul*. This can be seen from the demonstration of sensation at *Timaeus* 43c, where sensation is caused by the motions which go “through the body to the soul, and strike against it”[20] (*Timaeus*: 43c; trans. Zeyl). It can also be seen from the demonstration of seeing at *Timaeus* 45c-d, where seeing is caused by the kindred substance with motions going “through the whole body until they reach the soul”[20] (*Timaeus*: 45d; trans. Zeyl). As a result, sensation of a colour is caused by these motions affecting the *soul*. Secondly, the way in which the soul is affected is according to the wax model. This can be confirmed when Socrates characterizes the soul as wax at *Theaetetus* 191c-d, “we have in our souls a block of wax, larger in one person, smaller in another”[20] (*Theaetetus*: 191c-d; trans. Levett). Hence the way that the soul is affected can be explained by the way that the wax is affected. Thirdly, Plato does hold that the way in which the soul is affected by these motions is by the wax model. This can be confirmed when Socrates explains the case in which the soul-wax is deep and abundant at *Theaetetus* 194c-d, “when the things that come through the senses are imprinted upon this ‘heart’ of the soul -as Homer calls it, hinting at the likeness to the wax -the signs that are made in it are lasting”[20] (*Theaetetus*: 194c-d; trans. Levett). Obviously, it is the motions from the senses that are imprinted upon the soul, and the way they affect the soul is by the wax model. Fourthly, when Timaeus demonstrates that the liver is the place of the appetitive part of the soul, the mechanism he has in mind is clearly similar to the wax model, “so that the force of the thoughts sent down from the mind might be stamped upon it as upon a mirror that receives the stamps and returns visible images”[20] (*Timaeus*: 71b; trans. Zeyl).

Now it is time to summarize the three sub-processes of sensing a colour: (a) regarding the process of the kindred substance with motions affecting the eyes, whenever these fire particles travel from an object to the eyes, they will affect the eyes, and their affections of the eyes are dependent on their sizes; (b) regarding the process of affection-A’s transmission to the soul, it runs as follows: with the blood being its carrier, this affection-A moves to the brain, and starts

its journey from the brain to the liver where the seat of the appetitive part of the soul is situated; and (c) regarding the process of affection-A affecting the soul, whenever affection-A is delivered to the soul by the blood, it will affect the soul in accord with the wax model, and by such affecting, it will produce the sensation of the corresponding colour.

### 2.4.2 Sensing a colour and the correct imitation of the motions

Now it is time to turn to the question of why sensing a colour in this way is related to F-ness. To answer this question, I will argue (a) that its purpose is to recognize the correct imitation of the revolution in the sensation, and (b) that the lesser gods are forced to design sensing a colour in this way.

The process of sensing a colour is teleological, since the liver is created by the lesser gods, and the regularities in the process are secured by the demiurge and the lesser gods. Firstly, the liver which is the location of the appetitive part of the soul is created by the lesser gods, “But the gods had planned for exactly this eventuality, and had formed the liver and put it in the place where this part of the soul lived. They made the liver dense, smooth, bright, and sweet (but with some bitterness)”[36] (*Timaeus*: 71a-b; trans. Waterfield). Secondly, there is a regularity between the fire particles and their affections of the eyes. This can be confirmed from the demonstration of how the different kinds of fire particles affect the eyes, “‘white’ is what expands the visual ray, and ‘black’ is the opposite”[36] (*Timaeus*: 67e; trans. Waterfield). More importantly, if a human being’s soul is ordered, that is, “the wax in the soul is deep and abundant, smooth and worked to the proper consistency”[20] (*Theaetetus*: 194c; trans. Levett), then there will also be a regularity between these fire particles and their sensations, since the ordered soul will correctly imitate the motions in order and in detail. Given that the motions of fire particles are in a state of chaos in the pre-cosmos, “it is a fact that before this took place the four kinds all lacked proportion and measure”[20] (*Timaeus*: 53a-b; trans. Zeyl), these regularities must be secured by the demiurge and the lesser gods.

Now let us turn to the second question of what the purpose of sensing colours is. I will argue that it is to recognize the correct imitation of the revolutions in the sensation. Although it is natural for one to take the sensation of colours as its purpose, if one sticks to the principle that the purpose is the reliably produced outcome, this is not the case here. Given that the purpose of seeing is to bring us to the philosophy, harmony and order, the purpose of sensation should be helpful in fulfilling the purpose of seeing, but sensations themselves are not helpful but just the opposite, and this can be confirmed at multiple places in the *Timaeus*. Firstly, when Timaeus demonstrates the general process of sensation, he argues that “They [sensations] completely bound that of the Same by flowing against it in the opposite direction, and held it fast just as it was beginning to go its way”[20] (*Timaeus*: 43d; trans. Zeyl), hence sensations are proved “to be misled and unintelligent”[20] (*Timaeus*: 44a; trans. Zeyl). Secondly, when Timaeus describes the creation of the appetitive soul, he argues that “The gods knew that this part of the soul [the appetitive part of the soul] would never understand reason”[36] (*Timaeus*: 71a; trans. Waterfield), hence the appetitive sensation by itself cannot lead us to philosophy, reason and intelligence. Thirdly, later in Timaeus’ demonstration of the “divination”, he maintains that one “needs to be in command of his intelligence ... to subject to rational analysis all the visions that appear to him”[36] (*Timaeus*: 71e; trans. Waterfield). Consequently, visions themselves are not rational, and they can only be rational when they are ordered by the intelligence.

Actually, if one pays closer attention to the motions being imitated by the sensations, one can see why sensations themselves cannot be the purpose. Firstly, the appetitive part of the soul will be easily controlled by the disordered motions in the sensation, when it is not ordered.

Given that the motions being delivered to the appetitive part of the soul include both the other six disordered motions and the revolution which is the only ordered motion from the external object, the soul is controlled, not by the revolution but by the other six disordered motions, “it [the appetitive part of the soul] would proceed in a disorderly, random and irrational way that involved all six of the motions”[20] (*Timaeus*: 43b; trans. Zeyl). Secondly, being ignorant of the revolution is not only a possibility, on the contrary, it is essential to the appetitive part of the soul, “The gods knew that this part of the soul would never understand reason, and they knew that even if it did somehow have some dim awareness of any of them, it was not in its nature to pay attention to anything reasoned they said”[36] (*Timaeus*: 71a; trans. Waterfield).

Given that the motions being imitated by the kindred substance only include the revolution and the other six disordered motions, and that the other six disordered motions are not helpful for one to grasp philosophy or intelligence, then the purpose of sensing colours must be to recognize the revolution in the sensation. This can be seen from the case of observing the celestial bodies, “the god invented sight and gave it to us so that we might observe the orbits of intelligence in the universe and apply them to the revolutions of our own understanding”[20] (*Timaeus*: 47b-c; trans. Zeyl). Hence the recognition of the revolutions of the external objects can help a human being to grasp philosophy, and to become ordered.

Now, let us turn to the question of why the lesser gods are forced to design the process of sensing a colour in this way. I will argue that this is required by the purpose of recognizing the revolution in sensation, and it is in this way that sensing a colour must include both the correct imitation of the revolution and its by products, that is, the imitation of the other six disordered motions in the external objects.

To begin with, the lesser gods not only intend to make the sensation as good as possible, they also offer, in sensation, a tool by use of which a human being becomes good. Firstly, the lesser gods have the aim of making the sensation as good as possible, and this can be confirmed at *Timaeus* 71d-e, “the gods who created us bore in mind that their father had ordered them to make the human race as good as possible, and so they organized even our base part so that it might have some kind of contact with truth, and established the seat of divination in it”[36] (*Timaeus*: 71d-e; trans. Waterfield). Secondly, this quotation also confirms that the lesser gods offer the human being a tool by which she can be restored to her ordered status, that is, the divination. Thirdly, *Timaeus* explains how divination, in the sensation, can have a contact with truth at *Timaeus* 71c-d.

Instead, by exploiting the sweetness inherent throughout the liver for their own purposes, they straighten all its parts until they are free of distortions, wrinkles, and blockages, and they make the part of the soul that has been housed in the same part of the body as the liver gracious and cheerful, so that at night it can indulge in the modest entertainment of divination by dreams, which it has to rely on since it lacks the ability to reason and to apply intelligence.[36] (*Timaeus*: 71c-d; trans. Waterfield)

In other words, when the liver is ordered, it will cause the appetitive soul to be ordered, and the ordered soul will result in divination by dreams. More importantly, when this divination is interpreted in the correct way, that is, “to subject to rational analysis all the visions that appear to him, and to decide in what sense and for whom they signify some future, past, or present trouble or benefit”[36] (*Timaeus*: 71e-72a; trans. Waterfield), the subject will have a certain contact with the truth. As a result, the lesser gods want the sensation to be good, and this purpose is achieved by the rational analysis of the divination in the sensation.

In addition, “to subject to rational analysis all the visions that appear to him” means to guide the appetitive part of the soul by intelligence. Firstly, a mere divination which is a particular vision is insufficient for a human being to have certain contact with the truth, since she still needs to analyse it rationally.<sup>27</sup> However, no matter whether for the ordered soul or the disordered soul, the visions presented to their souls are exactly the same, since the imitation of the motions from the external object must be correct. Secondly, if the visions of divination are the same for the ordered soul and the disordered soul, then the only difference between them is whether the divination is analysed rationally. This can be confirmed by the way in which one deals with the harmonious sound at *Timaeus* 47d.

And harmony, whose movements are akin to the orbits within our souls, is a gift of the Muses, if our dealings with them are guided by understanding, not for irrational pleasure, for which people nowadays seem to make use of it, but to serve as an ally in the fight to bring order to any orbit in our souls that has become unharmonized, and make it concordant with itself.[20] (*Timaeus*: 47d; trans. Zeyl)

Similarly, if the vision of the divination is guided by the understanding, then it will lead one to have a certain contact with the truth, and on the contrary, if it is guided by the irrational pleasure, then it will lead one to become unharmonized and unintelligent.

Moreover, guiding the soul by intelligence can be further explained as being controlled by the revolution in the sensation. Firstly, the case of the soul being guided by the irrational pleasure can be further explained by the soul’s being controlled by the disordered motions, “It is then that these revolutions, however much in control they seem to be, are actually under their control [the other six disordered motions]”[20] (*Timaeus*: 44a; trans. Zeyl). In other words, when the sensation of colours is guided by the irrational pleasure, the appetitive part of the soul will be controlled by the other six disordered motions, consequently, it can only recognize these disordered motions in the sensation, and it will be unharmonized and unintelligent because it ignores the revolution in the sensation. Secondly, following this line of thought, the case of the soul being guided by intelligence can be further explained by the soul’s being controlled by the revolution in the sensation. If this is the case, then the case of the divination’s being guided by the understanding should be interpreted as follows: when the sensation of colours is guided by the understanding, the appetitive part of the soul will be controlled by the revolution in the sensation, consequently, it can recognize the revolution in the sensation, and it will be restored to its ordered status by imitating the revolution in the sensation.<sup>28</sup>

In conclusion, the purpose of the process of sensing a colour is to recognize the correct imitation of the revolution in the sensation which comes from the external object. This process allows one to imitate correctly the motions of the external object, because the imitation is achieved by the liver’s changing its shape in a certain way according to the wax analogy; and this process allows one to grasp F-ness, since the recognition of the revolution in the sensation helps one to have a certain contact with the truth.

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<sup>27</sup>As I have argued earlier, mere sensations themselves are not helpful for the subjects in grasping philosophy or intelligence.

<sup>28</sup>This process might seem circular, since the recognition of the revolution in the sensation requires that the revolution in the soul should take control, and this is achieved by imitating the revolution of the external object in the sensation. This is a valid objection, but not for my characterization here. The process I describe here is not the very first moment when the soul is able to recognize the revolution even to a slight degree, but the time when the soul has been ordered to a certain degree. Although it is not circular in the gradual restoration of the soul to its ordered state, there is still the problem of which revolution comes first at the very beginning. I tend to agree that it is the soul somehow being ordered first, then it is capable of recognizing the revolution in the sensation, otherwise Plato would not be a rationalist in his epistemology.

I will summarize the whole story of the lesser gods' design of sensing colours here. The lesser gods not only intend that even the sensation should have a certain contact with the truth, they also provide a human being with a tool to fulfil this purpose, and this tool is the rational analysis of the divination. Although the divination comes from a dream, it is still a kind of vision which includes the imitations of the revolutions and of the other six disordered motions, and it is the recognition of the revolution in the sensation that helps a human being to have a certain contact with the truth. In particular, when one's dealing with the sensations is guided by the intelligence, one will recognize the revolution in the sensation and use it to control the other six disordered motions, consequently, one's soul will be restored to its ordered state and have contact with the truth. However, if one's dealing with the sensations is guided by the irrational pleasure, one can only be shaken and affected by the other six disordered motions in the sensation, and this will "stir and violently shake the orbits of the soul"[20] (*Timaeus*: 43c-d; trans. Zeyl), hence leading one to be disordered and unintelligent.

### 2.4.3 The process of hearing a sound

Although the process of seeing colours is the most representative process of the different kinds of sensing, I still need to say a few words about the other senses, since the capacity of the eyes to see is merely one of the five senses in producing sensation. However, this does not mean that I will cover all of these five senses in this section, since most of them are explained in a similar way to the process of hearing a sound, which is both less complete and less concrete than the process of seeing. As a result, I will only demonstrate the process of hearing a sound generally based on my "teleological-reliabilist account" of the senses.

There are three passages relevant to the process of hearing a sound in the *Timaeus*. Timaeus demonstrates the purpose of hearing at *Timaeus* 47c-e, the sensation of sound at 67b-c, and how sounds can be harmonious at 80a-b. The sequence among them implies Timaeus' line of thought: the purpose is the top priority, it then should be fulfilled by the reliable process of hearing a sound, and the way that it fulfils the purpose is by producing harmonious sounds. Given my previous method in demonstrating the process of seeing, I will first try to determine the reliable process of hearing a sound, then I will explain why this process allows one to grasp F-ness or to be good.

According to Timaeus, the general process of hearing a sound runs as follows: "sound is the percussion of air by way of the ears upon the brain and the blood and transmitted to the soul, and that hearing is the motion caused by the percussion that begins in the head and ends in the place where the liver is situated"[20] (*Timaeus*: 67b; trans. Zeyl). In summary, the process of hearing a sound runs as follows: (a) the percussion of air which is a particular motion of air strikes the ears, and produces a corresponding affection, (b) with the blood being its carrier, this affection moves to the brain, and begins its journey from the brain to the liver which the seat of the appetitive part of the soul is situated. Obviously, this is exactly the same as the process of sensing a colour.

In addition, Timaeus not only mentions that the percussion strikes the ears, but also that it provides the mechanism which regulates such affection at *Timaeus* 67b-c, "let us take it that whenever the percussion is rapid, the sound is *high-pitched*, and that the slower the percussion, the lower the pitch. A regular percussion produces a uniform, smooth sound, while a contrary one produces one that is *rough*"[20] (*Timaeus*: 67b-c; trans. Zeyl). Again, as in the case of the characterization of the colour, Timaeus is characterizing the different kinds of sounds by the different kinds of motions of air: whenever the motions of air have a certain feature y, then the sound will have a corresponding feature Y.

Although it seems that Timaeus does not explain the process of how the soul is affected, this process must be same as affection-A imprinting itself on the soul by the wax model. Because both of them are affecting the appetitive part of the soul, and both of their inputs are motions which are carried by the blood. As a result, in the process of affecting the soul, whenever the affection comes from the ears to the soul, it will produce the corresponding sensation of sound in the soul, and the mechanism under which this process is carried out is the wax model.

Nevertheless, one more important difference must be pointed out, that is, there is neither the formation of the kindred substance nor the collision between the kindred substance and the external object in the process of hearing. It is hard to determine why Timaeus does not include these two stages in hearing a sound, since this can be explained in two opposite ways. Firstly, Timaeus might think that the former two stages in the hearing are quite like those in seeing, and given the similarities between the process of hearing and seeing, there is no point to repeat the former two stages in hearing a sound which are almost the same with those in the process of seeing. If this is the case, then Timaeus' account of hearing might be a process which includes three stages just like his account of seeing, and this makes his account of hearing active in essence, and makes his account of sensations uniform. Secondly, the reason why these two stages are not present may be that they should not be included in the process of hearing a sound, consequently, mere the process of hearing a sound is the complete process of hearing. If this is the case, then the process of hearing will be simpler than the process of seeing, and it is merely passive, since there is no element of air issuing out from ears to make contact with the external object.<sup>29</sup> Given that both explanations have their pros and cons, I am inclined to accept the latter one, since Timaeus in fact does not mention these former two stages in the process of hearing, and this implies that these stages should not be included in the complete process of hearing.

Consequently, the process of hearing only includes the process of sensing a sound, and it can be divided into three sub-processes: (a) regarding the process of air particles affecting the ears, whenever these air particles with motions affect the ears, they will produce the corresponding affection of the ears, depending on the features of these motions, "whenever the percussion is rapid, the sound is *high-pitched*, and that the slower the percussion, the lower the pitch"[20] (*Timaeus*: 67b; trans. Zeyl); (b) regarding the process of transmitting the affection to the soul, it runs as follows: with the blood being its carrier, this affection moves to the brain, and begins its journey from the brain to the liver which the seat of the appetitive part of the soul is situated; (c) regarding the process of the soul being affected, whenever the affection of the ears is delivered to the soul by the blood, it will affect the soul according to the wax model, consequently, it will produce the corresponding sensation in the soul.

Now that I have demonstrated the reliable process of sensing a sound, I shall explain why this process allows one to grasp F-ness or to be good.

Obviously, the process of hearing a sound is designed by the demiurge and the lesser gods, since the mechanism which regulates the air particles' affecting the ears and the mechanism which regulates the soul being affected are both stable. Given that the lesser gods want to ensure that the sensation should have a relation with the truth, "they [the lesser gods] organized even our base part so that it might have some kind of contact with truth"[36] (*Timaeus*: 71d; trans. Waterfield), they must also provide a human being with a tool for fulfilling this purpose, and this tool is the sensation of the harmonious sound, "And all such composition as lends itself to making audible musical sound is given in order to express harmony, and so serves this purpose as well"[20] (*Timaeus*: 47d; trans. Zeyl).

The sensation of the harmonious sound is good, because the revolution of the harmonious sound is akin to the revolution of the intelligence, which is good. Given that the harmonious

<sup>29</sup>This position has been defended by Grönroos(2001), for more detail, see Grönroos(2001) 36-38.



sound consists of the movements which “are akin to the orbits within our souls”, if one uses the understanding to guide the harmonious sound, then it can “serve as an ally in the fight to bring order to any orbit in our souls that has become unharmonized, and make it concordant with itself”[20] (*Timaeus*: 47d; trans. Zeyl). In other words, the revolution of the harmonious sound is the same as the revolution of our intelligence, and it is only because of this kinship between them that one can restore one’s soul to its ordered state by imitating the revolution of the harmonious sound.

Consequently, the process of hearing a sound allows one to grasp F-ness, since its designed purpose is to recognize the revolution in the sensation of the sound, and this purpose is partially fulfilled by the mechanism of producing the harmonious sound whose movements are akin to the revolution of our souls.

## 2.5 Conclusion

In this chapter, I have established (1) that the process of sensing allows one to be in contact with the Forms, if the sensation imitates correctly the motions of the external object, and (2) that the sensation can imitate correctly the motions of the external object.

To establish the first assertion, I have argued that (a) that this position is supported by the participation relationship between sensation and F-ness, and by the iconic method, and (b) that the motions of the external object are closely related to the Good and the Forms.

To establish the second assertion, I have (a) offered my account of the complete process of seeing, and (b) explained that each stage in the process of seeing contributes to one’s correct imitation of the motions of the external object. Specifically, the process of seeing is composed of three stages: (i) the formation of the kindred substance, (ii) the collision between the kindred substance and the external object, and (iii) the process of sensing a colour.

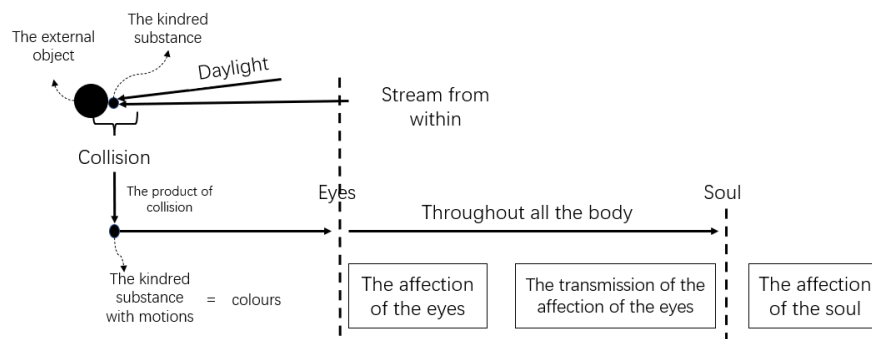


Figure 2.5: The complete process of seeing

Regarding the formation of the kindred substance, its purpose is to imitate the motions in the external object without contamination. Given that the purpose of the formation is to produce the kindred substance which is a single homogeneous body, and that the congenial environment of seeing is seeing under mild light, the lesser gods realized that the stream from the eyes must be akin to the daylight, and that the mechanism under which the coalescence is carried out must be *the principle of like unto like*. Specifically, the reliable process of forming the single homogeneous body runs as follows: (i) the inputs of this process include the stream from the eyes and the daylight, and they are akin to each other, (ii) the output of this process is a kindred substance,

and it is a single homogeneous body whose composition is uniform throughout the whole, and (iii) the mechanism under which the process is carried out is the principle of like unto like.

Regarding the collision between the kindred substance and the external objects, its purpose is to carry out the imitation of the revolutions and to initiate the delivery of them back to the eyes, and even to the soul. In order to secure human beings' invention of numbers and their grasp of time, the demiurge and the lesser gods ensured that these revolutions are sensed by a human being, and this is carried out by the kindred substance's correct imitation of these revolutions. Consequently, they had to include the wax model in the design plan of the collision in the seeing process. Moreover, in order for a human being to receive these correct imitations, they must include the mechanism of the one-dimensional collision in the design plan of collision, since this is the mechanism that ensures that these imitations can be delivered back to the eyes, and even to the soul. Specifically, the reliable process of the collision runs as follows: (i) whenever the kindred substance travels to the surface of the external object, it will make contact with the external object by being hindered by the external object; (ii) in the collision process, there are two separate mechanisms at work: one is the wax model which explains the fact that the kindred substance imitates correctly the motions of the external object, another is the mechanism of the one-dimensional collision which explains the fact that the "kindred substance with motions" travels back along a straight line from the location of collision to the eyes; (iii) the kindred substance with motions then delivers the motions of the external object to the eyes by the same route, and finally to the subject's soul.

Regarding the process of sensing a colour, its purpose is to recognize the correct imitation of the revolution in the sensation which comes from the external object. In order to fulfil this purpose, the demiurge and the lesser gods designed the process of sensing colours in such a way that the revolution in the external object can be correctly imitated and delivered to the soul. However, the process of sensing colours, being designed in this way, imitates not only the revolution but also the six other disordered motions in the external objects, and it is these disordered motions in the sensation that cause a human being to be unintelligent. The three sub-processes in the reliable process of sensing a colour can be summarized as follows: (i) regarding the process of the kindred substance with motions affecting the eyes, whenever these fire particles travel from an object to the eyes, they will affect the eyes, and their affections on the eyes are dependent on their sizes; (ii) regarding the process of affection-A's transmission to the soul, it runs as follows: with the blood being its carrier, this affection-A moves to the brain, and begins its journey from the brain to the liver which the seat of the appetitive part of the soul is situated; (iii) regarding the process of affection-A affecting the soul, whenever affection-A is delivered to soul by the blood, it will affect the soul according to the wax model, and by such an affecting, it will produce the sensation of the corresponding colour.

Regarding the process of hearing a sound, its purpose is to ensure that a human being can recognize the revolution in the sensation of the sound. More importantly, the demiurge and the lesser gods designed the process of hearing a sound in such a way that human beings can recognize the harmony in the sensation of sound, and this is fulfilled by the mechanism of producing the harmonious sound whose movements are akin to the revolution of our souls. Specifically, the process of hearing only includes the process of sensing a sound, and it can be divided into three sub-processes: (i) regarding the process of the air particles affecting ears, whenever these air particles with motions strikes the ears, they will produce the corresponding affection of the ears, depending on the features of these motions, "whenever the percussion is rapid, the sound is *high-pitched*, and that the slower the percussion, the lower the pitch"[20] (*Timaeus*: 67b; trans. Zeyl); (ii) regarding the process of the transmission of the affection to the soul, it runs as follows: with the blood being its carrier, this affection moves to the brain, and begins its journey from the brain to the liver which the seat of the appetitive part of the soul is situated; (iii) regarding the

process of the soul being affected, whenever the affection of the ears is delivered to the soul by the blood, it will affect the soul according to the wax model, consequently, it will produce the corresponding sensation in the soul.

Apart from offering my account of sensation, I would also like to remind the reader of how this account of sensation contributes to the overall argument by illustrating (a) that my account of sensation fits with the view that Plato defends a teleological reliabilist account, (b) that it is necessary for having some grasp of the Forms, and (c) that the capacity of sensation can be reordered in light of our knowledge of the Forms.

I have established that sensation is teleological and reliable, and this is the starting point of the whole project of Plato's teleological-reliabilist account of knowledge. The sensation, especially vision, is reliable, since the formation of the kindred substance is regulated by the principle of like unto like, and the collision between the kindred substance and the external objects is regulated by the wax model and the mechanism of the one-dimensional collision, and the process of sensing a colour is regulated by the wax model, and each of these models, mechanisms, and principles is stable and well constructed. It is teleological, since the purpose of the formation is to produce the kindred substance which is a single homogeneous body, the purpose of collision is to carry out the imitation of the revolutions and to initiate the delivery of them back to the eyes, and the purpose of sensing a colour is to ensure that a human being can recognize the revolution in the sensation. More importantly, all these help one to recognize the correct motions of the external object, and hence allow one to be in contact with the Forms, "the god invented sight and gave it to us so that we might observe the orbits of intelligence in the universe and apply them to the revolutions of our own understanding"[20] (*Timaeus*: 47b-c; trans. Zeyl).

This account of sensation is indispensable for having some grasp of the Forms, since one, as a human being, is forced to start from the perception of sensibles in order to achieve any cognition, "when the soul makes use of the body to investigate something ... for to investigate something through the body is to do it through the senses"[20] (*Phaedo*: 79c; trans. Grube). This is also consistent with the development of *noesis* which requires one to use sensibles, since one's soul is embodied, and the direct apprehension is inaccessible to human beings, "it [the soul] is imprisoned in and clinging to the body, and ... it is forced to examine other things through it as through a cage and not by itself"[20] (*Phaedo*: 82e; trans. Grube).

When one is equipped with the knowledge of the Forms, the capacity of sensation will be reordered, because the capacity of sensation will be working in the correct way, it will have the correct relationship with the other epistemic capacities, and be regulated by the Form of the Good. Firstly, the capacity of sensation will be working in the correct way, since one will recognize its design plan and reach the truth based on the sensation. When one is equipped with the knowledge of the Forms, one will be able to distinguish between the unfaithful sensation and the reliable sensation, and one will recognize how each of them is produced, and hence attain the truth of the original even by means of the unfaithful sensation. As I have argued earlier, the sensation will be unfaithful when the soul-wax is neither smooth nor abundant, but one can still attain the truth of the original by deciphering the coefficient correctly, given that one is offered the design plan of the sensation and that one is regulated by reason. In this way, the capacity of sensation can be led by its design plan, and turn to its correct way of working. Secondly, the capacity of sensation will have the correct relationship with the other epistemic capacities. For example, the sensation fomulates the basis of *phantasia*, "Human sense-perception or *phantasia* is therefore something different from and higher than sensation from which it springs and with which it is so closely related"[79] (Watson: 4), and it is also the indispensable starting point of other cognitions, since one, as a human being, is forced to start from the perception of sensibles in order to achieve any cognition. In this way, the cognition of sensation, by partaking in its own share of the truth of the whole, will live in harmony with the other cognitions. Thirdly, the

operation of developing the sensation is regulated by the Form of the Good. For example, the whole process of seeing is to ensure that one can recognize the correct imitation of the revolution in the sensation which comes from the external object, and in this way, the supreme good of vision will be achieved, since “our ability to see the periods of day-and-night, of months and of years, of equinoxes and solstices, has led to the invention of number, and has given us the idea of time and opened the path to inquiry into the nature of the universe”[20] (*Timaeus*: 47a-b; trans. Zeyl). Consequently, one restores the cognition of sensation by the Form of the Good, and in this way, the imprint or sensation produced in the soul will be reliable and correct, and one become becomes good as a whole in the respect of sensation.

# *Phantasia*

I have explained how sensation ensures one's acquisition of the truth. I will now turn to the intermediate between sensation and *doxa*, that is, *phantasia*, and I will try to establish that it can preserve some of the truth of the original object, and hence that it is Form-related.

The most influential view of *phantasia* is that it must be false. This view has been adopted by Grönroos (2001) and Silverman (1991). It has been argued that its falsity might reside in the mechanism of forming the mere presentation, or the limitedness of *phantasia* itself, or the judgement induced by the presentation-*cum*-belief. However, I shall argue that all these objections are not conclusive, and that they cannot establish that *phantasia* is necessarily false. Consequently, I will stand with Rowett (2018), Dominick (2010), and Patterson (1985), and argue that it is possible for *phantasia* to preserve some of the truth of the original object.

Although my strategy is in the same vein as Rowett's iconic method in which one can use "shadows to discover the truth about the things which cast them"[70] (Rowett: 156), my approach goes even further, since I not only connect the shadows and the original object by the iconic method, but I also explain that it is the peculiar formulation of *phantasia* that makes the iconic method possible, hence making it preserve the truth and Form-relatedness of the object. Moreover, I will illustrate that each stage in the formulation of *phantasia* contributes to the preservation of the truth of the original object, and hence that it allows one to grasp F-ness.

## **3.1 Does Plato's *phantasia* contribute to the grasp of the Forms?**

In this section, I will show that it is possible for *phantasia* to be Form-related. To achieve this purpose, I will illustrate that *phantasia* will be Form-related, if it characterizes a certain property of the external object reliably and faithfully, and that it is possible for *phantasia* to preserve some of the truth of the original object, since it is not necessarily false.

Specifically, I will (1) offer a general illustration of *phantasia*, and I will maintain that it is composed of the mere presentation and the presentation-*cum*-belief in which the former induces the latter, and (2) I will point out that there is a close connection between the truth of the original object and its F-ness, and (3) I will illustrate, negatively, that it is possible for *phantasia* to preserve the truth of the original object, by examining three objections.

### **3.1.1 The general illustration of *phantasia***

In this part, I will offer my general interpretation of *phantasia* by examining Silverman's (1991) account. I will argue that it is composed of the mere presentation and the presentation-*cum*-belief, and that they are connected in series rather than in parallel.

In order to achieve this purpose, I will (a) clarify Silverman's account, (b) reject Silverman's inclusion of the based belief in *phantasia*, and (c) provide my general interpretation of *phantasia*.

Although it is widely agreed that *phantasia* originates from sensation, "Human sense-perception or *phantasia* is therefore something different from and higher than sensation from which it springs and with which it is so closely related"[79] (Watson: 4), it is unclear what occurs between the multiple sensibles and a *phantasia*. To answer this question, Silverman has offered a three stage account of *phantasia*, which is composed of the mere presentation, the presentation-*cum*-belief, and the belief for which the *phantasia* can serve as evidence.<sup>1</sup> This refinement is quite helpful, since it explains why it is the intermediate between the sensation and *doxa*, and it clarifies the relations between *phantasia*, sensation and *doxa*.<sup>2</sup>

Having introduced the terms of stages of *phantasia*, now I will elaborate Silverman's usage of these terms. Regarding the mere presentation, Silverman argues that it is "what is 'presented' to the mind"[72] (Silverman: 135) by the conjunction of a thought component and the sensation, that is, it is the conceptualized sensation, "the initial result of the imposition of concepts onto whatever is reported by *aisthesis*" (Silverman: 135). However, a mere presentation, being conceptualized, is not a *doxa*, since it lacks the "assertive or judgmental aspect" (Silverman: 135). These characterizations constitute the two features of the mere presentation: (i) it is a conceptualized sensation by virtue of which it is superior to the sensation, and (ii) it lacks the act of judging by virtue of which it is inferior to the *doxa*. Now let us apply them to the situation of experiencing a red apple. Firstly, required by the conceptualization, one should apply the concept of "red" to a certain sensation, or the concept of "the apple" to a collection of sensations. Secondly, the mere presentation being not assertive, one might merely entertain the thought of "the apple" and "red" without linking them in a proposition, or one might merely entertain the thought that "the apple 'is' red" without assigning any judgement to it, either affirmative or negative.<sup>3</sup>

Regarding the presentation-*cum*-belief, it is the assertion or denial of about the mere presentation rather than about its external cause, "the judgment we make about what is occurrently presented to the mind, about the mere appearance or presentation"[72] (Silverman: 135). Now let us apply them to the situation of experiencing a red apple. The mere presentation might be that one entertains the concepts of "the apple" and "red" without linking them, while the presentation-*cum*-belief might be that "one asserts sensibly that the apple is red".<sup>4</sup> This makes up the two features of the presentation-*cum*-belief: (i) its content, being the same with that of the mere presentation, cannot be changed by the individual, since it is completely determined by "a given object and the sensory situation" (Silverman: 141), and (ii) it differs from the mere presentation, only because it is judged in a certain way, either asserting or denying the mere presentation.

Different from the presentation-*cum*-belief whose content is totally determined by the mere presentation, the content of the based belief is determined by the conjunction of the mere presentation, and the background beliefs, "the set of beliefs, abilities, expectations, and information

<sup>1</sup>According to Silverman, the notions which are synonymous with the mere presentation include "the mere appearance", "the content of the appearance", and the belief for which the *phantasia* can serve as evidence is usually abbreviated as "the based belief". These interchangeable usages will be kept in the examination of Silverman's account.

<sup>2</sup>For example, the relation between sensation and *phantasia* is in fact the relation between sensation and the mere presentation.

<sup>3</sup>This failure might result from the fact that one is not disposed to act by the mere presentation.

<sup>4</sup>Two things should be emphasized here: firstly, the verb in the mere presentation, "entertains", only implies that it is not judging, and secondly, the adverb "sensibly" serves to describe a particular manner of judging which differs from the judging in *doxa*.

possessed by the observer”[72] (Silverman: 141), and the process of formulating the based belief is not totally passive. This draws out two features of the based belief: (i) the number of the based beliefs will be related with the number of one’s background beliefs, but that of the presentation-*cum*-belief can only be one, if being affirmative cannot be coexistent with being negative, and (ii) the based belief may be about the external cause, but this is impossible for the presentation-*cum*-belief. For example, the based belief in the apple case might be that “I judge that the apple itself is red” or that “I judge that the apple itself merely appears red, and it is not actually red”, but the presentation-*cum*-belief can only be that “I judge sensibly that the apple is red” when it is assertive.

Having identified the components of *phantasia*, Silverman also characterizes their relation, that is, both the presentation-*cum*-belief and the based belief are caused in parallel by the mere presentation. Given that the parallel relation will be obtain, if the based belief is akin to the presentation-*cum*-belief, I will try to establish that there is a parallel relation between based belief and the presentation-*cum*-belief, by arguing that there is an assimilation between them. Firstly, the assimilation between them can be verified when Silverman contrasts the mere presentation with the induced beliefs, “while each sensory situation can yield only a single presentation [the mere presentation], this presentation can give rise to numerous beliefs”[72] (Silverman: 141). It seems that Silverman accepts that there is a division between the mere presentation and the induced belief, and that the numerous beliefs are induced by the mere presentation. Given that the number of the presentation-*cum*-belief, being induced by a certain mere presentation, can only be one, it is implied that the numerous beliefs must include the based beliefs and that they are caused by the mere presentation. Consequently, the based belief and the presentation-*cum*-belief share the similar feature, that is, they are both caused by the mere presentation. Secondly, the assimilation between them can be confirmed when he introduces the description of the full-fledged *phantasia*, “The judgment we make about what is occurrently presented to the mind, about the mere appearance or presentation, is then the full-fledged Platonic *phantasia*”[72] (Silverman: 135). There is no doubt that Silverman is referring to the based belief here, but the same description can also be applied to the presentation-*cum*-belief which also a judgement about the mere presentation, and hence they share the similar feature. Consequently, Silverman does not distinguish them by the standard whether it is induced by the mere presentation, as showed in the figure below.

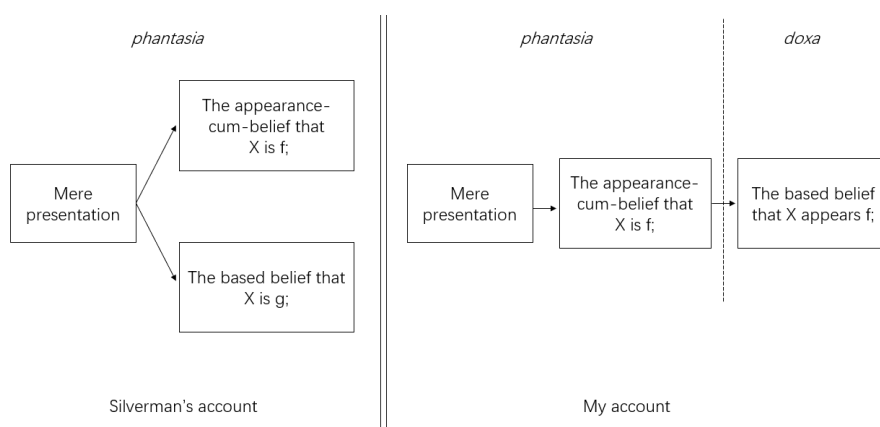


Figure 3.1: Two models of *phantasia*

Consequently, *phantasia*, according to Silverman, is composed of the mere presentation, plus

the presentation-*cum*-belief and the based belief. The latter two are both induced by the mere presentation, and they are caused in parallel.

I will reject Silverman's account of *phantasia*, since I find neither that the based belief is induced by the mere presentation, nor that it should be included in *phantasia*, although I agree with him that the presentation-*cum*-belief, being an induced belief, should be included in *phantasia*. By examining Silverman's account, I propose that *phantasia* is composed of the mere presentation, plus the presentation-*cum*-belief, and the latter is induced by the mere presentation, as illustrated in the figure above.<sup>5</sup>

The based belief is not induced by the mere presentation, since if it were the case, this would be consistent with neither Silverman's assertion, nor the agreed characterization of *phantasia*. Firstly, if the based belief were induced by the mere presentation, it would violate Silverman's assertion that it is not induced by the mere presentation.<sup>6</sup> According to Silverman's examples of based beliefs, the based belief is induced by the presentation-*cum*-belief, "The nonqualified belief that the appearance is evidence for is the belief that the stick is straight"[72] (Silverman: 138), and this has been strengthened later, "This presentation-*cum*-belief will then serve as evidence for the subsequent belief that the stick is in fact straight" (Silverman: 145), that is, it is caused by the presentation-*cum*-belief, together with the background beliefs. Secondly, if it were induced by the mere presentation, it would violate either the requirement that *phantasia* is regulated *only* by the non-rational side, or the principle of non-contradiction. Given that the presentation-*cum*-belief is completely determined by "a given object and the sensory situation" (Silverman: 141), one necessarily formulates the judgemental presentation-*cum*-belief, no matter whether one has the based belief or not. As a result, when one has the based belief, one must hold two beliefs at the same time: one is the based belief, for instance, "the stick is in fact straight" which is true, and another is the presentation-*cum*-belief, for instance, "the belief involved in the *phantasia* might be ... that the stick is bent" (Silverman: 145) which is false, and this is the problem of contradictory beliefs. To solve this problem, Silverman should either attribute different capacities to the presentation-*cum*-belief and to the based belief, "He has the belief that the stick is straight because, in the past, he has reasoned, measured, and calculated on the basis of other appearances of bent sticks" (Silverman: 138), or he should attribute opposite beliefs to the same faculty. Unfortunately, neither should be accepted, since the former will violate the requirement that they both are conducted by the non-rational side, and the latter will disobey the principle assumed in the argument for the tripartite soul, "the same thing will not be willing to do or undergo opposites in the same part of itself, in relation to the same thing, at the same time" (*Republic*: 436b; trans. Grube).<sup>7</sup>

Silverman's characterization of the based belief should be rejected, not only because it is not induced by the mere presentation, but also because it is not in accord with Plato's characterization of *phantasia*. This is for three reasons. Firstly, if it were to be included in *phantasia*,

<sup>5</sup>Borrowing these two notions from Silverman does not mean that I agree totally with his characterizations and justifications, on the contrary, I will argue later that Silverman's descriptions and arguments for them are inappropriate.

<sup>6</sup>Yes, Silverman is ambiguous in whether it is induced by the mere presentation, and this is so at one place, but he maintains this is not so at another place.

<sup>7</sup>This dilemma can be illustrated vividly from Silverman's response to the charge of attributing contradictory beliefs to the same capacity. Lycos(1964) maintains that *phantasia* is regulated by one agent, but that it can be both true and false, hence it disobeys the principle of non-contradiction. Silverman, in responding to this charge, argues that the relation between these two beliefs is parallel, hence either one lacks the skill and goes with the presentation-*cum*-belief by asserting that the stick is bent, or one has the skill, and goes with the based belief by holding that the stick is straight, consequently, the contradiction will never happen. Although this strategy can escape the charge of the contradiction by denying their simultaneous presence, it attributes reason or measuring to the non-rational side which is the agent of *phantasia*, and thus this contradicts the fact that the non-rational side is unable to think.



it would violate the characterization of the agent. Were one to adopt Silverman's suggestion of adding the based belief into the notion of *phantasia*, one would have to accept that the based belief, when being true about the original object, should be formulated through thinking or reason, "it is difficult to escape the conclusion that even a *phantasia* is formed through thinking"[38] (Grönroos: 18), but this is inaccessible to the non-rationalside which by definition does not think. Secondly, were the thinking in the based belief available to the non-rationalside, it would still disobey the definition of *phantasia*. Given that the based belief is formulated through thinking, and that it can be a reliable conceptualized representation of the external object, it is natural for one to accept that it is a kind of *doxa*, and that a certain *phantasia* is a kind of *doxa*. However, *phantasia* cannot be *doxa*, since it is the mixture of sensation and *doxa* based on the definition of *phantasia* at *Sophist* 264a, "And what if that [affirmation and negation] doesn't happen on its own but arises for someone through perception? When that happens, what else could one call it correctly, besides appearance [*phantasia*]"[20] (*Sophist*: 264a; trans. White), and the mixture should be interpreted as the intermediate, "*phantasia*'s role is to link the limited irrational findings of aisthesis to the conceptual faculty of belief"[72] (Silverman: 133). In other words, *phantasia*, according to its definition, should be the intermediate between the sensation and *doxa*, hence it is not *doxa* yet.<sup>8</sup> Thirdly, Silverman is unjustified in including the based belief into the notion of *phantasia*. Silverman's conclusion that the based belief should be included in *phantasia* may only be established, if the presentation-*cum*-belief, which is induced by the mere presentation, is included in *phantasia*, and the based belief is also induced by the mere presentation. However, as I have argued earlier, the based belief is not induced by the mere presentation, hence he is not justified in maintaining the parallel relation and the inclusion of the based belief.

Before I turn to arguing that it is possible for *phantasia* to be Form-related, I need to add one more qualification of *phantasia* here: when I claim that *phantasia* contributes to one's grasp of F-ness, I do not mean that this can be achieved by any *phantasia*, but only the *phantasia* which is regulated by the ordered non-rationalside. Obviously, there should be at least two cases in which *phantasia* can be developed: firstly, when the process is regulated merely by the disordered non-rationalside, "[it] would never understand reason, ... even if it did somehow have some dim awareness of any of them, it was not in its nature to pay attention to anything reasoned they said"[36] (*Timaeus*: 71a; trans. Waterfield), and secondly, when the non-rationalside is in harmony, for example, when it is directed by reason, "it could act as a mirror for thoughts stemming from intellect, just as a mirror receives impressions and gives back images to look at" (*Timaeus*: 71b; trans. Waterfield). Given that the non-rationalside, by itself, is more likely to be trapped in distorted representations, "They knew that it [the appetitive part of the soul] would much more readily be bewitched by images and phantasms" (*Timaeus*: 71b; trans. Waterfield), it is unlikely for one, who is governed by the problematic non-rationalside, to grasp Forms by *phantasia*, "But it's not the job of someone who has been out of his mind and remains so to assess by himself the visions and the voices; ... only a man of sound mind possesses the ability to do what pertains to himself, and to know himself" (*Timaeus*: 72a). As a result, I will confine my discussion to the *phantasia* which is regulated by the ordered non-rationalside, and this can be achieved either by passively following the design plan offered by the lesser gods, or by following the order from reason.

In summary, by examining Silverman's account, I have offered my sketch of *phantasia*, that is, it is composed of the mere presentation and the presentation-*cum*-belief in which the former induces the latter. With this notion of *phantasia*, I will explain that both the mere presentation

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<sup>8</sup>I will illustrate that the mixture should be interpreted as the intermediate later.

and the presentation-*cum*-belief can allow one to acquire some of the truth of the original object, and hence *phantasia* is Form-related.

### 3.1.2 Is it possible for *phantasia* to be Form-related?

Before I turn to explain what it is in virtue of which the *phantasia* is Form-related, I should establish that it is possible for the *phantasia* to be Form-related. Specifically, I will argue (a) that a *phantasia* will be Form-related if it can allow one to acquire some of the truth of the external object, and (b) that it is possible for one to gain some of the truth based on *phantasia*. I will do this by addressing three objections.

Although *phantasia* is normally connected with falsity and deception, it is possible for it to be Form-related in general. Firstly, were it impossible, the lesser gods, with the purpose of making the universe good, would not equip the wild beast with the ability to formulate *phantasia*. Were *phantasia* unrelated to Forms, then one, desiring to attain good, would try one's best to avoid to formulate *phantasia*, and *phantasia* would be useless in making the world good. If this is the case, then the lesser gods, wanting one to be as good as possible, should *not* equip one with the cognition of *phantasia*. But, this is not the actual case, since the lesser gods ensure that even the non-rationalside is connected with truth and Forms, "to make the human race as good as possible, and so they organized even our base part so that it might have some kind of contact with truth"[36] (*Timaeus*: 71d; trans. Waterfield). Secondly, it is Form-related based on the line analogy, "each [divided line] shares in clarity to the degree that the subsection it is set over shares in truth"[20] (*Republic*: 511e; trans. Grube), since *phantasia*, being a part of the line, it should also partake in the Forms if truth here is closely connected with Forms. Thirdly, it can be Form-related when the non-rationalside follows the reason's direction, since *phantasia* should be consistent with the orders from reason which "is exclusively exercised on Forms"[56] (Moss: 19).

To determine what it is in virtue of which *phantasia* can be Form-related, I will propose the standard that *phantasia* will be Form-related, if it allows one to acquire some of the truth of the external object or if it allows one to navigate the external world successfully.<sup>9</sup>

Firstly, this standard should be accepted, since this is implied in the case when the non-rationalside follows the direction of reason. When the non-rationalside is regulated by reason, one will act in accordant with reason. This accordance can be confirmed not only from the fact that one's cognition agrees with reason, but also from the fact that one's behaviour is consistent with the order from reason. The former is manifested by *phantasia*'s truth-preservation, and the latter is exhibited by one's navigating the external world successfully by means of *phantasia*. Both can be used to verify its being Form-related.<sup>10</sup> Secondly, this standard should be accepted, since *phantasia* will be Form-related through the Form-copy if it characterizes a certain property of the external object reliably and faithfully. If one grasps correctly a property of the original object by means of *phantasia*, then one grasps the copy, "And whatever enters it and leaves it is a copy of something that exists for ever"[36] (*Timaeus*: 50c; trans. Waterfield). This "copy" is normally interpreted as Form-copy which instantiates the Form, "Particulars, then, have the properties they have because they have Form-copies derived from the Forms, which Are those

<sup>9</sup>This can not be fulfilled in the commonly accepted way, that is, by one's consciously grasping F-ness in formulating *phantasia*, since this is beyond the ability of the non-rationalside.

<sup>10</sup>I view them as two different ways of illustrating the same standard, since it is because of *phantasia*'s being true that one's external behaviour is appropriate. This understanding also explains why the standard should be accepted.

properties”[73] (Silverman: 12).<sup>11</sup>

To establish my position that *phantasia* can be Form-related, I, being offered the standard above, have to show that *phantasia* can preserve the truth of the external object under certain conditions. Now I will illustrate negatively that it is possible for *phantasia* to preserve the truth by addressing several objections, and I will, in the subsequent sections, offer a positive explanation of how the *phantasia* preserves the truth.

It is generally agreed that *phantasia* is false and deceptive, and as the figure below illustrates, several factors are identified as causing the falsity. Specifically, the falsity may reside in the mechanism of forming the mere presentation, or in *phantasia* itself which includes both the mere presentation and the presentation-*cum*-belief, or in the judgement induced by the presentation-*cum*-belief. In the following part, I will examine these three objections, and try to show that none of them can exclude the possibility that one can attain some of the truth of the original object by *phantasia*. Thus it is possible for *phantasia* to preserve the truth, and be Form-related.

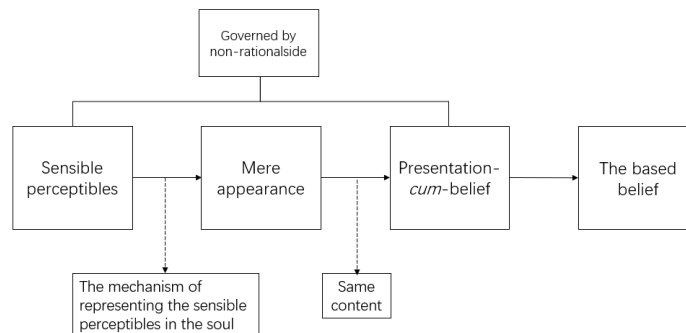


Figure 3.2: The process of developing *phantasia*

To begin with, one might argue that *phantasia* must be false, since the mechanism of forming the mere presentation can not represent faithfully the original object, even if the sensible perceptibles can imitate the motions in the external object without contamination. In short, the mechanism is charged with representing the external object falsely. To respond to this objection, I will uncover the mechanism of formulating the mere presentation, and explain that its production can sometimes be a faithful representation.

Given that the mere presentation is produced by the sensation’s affecting the soul, and that this process is explained by the wax model, “holding it under our perceptions and thoughts as if we were making impressions from signet rings”[69] (*Theaetetus*: 191d; trans. Rowe), the mechanism must be analogous to impressing something on wax. The quality of the affection depends largely on the surface of the soul, since one maybe “not only quick to learn but have good memories, and instead of misaligning imprints with perceptions they believe what is true” (*Theaetetus*: 194e) when the surface is smooth and abundant. However, one who would have unclear imprints when it is rough or fluid. As a result, *phantasia* can represent faithfully the original object when the soul is ordered, but cannot when the soul is not.

The introduction of the mechanism not only confirms that *phantasia* can be true when soul-wax is ordered, but also demonstrates how a *phantasia* is true. The mechanism can be illustrated as in the figure below: the original object has many attributes, from  $O_1$  to  $O_n$ , which are closely

<sup>11</sup>There might be other interpretations of the participation between the particular and Forms, but they all assume that the particular is related to Forms, and this is sufficient for my point.

connected, and *phantasia* can represent some of these attributes, for example, from  $R_1$  to  $R_m$ , which are also closely related.<sup>12</sup> According to this model, when the soul is smooth and abundant, the representation of a certain property will be faithful, for instance,  $R_1 = O_1$ , and this enables Grönroos to claim that the representation sometimes is same with the original in certain respects. As a result, the representation of a certain property can maintain a truth of the original, because it equates to the property, and this explanation also disqualifies the first objection.

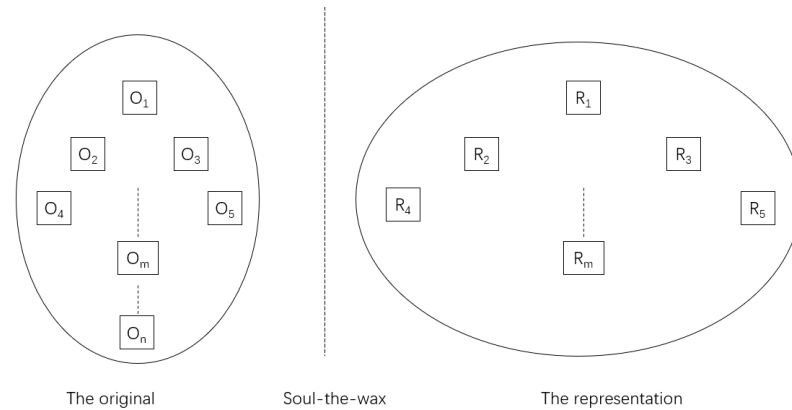


Figure 3.3: The relation between the representation and the original

The first objection fails, not only because the *phantasia* is a faithful representation when the soul is ordered, but also because the unfaithful *phantasia* can guide one to attain the truth when it is interpreted by reason. By unfaithful, I only mean that the representation is not the same as the original object in certain respects, that is, they are different. In fact, they should be connected as in the figure above, and this connection can be illustrated by the relation between the image in a distorting mirror and the original object, or between the length of the pole's shadow and that of the pole. According to this model, the representation is different from the original, since  $R_1 \neq O_1$ , but they are still closely connected, since the former is a function of the latter, for example,  $R_1 = x \cdot O_1$ .<sup>13</sup> Following this line of thought, when one recognizes the true value of the coefficient, one, based on the unfaithful *phantasia*, can still figure out the truth of the original object, since  $O_1 = R_1/x$ .<sup>14</sup> For example, one definitely formulated the unfaithful *phantasia* when one was young and uneducated, but these unfaithful images were not without use, since one may still uncover the truth through them when one becomes a philosopher. In other words, the falsity does not reside in *phantasia*'s being unfaithful, but in one's problematic interpretation of the coefficient, hence it is not in the nature of *phantasia* to be false.

Although the unfaithful *phantasia* is not a true representation of the original object, it is

<sup>12</sup>Given that the information conveyed by *phantasia* is limited,  $m < n$ .

<sup>13</sup>The degree of the distortion can be seen from the value of the coefficient  $x$ , for example, the image whose coefficient  $x$  equals 10 is more distorted than the image whose coefficient  $x$  equals 2, and the image is a true representation only when  $x$  equals 1.

<sup>14</sup>The example in the figure is a representation which enlarges the original, that is, the coefficient is larger than 1, and this can also be applied to the case in which the representation shrinks the original, for example, the sun looks like a football. Nevertheless, these examples are the simplest, since they assume that the coefficient stays the same in a particular the soul-wax in certain respects. I have to admit that the real case must be more complex, since the coefficient might differ from part to part, for example, it might be bigger above but smaller below, or bigger at the left but smaller at the right. Complex as the actual case seems, it can still be explained by the same strategy, since the complex representation can be divided into smaller areas, and among each of them, the coefficient stays the same.

still a disguised truth waiting to be deciphered rather than a falsity. This view of *phantasia* makes sense of Rowett's (2018) iconic method. According to Rowett, the *phantasia* can be used to grasp the truth of the original, "using shadows to discover the truth about the things which cast them"[70] (Rowett: 156), and the reason why this works is that the *phantasia* is a reliable reflection of the original in certain respects, "As long as we are aware which is a reflection and which is the real thing, we can use shadows and images to acquire good information about what they reflect" (Rowett: 151). With my interpretation, now one can understand why *phantasia*, both the faithful and the unfaithful one, is reliable in preserving the truth of the original, since it is a function of the original, and the truth can be attained if the coefficient is deciphered correctly.

In summary, the representation will be faithful when the soul-wax is smooth and abundant, and unfaithful when it is not, but the unfaithful *phantasia* can still guide one to attain the truth of the original if the coefficient is deciphered correctly. As a result, the falsity of *phantasia* does not necessarily reside in the mechanism of formulating the mere presentation, and this objection fails.

In addition, one might argue that *phantasia* must be false, since its outcome, that is, the mere presentation and the presentation-*cum*-belief, can only offer limited information about the original, "they leave out information about the original and, hence, fail to convey all there is to know about it"[37] (Grönroos: 121). However, this objection obviously fails, since being limited does not entail falsity. Specifically, I will argue (i) that if falsity is interpreted as failing to cover any truth of the original, this is not correct, since Grönroos(2001) presupposes that *phantasia* is partially true, and (ii) if falsity is interpreted as failing to cover the whole truth, this objection must be abandoned, since *phantasia*'s being limited is not responsible for one's inability to capture the whole truth.

Regarding the first point, I will argue that *phantasia*, while being limited, can preserve a partial truth of the original. Firstly, it is possible to accommodate truth and limitedness based on the definition of the limitedness. Intuitively, being limited means that some aspect of the original is not covered by *phantasia*, or that it is covered but its representation is unfaithful. However, this only implies that *phantasia* is problematic in relation to the external object in some respects. They are either uncovered or represented unfaithfully, but this does not entail that the representation is necessarily false in *every* respects. Secondly, this is not merely a theoretical possibility, since even Grönroos, who criticizes its limitedness, assumes that *phantasia* is true to the original in certain respects, "a reflection of a thing might display the same colours and even the same shape as the original"[37] (Grönroos: 121).<sup>15</sup>

Regarding the second point, I will first clarify the meaning of limitedness offered by Grönroos (2001). According to him, the reason why *phantasia* is limited is that it only conveys the aspect of colour and shape, but not the other aspects, for example, temperature or smell, "a reflection of a thing might display the same colours and even the same shape as the original, but yet leave a great deal of other aspects of it"[37] (Grönroos: 121). Given that being limited means being less in number, the assertion that the cognition A covers only limited details of B means that the number of aspects that A covers is less than the number of aspects that B has.<sup>16</sup> If this is the case, one who tries to answer the question, is limited in his answer, since one can only offer an incomplete answer at this point, and just as one who knows only the incomplete clues at the murder case, is limited in one's ability to detect the murder.

With this notion of limitedness, I can now answer the question whether one can attain

<sup>15</sup>Actually, the formulation of *phantasia* also ensures its being truth-related, and this will be covered later.

<sup>16</sup>Grönroos is taking these aspects as disconnected, just like fruits on the table, rather than a closely connected web. In my view, the latter is a more plausible way to interpret the relation between the features.

the whole truth of the original by means of the limited *phantasia*. Taking a case of *dianoia* as an example, one, in Euclidean geometry, can derive all the theorems from the five axioms alone, and this is also confirmed in certain systems in logic. Now the problem is whether this relation between limitedness and the whole truth holds in *phantasia*. Firstly, if it can be applied to *phantasia*, then it is possible for one to attain the whole truth of the original by means of the limited *phantasia*. Consequently, its falsity is not caused by its being limited, but by one's miscalculation. Secondly, if it cannot be applied to *phantasia*, then the limitedness in *phantasia* will not bring the whole truth, but the limitedness in *dianoia* can lead one to acquire the derivative truth in the system, hence being limited leads to both falsity and truth, so it is not responsible for causing falsity. Nevertheless, if the objection is that falsity is interpreted as failing to attain the whole truth, and that it is caused by *phantasia*'s being limited, then it fails. It fails, because either one can acquire the whole truth when it is possible for one to acquire the whole truth by the limited information, or *phantasia*'s being limited is not responsible for its being false granted that *dianoia*'s being limited can lead one to capture the whole truth.

Finally, one might argue that *phantasia* must be false, since one, especially a novice, develops false judgement, and this is formulated by passively assenting to the appearance, "One makes no truth claims in merely yielding to an appearance"[54] (Moss: 235). This is the charge that *phantasia* is unreliable, and this understanding of falsity comes from two sources: firstly, one's based belief would be false if one relies on *phantasia*, and secondly, one, relying on *phantasia*, would not distinguish the image from the original, "it leads one to think that there is no difference between the way things appear and the way they are"[72] (Silverman: 145). To respond to this objection, I will argue that it is possible for the based belief to be true when it is induced by *phantasia*, and that it is possible for one to distinguish the image from its original based on *phantasia*.

In terms of the first objection, I will illustrate that there is a based belief which is induced by *phantasia*, and that it is true. As I have argued earlier, one can still distinguish the truth of the original, by the unfaithful *phantasia*, when one deciphers the coefficient  $x$ . This case confirms that one can formulate a judgement by *phantasia* which preserves the truth of the original. This also implies that the cause of unreliability does not reside in *phantasia*, but in the miscalculation carried out by disordered reason, since one can always formulate true beliefs based on the unfaithful *phantasia*, as long as one is governed by reason.

In terms of the second objection, I will argue either that one can distinguish the image from reality based on *phantasia* or that if one is unable to distinguish the image from the original by means of *phantasia*, this is not because *phantasia* is an image. I agree that one does mistake the image for reality sometimes, but this is not always the case, since one can view it as an image of an original object, and conjecture the original by the image, "I can ... also view it [the painting] as a painting of some object-I can inspect a painting of a bed in order to gain some grasp of beds"[24] (Dominick: 7). More importantly, this way of viewing the image has been taken for granted in Plato's *dianoia*, since one is investigating the intelligibles through the image in *dianoia*, "using as images the things that were imitated before"[20] (*Republic*: 510b; trans. Grube).

Now the problem is whether this way of viewing the image can also be applied to *phantasia*. If this can be applied, then this objection has been refuted, since one can see the original through the *phantasia*, and distinguish the image from the reality through *phantasia*. Firstly, this approach has been defended by Dominick (2010). He believes that there is a similarity between *phantasia* and *dianoia*, "and as intellect is to opinion, so knowledge is to belief and thought[*dianoia*] to imaging[*eikasias*]"[20] (*Republic*: 534a; trans. Grube), hence this way of viewing the image can be applied to *phantasia*, and it is not necessary for one to mistake the image for the reality

in *phantasia*, “In the same way that *dianoia* does not involve the mistaking of its objects for reality, *eikasias* should not necessarily involve mistaking images for originals”[24] (Dominick: 13).<sup>17</sup> Secondly, it has been argued that the image (of *F*) is not an independent existence, but a part of a relation, that is, it is always an image of *F* which imitates the original *F*, “They[the sensibles] are *F* for no other reason than that they participate in the Form of *F*,  $\hat{\alpha}\hat{\lambda}\hat{\epsilon}\hat{\gamma}$  the reflection, statue, or painting is a horse only in that it images or imitates, or is phantasm, *eidōlon* or *eikōn* of a horse”[60] (Patterson: 44). If this is the case, the *phantasia*, being interpreted as the image of *F*, must be connected with the original object, “without being of the original or ‘real’ *F* it would not be an imitation or image *F*” (Patterson: 120), and it allows one to distinguish the image from the reality.

On the other hand, if this way of viewing the image cannot be applied to *phantasia*, then one does mistake the image for the reality in *phantasia*, but one does not mistake it in *dianoia*. Consequently, the image can cause one both to distinguish the image from reality and to mistake the image for the reality, hence the fact of being image does not entail the mistake. In other words, even if one did mistake the image for the reality through *phantasia*, the mistake would not be caused by *phantasia*’s being imaginary, hence the objection has been refuted.<sup>18</sup>

Therefore, I have established that *phantasia* is composed of the mere presentation and the presentation-*cum*-belief in which the former induces the latter, and it is possible to argue that *phantasia* can preserve the truth by refuting these objections.

Specifically, by examining these objections, I have established that none of them can exclude the possibility that one can attain partial truth of the original object by means of *phantasia*, and that it is possible for *phantasia* to preserve the truth of the external object, and hence be Form-related.

## 3.2 Truth preservation by the mere presentation

Having determined both the general composition of *phantasia*, and the standard of being Form-related, next I will explain that both the mere presentation and the presentation-*cum*-belief can preserve the truth of the external object by their formulations, and hence that they are both Form-related.

In this section, I will focus on the mere presentation, and I will argue firstly that it is a determinate impression which is neither conceptualized nor judgemental, but is caused in the memory by the special perceptibles and regulated by the non-rational side, and secondly that its formulation ensures one to maintain some of the truth of the original object. Specifically, I will (1) introduce some agreed conditions for formulating the mere presentation, (2) complete my definition of the mere presentation, by examining Silverman’s conceptualized interpretation, and (3) explain why the formulation I offered can preserve the truth.

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<sup>17</sup>Dominick also defends this conclusion from personal experience, since it is absurd to maintain that the wild beast believes that it is the apple in mind rather than in the external world that can appease thirst, “I do not typically mistake shadows for three-dimensional objects, and it certainly does not seem necessary that I make that mistake every time I consider a shadow” (Dominick: 6).

<sup>18</sup>I do not mean that the mistake is not caused by any factors in *phantasia*, but only that if the mistake were necessarily associated with *phantasia*, this would not be caused by its being an image.

### 3.2.1 Some agreed conditions of the mere presentation

In this part, I will lay the basis of my discussion of the mere presentation, and I will achieve this by illustrating some agreed characterizations of the mere presentation.<sup>19</sup> Specifically, I will argue, by resorting to the model below, that (a) its cause is the special perceptibles, (b) its capacity is the memory, and (c) its agent is the non-rational side.<sup>20</sup>

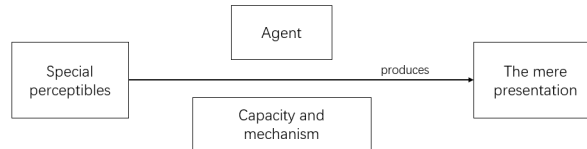


Figure 3.4: The process of forming the mere presentation

To begin with, the cause of the mere presentation is the special perceptibles. Firstly, this is confirmed by Socrates’ definition of *phantasia*. According to the definition of *phantasia*, it originates from sensation, “what if that [affirmation and negation] doesn’t happen on its own but arises for someone through perception? ... what else could one call it correctly, besides appearance [*phantasia*]”[20] (Sophist: 264a; trans. White), hence it is caused by sensation. Secondly, it is agreed, by contemporary critics, that the mere presentation is caused by the special perceptibles. For example, Watson (1988) views *phantasia* as coming from sensation, “something different from and higher than sensation from which it springs and with which it is so closely related”[79] (Watson: 4), and Silverman (1991) emphasizes that *phantasia* is a conceptualized sensation, that it can “link the limited irrational findings of aisthesis to the conceptual faculty of belief”[72] (Silverman: 133). Consequently, the cause, being sensation, should also be the special perceptibles, for example, the color red, a pleasant smell, and a sweet taste.<sup>21</sup>

In addition, I will argue that the capacity of forming the mere presentation is memory. Socrates agrees that the impression of an object is *phantasia*, “What is that object which catches my eye there beside the rock under a tree? ..... if he had caught sight of some appearance [*φαντασθέντα*] of the sort”[39] (*Philebus*: 38c; trans. Hackforth), and similarly, the impression of a certain person in the distance, [“in the distance I see someone else I don’t know”[69] (*Theaetetus*: 191b; trans. Rowe)], should also be a *phantasia*, since these two examples can be about the same object and the same impression. Given that the latter impression is caused by the memory, “it is a gift from Memory, mother of the Muses, and that we imprint on it whatever we wish to remember from among the things we see or hear or the thoughts we ourselves have” (*Theaetetus*: 191d), it is reasonable to conclude that the capacity governing *phantasia* in the former should also be the memory.

If the wax model is a good analogy of the memory, then this model informs one of three functions of memory in formulating a *phantasia*: firstly, it receives the affections caused by the special perceptibles, secondly, it unifies them as one determinate impression, and thirdly, it

<sup>19</sup>Although I have characterized *phantasia* as a linear process with two stages, this does not imply that their formations have different agents and capacities. In my opinion, these two sub-processes, being distinct, can be viewed as two functions of the same agent by means of the same capacity, hence I will assume that they share the same capacity and agent, and only differ in the characterizations of the causal process, that is, their causes and outcomes, and mechanisms.

<sup>20</sup>The factors of this model come from two sources: one is the Causal Mechanical Model of explanation which emphasizes the physical process, another is Plato’s emphasis on the agent.

<sup>21</sup>The notion of special perceptibles comes from *Theaetetus* 184e-185a, where Socrates argues that the product of each sense is unique to this sense, and inaccessible to other senses. These examples all come from *Timaeus* 65b to 68e, where Timaeus elaborates the affection of a particular sense.



stores the impression.<sup>22</sup> More importantly, if I am justified in arguing that memory has these three functions, then these functions provide one with the mechanism of formulating the mere presentation, that is, by receiving the special perceptibles, it unifies their affections in the soul, and stores the unified impression in the memory.

There is no doubt that the memory can store the mere presentation, since it keeps its impression as the wax stores the imprint, “whatever is imprinted on the block, we remember and know for as long as its image is in the wax”[69] (*Theaetetus*: 191d; trans. Rowe). It, in addition, should also receive the affections by mirroring the special perceptibles, “when the things that come through the senses are imprinted on this ‘heart’ of the soul [soul-wax]” (*Theaetetus*: 194c-d), though the variations in the wax’s quality make the impressions different from person to person.

After receiving the special perceptibles, the memory does not view them as being unconnected, but as a unified impression, and this can be confirmed from Plato’s text. Firstly, when Socrates argues that it is impossible for one to believe nothing at *Theaetetus* 189a, he asserts that the appearance is *one* thing, “the person who is hearing something, too, is hearing some one thing and something that is”[69] (*Theaetetus*: 189a; trans. Rowe). The emphasis on *one* implies that the impression on the memory is not of the scattered special perceptibles which are many, but of *one* determinate and unified thing. Secondly, the present impression should be one particular thing, since the imprint in the memory is one particular thing. Clearly, when one recalls the imprint in the memory, what one recalls is one particular imprint, and this can be confirmed from its singular description, “a memory in myself of what he [Theodorus] is like” (*Theaetetus*: 192d), or “the imprint belonging to each of you” (*Theaetetus*: 193c). Given that the imprint is a unified particular, and that it shares the same nature with the impression, the mere presentation should also be one particular thing which unifies the multiple perceptibles.<sup>23</sup>

Moreover, the agent which regulates its formulation should be the appetitive part of the soul or the non-rationalside.<sup>24</sup> Firstly, it should be the non-rationalside based on the argument for the tripartition of the soul. According to the argument, the *doxa* that the stick is straight is judged by the rational soul, and the *phantasia* that the stick is bent cannot be “judged” by the same part of the soul, since “it is impossible for the same thing to believe opposites about the same thing at the same time”[20] (*Republic*: 602e; trans. Grube).<sup>25</sup> As a result, *phantasia* must be regulated by the inferior part of the soul which is the non-rationalside. Secondly, it should be the non-rationalside, since it is formulated by soul-wax. As I have argued earlier, *phantasia* is formulated by the special perceptibles’ impressing on soul-wax, and this process is affected by the quality of the soul. Given that the function of soul-wax is similar to that of the surface of the liver, “the force of the thoughts sent down from the mind might be stamped upon it as upon a mirror that receives the stamps and returns visible *images*”[20] (*Timaeus*: 71b; trans. Zeyl), and

<sup>22</sup>The latter two functions have been defended by Scheiter (2012) when he explains Aristotle’s *phantasia*. Fortunately, as Scheiter (2012) recognizes, there is a close relation between Plato’s notion of memory and Aristotle’s *phantasia*, because they both intend to solve the same problem of error, “whereas Aristotle adds *phantasia*, Socrates adds memory” and “what Socrates is calling ‘memory’ should really be called *phantasia*” (Scheiter: 266). If this is the case, then it is reasonable to attribute these functions to Plato’s notion of memory.

<sup>23</sup>Given that the imprint is the stamp on the soul, “to refer the imprint belonging to each of you to the corresponding visual perception”[69] (*Theaetetus*: 193c), and that the present impression is the stamp on the soul caused by special perceptibles, it is reasonable to infer that the impression and the imprint share the same nature, that is, each is a stamp on soul-wax. In my opinion, the impression is the present appearance when one is currently perceiving it, while the imprint is the stored impression in the memory, and its activation is not through one’s currently perceiving it, but through one’s recalling it.

<sup>24</sup>This position has been defended by Silverman (1991), and Grönroos (2013), and Moss (2014).

<sup>25</sup>The example of *phantasia* here is a naive way to illustrate that it is judgemental, and the usage of the example does not imply that I agree that *phantasia* must be a proposition. Although this is an example of the presentation-*cum*-belief, rather than of the mere presentation, it can still illustrate that the agent of *phantasia* is the non-rationalside, since they share the same agent.

that the liver is the house for the non-rationalside, it is reasonable to infer that soul-wax refers to the non-rationalside. As a result, it is by the non-rationalside that one receives the special perceptible, and unifies the affections, and stores the impressions.

In conclusion, I have uncovered several descriptions of the mere presentation: firstly, that it is caused by the special perceptibles, secondly, that it is a determinate impression in the memory, and thirdly, that this process is regulated by the non-rationalside.

### 3.2.2 The mere presentation and the truth

With these requirements being established, now I will offer my own conservative account of the mere presentation by examining Silverman's interpretation, then I will explain that my explanation of its formulation allows it to preserve the truth of the original object, and hence be Form-related.

Specifically, I will argue (a) that Silverman's conceptualized interpretation of the outcome should be rejected, since it is incoherent with his other characterizations of the mere presentation, when one attempts to actualize the conceptualization, (b) that it should be interpreted as a determinate impression which is neither conceptualized nor judgemental, and (c) that the factors emphasized in my account allow it to preserve the truth of the original object.

Now I will argue that Silverman's conceptualized interpretation of the mere presentation is inappropriate, since it is inconsistent. Before I turn to my examination, I need to summarize the features that Silverman takes for granted in his interpretation. According to Silverman, the mere presentation is the conceptualization of the sensation, but it lacks the act of judging which is the distinctive feature of *doxa*. Apart from these two requirements, he agrees that it is caused by the sensation, "the filling-out of sensation to yield the content of the appearance"[72] (Silverman: 135), that the process can only be affected by the physical movement, "a given object and the sensory situation completely determine the content of the mere presentation" (Silverman: 141), and that the agent is the non-rationalside, "it was irrational because it was materially caused" (Silverman: 132). However, to actualize the conceptualization of the mere presentation, if possible, some of these requirements must be violated.

To begin with, to actualize the conceptualization of the mere presentation, Silverman has to agree that reason has a part in the formulation of the mere presentation, but this is inconsistent with the characterization of non-rationalside, since it is unable to think. Thus his account should be rejected.

According to Silverman, the mere presentation is conceptualized and these concepts come from the rational soul, "This suggests that *phantasia* manages to fill out aisthesis to yield the world of appearance by imposing concepts on appearances, concepts whose source is the rational mind"[72] (Silverman: 134). As a result, the process of conceptualization can be characterized as follows: (i) when the special perceptibles arrive in the soul, the non-rationalside will unify them and store the impression, (ii) reason, based on the report from the non-rationalside, will consider among the multiple alternative concepts, and then choose the appropriate concept to match the impression, (iii) the non-rationalside, being affected by pleasure and pain, will receive the concept from reason, and (iv) the non-rationalside will attach the concept to the impression. This completes the conceptualization. The process has been illustrated in the figure below.

If this is the case, then reason is required in the conceptualization. I must admit that the steps (i) and (iv) do not require reason, since they are regulated by the physical movement and the design plan, that is, how the non-rationalside should respond to special perceptibles and emotions. However, both steps (ii) and (iii) require reason. Specifically, the aim of step

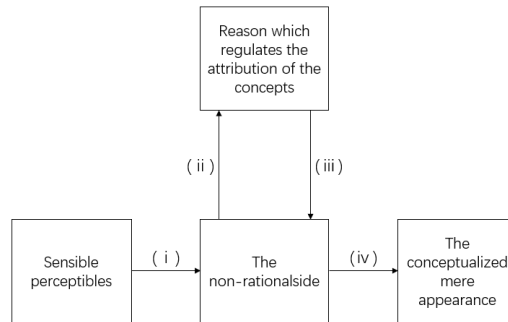


Figure 3.5: The conceptualization of the mere presentation

(ii) is to attribute the appropriate concept to the special perceptibles. Its success requires one to understand the concept, and to determine which concept matches the special perceptibles. Similarly, the purpose of step (iii) is to translate the concept to its corresponding emotion. Its accomplishment requires one to understand the concept, and to determine which emotion is entailed by this concept.

However, these understandings are inaccessible to the non-rationalside, since it understands neither the thought nor the concept, “[it] lacks the ability to perform *logismos* and thus can never move beyond *eikasia*”[54] (Moss: 226), and it cannot have these thinking abilities at all, “This kind of soul knows nothing of belief, reasoning, and intelligence, but is aware only of the pleasures and pains that accompany its appetites”[36] (*Timaeus*: 77b; trans. Waterfield). In fact, it can only be moved by pleasure and pain, since reason has to direct the non-rationalside through the emotions, “passion flares up and transmits its inducements and threats through all the body’s alleyways, so that every sentient part of the body becomes aware of them” (*Timaeus*: 70b). As a result, Silverman’s view of the mere presentation as conceptualized, and its actualization, requiring the involvement of reason, would violate the requirement of the non-rationalside which is unable to think. Hence it must be rejected.

In addition, even if the non-rationalside were somehow offered these understandings, Silverman’s interpretation would still violate the requirement that all the processes can only be affected passively by the physical movement. To figure out the proper concept to match the impression, one has to examine the existing concepts in the rational mind, and by comparing and contrasting the possible candidates, one would ultimately find the suitable concept and impose it on the impression. Obviously, comparing the different candidates, and choosing the proper concept must be performed actively and consciously, but this is not allowed by the passive formulation of *phantasia*, “[it] occurs quickly, automatically, and, for the most part, unconsciously”[72] (Silverman: 134).

Moreover, even if these charges were avoided, Silverman’s interpretation would still violate the requirement that the content of the mere presentation can only be affected by the sensation. Supposing these understandings were available to the non-rationalside by nature, then its conceptualization would be correct when these programmed understandings are true, and incorrect when they are false. Given that the mere presentation with the correct conceptualization is different from the mere presentation with the incorrect conceptualization, these understandings can affect the conceptualization of the mere presentation, and accordingly they can affect its content which is the conceptualized sensation. However, this is not allowed by Silverman, since its content should be determined only by the sensation, ‘no matter what we know or believe,

our knowledge cannot influence or change the content”[72] (Silverman: 139). Hence his account must be rejected.

In conclusion, Silverman’s conceptualized interpretation of the mere presentation must be rejected, since firstly, it requires the involvement of reason which is inaccessible to the non-rational side, secondly, it requires one’s active and conscious calculation which contradicts the passive feature of its formulation, and thirdly, it implies that its content can be affected by the background information, but this violates the requirement that it should be determined only by the sensation.

Although Silverman’s account is problematic, its failure resides in the conceptualization, rather than in the formulation of the impression. I will argue that the outcome of the mere presentation should be an impression which is neither conceptualized nor judgemental. This account is better than Silverman’s interpretation, since it can avoid the previous inconsistencies. Silverman has divided the formulation of the mere presentation into two parts, that is, the development of the impression and its conceptualization, but the actualization of the conceptualization violates some characterizations of his notion of the impression. However, the non-conceptualized interpretation of the mere presentation is to eliminate the operation of the conceptualization, and hence to restrict the mere presentation to the impression.

This straightforward suggestion can actually save Silverman’s account, since it will not face the previous problems. Firstly, it satisfies the requirement that its content is independent of the background information, since the receiving, and the unifying, and the storing process can only be affected by the quality of the wax and the sensation, but they cannot both be modified by one’s background beliefs. Secondly, it does not assume the involvement of reason, since all of these processes can be viewed as alterations driven by the physical disturbances, and its alteration depends on the nature of the material which is designed by the lesser gods. Consequently, it is reasonable to accept this non-conceptualized interpretation of the mere presentation.

If I am requested to offer a more specific interpretation of the mere presentation, apart from its being an impression, I will suggest that it is an image. This pictorial interpretation can be confirmed, though not conclusively. Firstly, it is supported by the capacity of forming the *phantasia*. Given that memory is the capacity, and that memory is analogous to the wax tablet, it is reasonable to infer that the mere presentation, which is produced by special perceptibles’ impressing on the memory, shares the features with the impression produced on the wax. Obviously, the impression produced on the wax is an image, “whatever is imprinted on the block, we remember and know for as long as its *image* is in the wax”[69] (*Theaetetus*: 191d; trans. Rowe), hence the mere presentation on the memory is also pictorial. Secondly, this interpretation is also corroborated by the characterization of the non-rational side. Given that the non-rational side is located in the liver, and that the surface of liver is analogous to that of a mirror, “the force of the thoughts sent down from the mind might be stamped upon it as upon a mirror that receives the stamps and returns visible *images*”[20] (*Timaeus*: 71b; trans. Zeyl), I am justified in maintaining that the impression on the appetitive part of the soul should be similar to the image on the mirror, and hence it should be pictorial. This position has been mentioned by Grönroos (2013) when he tries to explain the distinctive feature of *phantasia*, “the stranger singles out *phantasia* as a further item on a par with statement, belief, and thinking, distinguished by its connection to images and deception”[38] (Grönroos: 9).

However, I have to admit that the pictorial interpretation is not well-founded, and is only an suggestion. The safe strategy is to view the outcome as an impression without pointing out its configuration. Consequently, I have offered this formulation of the mere presentation: firstly, the special perceptibles affect the soul-wax which is regulated by the wax model, secondly, the affections are unified as an impression, and thirdly, the impression is stored in the memory, which

is also explained by the wax model.<sup>26</sup>

Having determined the formulation the mere presentation, it is easy to establish my position that it can help one to grasp the truth of the original when ordered by reason. Firstly, the cause, being the special perceptibles, does secure the truth of the original object, since they are faithful affections of the kindred substance which preserves the motions of the original objects. Secondly, the memory can ensure that the impression is a faithful representation of the special perceptibles, if the soul-wax is smooth and abundant, “[they] not only quick to learn but have good memories, and ... they believe what is true”[69] (*Theaetetus*:194e; trans. Rowe), and hence it preserves the truth of the original which is delivered by the special perceptibles. Thirdly, the agent, being the non-rationalside, can operate by orders from reason through pleasure and pain. Although it is not the nature of the non-rationalside to pursue the truth or Forms, this can be achieved when it is guided by reason, “all the parts become perfectly submissive and obedient, and so allow the best part to be the ruler in their midst”[36] (*Timaeus*: 70b; trans. Waterfield), and the direction from reason can guarantee that these processes are aiming at attaining the truth. Hence its formulation, under this condition, must be congruous with reason and truth.

In conclusion, I have offered my account of the mere presentation: that it is a determinate impression which is neither conceptualized nor judgemental. The determinate impression is caused in the memory by the special perceptibles and regulated by the non-rationalside.

The mere presentation can provide one with some of the truth of the external object when the non-rationalside is regulated by reason, since the motions of the original object have been preserved by the special perceptibles through kindred substance, and they are received faithfully by the the soul-wax when it is smooth and abundant, and finally they are possessed by the non-rationalside under the direction of reason which maintains the truth of the original and its F-ness.

### 3.3 The truth preservation by the presentation-*cum*-belief

Having established that the mere presentation can preserve the truth of the original in the positive sense, now I will turn to the second stage of the *phantasia*, that is, the formulation of the presentation-*cum*-belief, and I will explain that it is connected with the truth, and hence is Form-related. In order to achieve this purpose, I will first offer my interpretation of the presentation-*cum*-belief, and then explain how it can maintain the truth.

To introduce my own account of the presentation-*cum*-belief, I will (1) put forward three conditions by examining two influential strategies, (2) offer my own interpretation by resorting to the anticipatory pleasure, and (3) show that it satisfies these conditions, and hence it should be adopted.

Having established that the presentation-*cum*-belief is a pleasant imprint which is caused by the painful impression, and which can guide one to carry out a certain act, I will argue that the basic presentation-*cum*-belief, being designed by the lesser gods, can help one to attain some of the truth of the original object in a loose sense, and hence be Form-related.

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<sup>26</sup>I will explain later that the mere presentation is necessarily associated with an emotion, and this implies that the impression is stored in the memory with a label, and this label is an emotion which is developed passively rather than a concept which is given by reason.

### 3.3.1 The two unsuccessful explanations for the feature of being judgemental

In this part, I will formulate three requirements of the presentation-*cum*-belief by examining two unsuccessful interpretations.

To explain the judgemental feature of the presentation-*cum*-belief, two strategies have been offered, but both fail to accomplish the task. The first interpretation resorts to a kind of judgement, but it fails, because it is governed by the non-rationalside which is unable to think. The second interpretation resorts to the example of the painting at *Philebus* 39b, and its failure resides in the fact that it differs from the presentation-*cum*-belief in multiple respects.

However, these two interpretations, though being unsuccessful, are also instructive, since they suggest three requirements of the presentation-*cum*-belief: (a) it is judgemental, (b), it is formulated by its nature, granted that its agent is the non-rationalside, and (c), it is composed of sensation, memory and the emotions. I will call the presentation-*cum*-belief, for the sake of simplicity, P-C-B in this section.

As I have argued earlier, P-C-B is subsequent to the mere presentation, and they share the same content and agent. However, these conditions are not enough to establish its formulation, and this forces one to unearth more relevant descriptions. One widely accepted requirement is that P-C-B is judgemental, and this can be confirmed from Socrates' definition of *phantasia* in *Sophist*, since it "arises for someone through perception" and it is "the blending of perception and belief"[20] (*Sophist*: 264a-b; trans. White). This view has also been adopted by Silverman, "the belief involved in the phantasia will be that the stick appears bent"[72] (Silverman: 145), and by Grönroos who agrees that *phantasia* is a kind of belief, "Plato is operating with a generic notion of belief ... which is subdivided into the two species, *doxa* and *phantasia*"[38] (Grönroos:4).<sup>27</sup> Actually, these critics not only agree that P-C-B is judgemental, but also point out a strategy to explain in virtue of what P-C-B is judgemental, that is, it is a kind of belief which is supposed to be judgemental.

Although this argument is valid, it is not sound, since one cannot accept that P-C-B is a kind of *doxa*, given that it is regulated by the non-rationalside. In the following part, I will examine several attempts which assume that P-C-B is a kind of *doxa*, and I will argue that none of them should be adopted, since either the assumption is not well founded, or it cannot accommodate the requirement that the non-rationalside is unable to think.

To begin with, the position that *phantasia* is a kind of *doxa* should not be adopted, since it is not well-founded. One is likely to accept that P-C-B is a kind of *doxa*, and this might be reached by the following argument: *phantasia* is defined as a mixture of sensation and *doxa*, and *phantasia*'s being a mixture implies that it is both sensation and *doxa*, and consequently, *phantasia* should be a kind of *doxa*.

However, whether this conclusion should be accepted relies on whether this is the correct way to interpret the mixture, and this strategy will fail if this interpretation is problematic. Against Grönroos, I will argue that the mixture should be interpreted as the intermediate, and that *phantasia* should be interpreted as the intermediate between sensation and *doxa*, hence P-C-B is not *doxa* yet, and his position is not well-founded.

In my opinion, the mixture of X and Y should be interpreted as the intermediate status, since they are synonymous. When Timaeus describes becoming at *Timaeus* 35a, he implies that becoming is the mixture of being and not being, "In between the Being ... and the one that is divisible and comes to be in the corporeal realm, he mixed a third, intermediate form of

<sup>27</sup>Although some critics does not distinguish the mere presentation and P-C-B in their analysis of *phantasia*, the reference of the judgemental *phantasia* should be P-C-B, since the mere presentation is not judgemental.

being, derived from the other two”[20] (*Timaeus*: 35a; trans. Zeyl). This is also characterized as the intermediate in *Republic*, “Or can you find a more appropriate place to put them than intermediate between being and not being?”[20] (*Republic*: 479c; trans. Grube). Given that the intermediate can substitute for the mixture, it is plausible to hold that these two notions are synonymous, hence *phantasia*, being the mixture, should be interpreted as the intermediate sensation and *doxa*. If this is the case, then one is unjustified in maintaining that *phantasia* is a kind of *doxa*, or that P-C-B is judgemental *because* it is a kind of *doxa*.

In addition, even if this argument did work, and P-C-B were a kind of *doxa*, it would not be conceptualized, since this would contradict the requirement of the non-rational side. One might suggest that *phantasia* can be interpreted as a conceptualized proposition, and this configuration makes it a kind of *doxa*, and hence judgemental, granted that *doxa* is judgemental.<sup>28</sup> The argument can be summarized as follows: if a cognition is a conceptualized proposition, then it is judgemental; and if P-C-B is a conceptualized proposition, then similarly, P-C-B is judgemental.

However, this inference still fails, since *phantasia* cannot be conceptualized, given that it is regulated by the non-rational side. I have argued earlier that the conceptualization cannot be applied to the mere presentation, since it would require the involvement of reason which is inaccessible to the non-rational side, and one’s active and conscious calculation which disobeys the passive feature of its formulation. Given that P-C-B is also regulated by the non-rational side, the same charges can also be applied to P-C-B’s conceptualization, hence P-C-B cannot be conceptualized. The close relation between conceptualization and thinking can be confirmed from Grönroos’ interpretation, since he accepts that reason should be involved in P-C-B if it is conceptualized, “it is difficult to escape the conclusion that even a *phantasia* is formed through thinking, and that it is a disposition of reason in precisely that sense”[38] (Grönroos: 18).<sup>29</sup>

Moreover, one, recognizing the failure of the conceptualized approach, may replace the association between two conceptualized propositions with the association between a non-conceptualized impression and an imprint, or between special perceptibles and an imprint. For example, one may formulate the judgemental P-C-B when one is presented with the sensation of an apple, and P-C-B might be comprised by one’s linking the present impression with a stored imprint which is of an apple, and is true when the association is correct. This concession still resorts to *doxa* which is judgemental, but it seems better than the conceptualized one, since it explains why P-C-B is judgemental by resorting to actively linking one with another, and it, being non-conceptualized, escapes the charge from conceptualization.

However, this strategy of resorting to *doxa*, as I will show later, is not revived by this concession, but is sentenced to death by it. Specifically, this concession points out that the essential feature of this strategy is the conflation of judging and actively linking one with another, but unfortunately, such linking still requires the involvement of reason which is inaccessible to the non-rational side, hence both the concession and the general strategy should be rejected.

This concession has been developed by Scheiter in explaining Aristotle’s *phantasia*, and the similar idea can also be used to interpret Plato’s *phantasia*.<sup>30</sup> According to Scheiter, Aristotle’s

<sup>28</sup>I will not dispute over whether being a conceptualized proposition is enough for it to be a *doxa*, or whether it is necessary, and I will give it a pass for the sake of the argument.

<sup>29</sup>This solution might provide one with a consistent theory, but this is not good, since it changes the essence of the non-rational side. More importantly, it misinterprets the situation, since the problem does not reside in the characterization of the non-rational side, but in the strategy of explaining the feature of being judgemental.

<sup>30</sup>Aristotle’s view of *phantasia* is similar with Plato’s account in multiple respects. Firstly, Aristotle’s notion of *phantasia* originates from Plato’s view of *phantasia*, “In the *Theaetetus*, Socrates claims that we come to have true or false beliefs by combining our memories with our current perception. But whereas Socrates posits memory, Aristotle posits *phantasia*”[71] (Scheiter: 269). Secondly, Aristotle accepts that *phantasia* is the intermediate between sensation and *doxa*, since he agrees that it originates from sensation, “Aristotle claims that *phantasia* is found only where perception is found (*DA* 3.3, 427b14-16) and is impossible without perception (*DA* 3.3, 428b11-12)” (Scheiter: 257), and that it is not *doxa* yet, “what they show is the distinction between judging and being

*phantasia* is a unified image which represents the origin of the sensation, and it is judgemental because one associates the multiple special perceptibles with the unifying image, “the perception of the sensible forms, as in the green and brown color patches of an oak tree, combines with the correct image, in this case an image of oak tree” (Scheiter: 270). Following this line of thought, one might offer a similar account to interpret Plato’s *phantasia* without concepts, that is, P-C-B is an imprint in the memory, and it is judgemental because one actively links it with a cluster of special perceptibles by consideration.<sup>31</sup>

In order to clarify this association, I will offer a procedure of formulating P-C-B, which requires one (i) to present the multiple special perceptibles on the one side, and (ii) to offer the possible imprints on the other side, and (iii) to select the appropriate one among these possibilities, and to link it with the sensation. I will pay attention only to the last stage here.<sup>32</sup> According to this procedure, the feature of being judgemental is explained by the character of the selection. Specifically, P-C-B will not be judgemental, if the selection is developed by nature or automatically, but it will be judgemental, if the selection is made after one’s conscious consideration.<sup>33</sup> If this is the case, then the successful solution which explains the formulation of P-C-B requires firstly that it is performed by the non-rational side which is unable to think, and secondly that the selection is formulated neither automatically nor by nature.

Scheiter offers two solutions to explain in virtue of what the selection is chosen, but neither of them should be accepted.<sup>34</sup> The first suggestion is that the selection is governed by developed habit, but this should be rejected, since it is unnecessary for the selection. I admit that this satisfies the requirements above in some situations, since this can explain the selection when the habit has been developed for the wild beast, “each movement becomes associated with other movements, generally through habit or custom”[71] (Scheiter: 271), and this selection, after becoming a habit, can be performed by the non-rational side without the involvement of reason. However, the learnt habit is unnecessary for the selection, since the wild beast can select without the habit, and this can be confirmed from the case in which the beast selects when it faces the challenge for the first time, “one who is emptied for the first time could apprehend replenishment”[39] (*Philebus*: 35a; trans. Hackforth).

The second suggestion is that the imprint is selected by resemblance, and a certain understanding of this suggestion shows a new way to explain the feature of being judgemental. This idea can be accomplished in two ways: one is the subjective resemblance which contradicts the requirement of the non-rational side, another is the objective resemblance which uncovers a new direction. Firstly, the subjective reading requires one to recognize the similarity between the sensation and the imprint, and it contradicts the fact that the non-rational side can not think.

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appeared to (cf. *De Somniis*, II, 460b 16-25)”[49] (Lycos: 506). Thirdly, Aristotle argues that *phantasia* contains something more than sensation, since it needs this space to solve the problem of error, “In the Theaetetus, Socrates, like Aristotle, claims that something must be added to thought and perception ... but whereas Aristotle adds *phantasia*, Socrates adds memory” (Scheiter: 266). Fourthly, Aristotle approves that the capacity for formulating *phantasia* should be similar to memory, “[*phantasia*] produces something before the eye, just like the image-making (*eidáŹlopoiountes*) that occurs in memory”, and that the mechanism should be similar to the imprinting on the wax, “we should note his use of the wax metaphor to explain perception ... which may be another indication that he has Plato in mind throughout his discussion on perception and *phantasia*” (Scheiter: 269).

<sup>31</sup>It can also be an association between the unifying impression and an imprint in the memory, but this will make no difference for my subsequent analysis, since it also requires active linking.

<sup>32</sup>The former two stages might also require consideration and reason, but I will let this pass for the moment.

<sup>33</sup>The underlying idea is quite intuitive, since after all, one is unlikely to say that the kettle is judgemental if it begins to heat when its power is turned on. Similarly, P-C-B will not be judgemental if the procedures are performed passively by design.

<sup>34</sup>Although Silverman characterizes the imposition of concepts as being passive, “The imposition of concepts that yields the world of appearance no doubt occurs quickly, automatically, and, for the most part, unconsciously”[72] (Silverman: 134), he does not answer the question how this particular concept is selected, “Plato offers no account of how concepts are imposed on sensation” (Silverman: 146).



This reading has been adopted implicitly by Silverman, since the concept selected in *phantasia* resembles the original, when it represents the external world correctly, “For the most part, the appearances that result are veridical or accurate representations of the external objects that are their partial causes”[72] (Silverman: 146). If this is the case, this requires that the non-rationalside must be able to recognize the cognitive similarity between them, and that it should be able to understand and evaluate the content of the imprints, but neither of them is available to the non-rationalside. Secondly, the objective reading shows a new direction to interpret the feature of being judgemental. According to Scheiter, it is in virtue of resemblance that one selects a particular imprint, “when we have a perceptual experience that resembles this unified image, the perception automatically sets our perceptual system in motion” (Scheiter: 272), and this is consistent with the function of the soul-wax. More importantly, this process is developed objectively, hence it does not require the involvement of reason, “the combination of *phantasia* and perception ... does not require inference or deliberation” (Scheiter: 271), and this can be accomplished by the non-rationalside. Although Scheiter takes resemblance between them for granted, and he does not explain in virtue of what this process can be carried out, this does show a new direction for one to interpret the feature of being judgemental.

The primary lesson learnt from these two suggestions is that there is a tension between the involvement of the non-rationalside and that the selection cannot be made by nature in order for P-C-B to be judgemental. It seems that the adoption of the latter will necessarily contradict the former. After all, when the selection is not carried out automatically, it must include some component which requires consideration or evaluation, hence the procedure cannot be totally passive. Perhaps, this is why Grönroos revises his characterization of the non-rationalside, and attributes to it a certain inferior thinking, “*phantasia* is singled out as a belief that arises through sense perception and thinking *jointly*”[38] (Grönroos: 4). If this is the case, then it uncovers two ways of dealing with the inconsistency: one is to revise the characterization of the non-rationalside, and another is to search for another approach to explain the feature of being judgemental. Given that the approach fails when it resorts to *doxa*, I will try a different direction, and I will insist that the non-rationalside is unable to think, and reject the standard that judging implies that it cannot be performed automatically or by nature.

However, this new approach is feasible, since it is possible for the wild beast to formulate a judgemental P-C-B merely by the non-rationalside. Given that Aristotle agrees that the wild beast can formulate *phantasia*, “all animals have *phantasia* in at least some indefinite way”[71] (Scheiter: 259), and that there is a similarity in the notion of *phantasia* between Plato and Aristotle, “Aristotle’s description of *phantasia* is very similar to Socrates’ account of memory” (Scheiter: 269), I may infer that Plato also agrees that the wild beast can formulate *phantasia*.<sup>35</sup> More notably, this formulation is based on emotions which require no reason, and this can be confirmed when Timaeus explains why men’s sex organs are disobedient, since the wild beasts are, “incapable of listening to reason, ... and, goaded by their frantic appetites”[36] (*Timaeus*: 91b; trans. Waterfield), and they, being regulated by their emotions, can deal with the world when reason is absent. Given that the judgemental P-C-B can be developed merely by the non-rationalside, the standard must be abandoned that the selection cannot be made automatically or by nature.

In summary, I have examined the strategy of explaining the feature of being judgemental by resorting to *doxa*, and I have rejected some of its variations given that the non-rationalside cannot think. Faced with the tension between the non-rationalside and the active linking which

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<sup>35</sup>Although Scheiter argues in the end that Aristotle “entertains the possibility that some animals lack *phantasia*”, it poses no threat to my conclusion that the wild beast, at its best, can only entertain *phantasia*. More importantly, later I will explain in detail how the wild beast can formulate a *phantasia* merely through the non-rationalside.

is implied by the assumption that P-C-B is judgemental in virtue of being a kind of *doxa*, one will need a brand new way to explain P-C-B's being judgemental by abandoning the active linking, and explaining how it is developed automatically through emotions.

If this is the case, then this also poses two requirements of the explanation of P-C-B's being judgemental: firstly, that P-C-B is regulated by the non-rational side which is unable to think, and secondly, that the selection made by the wild beast, when it faces a challenge for the first time, must be by its nature.

Another interpretation is based on the analogy of painting, and this view has been defended by Hackforth (1945), who argues that the painting is synonymous with *phantasia*, "Plato interpolates the mental picture (*εἰκῶν*), the work of a painter (*ζωγράφος*, 39 B) ... Plato himself later uses the word *φαντάσματα* (40 A) as a synonym for *εἰκόνες*"[39] (Hackforth: 72).

However, this interpretation should be resisted, since the painting is quite different from P-C-B. This is for three reasons. Firstly, their inputs are different, since the input of the painting is an assertion or a thought which is judgemental, but the input of P-C-B is an impression which is not. Given that the function of painting is to represent the assertion made by the soul, "A painter, who comes after the writer and paints in the soul pictures of these assertions that we make"[39] (*Philebus*: 39b; trans. Hackforth), the thing being painted should also be assertive, and judgemental. However, the input of P-C-B is an impression of the special perceptibles, and as I have illustrated earlier, it is neither judgemental nor conceptualized, and hence P-C-B cannot be interpreted in the same way as the painting. Secondly, the abilities required by the agent are different, since thought is required in painting, but not in formulating P-C-B. Given that the painting is a translation of the writing, and that the translation must be false or unwarranted if one does not understand the target assertion, it implies that one must seize actively the meaning of the assertion, in order for one to translate it correctly. However, the non-rational side can neither think nor associate actively one with another, and hence the ability required in painting is inaccessible in formulating P-C-B. Thirdly, they are different in terms of whether their content depends on that of the assertion, which is the background beliefs. Given that the painting is a translation of the assertion, the content of the painting depends on that of the assertion, "Then are the pictures of true opinions and assertions true, and the pictures of false ones false?" (*Philebus*: 39c), and hence it relies on the background beliefs. However, this cannot apply to P-C-B, since its content must be same with that of the mere presentation, and it is independent of the background beliefs, "no matter what we know or believe, our knowledge cannot influence or change the content"[72] (Silverman: 139).

Although the painting is not the appropriate analogy of P-C-B, the analogy itself is not useless, since it points out that the cause of the writing is "the conjunction of memory with sensations, together with the feelings consequent upon memory and sensation"[39] (Hackforth: 74; trans. Hackforth), and the conjunction, rather than the painting, can be viewed as an interpretation of P-C-B. Firstly, the conjunction shares the same relation with *doxa* as P-C-B. As I have argued earlier, the based belief is not a part of *phantasia*, and it is a belief which is induced by P-C-B, "This appearance-*cum*-belief will then serve as evidence for the subsequent belief that the stick is in fact straight"[72] (Silverman: 145). However, this feature can be carried out by the conjunction, since it causes *doxa* or the based belief, "It appears to me that the conjunction ... may be said as it were to write words in our souls"[39] (*Philebus*: 39a). Secondly, it is possible for the conjunction to satisfy the requirement of the non-rational side, which is disobeyed by the strategy which resorts to a kind of belief. The formulation of P-C-B should include the impression and the sensation, and the imprint which requires the memory, given that P-C-B is induced by the mere presentation which is the impression of the sensation. The conjunction not only includes these components, but also adds the emotion which can be used

to explain the selection merely by the non-rational side, and this will be illustrated later. To sum up, the conjunction can be viewed as a candidate to interpret P-C-B, and I will use it as my basis for interpreting P-C-B.

In conclusion, I have examined two strategies of explaining P-C-B, and offered several reasons for rejecting them. The first interpretation fails, either because the assumption that P-C-B is a kind of *doxa* is not well founded, or because it violates the requirement that the non-rational side is unable to think. The second interpretation which resorts to the painting analogy fails, because it is different from P-C-B in multiple respects.

However, the result from these rejections is not mere negative, but also positive, since it suggests several conditions of P-C-B: firstly, it is judgemental, and secondly, the selection made by the wild beast, when it faces the challenge for the first time, must be according to its nature, given that its agent is the non-rational side, and thirdly, it is composed of sensation, memory and the emotions.

### 3.3.2 The presentation-*cum*-belief and the truth

In this part, I will try to explain that P-C-B can preserve the truth of the external object in a limited sense, and hence be Form-related. To achieve this purpose, I will (a) offer my interpretation of P-C-B, (b) illustrate that it satisfies the three conditions I have established above, and (c) point out that the basic P-C-B can help one to attain some of the truth of the original object in the sense of allowing one to navigate the external world successfully.

With these conditions being determined, I suggest that P-C-B can be interpreted by resorting to the anticipatory pleasure at *Philebus* 35a, “When one becomes empty then, apparently he desires the opposite of what he is experiencing: being emptied, he longs to be filled”[39] (*Philebus*: 35a; trans. Hackforth). As the figure below illustrates, I will argue that the formulation of P-C-B runs as follows: (i) one experiences a basic pain which is caused by a certain disturbance in the body, and one associates the pain with a corresponding impression, (ii) recognizing the basic pain, the non-rational side is moved to an anticipatory pleasure, and the pleasure is opposite to the pain, and (iii) granting this anticipatory pleasure, one selects the imprint of the appropriate act in the memory among multiple alternatives, and this pleasant imprint is P-C-B.<sup>36</sup>

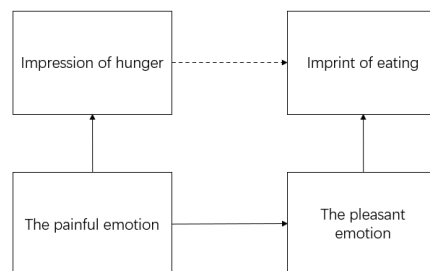


Figure 3.6: The association between emotions

<sup>36</sup>One might argue that one will recollect the imprint of eating as long as one experiences his hunger, and that my account misinterprets the example. I admit that the formulation resides in one’s experiencing hunger and one’s recollection, but this is incomplete, since it cannot explain how the impression causes the recollection, and why the object being recollected must be the imprint of eating. To answer these questions, I suggest the actual procedure should be supplemented in this way.

Several qualifications should be emphasized before I turn to the details. Firstly, I admit that the model of the anticipatory pleasure relies on multiple hypotheses. For example, it assumes that the opposite pleasure is always present, and that the imprint is always available. These set the stage of my interpretation. Secondly, these hypotheses imply that my interpretation cannot exhaust all types of cognition which are between sensation and *doxa*. For example, it is possible for one to have the pain without the anticipatory pleasure, “sometimes the emptying process is associated with a distinct hope of coming replenishment, while at other times there is no such hope”[39] (*Philebus*: 36a-b; trans. Hackforth), and to have the pleasure without entertaining the corresponding imprint. However, these cases will not be discussed here, since my purpose is to show that it is possible for P-C-B to preserve the truth, and that this is carried out by the full-fledged P-C-B rather than the incomplete application of P-C-B.

Before I turn to explain why this account satisfies the three requirements of P-C-B, I need to further clarify procedures (i) and (iii) a little bit. Regarding procedure (i), it seems that my illustration is an over-interpretation, since the example is only that “one becomes empty”, and it appears that neither impression nor pain is present. However, this charge is superficial, because both of them are implied by the context.

Although it is possible for one to be hungry without recognizing it, the notion here implies one’s experiencing hunger, hence it is an impression in the soul. I admit that the disturbance in the body can be divided into non-sensation which does not affect the soul, “what is undetected by the soul when it is unaffected by the disturbances of the body, you must substitute the term ‘non-sensation’”[39] (*Philebus*:33e-34a; trans. Hackforth), and sensation whose affection in the soul is the impression. However, the description of one’s being hungry here should be the sensation which affects the soul, since stage (ii) does assume that one experiences hunger, and this implies that the soul must be affected by the bodily disturbance. As a result, one’s being hungry in stage (i) is a physical disturbance that causes the impression of hunger in the soul.

Apart from the entailment of the impression, one’s being hungry here is also associated with a certain emotion. Firstly, the disturbance in the body is necessarily associated with emotions. Given that one’s physical body must be shaken when one becomes hungry, hunger is an affection in the body, “Hunger, say, is a form of disturbance”[39] (*Philebus*: 31e; trans. Hackforth), and this disruption in the body, as the cutting from triangles, is pain, “Hunger, I take it, is a case of disintegration and pain” (*Philebus*: 31e).<sup>37</sup> Secondly, this entailment is also confirmed by the assertion that emotions are the accompaniment of sensations, “all those experiences which involve not only perception ... but also accompanying pains and pleasures”[36] (*Timaeus*: 64a; trans. Waterfield). By resorting to the distinction between the representation and the experience of this representation, one can view sensation as the mental representation, and the emotion as the feeling or the experience of it, “the pleasure constitutes a way of experiencing what is desired ... doing so by means of the occurrence of a likeness in the soul (a representation of oneself taking pleasure in winning the lottery)”[40] (Harte: 59).<sup>38</sup> Given that one’s being hungry in stage (i) is a physical disturbance, and that it causes the impression of hunger by affecting the soul, this sensation must be experienced by the soul, hence the impression is necessarily associated with an emotion. Following this line of thought, the recollected imprint, being similar to the impression, should also be associated with emotion, and this establishes the constitution of the impression and the imprint.

Regarding stage (iii), it divides the P-C-B by the characterization of the selection. Although one will select the imprint when one is offered the anticipatory pleasure, the selection can be

<sup>37</sup>However, not all sensations are accompanied with emotions, since the sensation of color, which takes place without emotion, is an exception, “Unimpeded modifications, however, certainly cause sensation, but involve no pain or pleasure. This is what happens with sight”[20] (*Timaeus*: 64d; trans. Zeyl).

<sup>38</sup>For more information of this distinction, see Thomas (2021).

developed either by nature or not, and I will call the case in which the imprint is selected by nature the basic P-C-B, and the one in which it is not the non-basic P-C-B.

As a result, by resorting to the anticipatory pleasure which is caused merely by the disturbance in the body, I have explained the process of formulating P-C-B. Specifically, the whole process runs as follows: (i) the wild beast, being affected by a certain disturbance in the body, experiences an impression and a pain in the soul, (ii) recognizing the particular pain, the non-rationalside is moved to its opposite pleasure, and (iii) given this anticipatory pleasure, the non-rationalside selects the imprint to associate with the pleasure. This is the basic P-C-B when the selection is developed by nature, and non-basic P-C-B when the selection is developed by accident or culture.

Having offered my account of P-C-B, I will now argue that both the basic and the non-basic P-C-B can satisfy the three requirements, and that only the basic one can guide one to grasp the truth of the original object which directs one to replenish the present emptiness.

Obviously, my interpretation can easily satisfy the requirement of the conjunction, since its formulation includes the impression of one's experiencing hunger, the imprint of eating, the painful emotion which is associated with the impression, and the pleasure which is associated with the imprint.

Now, I will argue that the formulation of P-C-B can satisfy the requirement of the non-rationalside. In order to explain the implication of this requirement, I will explain the movement from the impression to the imprint by resorting to the movement by using the analogy of two balls which are regulated by a force. Taking the collision between two balls as an example, both balls are simply driven by force, but not by reason, and the direction they are driven in is also independent of reason. Firstly, just as the ball is moved by the force, the movement from impression to imprint is also driven by something which does not require reason, that is, the associated emotion, "the part with which it lusts, hungers, thirsts, and gets excited by other appetites the irrational appetitive part, companion of certain indulgences and pleasures"[20] (*Republic*: 439d; trans. Grube). Secondly, just as the direction of the moving ball is governed by the law of motion, which is independent of reason, the way in which how one emotion impacts another emotion, and the way in which it affects the imprint is not influenced by reason. As a result, I suggest that an action is regulated by the non-rationalside, if it is driven by emotions, and the way in which it is driven is not influenced by reason.

Clearly, the basic P-C-B is regulated by the non-rationalside. Regarding procedure (i), the movement from a physical disturbance and its affection in the soul is wholly determined by the quality of the wax, and this has been illustrated earlier, hence it cannot be affected by the background beliefs, and is independent of reason. Regarding procedure (ii), the movement from the pain to the pleasure is performed by emotion, and this can be confirmed by Socrates' introduction of the imprint, since he does not illustrate the cognitive content of the imprint independently, but initially describes it as the painful emotion, "the opposite of what he is experiencing", and "one who is emptied for the first time could apprehend replenishment"[39] (*Philebus*: 35a; trans. Hackforth). More importantly, the way in which this movement is carried out is also independent of reason, since the subsequent emotion is the *opposite* to the previous emotion, and this is consistent with the fact that it is necessary for the wild beast to pursue pleasure when it is experiencing painful hunger, "the part[the non-rationalside] that wants food, drink, and everything the nature of the body makes it feel it lacks"[36] (*Timaeus*: 70e; trans. Waterfield). Regarding procedure (iii), the movement from the pleasure to the imprint is also regulated by the non-rationalside, since the selection made in the basic P-C-B is governed by nature. As Socrates argues, one will seize the imprint of eating when one feels hunger for the first time, but this cannot be achieved through experience, "replenishment being something that he is neither experiencing in the present nor has ever experienced in the past" (*Philebus*: 35a), hence

this recollection must be programmed in the memory before one's birth, that is, by nature. This solution has also been summarized by Iwata as the innateness interpretation, "we are born with the innate memory of restorative pleasures in the soul by reference to which new-born babies desire to be replenished even before obtaining the first replenishment"[42] (Iwata: 196). As a result, each procedure of formulating the basic P-C-B is activated by emotion, and the way each is directed is also based on its nature, hence its formulation is regulated by the non-rational side.

The non-basic P-C-B, when it is formulated by the wild beast, is also regulated by the non-rational side. Given that their difference only lies in procedure (iii), that is, whether the selection is made by nature, I shall illustrate how the selection in the non-basic P-C-B is developed, and why this process satisfies the requirement of the non-rational side. To illustrate this process, one useful example might be the domestication of a dog through punishment. A dog, when experiencing hunger, will necessarily recollect the disposition to eat by nature, but in actuality, it chooses the other option by resisting this natural inclination, since if it has been punished several times when adopting the natural selection, "To bring these under better control, one disciplines the soul through denying it the pleasures to which it is so attracted"[13] (Brickhouse: 26). This punishment is effective for the wild beast, since it is directed by its emotions which is the only currency for the wild beast, "Our natural attraction to beauty ... will not as likely lead us into wrongdoing with someone else's spouse ... if we come to associate such wrongdoing with the pains and shames of the punishments"[13] (Brickhouse: 26). This implies that the wild beast can formulate this selection only by its emotions without the involvement of reason, and hence that it is also regulated by the non-rational side.<sup>39</sup>

Having explained that both the non-basic and the basic P-C-B satisfy the former two requirements, I will argue that they are both judgemental. Clearly, Socrates agrees that the non-basic P-C-B is judgemental, since the anticipatory pleasure attached with the habituated selection might be false, "in respect of reality holding an opinion and feeling a pleasure are on the same footing"[39] (*Philebus*: 37b; trans. Hackforth). Differing from the basic P-C-B, the habituated selection is formulated by accident rather than by nature, and hence the object referred to by this imprint might not satisfy the present hunger, and thus making it false sometimes. A more complete analysis of why it is false has been defended by Davidson, since it depends on the fact that "part of our feeling about it is due to what we imagine the event to be like, and part of our feeling is due to whether we consider that the event exists (or did exist or will exist)"[21] (Davidson: 357). Consequently, it is false either because the reference of the imprint is different from the actual case, or because the event represented by the imprint does not occur. Given that the possibility of falsity is entailed by being judgemental, "in the case of opinion falsehood and truth supervene, with the result that it becomes not merely an opinion but a certain sort of opinion, true or false respectively?" (*Philebus*: 37b-c), Socrates must accept that the non-basic P-C-B is judgemental.

To explain in virtue of what the habituated imprint is judgemental, one may resort to the Causal-functional Account of belief, "an attitude is a belief only if it disposes a subject to behave in certain ways that would tend to realise her desires if the proposition towards which it is directed is true"[25] (Engel: 79), and hence the imprint is a judgement if it can lead one to perform a certain act.<sup>40</sup> Following this line of thought, the imprint is true if this act can satisfy

<sup>39</sup>I have to admit that this is not an ideal example, since it assumes that there is an agent to cultivate the dog, and this cultivation is formulated with the involvement of reason if one views it as a whole. However, the dog can still formulate a habit merely by itself, and this is what happens in its evolution, and this is the typical case of the non-basic P-C-B.

<sup>40</sup>Theoretically, there is a difference between disposing a subject to act and actually carrying out the act, since one can have the disposition, but still fail to act. The failure might be caused by one's weak will or inability to carry out the act, and these two factors have been emphasized by Taylor when he summarizes argument of the

the desire, and it is false if otherwise.

This strategy has been adopted by some critics when they explain Plato's *phantasia*. Firstly, this interpretation of the judgemental feature has been defended by some critics. For example, when Davidson (1990) illustrates the nature of the anticipatory pleasure, he agrees that the feature of being judgemental can be explained by one's act, "One test of such feelings is the willingness to act upon them. If we believe something, we will base our performance on it"[21] (Davidson: 355), and when Moss (2014) attributes the Sceptic's distinction between "belief and a similar but sub-doxastic state" to Plato, she also argues that *phantasia* is judgemental because it can cause one to carry out a certain action, "[the *phantasia* of the snake being dangerous] has representational content similar to the belief that the snake is dangerous, and that can play a similar role to that belief in causing behaviour and emotion"[54] (Moss: 213). Secondly, this view of the truth-value has been adopted by Davidson in his illustration of the anticipatory pleasure, "To have an opinion means to believe that something is the case; to have a pleasure (of the sort mentioned) only results from believing that something is the case" (Davidson: 358). Following this line of thought, the non-basic P-C-B is sometimes false, because the habituated selection is unsuccessful in helping one to satisfy the desire, and the basic P-C-B is always true since the chosen act, being motivated by its nature, can always replenish the present emptiness.

If this is the case, then the basic P-C-B is also judgemental, since it can guide one to carry out a certain act. This conclusion can be confirmed by Harte(2014) when he argues that desire can guide one to act, "desire is the or a psychologically produced mechanism for getting the animal going"[40] (Harte: 64), and by Moss (2014) when she illustrates one's being affected by the appearance, "you will be disposed to feel and act as if  $x$  were  $F$ —and ... you have in some sense assented to the appearance, although only passively, 'involuntarily', or by default"[54] (Moss: 214), and by Grönroos, "The power of sense perception explains not only how nonrational animals get along in the world, but even how human beings manage a great many of their everyday dealings"[38] (Grönroos: 8).<sup>41</sup>

Differing from the non-basic P-C-B, the basic one is always true in the sense of satisfying the desire. Firstly, it is always true, since the selection is programmed in nature by the lesser gods. Actually, not only the selection in the basic P-C-B is programmed into nature before its birth, it is also designed by the lesser gods who are the creators of the mortal souls, "Into the mix they[the lesser gods] added unreasoning sensation and ever-adventurous desire, and so, constrained by necessity, they constructed the mortal soul"[36] (*Timaeus*: 69d; trans. Waterfield). Given that the lesser gods have a purpose of making the creature as good as possible, "the gods who created us bore in mind that their father had ordered them to make the human race as good as possible" (*Timaeus*: 71d-e), it is plausible to infer that the act designed by the lesser gods can satisfy the corresponding desire, and hence that the basic P-C-B is always true. Secondly, it offers a new way to interpret the line analogy by which *phantasia* partakes of some of the truth, "each [divided line] shares in clarity to the degree that the subsection it is set over shares in truth"[20] (*Republic*: 511e; trans. Grube). Given that the basic P-C-B must be trustworthy in replenishing the empty, it is always true, and this constitutes its share of truth in the line. This implies that its share of truth is not categorically different from *episteme*'s share, and that the line does not

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weakness of will at *Protagora* 358b-e, since he argues that whether one *judges* that an apple can appease thirst is based on whether one actually eats the apple when one is thirsty and when one can reach an apple, "If pleasure is the good, then if anyone judges that  $x$  is better than  $y$ , and he is able to do either  $x$  or  $y$ , he does  $x$ "[77] (Taylor: 505). However, my purpose is not to offer an all-embracing definition of action, but only to illustrate whether this strategy can be adopted by Socrates. Hence I will assume that one always possesses strong will, and that one is always able to perform the desired action. In other words, I will maintain that one will act as one desires, with the assumption that all the other factors, if they exist, are helpful to the actualization of the act.

<sup>41</sup>My characterization of *phantasia* can also be made compatible with Grönroos' notion of sense perception, since *phantasia* is also a non-rational capacity, and it is entertained by the wild beast.

represent any kind of *phantasia*, but only the basic P-C-B and the P-C-B which is regulated by reason. More importantly, this interpretation also verifies that *phantasia* is correlated with the Forms.<sup>42</sup>

Although I agree that the basic P-C-B is always true, it does not follow that the wild beast, by means of the basic P-C-B, grasps the whole truth of the original object, as the philosopher does in *episteme*. Firstly, the basic P-C-B is not helpful in directing the wild beast to grasp the essence of the object, since it, being directed merely by the non-rational side, cannot go beyond the appearance. It has been agreed that the wild beast is confined to the appearance, “Arguably their mistake is not to identify the shadows as real, but instead, more radically, to fail entirely to develop a notion of the real, by contrast with the apparent”[54] (Moss: 235). Hence it is unlikely for it to grasp the essence directly and consciously. Secondly, although the basic P-C-B can represent the external object faithfully to a certain extent, this way of viewing the object is restricted. According to this standard of truth, the truth-value is determined by whether it can satisfy the present desire, “This suggests that a belief can be made true by the fact that holding it contributes to our happiness and fulfilment”[47] (Hookway: 6), and this is not enough to grasp the external object itself. This has been illustrated nicely by the *restricted* sense offered by Marx, “For the starving man, it is not the human form of food that exists, but only its abstract being as food; it could just as well be there in its crudest form, and it would be impossible to say wherein this feeding-activity differs from that of animals”[51] (Marx: 109). Perhaps this is why the wild beasts, being able to distinguish raspberry from strawberry, cannot “understand what it is to be a raspberry and what it is that makes a raspberry different from a rock”[71] (Scheiter: 263). Given that the selected external object can satisfy the present desire, the basic P-C-B is always true, but this cognition cannot be enough, since the object’s essence is unavailable to the wild beast, and the object is viewed from a *restricted* sense, that is, whether it can replenish the emptiness.

In summary, I have offered my interpretation of P-C-B, and its formulation runs as follows: (i) one experiences a basic pain which is caused by a certain disturbance in the body, and one associates the pain with the corresponding impression. (ii) Recognizing the basic pain, the non-rational side is moved to an anticipatory pleasure, and the pleasure is opposite to the pain. And (iii) granting this anticipatory pleasure, one selects the imprint of the appropriate act in the memory among multiple alternatives. This pleasant imprint is P-C-B. More importantly, the imprint will be the basic P-C-B when the selection is developed by nature, and non-basic when the selection is developed by accident or culture.

This interpretation should be adopted, since it satisfies the three requirements I have established previously. It satisfies the requirement of conjunction, since it includes the impression which is caused by the disturbance in the body, and the imprint which is the selection, and their

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<sup>42</sup>It seems that this position is inconsistent with the assertion that a cognition is not judgemental if it is always true, since the basic P-C-B is both always true and judgemental. Although this standard helps one to establish the conclusion that the non-basic P-C-B is judgemental, its priority must be limited. Firstly, the standard can be explained by the Causal-functional Account of belief, and this implies that it is an application of the causal account. According to the causal account, the non-basic P-C-B is judgemental, since it can lead one to carry out a certain act, and it is sometimes false, because the act is unsuccessful in satisfying the desire. As a result, a failed act presupposes the existence of an act, and hence a cognition’s being sometimes false presupposes that it is judgemental, and this explains why a cognition is judgemental if it is capable of being false. Following this line of thought, it is still possible for one to accept that the basic P-C-B is always true, since it can lead one to carry out a certain act, and that it is always true, since the act can satisfy the present desire. Secondly, this standard is false, since it is possible for a cognition to be both always true and judgemental, apart from the basic P-C-B. Given that *episteme* cannot be false, “As befits knowledge, then, perception is always of what is, and never plays us false”[69] (*Theaetetus*: 152c; trans. Rowe), and that it is judgemental in characterizing the reality in an active manner, a cognition’s being always true does not entail that it is not judgemental. This also points out the affinity between the basic P-C-B and *episteme*, since they are both designed by the *Good* and they are both always true.



association which is accomplished by the movement between their attached emotions. It satisfies the requirement of the non-rational side, since each procedure is driven by emotions, and each way of being directed is independent of reason. Specifically, stage (i) is associated with the painful emotion, and this movement from a physical disturbance and its affection in the soul is wholly determined by the quality of the wax. Stage (ii) is a movement from the pain to the pleasure, and this movement is directed by the nature of the appetitive part of the soul, that is, to pursue the pleasure. And stage (iii) is caused by the anticipatory pleasure, and the selection in the basic P-C-B is wholly determined by the design plan programmed in the nature, and this nature sets the stage for the selection in the non-basic P-C-B which occurs by accident, and hence it is not influenced by the background beliefs. It satisfies the requirement of being judgemental, since P-C-B can lead one to carry out a certain act.

The non-basic P-C-B is not necessarily connected with the truth of the external object, since its selection of the imprint is made by culture or by accident. This choice might be unfaithful to the characterization of the external object, and hence it, as the representation of the original, is sometimes false.

However, the basic P-C-B is always true in the sense of satisfying the present desire, since its selection of the imprint is designed by the lesser gods with the purpose of making the creature as good as possible, and this is confirmed by its share of truth in the line analogy. This enables the basic P-C-B to preserve some of the truth of the original object, and hence making it Form-related. However, the basic P-C-B, although being always true, cannot be the final destination of cognition, since the object's essence is unavailable to the wild beast, and it is viewed from a *restricted* sense, that is, its power to replenish the emptiness.

### 3.4 Conclusion

We have discussed several issues about Plato's *phantasia* in this chapter, and the primary concern has been whether Plato's *phantasia* contributes to one's grasp of Forms. This question has been answered by illustrating that a *phantasia* will be Form-related if it preserves some of the truth of the original object, and that *phantasia* can attain such truth.

In the first section, I have argued that one is allowed to accept the standard that a *phantasia* will be Form-related if it preserves some of the truth of the original object, and that it is possible for *phantasia* to be Form-related. Firstly, I have offered a general illustration of *phantasia* by examining Silverman's interpretation. Against Silverman, I have argued that *phantasia* is composed of the mere presentation and the presentation-*cum*-belief in which the former induces the latter. Secondly, I have shown that one is justified in accepting the standard, since this is ensured by the participation of the representation in the truth of the original object. Thirdly, I have illustrated that it is possible for *phantasia* to be Form-related, since none of the rejections offered can exclude the possibility that one can attain a certain truth of the original by *phantasia*.

In the second section, I have shown that the mere presentation can preserve the truth. This is accomplished by illustrating the process of formulating the mere presentation and its contribution to truth-preservation. Regarding the former, I have demonstrated the development of the mere presentation by resorting to the model of the wax tablet. The mere presentation is a determinate impression which is neither conceptualized nor judgemental, but is caused in the memory by the special perceptibles and regulated by the non-rational side. Regarding the latter, I have pointed out that it can provide one with some of the truth of the external object when the non-rational side is regulated by reason, since the motions of the original object have been preserved by the special perceptibles through kindred substance, and they are received faithfully by the soul-wax when it is smooth and abundant, and they are possessed by the non-rational side under the direction

of reason which maintains the truth of the original and its F-ness.

In the third section, I have explained that P-C-B is reliable in preserving the truth, and this is achieved by illustrating its formulating process and its contribution to truth-preservation. In terms of the former, I have established the formulation of P-C-B by resorting to the anticipatory pleasure. The formulation runs as follows: (i) one experiences a basic pain which is caused by a certain disturbance in the body, and one associates the pain with the corresponding impression, (ii) recognizing the basic pain, the non-rational side is moved to an anticipatory pleasure, and the pleasure is opposite to the pain, and (iii) granting this anticipatory pleasure, one selects the imprint of the appropriate act in the memory among multiple alternatives. This pleasant imprint is P-C-B. In terms of the latter, I have argued that the basic P-C-B is always true in the sense of satisfying the desire, since its selection of the imprint is designed by the lesser gods with the purpose of making the creature as good as possible, and this is confirmed by its share of truth in the line analogy.

Apart from offering my account of *phantasia*, I would also like to remind the reader of how this account of *phantasia* contributes to the overall argument by illustrating (a) that my account of *phantasia* fits with the view that Plato defends a teleological reliabilist account, (b) that it is necessary for having some grasp of the Forms, and (c) that the capacity of *phantasia* can be reordered in light of our knowledge of the Forms.

I have established that *phantasia* is teleological and reliable, and this is the second part in the overall cognition, that is, between sensation and *doxa*. *Phantasia*, being composed of the mere presentation and the presentation-*cum*-belief, is reliable, since the development of the mere presentation is explained by the model of the wax tablet, and the formulation of the presentation-*cum*-belief is explained by the model of the anticipatory pleasure, and these two models are stable and well constructed. It is teleological, since each of them is aimed at providing human beings with some of the truth of the external object, and hence to help the human being to navigate the external world successfully. Specifically, the mere presentation can provide one with some of the truth of the external object when the non-rational side is regulated by reason, and the basic presentation-*cum*-belief is always true, since it allows one to satisfy the basic desire in the correct way.

This account of *phantasia* is indispensable for having some grasp of the Forms, since the image is indispensable for the formulation of *dianoia* which in turn is required in the mastery of *noesis*, and *phantasia* is the distinctive capacity for producing images, given that the mere presentation and the presentation-*cum*-belief are images produced by the capacity of *phantasia*.

When one is equipped with the knowledge of the Forms, the capacity of *phantasia* will be reordered, because the capacity of *phantasia* will be working in the correct way, and it will have the correct relationship with the other epistemic capacities, and be regulated by the Forms. Firstly, the capacity of *phantasia* will be working in the correct way, since one will recognize its design plan and reach the truth based on the *phantasia*. When one is equipped with the knowledge of the Forms, one will be able to distinguish between the mere presentation and the presentation-*cum*-belief, and one will recognize the design plan or the structure of them, and hence attain the truth of the original. As I have argued earlier, the representation will be unfaithful when the soul-wax is neither smooth nor abundant, but one can still attain the truth of the original by deciphering the coefficient correctly, given that one is offered the design plan of the *phantasia*. In this way, the capacity of the *phantasia* can be led by its design plan, and turn to its correct way of working. Secondly, the capacity of *phantasia* will have the correct relationship with the other epistemic capacities. For example, the operation of *phantasia* contributes to the mastery of *dianoia* by producing images which are indispensable for the formulation of *dianoia*, and it has the good relationship with sensation, since *phantasia* originates from sensation, "Human sense-perception or *phantasia* is therefore something different from and higher than sensation

from which it springs and with which it is so closely related"[79] (Watson: 4). In this way, the cognition of *phantasia*, by partaking in its own share of the truth of the whole, will live in harmony with the other cognitions. Thirdly, the operation of developing *phantasia* is regulated by the properties of the Forms. For example, the basic presentation-*cum*-belief is always true in the sense of satisfying the desire, since its selection of the imprint is designed by the lesser gods with the purpose of making the creature as good as possible (see the *Timaeus*), and this is confirmed by its share of truth in the line analogy (see the *Republic*). Consequently, one restores the cognition of *phantasia* by the Form of the Good, and in this way, the soul-wax becomes smooth and abundant, and one becomes good as a whole in the respect of *phantasia*.



# *Doxa*

Critics do not agree upon how to answer the question “Is Plato’s *doxa* connected with being?”. They are generally divided into two groups by their answers, that is, yes and no. Those who give the affirmative answer include Grönroos (2013), Lott (2011), and Ganson (2009). The negative answer has been defended by Moss (2020, 2014) and Kaag (2012).

Regarding this question, I will follow the affirmative tradition. Specifically, I will argue that the development of *doxa* is regulated by the properties of F-ness, and hence that it is Form-directed.

To set up my position, several established accounts will be used. Firstly, regarding the division of *doxa*, my position differs from Grönroos’ view that there are two kinds of *doxa*. I will refine his account by arguing that *doxa* is composed of three sub-kinds, that is, rational generic belief, irrational generic belief, and perceptual judgements. Secondly, regarding the relation between *doxa* and being, my account is not totally in accord with Lott’s view that in developing the *doxa*, one does not grasp the Forms but only attempt to grasp them, since I will go further than him by explaining in virtue of what *doxa* is Form-directed. Thirdly, I will illustrate that each stage in the development of *doxa* is regulated by the properties of F-ness, and hence that it allows one to grasp F-ness.

## 4.1 The relationship between Plato’s *doxa* and the Forms

Before I turn to the question of how all kinds of *doxa* are connected with being, I need to first specify what I mean by “*doxa*”, “being connected”, and “being”, since these are implied by the understanding of the principal parts of the question. Given that the parts of the question might be interpreted in different ways, I shall list some competing interpretations of them, and then determine how I will use them in my dissertation.

### 4.1.1 The reference of *doxa*

It has been widely accepted that the term *doxa* is used by Plato in two ways: on the one hand, it denotes *mere* belief which does not meet the necessary condition of the knowledge, and on the other hand, it refers to belief which has the possibility of being knowledge. This view has been argued by Moss(2020) when she clarifies the two senses of *doxa*, “*doxa* as both inferior to and incompatible with *epistēmē*” and “generic taking-to-be-true, of which knowledge is a special species”[55] (Moss: 201), and by Grönroos(2013) when he establishes the distinction between two kinds of belief, “they all indicate a distinction between carefully reasoned beliefs and those that we simply end up with without much consideration”[38](Grönroos: 17). Among these two kinds of *doxa*, Plato’s *doxa* has been interpreted as being *mere* belief, since the typical case of *doxa*

is supposed to contrast with *episteme*, but the explanation of the reasoned belief relies more on *dianoia* or *noesis*.

Regarding the *mere* belief, most critics agree that it is the non-rationalside's response to the sensory qualities, for example, Moss(2008) defines it as being "to accept unreflectively that things are just as they appear to be"[53] (Moss: 40), and Grönroos interprets it as being "formed through sense perception, on the basis of how the thing strikes the person, without considering its real nature"[38] (Grönroos: 1). Although most critics do not dispute over its input and agent, they actually argue over the condition under which the non-rationalside activates the passive acceptance. For example, Moss argues that it requires one to take into awareness that the sensory quality is good-dependent, but this suggestion has been rejected by Ganson(2009), since he maintains that the acceptance requires the design plan of the non-rationalside, but not the recognition of the evaluative judgement. These two accounts surely make the notion of *mere* belief ambiguous, since the former implies that it, by resorting to one's taking something as true, is truth/good dependent, but the latter truth/good independent.

Confronted with the fact that *mere* belief appears ambiguous, I must firstly determine its usage. Given that its ambiguity is exhibited vividly in Moss' interpretation, her account will be my prime target. Specifically, I will (i) illustrate and reject her account by offering my reasons, (ii) analyse the two senses of *mere* belief in her account, and (iii) offer my account of *doxa*.

Clearly, Moss resorts to the reason explanation of action when she interprets *mere* belief. Firstly, Moss clearly states that the interpretation should be the reason explanation, since she holds that the action and the *mere* belief share the same explanation, "appetite and spirit desire pleasures and honour, ... for the same reason that they perceive the stick as bent"[53] (Moss: 65). Given that the action is illustrated by the reason explanation which cites "the agent's desires, intentions, and means-end beliefs"[80] (Wilson: 10), the *mere* belief should also be explained in the similar way. Consequently, when one develops the *mere* belief that the stick is bent, one should have a certain grasp of truth and realize consciously that this notion of truth is satisfied by this belief.<sup>1</sup> Secondly, this can be directly confirmed by Moss' characterization of the non-rationalside which is the agent of *mere* belief, and that "appetite and spirit have beliefs about how things are, including beliefs about what is best or how things ought to be, that they can recognize means to end"[53] (Moss: 65). Obviously, the beliefs about what is best belong to the notion of truth, and the awareness of means to end highlights that this belief can function as a mean to attain the truth. Perhaps this is the reason why Ganson summarizes her approach exactly in the style of reason explanation, "Our non-rational side accepts things *as true*, just as it desires things *as good*"[29] (Ganson: 191).

If Moss's account were adopted, then it would lead to the problem of infinite regress, and would make it impossible for one to formulate *mere* belief. In order to develop the *mere* belief that it is true that a stick is bent, one, based on Moss' account, should reason in advance that its being true requires *x-y-z*, that a stick is bent, and that this belief satisfies the requirement of truth. As a result, the requirement of truth must not only be recognized, but also accepted, in order to be believed. This is a judgement. However, the further belief that being true requires *x-y-z* should also be explained by the reason explanation, hence it should presuppose that one should have grasped a second-order truth previously, but this second-order truth, being a belief, still requires the recognition of the third-order truth, and this process will go on infinitely.<sup>2</sup> If Moss' account is interpreted rigorously, then there will always be a further judgement to be explained, and this makes the development of *mere* belief impossible to begin.

<sup>1</sup>This does not require that one's grasp be complete or correct, but only that there should be some requirements which enable one to rule out one appearance at least, even though this ruling out is, in fact, false.

<sup>2</sup>The similar thought has been defended by Gerson(2018) in his distinction between the necessary truth in math and its truth maker. For more detail, see Gerson(2018), 50.

In addition, Moss' suggestion should be rejected, because it will be self-refuted. Firstly, even if the regress were avoided somehow, the interpretation would contradict the precondition that one can only yield to the appearance. As I have said earlier, it is agreed that one can only accept the appearance, and this makes it impossible for one to doubt the appearance or to develop the distinction between appearance and reality, since "Grasping the idea of how things are-what is true-is beyond a creature that draws no distinction between appearance and reality"[29] (Ganson: 191). Hence it is impossible for one to have the notion of truth when one can only yield to the appearance.<sup>3</sup> Given that Moss' interpretation requires that one should have such a notion of truth based on the reason explanation, and that it should explain the feature of yielding which forbids such a notion, it must be self-refuting, hence it should be rejected. Secondly, Moss' account will imply that the *mere* belief is both rational unrelated and rational related. Obviously, *mere* belief is rational unrelated, since it is developed *unreflectively* which implies the absence of any reason, "why are they able to do so without the aid of reasoning"[53] (Moss: 58), and the absence of reason is "not subject to criticism as rational or irrational"[29](Ganson: 192), that is, rational unrelated. However, Moss' account not only attributes to one the ability to distinguish between appearance and reality, but also the abilities to calculate and compare, all these abilities belonging to reason, rather than the non-rationalside. According to Moss, the non-rationalside can identify its purpose and appropriate means, "appetite and spirit have beliefs about how things are, including beliefs about what is best or how things ought to be, that they can recognize means to end"[53] (Moss: 65), and it always pursues the best which is sorted by the non-rationalside in a certain way, "it[the spirited part] takes honour to make life worth living, and sees it ... above all else" and "it[the appetitive part] thinks gratification the thing most worthy of pursuit"[53] (Moss: 62-63). However, all these activities, including recognizing the possible candidates for the good, ranking them by the same standard, together with pursuing always the best which scores highest in the ranking, and figuring out the appropriate means to the end, require one to compare and contrast according to a certain principle, but none of them is possible without the involvement of reason.

Furthermore, the analysis of Moss' notion of the *mere* belief not only helps one to eliminate her interpretation, but also leads one to discover two senses of the *mere* belief, and hence the three senses of *doxa*. If one pays closer attention to Moss' interpretation, one can see that her interpretation wavers between the passive perceptual judgement and the irrational generic belief, and it is this confusion that causes her account to be inconsistent. Before explaining how this confusion causes the problem, I will first clarify these two kinds of belief. By the passive perceptual judgement, I mean the belief which is caused by one's passively yielding to the appearance without one's recognition of the principle, for example, the visual report that the stick is bent. This can be understood by the function of programmes in a computer, "what computers do when they apply the function as a rule without grasping the function in its universality"[32](Gerson: 48), since it highlights two features of the *mere* belief: one is that its function is fixed in most cases by its design, another is that the awareness of the principle is not required. Perhaps this is why Ganson stresses not only that *mere* belief is caused by perception rather than by reason, "The perception of this painful affection (i.e. pain) triggers a memory of an opposite affection previously cognized by way of perception", but also that it is stable based on the underlying design, "we are designed in such a way that we naturally desire affections which restore the healthy state of the body"[29] (Ganson: 189). By the irrational generic belief, I mean the belief which is caused by the non-rationalside ruling reason. Specifically, that reason

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<sup>3</sup>The implication is also confirmed by Moss, since she also believes that one should have no such distinction in developing the *mere* belief, "none of them, however, gets beyond appearances to the truth" (Moss: 64) and "what it cannot do is to question or criticize such appearances"[53] (Moss: 66).

is consciously used in this case, but it is used as a means, rather than the end, for the non-rational side to adopt or reject a new proposition. Taking Protagoras in the *Theaetetus* as an example, he represents the one holding the irrational generic belief, since he not only constantly appeals to perception, but also takes perception as having the final say, “perception is always of what is, and never plays us false” and as the criterion of the truth, “how each of us perceives a thing is likely also to be how it is for each of us”[69] (*Theaetetus*: 152c; trans. Rowe). In short, it is the conscious awareness of the norm of perception that distinguishes one who holds the *mere* belief from the one with the irrational generic belief.

In order to show that Moss’ confusion causes her notion of the *mere* belief to be incoherent, I will argue: (a) that Moss attributes to *mere* belief both the features of “simply response” and “good-dependence”, (b) that the former feature assumes that the *mere* belief refers to the passive perceptual judgement, and (c) that the latter presupposes that it denotes the irrational generic belief. If this is the case, then Moss’ usage of the *mere* belief is ambiguous, and this causes her notion of the *mere* belief to be incoherent.

Regarding the feature of “simply response”, Moss assumes the passive perceptual judgement in her account of *mere* belief. Firstly, when Moss explains the meaning of “simply response”, she argues that this process occurs naturally without the involvement of reason, “Why are they able to do so without the aid of reasoning? Surely because such qualities seem simply manifest, as ordinary sensory qualities are”[53] (Moss: 58). Hence this does not require one to consciously recognize the notion of truth, and satisfies the requirement of passive perceptual judgement. Secondly, this is not only confirmed by the conclusion that the non-rational side pursues “what simply strikes them as manifestly worth having”[53] (Moss: 57), but also by Moss’ argument for this conclusion. The evidence for this conclusion include (i) that the response comes in a natural way without conscious awareness of the criteria, “[Affect] can have authority in the matter of what we should desire and do[i.e. in matters of value] ... [It] silences any demand for justification”[44] (Johnston: 189), and (ii) that the response, perhaps because being unreflective, is stable and repeatable, “Children—in whose souls reasoning is not yet present, but spirit is already strong (441 A-B)—cannot yet understand what is good and bad, or why; they can, however, be trained to form judgements and passions regarding the fine and the shameful”[53] (Moss: 57-58). Given that the passive perceptual judgement is a stable response to the appearance without one’s conscious awareness of the principle, it is appropriate to maintain that it is because of the passive perceptual judgement that Moss attributes the feature of “simply response” to the *mere* belief.

Regarding the feature of “good-dependence”, Moss explains *mere* belief as being the irrational generic belief. Firstly, when Moss gives an example of *mere* belief, she explains it by highlighting the requirements of the irrational generic beliefs. According to Moss, one may stick to a *mere* belief even when it is falsified by reason, “such a part[the soul limited to appearances] may believe a submerged stick bent even when the rational part has calculated that it is straight” (Moss: 63), and this implies that the reason is involved in the formulation, also that it is overruled by the non-rational side, “souls ruled by appetite or spirit err on account of their confused notions of the good”[53] (Moss: 62), hence it satisfies the requirements of the irrational generic belief. Secondly, this can also be confirmed by Moss’ argument for the conclusion that *mere* belief is good-independent. Moss’ reasoning runs as follows: to form a *mere* belief, one should have a notion of good, “all desire is for things *qua* good”[53] (Moss: 61), and one, to achieve this purpose, ranks the candidates by means of the non-rational side rather than by reason, “what genuine *is* does not appear (is not manifest, obvious, accessible without abstruse calculation), while what appears to most people is not what is real and true”[53] (Moss: 63), and finally, one takes the highest score as the criteria of truth for one’s regulation, “the spirited part does not merely want honour ... and sees it as ‘to be gone for’ above all else”[53] (Moss: 62-63). Given that the irrational generic belief requires both the conscious awareness of the notion of truth



and the non-rational side ruling reason, it is appropriate to maintain that it is in virtue of the irrational generic belief that Moss attributes the feature of good-dependence to *mere* belief.

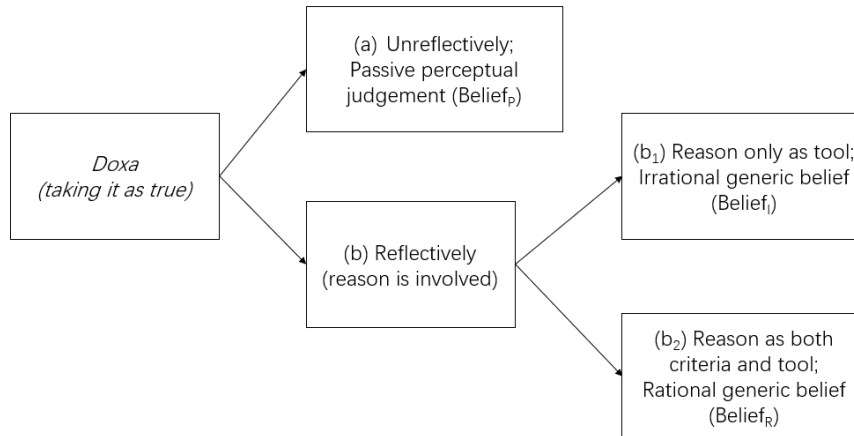


Figure 4.1: Different kinds of *doxa*

Although Moss' interpretation of *mere* belief is ambiguous, it actually maps out two different kinds of *doxa*, that is, the passive perceptual judgement and the irrational generic belief, and this has not been fully appreciated before. More importantly, this discovery uncovers a new structure of *doxa* as in the figure above, and this illustrates my different usages of *doxa*. The *mere* belief denotes the passive perceptual judgement (Belief<sub>P</sub>), hence it requires that the response is stable, but not the conscious awareness of the standard of truth. For instance, the natural response of the wild beast or the new-born baby when they are struck by the manifest appearance is a typical example, "And it is yet another thing to grasp the manifestation without knowing that it is a manifestation of that function. This last cognitive achievement is what children do in basic arithmetic before they learn algebra"[32] (Gerson: 48). The irrational generic belief (Belief<sub>I</sub>) requires that reason is used in its development, and that the reason is ruled by the non-rational side. For instance, Protagoras' account of knowledge in the *Theaetetus* is an example of irrational generic belief, since reason is used to maintain the consistency of the system, and the suggestion made by the reason can be rejected by the non-rational side. The rational generic belief (Belief<sub>R</sub>) refers to the belief which may become knowledge, and it requires not only that reason is employed, but also that it is the standard of the truth. One example would be Theodorus' grasp of the knowledge when he is guided by Socrates, since he realizes that the definition by perception violates the requirement of reason, but he, differing from Protagoras, values reason more than perception by rejecting the definition.

In conclusion, I have rejected Moss' account of the *mere* belief, because her account wavers between two senses. However, the refutation not only helps me to eliminate an interpretation of *mere* belief, but also guides me to come up with a new account of *doxa* which is composed of three kinds: Belief<sub>P</sub> in which reason is devoid, Belief<sub>I</sub> in which reason is ruled by the non-rational side, and Belief<sub>R</sub> in which reason functions both as the norm and the tool to keep the system consistent. Following this line of thought, the *mere* belief refers to Belief<sub>P</sub> in my dissertation, and the *doxa* refers to all these three kinds of beliefs.

### 4.1.2 Being and F-ness

Having identified the meaning of “*doxa*” in my statement that *doxa* is connected with being, now it is time to explain the term “being”. Given that the term “being” is heavily loaded and that its definition is complicated, I do not intend to invent a brand new account, but only to adopt an established account which is proper to Plato’s characterization of *doxa*.

Clearly, *doxa*, especially Belief<sub>R</sub>, has something to do with being. This is confirmed in Plato’s dialogues. Firstly, *doxa* is related to being in the *Theaetetus* through its agent, that is, reason. Clearly, the agent of *doxa* is reason, and this can be verified at *Theaetetus* 189e when Socrates offers the definition of *doxa*, “The image I have of the soul as it is in thought is exactly of it as in conversation with itself”[69] (*Theaetetus*: 189e; trans. Rowe), and at *Theaetetus* 186a when Theaetetus explains the role of calculation in developing *doxa*, “These [beautiful and ugly, good and bad] too ... are more than anything things whose being the soul examines in relation to one another”[69] (*Theaetetus*: 186a; trans. Rowe).<sup>4</sup> Given that the proper object of reason is being, “Whereas what our soul tries to judge by itself, going close up to them and comparing them with each other, is their being”[69] (*Theaetetus*: 186b; trans. Rowe), *doxa* is connected with being based on Socrates’ explanation of *doxa* in the *Theaetetus*. Secondly, this connection between *doxa* and being is also defended by Lott’s(2011) explanation of belief formation, “I take it that Plato’s point is that when someone forms a belief, this belief is formed with the explicit intention of grasping being (representing correctly)”[48] (Lott: 359), and by Moss’(2014) Appearance-Assent Account of Plato’s *doxa*, “Perception lacks access to being; the activity of investigating being is *to doxazein*, forming *doxai*”[54] (Moss: 229).

Although it is easy to establish the connection between Belief<sub>R</sub> and being, it is not simple to determine the definition of being, since there are multiple possible candidates. According to Lee’s(2010) summary, there are three typical interpretations of being in Plato’s dialogues: (1) based on the existential reading, x is what *is* iff x exists, x both *is* and *is not* iff x both exists and does not exist, x is what *is not* iff x does not exist or is not anything at all; (2) according to a predicative reading, x is what *is* iff x is really F (for some predicate F), x is both *is* and *is not* iff x is F and not F, and x is what *is not* iff x is not F by any means; (3) based on a veridical reading, x is what *is* iff x is true, x is both *is* and *is not* iff x is and is not true, and x is what *is not* iff x is false.<sup>5</sup> In fact, even if the candidates were restricted to these three basic accounts, it would not be easy for one to choose between them, since each reading “has advantages not shared by the others” and “continues to have defenders as well as critics”[46] (Lee: 863).

However, the obstacles can be overcome by adding the relevant context. Given that my purpose is not to pin down the official account of Plato’s being in general, but to determine the account proper to Plato’s *doxa*, and that the object of *doxa* is supposed to be the particulars, the appropriate approach should be the predicative reading, since this has been implied by the critics when they interpret Plato’s *doxa*. Firstly, to analyse whether a particular is really F has been defended as the distinctive feature of Plato’s *doxa*. This can be supported by Lott’s Realist Reading of being in his explanation of *doxa* at *Theaetetus* 184-7, which is “to find out whether abstract properties like sameness and beauty (186A2-B1) or perceptual properties like hardness (186B2-9) really apply to given objects”[48](Lott: 352), and by Moss’ Appearance-Assent account of *doxa* whose purpose is to determine whether x is really F, “its thought is directed not toward

<sup>4</sup>As I will show later, the *doxa* here is more likely referring to Belief<sub>R</sub> only, rather than all kinds of *doxa*.

<sup>5</sup>Apart from these three basic accounts, I can also list other possible accounts: on the one hand, it is the compound reading based on these three basic accounts, for example, the account which is composed of existential and predicative reading, and on the other hand, it is the interpretation which focus more on the syntax aspect, for example, it should be interpreted as the copula which makes possible the proposition. I admit that there are other possible interpretations of being, but I will confine myself to the basic interpretations here.

the appearance, but toward the object ‘as it is’, that is, to the object itself”[54] (Moss: 224). Secondly, the predicative reading of being is implied by this kind of analysis. If it appears to one that one’s computer is hard, and one is offered the account of Moss or Lott, that is, the *doxa* is true if the computer in the external world is really hard under the condition of the appearance, one, by acknowledging that this computer is soft by comparing to the diamond, has to answer that it is both hard and not hard, but not truly hard. This is exactly the characterization of the predicative reading.

Given that being should be interpreted by the predicative reading in interpreting Plato’s *doxa*, being should be understood as the corresponding Form or F-ness. Consequently, my statement that *doxa* is connected with being should be interpreted as meaning that each kind of *doxa* is connected with its F-ness.<sup>6</sup>

### 4.1.3 Being connected and attempting to grasp

Having determined the meaning of “*doxa*” and “being” in my statement, now it is time to figure out the definition of “being connected”. In this part, I will argue that “being connected with F-ness” should be interpreted as one’s aiming at F-ness, and that this is achieved by recognizing the formal properties of Forms, but not necessarily grasping the essential properties of F-ness.

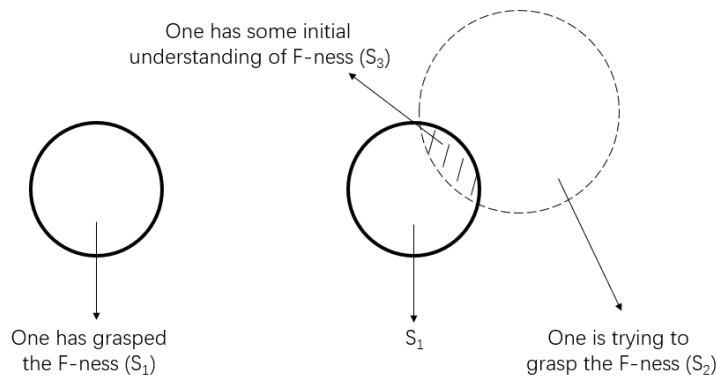


Figure 4.2: The illustration of attempting to grasp F-ness

Although it is evident that the *doxa*, especially  $\text{Belief}_R$ , should be connected with F-ness, it is unclear how they are connected. According to Lott, there are, at least, two contenders in interpreting the relation: one is seizing F-ness in one’s awareness just like one holds a pen in hand, and another is merely trying to grasp F-ness which implies that F-ness has not been fully recognized. Their relation is illustrated in the figure above: the small circle on the left side,  $S_1$ , represents the grasp of F-ness, and the dotted circle on the right side,  $S_2$ , represents the attempt to grasp F-ness, and the slashed area,  $S_3$ , represents the partial understanding of F-ness.<sup>7</sup> More importantly, it is through the recognition in  $S_3$  that one is qualified as attempting to grasp F-ness, since this recognition offers one a solid foundation to search for F-ness, and makes it possible for one to increase one’s recognition of F-ness.

<sup>6</sup>I had better distinguish Forms and F-ness in my dissertation: by Forms, I refer to Forms in general, but by F-ness, I refer to the particular Form which corresponds to that property F.

<sup>7</sup>I do not mean that F-ness can be divided by this figure, since the space represents the cluster of descriptions which select F-ness, and part of it portrays a certain necessary condition of F-ness.

Apart from this, more implications of attempting to grasp F-ness should be noted. Firstly, the partial understanding of F-ness can differ, hence there might be competing systems with  $S_2$ , for example,  $S_4$  which highlights the different parts of F-ness. Secondly, when one merely attempts to grasp F-ness, one is not guaranteed to attain F-ness, hence one may end with incomplete cognition of F-ness, either  $S_2 > S_1$  or  $S_2 < S_1$ . Thirdly, one actually grasps F-ness only when one's cognition of F-ness is complete, that is, when  $S_2 = S_1$ .

Provided with these two interpretations of the relation, I will argue that it cannot be grasping F-ness, and this is for two reasons.

If being connected with F-ness is interpreted as grasping F-ness, then this will make the relation itself incoherent and unclear. Firstly, the relation itself would be inconsistent if grasping F-ness means that one acquires F-ness completely. Given that the recognition of F-ness is complete in *noesis*, and it is superior to that in *doxa*, it is natural to infer that the recognition of F-ness in *doxa* should be incomplete. Given that this interpretation grants that one has grasped F-ness which is to acquire F-ness completely as in *noesis*, one also acquires F-ness incompletely which is implied by the fact that *doxa* is inferior to *noesis*, the interpretation then is inconsistent. Secondly, even though acquiring F-ness completely can be divided into multiple kinds by one's internal status, for example, if one explicitly grasps F-ness in *noesis*, but only dimly grasps F-ness in *doxa*, the latter notion would lack textual support. This has been argued by Lott, 'It seems that Plato simply lacks the relevant concept for 'dim awareness' or 'cognitive access''[48] (Lott: 343). Thirdly, even though the dim awareness of F-ness were granted, it would only be shooting oneself in the foot, since it uncovers more problems entailed in this notion. For example, how to characterize this notion of *dim awareness*. Is it a complete grasp of F-ness which is unclear, or is it a clear but partial grasp of F-ness, etc.<sup>8</sup> If it is a clear but partial grasp, then which part of F-ness is attained by the subject? If the partial grasp is to recognize a particular necessary condition of F-ness, then will this attainment change from person to person, or from time to time?

If being connected with F-ness is interpreted as a clear but partial grasp of F-ness, then this will contradict the characterization of *doxa*. Firstly, suppose the clear but partial grasp of F-ness were granted, it would be inconsistent with the requirement of effort in attaining the partial grasp of F-ness. Given that  $\text{Belief}_I$  is viewed as the typical *doxa* by most critics, and that one has a clear but partial grasp of F-ness based on this interpretation, it implies that the non-rational side is able to recognize a certain part of F-ness even when one is disordered. More importantly, the controlling principle of  $\text{Belief}_I$  is one's subjective likes or hates, and hence the ability to appreciate F-ness in *doxa*, though partially, should come spontaneously, but this would be inconsistent with the fact that the clear grasp of any part of F-ness comes only with great effort, "whereas calculations about these ... come ... only with difficulty, late on, and after much trouble and education"[69] (*Theaetetus*: 186c; trans. Rowe). Secondly, if one were granted the dim awareness of F-ness in developing the *doxa*, this would obscure the distinction between *doxa* and *episteme*. Given that one has a clear but partial grasp of the F-ness in each formation of the *doxa*, it is theoretically possible for one to accumulate the complete grasp of F-ness piece by piece, hence the relation between *doxa* and *episteme* will be one of part and whole, but this obviously violates the doctrine that *doxa* can never be *episteme*.

Having clarified these terms in my statement that *doxa* is connected with being, my position

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<sup>8</sup>I intend to agree that the dim awareness can only be a clear grasp of some part of F-ness, if the awareness is possible. Given that the agent of  $\text{Belief}_R$  is reason, and its object is F-ness, it is natural to argue that the grasp of F-ness in  $\text{Belief}_R$  should be clear, since this is what the reason is designed for. If the awareness of F-ness in  $\text{Belief}_R$  is dim, it must be a clear but partial grasp of F-ness.

becomes more specific, that is, each kind of *doxa* is attempting to grasp the corresponding Form, but none of them has fully grasped F-ness yet.

## 4.2 The attempt to grasp F-ness

In order to establish my conclusion that all kinds of *doxa* are Form-directed, I will (1) explain Form-directedness by resorting to the intentional interpretation of truth-directedness, (2) illustrate some of the advantages of adopting this approach, and (3) examine the two arguments offered by Moss(2020) which serve to show that *doxa* cannot be of Forms.

### 4.2.1 Each kind of *doxa* is truth-directed

Although I have offered some intuitive characterizations of the attempt to grasp F-ness, I should investigate this notion in depth, and explain how *doxa* is Form-directed, since this feature differentiates *doxa* from *episteme*, and unifies all the different kinds of *doxa*.

In order to explore the implications of attempting to grasp F-ness, I will resort to the intentional interpretation of truth-directedness, which maintains that one attempts to obtain the truth when one has “(a) the conscious recognition of the basic norm of truth and (b) the intention to respect and maintain this norm in the formation of one’s beliefs”[25](Engel: 84).<sup>9</sup> Consequently, for one to try to grasp F-ness, one should be aware of some controlling principles which one has adopted in advance, and refuse the new proposition which violates these principles.<sup>10</sup>

Now, I will show that both  $\text{Belief}_R$  and  $\text{Belief}_I$  satisfy these requirements and are truth-directed, and that  $\text{Belief}_P$ , though failing to satisfy them, can also be viewed as truth-directed in a loose sense.

To begin with,  $\text{Belief}_R$  is truth-directed, since its controlling principle is implied by F-ness, and its regulation is dependent on reason. This can be illustrated by the fact that Theaetetus abandons his account of knowledge, but still persists in searching for the definition, when guided by Socrates.<sup>11</sup> Specifically, he rejects the definition because it is developed in disobedience of reason, that is, the definition is not consistent with the controlling principle, and he continues searching because the controlling principle he adopts, for instance, if a particular is F then it instantiates F-ness, presupposes the existence of F-ness. Hence this fact confirms that  $\text{Belief}_R$  satisfies the intentional account. The close relation with F-ness in both principle and regulation explains why Socrates attributes being or F-ness to the calculation in developing the *doxa*, “calculations about these, in relation to their being or the benefit they bring”[69] (*Theaetetus*: 186c; trans. Rowe), and to its outcome, “what our soul tries to judge by itself, going close up to them and comparing them with each other, is their being” (*Theaetetus*: 186b). This also confirms that the reference of *doxa* here should be  $\text{Belief}_R$ .

<sup>9</sup>Although different accounts of truth-directedness have been distinguished by Engel(2004), I, being persuaded by Lott’s(2011) argument, will agree that the intentional account is the most appropriate one to interpret Plato’s *doxa*, “I think that the notion of truth-directedness of belief in later Plato is probably closest to (3), i.e. teleological account”[48](Lott: 359).

<sup>10</sup>This reminds one of the classical foundationalism, “A belief is acceptable for a person if (and only if) it is either properly basic (i.e., self-evident, incorrigible, or evident to the senses for that person), or believed on the evidential basis of propositions that are acceptable and that support it deductively, inductively, or abductively”[62](Plantinga: 76). I think such association is helpful, since the reason why a new proposition is adopted as *doxa* is either that it is among the controlling principles which is basic for the subject, or that it is implied by these principles, for example, being deduced from the principles.

<sup>11</sup>Although this is only one example, its constitution is quite common in Plato’s dialogues, hence its force in reasoning should not be ignored.

Generic belief		Controlling principle is implied by F-ness	The adoption of the new proposition conforms to reason
Belief <sub>R</sub>		√	√
Belief <sub>I</sub>	Case 1	√	X
	Case 2	X	√
	Case 3	X	X

Figure 4.3: Three cases of the irrational generic belief

In addition, these two requirements not only explain that Belief<sub>I</sub> is truth-directed, but also help one to better understand Belief<sub>I</sub>, since one will arrive at three cases of Belief<sub>I</sub> depending on whether their controlling principle is implied by F-ness and whether the acceptance of the new proposition conforms to reason. This has been illustrated in the figure above. Case 1 refers to the situation in which one's controlling principles are implied by F-ness, but one's regulation in adopting the new proposition is inappropriate. For example, when one mistakenly adopts a proposition which violates the controlling principles, one does not fulfil one's obligation in operating by reason, since one gives assent to a proposition which should be rejected. However, for one to regulate one's opinion by reason, one "should believe a proposition p with a firmness that is proportional to the degree to which p is probable with respect to what is certain"[62] for one (Plantinga: 72), hence when mistakenly accepts a problematic proposition, one is not using reason properly. Case 2 refers to the situation in which the controlling principles do not comply with F-ness, but the system which is based on these principles is consistent, or, at least, alleged to be consistent. This can be best illustrated by Protagoras' account of knowledge whose controlling principle is that knowledge is perception, "perception is always of what is, and never plays us false"[69] (*Theaetetus*: 152c; trans. Rowe). Protagoras, when facing the inconsistency in his system, tries to keep his account as consistent as possible, and this implies that Protagoras agrees that the system should be consistent, though his controlling principle disobeys the requirement of F-ness. Case 3 refers to the situation in which both the controlling principle and the regulations are problematic. This case can be demonstrated by the "Tenacity" summarized by Kaag(2012): on the one hand, the basic principles are not adopted by reason but by the non-rational side, "belief is determined by our own subjective likes or dislikes", and on the other hand, the refutation of a new proposition is not determined by its conforming to the principles, but "[it] is protected by a willful shortsightedness when it comes to examining those factors that might jeopardize our particular preferences"[45] (Kaag: 516).

Although the intentional account of truth-directedness cannot be satisfied by Belief<sub>P</sub>, it can be truth-directed in a loose sense. Belief<sub>P</sub> fails to satisfy the intentional account, since it is neither capable of regulating its adoption based on reason, nor able to recognize consciously the formal properties of F-ness which are available only to reason, provided that the agent of Belief<sub>P</sub> is the non-rational side and that reason is absent in any sense. However, it is truth-directed in the causal sense, since "it disposes a subject to behave in certain ways that would tend to realise her desires if the proposition towards which it is directed is true"[25] (Engel: 79). In short, Belief<sub>P</sub> is truth-directed, since one tends to accept a proposition when its implied behaviour can satisfy one's desire, but to reject it when the behaviour cannot. Given that one has the tendency to

drink when one is thirsty and to eat when one is hungry, “Whoever among us is emptied, it seems, desires the opposite of what he suffers”[20](*Philebus*: 35a; trans. Frede), and that this tendency can actually help one to satisfy the corresponding desire, hence  $\text{Belief}_P$  is truth-directed in the causal sense. The same conclusion can also be drawn from the design plan of  $\text{Belief}_P$ . Given that the design plan, which rules the disposition, is programmed into the non-rational side, “it is this memory that directs it towards the objects of its desires, our argument has established that every impulse, and desire, and the rule over the whole animal is the domain of the soul” (*Philebus*: 35d), and that its purpose must be good when one is ordered, “For the gods who created us bore in mind that their father had ordered them to make the human race as good as possible, and so they organized even our base part so that it might have some kind of contact with truth”[36] (*Timaeus*: 71d; trans. Waterfield), one is disposed to grasp the truth. Consequently, each kind of *doxa* is truth-directed, and this marks off a distinctive feature of *doxa*.

This notion of truth-directedness should be adopted in interpreting *doxa*, since it, as I have argued above, enables one to discover a new way of conceiving of the  $\text{Belief}_I$ , and helps one to unify the many different kinds of *doxa*. Apart from these two advantages, one further benefit should be noted, that it makes it possible that one is in contact with *Form* without grasping or partially grasping the relevant *Form* in the formation of *doxa*.

Cognition		Having a disposition which is Form-directed	Recognizing the formal properties of F-ness	Having grasped the essential properties of F-ness
<i>Doxa</i>	$\text{Belief}_P$	√	X	X
	Case 2 and 3 of $\text{Belief}_I$	√	X	X
	$\text{Belief}_R$ and Case 1 of $\text{Belief}_I$	√	√	X
<i>Noesis</i>		√	√	√

Figure 4.4: The dissimilarities and similarities between all kinds of *doxa*

When I argue that the relation between F-ness and the agent cannot be a fully grasp of F-ness, I also dismiss the possibility that one has a clear and partial grasp of F-ness. Following this line of thought, it seems that my interpretation of attempting to grasp F-ness should also be dismissed, since according to my interpretation, one, in formulating  $\text{Belief}_R$ , should recognize its controlling principle, and that the principle is implied by F-ness which implies an awareness of F-ness. To solve this problem, one needs to distinguish the essential properties which are implied only by the target F-ness from the formal properties which are implied by all the Forms. I can list multiple formal properties of Forms, for example, that Forms should be one or absolute, that the particular is F because it instantiates F-ness, and that the particular is both F and not F, etc. According to my interpretation, when one formulates  $\text{Belief}_R$  about property F, one recognizes the formal properties of F-ness. For example, the Hardness should be absolute, but this recognition does not come from one’s understanding of Hardness itself, but from one’s cognition, either actively or passively, of the Forms in general. Hence it is possible for one to be “ignorant” about the essential properties of Hardness in formulating the *doxa*.

Therefore, I, by borrowing the intentional interpretation of truth-directedness, have explained that the feature of truth-directedness can be applied to  $\text{Belief}_I$  and  $\text{Belief}_R$ , and also to  $\text{Belief}_P$

in a loose sense. Moreover, this account is favourable, since it helps one (a) to further arrange the different cases of  $\text{Belief}_I$ , (b) to recognize that it is because of truth-directedness that each of them is *doxa*, and (c) to make it possible that one is in contact with F-ness without grasping the essential properties of F-ness.

### 4.2.2 From truth-directedness to Form-directedness

Apart from the previous benefits provided my interpretation, one more advantage should be emphasized here, that is, it can explain why *doxa* is Form-directed, and illustrates the hierarchy in Form-directedness between these kinds of *doxa*. Specifically, I will explain why some kinds of *doxa* are more Form-directed than other kinds, based on their differences in either the recognition of principles or the regulation of the assent to a new proposition.

Given that I must explain why  $\text{Belief}_I$  can lead one closer to F-ness compared to  $\text{Belief}_P$ , and that I have divided  $\text{Belief}_I$  into three cases, it seems that all three cases should be included, but only Case 2 will be discussed here. Firstly, neither Case 1 nor Case 3 can be a distinctive example for illustrating  $\text{Belief}_I$ . On the one hand, the comparison with Case 3 is too hard to operate since neither its principle nor its regulation is stable, and on the other hand, the comparison with Case 1 relies more on the acceptance of the formal properties of F-ness, and this is a distinctive feature of  $\text{Belief}_R$  rather than of  $\text{Belief}_I$ . Secondly, Plato's major concern with  $\text{Belief}_I$  resides more in Case 2, rather than the other cases. Obviously, the interlocutors' beliefs are Socrates' main concern, and they are assumed to accept the principle that the system should be consistent, which makes Socrates' persuasion possible. Hence one should regulate one's adoption of a new proposition by reason, even though one is limited to  $\text{Belief}_I$  as Protagoras is. This characterization of the interlocutors' case is exactly what occurs in Case 2, since the regulation is accepted as being reasonable, but the controlling principle is problematic.<sup>12</sup>

Having qualified my discussion, now it is time to explain why the Case 2 of  $\text{Belief}_I$  is more Form-directed than  $\text{Belief}_P$ , and why it is less so than  $\text{Belief}_R$ .

To begin with,  $\text{Belief}_I$  can lead one closer to F-ness, compared with  $\text{Belief}_P$ , since  $\text{Belief}_I$  can give one some possibilities of proceeding toward the formal properties of F-ness by respecting the requirement of consistency, but neither of them is available to one with  $\text{Belief}_P$ . Naturally, one, with  $\text{Belief}_P$ , is unlikely to be consciously aware of F-ness, since one would recognize neither the controlling principle nor the obligations of applying reason. Although  $\text{Belief}_P$  is truth-directed in the causal sense, the default disposition, which is supposed to guide one to F-ness, is contaminated by the disharmony in the soul, and this causes one to repeat the falsity again and again, hence it is impossible for one to correct one's previous mistakes, and to turn around given that one is not ordered and trapped in  $\text{Belief}_P$ .

However, Case 2 of  $\text{Belief}_I$  differs from  $\text{Belief}_P$  in two ways. Firstly, Case 2 of  $\text{Belief}_I$ , differing from  $\text{Belief}_P$ , requires one's respect for consistency, and this makes it possible for one to advance from  $\text{Belief}_I$  to  $\text{Belief}_R$ . Specifically, if one appreciates the requirement of consistency, one will realize that the present theory should be abandoned in virtue of its innate incoherency, and by replacing the inappropriate principles with the more promising ones, one will have a better chance to attain the formal properties of F-ness. Secondly, even if one did end at another problematic controlling principle, this "unlucky" attempt would prepare for one's advance, since it would develop one's proficiency in using reason correctly, which is required in both  $\text{Belief}_R$  and *noesis*. For example, the one who tries to avoid the "Cold Wind" Argument and sticks to the definition that knowledge is perception, is less competent than the one who rejects the definition

<sup>12</sup>This is also consistent with the case of *turning around* in the cave which is Socrates' prime concern, since only Case 2 can lead the prisoner to realize the defect in  $\text{Belief}_I$ .



for its inconsistency, and approaches the definition of knowledge in other ways, since the latter is more experienced in maintaining one's opinions reasonably, and this experience provides one with more preparation for the recognition of the formal properties of F-ness.

In addition,  $\text{Belief}_R$  can guide one nearer to F-ness, compared with  $\text{Belief}_I$ , since it requires one's recognition of the formal properties of F-ness, but this is unavailable to  $\text{Belief}_I$ . Firstly, one is more likely to attain more formal properties of F-ness if one is equipped with some correct controlling principles, compared with the one whose controlling principles are completely false. Obviously, when one with  $\text{Belief}_I$  searches for the definition of F-ness, one has no chance of grasping F-ness.<sup>13</sup> However, when one with  $\text{Belief}_R$  seeks to expand the formal properties of F-ness, their exploration is based on a non-false foundation, and this, though not ensuring the attainment of more properties, makes one's attempt to expand the formal properties of F-ness at least possible. Secondly, even if one did fail to grasp more formal properties of F-ness, these unsuccessful attempts would guide one closer to F-ness by eliminating the obvious falsities. When one is confronted with new accounts which violate the principle, one, by refuting the problematic accounts, never adopts the false definitions. Thus one has a better chance of grasping the additional formal properties of F-ness, since the remaining candidates are more likely to be correct.

Therefore, not only is it possible for *doxa* to be in contact with Forms, but each kind of *doxa* is also able to direct one closer to F-ness.  $\text{Belief}_I$ , compared with  $\text{Belief}_P$ , can lead one closer to F-ness, because the insistence upon being consistency can give one some possibilities of approaching the formal properties of F-ness by recognising the incoherence in the present account which is impossible for one with  $\text{Belief}_P$ .  $\text{Belief}_R$ , compared with  $\text{Belief}_I$ , guides one closer to F-ness, because the attainment of the formal properties of F-ness gives one a possibility to reach the properties of F-ness which is unavailable to one with  $\text{Belief}_I$ .

### 4.2.3 *Doxa* cannot be of Forms?

One last advantage of my interpretation can be captured by the examination of Moss'(2020) two arguments whose conclusion is that the *doxa* cannot be of Forms, since my interpretation not only offers the counterexample of her position, but also explains why her arguments fail.

Moss' first approach is to elevate the *doxa* which is clearly about F-ness to the level of *dianoia*. Let us call it the *Elevation Argument*. This argument begins by identifying *dianoia* as the cognition between *noesis* and *doxa*.<sup>14</sup>

P<sub>1</sub>: Plato does in fact recognize a category between knowledge and *doxa*.

P<sub>2</sub>: *Dianoia* can fill the gap between *doxa* and knowledge.

C<sub>1</sub>: Therefore, *dianoia* is a cognition which is inferior to knowledge but superior to *doxa*.

Having fixed the place of *dianoia*, Moss infers that *doxa* cannot be of Forms by resorting to the Distinct Objects epistemology.

P<sub>3</sub>: According to the Distinct Objects epistemology, the object of *dianoia* should be superior to that of *doxa*, but inferior to that of knowledge, that is, a complete grasp of F-ness.

<sup>13</sup>It is possible for one to acquire certain formal properties of F-ness by chance, but this cannot be viewed as one's recognition of F-ness, since this is not stable.

<sup>14</sup>These premises and conclusions are summarized from Moss(2020), 203-204.

C<sub>2</sub>: Therefore, the grasp of F-ness in *dianoia* is a partial grasp of F-ness.

C<sub>3</sub>: Therefore, *doxa* cannot be of *Forms*.

Moss accepts that Socrates' beliefs about the Good are the generic taking-to-be-true beliefs, but she does not view it as *doxa*, since she elevates it from *doxa* to *dianoia*. Her reason resides in the fact that Socrates has some robust grasp of the Form, "What I go on to say about *dianoia* will show that Plato does in fact recognize deficient thoughts that are nonetheless in a robust sense about Forms" (Moss: 214), and this robust grasp or partial grasp comes from the fact that he "relates the similes of Sun, Line, and Cave, and refers to them as 'what seems to him'" [78] (Vogt: 53). Consequently, Socrates' has a partial grasp of F-ness, because he offers the positive characterizations of the Good through the images or similes above, without taking them as reality.

I admit that Socrates' beliefs about the Good can be *dianoia* and superior to *doxa*, by resorting to these two features, and I agree with Moss's C<sub>1</sub> that *dianoia* should be the cognition in between *noesis* and *doxa*, but still, I cannot see why this implies that *doxa* cannot be of Forms, since her inference from C<sub>2</sub> to C<sub>3</sub> is not convincing.<sup>15</sup> Specifically, must the grasp of Forms in the *doxa*, if possible, be non-existent? given that it should be inferior to the partial grasp of F-ness. It is true that one whose grade is F is inferior to anyone who passes the exam, but it does not imply that one has no score at all, or that one does not participate in the exam.

To make my objection concrete, I will portray the interlocutors' beliefs which are the counterexamples of her inference, since their beliefs are inferior to both *noesis* and Socrates' beliefs, but they are also related to F-ness, based on my distinction between the substantial and formal properties of F-ness. Specifically, I will first explain that the interlocutors' beliefs are about the formal properties of F-ness when they are taught by Socrates, then illustrate how their beliefs cannot be *dianoia*, and finally arrive at my conclusion that *doxa* can be of Forms.

The interlocutors' true beliefs about F-ness, guided by Socrates, should be related to the formal properties of F-ness, since they are regulated by the formal properties of F-ness. These beliefs include Theaetetus' true belief that knowledge is not perception, and Hippias' true belief that beauty is not the beautiful girl, etc. Once Theaetetus recognizes the innate inconsistency in Protagoras' account, he abandons this definition, and turns to other options, "Evidently not, Socrates. It has become as clear as it could be, especially now, that knowledge is something other than perception" [69] (*Theaetetus*: 186e; trans. Rowe), and this response differentiates him from Protagoras, since the same principle of perception is rejected by him but still adopted by Protagoras when they face the same incoherence caused by this definition.

Although Theaetetus rejects this account because it fails to satisfy the requirement of consistency, the requirement can be interpreted in ways other than consistency, for example, the principle that the Forms should be absolute or self-identical. Consequently, given that perception is knowledge based on Protagoras' account, and that perception has no claim to truth, this account obviously violates the principle that the Forms should be absolute since it is not true all the time, and the principle that Forms should be self-identical since the same knowledge is both perception and not perception. In other words, when the interlocutors are persuaded by Socrates to refute a certain account, the fact they are obeying the requirement of consistency implies that they adopt a certain notion of Forms, for example, all the Forms should be absolute, etc. Provided that the formal properties of F-ness are the properties which can be applied to all the Forms, it is reasonable to argue that the interlocutors are maintaining their adoption by the formal properties of Forms, and that their true beliefs are correlated with F-ness.

<sup>15</sup> Although this conclusion is based on abduction whose validity is controversial, I will give it a pass.

Cognition	Its relationship with Forms	Its relationship with the particulars
<i>Dianoia</i>	Controlling principles are positive properties of F-ness.	It goes beyond all the particulars.
The interlocutors' beliefs (Belief <sub>R</sub> )	Controlling principles are formal properties of F-ness.	It goes beyond this particular, but does not go beyond all particulars.
Belief <sub>I</sub>	Controlling principles violate the properties of F-ness.	It rests at this particular, without going beyond this particular.

Figure 4.5: The distinction between *dianoia* and the interlocutors' beliefs

Not only can the interlocutors' beliefs be of Forms, they are also resistant to elevation to the level of *dianoia*. Firstly, the interlocutors, as students, are guided by Socrates, hence this implies that their beliefs should be inferior to Socrates' belief, that is, inferior to *dianoia*. I agree with Moss that Socrates' true beliefs are *dianoia*, and this is because that he can recognize the incompatibility in their accounts *independently*, and also that he has a robust grasp of what the Form is. However, the fact that the interlocutors must be *guided* to recognize the inconsistency in their view implies that they do not have the ability to discover their incoherency merely by themselves. Additionally, the fact that they can only refute the problematic account without suggesting a promising direction of inquiry implies that they have no grasp of the substantial or peculiar properties of F-ness. Hence their cognition cannot be *dianoia*. Secondly, it is possible for the interlocutors to take the particulars as the realities even after they reject these accounts, and this violates the conditions of *dianoia*. For example, when Hippias refutes the definition that Beauty is a beautiful girl, he turns to the account that Beauty resides in gold, hence one can still be limited to appearance even when one holds a true but negative belief of F-ness. Given that *dianoia* requires one to go beyond the appearance, and that the interlocutors do not go beyond all of the particulars, the interlocutors' beliefs are not necessarily *dianoia*. As a result, these interlocutors' beliefs, being different from Socrates' beliefs categorically, must be Belief<sub>R</sub> rather than *dianoia* as the figure above shows, and they grasp the formal properties of Forms in developing these negative generic taking-to-be-true beliefs about F-ness.

The second argument runs as follows: one with *doxa* cannot "recognize the existence of Forms" and is unable to think "'for the sake of them[Forms]' without yet fully grasping them"[55] (Moss:206), since one takes perceptibles as ultimate reality in developing *doxa*. Differing from the previous argument which elevates Socrates' beliefs to *dianoia*, this argument focuses on the beliefs which cannot be elevated, and it attributes one's failure in grasping the Forms to one's yielding to the particulars. Although I agree with Moss that the interlocutors perhaps are not aware of the existence of the Forms, and that they are confined to particulars, I find this argument can also be falsified by pointing to the interlocutors' beliefs. Specifically, when the interlocutors formulate the true belief that knowledge is not perception, or that Beauty is not a beautiful girl, they may not recognize the existence of Forms or go beyond all the particulars, since they may resort to another particular. However, they do value the requirement of consistency more than the adopted definition in that they reject the definition when it causes inconsistency, and

this implies that they regulate their assent to definitions in accord with the formal properties of F-ness.<sup>16</sup>

Therefore, my account of *doxa* offers a counterexample to Moss' argument that *doxa* cannot be of Forms. Since, while the interlocutors' true beliefs can not be *dianoia*, their controlling principles are implied by the formal properties of the Forms.

### 4.3 The mechanism of *doxa* and Form-directedness

I have established the position that each kind of *doxa* is Form-directed, by resorting to its controlling principle and the regulations of its assertion. Now it is time to illustrate the auxiliary cause of *doxa* by unifying its mechanism in terms of Form-directedness. To explain how each stage of its mechanism can contribute to Form-directedness, I will argue (1) what the stages of developing *doxa* are, and (2) how each stage can guide one closer to F-ness.

Before I turn to the detail, I must make a qualification here. I am obliged to offer the auxiliary cause of *doxa* and to explain how its process can serve the primary purpose, since they are entailed by the requirement of explanation in *Timaeus*, “So anyone who desires understanding and knowledge must look for his primary causes to that which is essentially intelligent, and look for his secondary causes in the domain of things that are moved by other things and in their turn move others by automatic necessity”[36] (*Timaeus*: 46d-e; trans. Waterfield). The teleological-reliabilist account is always my top concern.

Although this should be a necessary condition for the explanation of *doxa*, it has not been used by critics when they explain Plato's *doxa*, hence the material I can use for this project is quite limited. As a result, I have to strike a balance between offering a teleological account of the mechanism and making sure that this account is well founded, since I cannot meet these two ends for the moment. Under this condition, I will only aim to illustrate the structure of explanation for the moment, hence I will be content with merely offering my interpretation of the mechanism. In other words, I will only attempt to give a possible candidate for interpreting the mechanism, but not aim to persuade one to accept my account completely by evaluating the competing options as I have done previously, with the hope that my crude remarks may be developed by abler people.

#### 4.3.1 The general mechanism of *doxa*

In this part, I will introduce the general mechanism for developing *doxa*, and explain why Belief<sub>P</sub> is Form-directed. When Socrates explains the possibility of false belief at *Theaetetus* 189e-190a, he introduces the definition of *doxa*.

It looks to me as if, when the mind is thinking, it's simply carrying on a discussion, asking itself questions and answering them, and making assertions and denials. And when it has come to a decision, either slowly or in a sudden rush, and it's no longer

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<sup>16</sup>In fact, the notion “of Forms” needs further clarification. It, in my opinion, has syntactic and semantic aspects. Regarding the syntactic aspect, the assertion that *doxa* cannot be of Forms might mean that F-ness cannot occupy a certain place in a sentence. Specifically, it might mean that F-ness cannot occupy the place of subject, for example, it is impossible for one to formulate the sentence “Beauty is gold”, or that F-ness cannot occupy the place of object, for example, one cannot develop the sentence “This beautiful girl is Beauty”. Regarding the semantic aspect, it might mean that it is impossible for one to understand any properties of F-ness, whether the property is a substantial or a formal property of F-ness, and whether the property is used in the controlling principle or the regulation. Given that the target statement can be interpreted in multiple ways, it is necessary for one to determine these issues before one argues that *doxa* cannot be of Forms.

divided, but says one single thing, we call that its judgement.[50] (*Theaetetus*: 189e-190a; trans. McDowell)

This definition is quite useful in interpreting Plato's *doxa*. To begin with, this definition clearly testifies that it belongs to  $\text{Belief}_R$ . It not only points out that this is the definition of *doxa* based on the formal naming, "we call that its judgement", but also implies that this is the definition of  $\text{Belief}_R$ , because it establishes that the agent of *doxa* is mind or reason, and reason, as I have argued earlier, can only be used as controlling principle in  $\text{Belief}_R$ , and not in other kinds of *doxa*.

In addition, this definition offers further characterizations of developing *doxa*. Firstly, the fact that the process can be either slow or sudden implies that this mechanism is not enough for the grasp of formal properties, since the mechanism itself does not ensure its outcome being Form-related. If the attainment is sudden only when one grasps the properties at the very first attempt, then one must fail to acquire the properties at this attempt when it is slow, hence operating the process correctly is insufficient for one to attain the properties. Secondly, the fact that  $\text{Belief}_R$ , which is composed of purpose and mechanism, should be a unity rather than multiplicities, implies that each stage of the process should be unified by Form-directedness, hence each of them should contribute to one's grasp of the formal properties.

Moreover, this definition can be applied to  $\text{Belief}_I$ . Obviously, this definition clarifies the process of developing  $\text{Belief}_R$ , and it is composed of two stages in general: one is the asking and answering, another is the calculation which includes making assertions/denials and the final decision which it results in. This two-stage account of  $\text{Belief}_R$  can also be applied to  $\text{Belief}_I$ , since the same process is carried out in formulating  $\text{Belief}_I$ . According to my previous interpretation of  $\text{Belief}_I$ , one, in developing  $\text{Belief}_I$ , must offer a controlling principle, even though it might be problematic, and evaluate the new proposition by this principle to determine whether the proposition should be adopted. Obviously, offering the principle is giving an answer to a question which belongs to the stage of asking/answering, and evaluating the new proposition is performing the affirming and denying which instantiates the stage of calculation, hence it is reasonable to apply the two-stage account of  $\text{Belief}_R$  to  $\text{Belief}_I$ .

However, this definition is not applicable to  $\text{Belief}_P$ , since it requires the conscious recognition of its principle and the rules for maintaining the system, but neither is accessible to one with  $\text{Belief}_P$ . As a result, I will explain the mechanism of  $\text{Belief}_I$  by that of  $\text{Belief}_R$ , and cover the mechanism of  $\text{Belief}_P$  independently here.

I will explain the mechanism of  $\text{Belief}_P$  by resorting to the mechanism of the presentation-*cum*-belief in the previous chapter, given that both of them are produced by one's yielding to the appearance, and that their acceptance is governed by the non-rationalside. However, one difference between them must be pointed out, that is,  $\text{Belief}_P$ , but not the presentation-*cum*-belief, is conceptualized, and this feature differentiates between them. Consequently, the mechanism of  $\text{Belief}_P$  is constituted by developing the presentation-*cum*-belief and its conceptualization. Specifically, when one perceives an object,  $\text{Belief}_P$  comes only when a natural disposition towards the object is caused if the object can satisfy the basic desires of the non-rationalside (or a disposition is missing if such satisfaction is lacking), and when the disposition is governed by custom. As a result, what the new born baby and the wild beast have is the presentation-*cum*-belief, since conceptualization is inaccessible to them, but what the young and civilized child has can be  $\text{Belief}_P$ , since the use of the name can be instilled in them through daily communication.

With this process in mind, now I must determine its relationship with Form-directedness. Regarding the process of conceptualization, it requires neither one's apprehension of Forms nor one's obedience to reason, "one could have a word or name in one's vocabulary without being in contact with the relevant property that the word (in fact) designates"[48] (Lott: 357), hence one

is only “mentioning” the properties rather than seeking their essences. However, this employment of the abstract concept gives one another way to view the appearance, and this prepares for one’s going beyond the appearance, hence contributing to one’s grasp of Forms. Regarding the natural disposition, it is Form-directed, since it is designed by the lesser gods according to the analysis of the presentation-*cum*-belief, and it is designed to help one to grasp a certain truth of the original object, and even F-ness when one is ordered. Consequently, the mechanism of Belief<sub>P</sub>, especially the designed disposition, contributes to one’s grasp of Forms, though this is only accomplished when one is ordered by reason.

### 4.3.2 The asking/answering stages and Form-directedness

Having explained why the mechanism of Belief<sub>P</sub> contributes to Form-directedness, now I must cover the cases of Belief<sub>R</sub> and Belief<sub>I</sub>. Given that the two stage account of Belief<sub>R</sub> can also be applied to Belief<sub>I</sub>, I will explain their relation to Form-directedness stage by stage. In this part, I will explain how the stage of asking/answering contributes to one’s grasp of F-ness in both Belief<sub>R</sub> and Belief<sub>I</sub>.

Regarding Belief<sub>R</sub>, I will explain: (a) what asking and answering stages are in Belief<sub>R</sub>, and (b) why grasping the formal properties of F-ness cannot be achieved without the asking/answering.

The formulation of the question in the asking stage should be “what is F?” based on its characterizations. Firstly, this is confirmed by the question raised by Socrates. The question in Belief<sub>R</sub> shares the same formulation with the question posed by Socrates, since interlocutors, being passively persuaded, are normally questioned by Socrates. Given that the questions raised by Socrates are “what is knowledge” in the *Theaetetus*, and “what is beauty” in the *Hippias Major*, it is reasonable to characterize this stage as posing the question “what is F?”. Secondly, this interpretation is supported by the characterization of the calculation. Based on the description of calculation in Belief<sub>R</sub>, what is investigated is being, “Whereas what our soul tries to judge by itself, going close up to them and comparing them with each other, is their being”[69] (*Theaetetus*: 186b; trans. Rowe), and being should be interpreted predicatively, hence the soul determines “whether x is really F (for some predicate F)?”. For instance, when Hippias is required to examine whether a particular girl is Beauty, he is actually using the definition of beauty, that is, whether this beautiful girl is really the essence of beauty, hence he is trying to answer the question “what is Beauty?”. Thirdly, this approach has been defended by the contemporary critics based on their interpretations of Plato’s *doxa*. When Moss(2014) develops Plato’s Appearance-Assent account of Belief, she argues that one’s task is to determine how things really are by asking the question whether “x is really F”[54] (Moss: 218). When Grönroos(2001) illustrates that the *doxa* is rational “in virtue of being based on a grasp of the being of the thing, that is, what the thing is”[37](Grönroos: 100), he argues that what the agent is concerned with is the essence of a certain property, that is, he is searching for the answer to the question “what is F?”.

One more requirement of the asking stage is that to ask the question requires one to realize that the adopted account is problematic. This can be seen from Moss(2014) when she explains that what the senses report cannot be the essence of Big, “For it is only when we stop trusting the reports of the senses that we start even to ask questions about Being: to ask ‘what at all the Big is’”[55] (Moss: 203), hence one is unable to raise the question unless one recognizes that the present account is inconsistent. This can also be confirmed from Politis(2006) when he articulates the condition under which the soul can raise the question, “The cause of our being in a state of *aporia* is characterized as a question articulated so as to have two opposed sides with apparently equally good reasons on both sides—a puzzle or problem in the particular sense of an apparent contradiction”[63] (Politis: 90). Although the problem is not caused by the

inconsistency between appearance and reality, but by two equally good explanations.

Consequently, the question should be formulated as “what is F?”, and this investigation of essence is impossible unless one is dissatisfied with the present account. Actually, it is this dissatisfaction that leads one closer to the Forms. Firstly, this dissatisfaction motivates one to pursue a new account, though the new one might still be problematic. This motivation activates the search for the Forms, and makes possible its connection with Forms. Secondly, this dissatisfaction of the adopted account is required, not only because some advantages are granted by it, but also because the grasp of Forms is impossible without it. Were one not puzzled about the appearance, one would stick to the appearance, and being passively yielding to the appearance prevents one from doubting the appearance, and having the notion of truth, let alone the search for F-ness, “Yielding is instead a matter of not letting the question of the appearance’s truth arise - either because you are an animal or child who cannot question appearances”[54] (Moss: 215). In other words, if one is about to investigate the Forms, one must be sceptical about the appearance, and have the ability to ask the question. Consequently, one starts to doubt the appearance, and to raise the question “what is F?” only when one realizes that the appearance is problematic, and this distrust of the appearance motivates one to search for the essence of F, though it cannot ensure one’s attaining the Forms at every attempt. Nevertheless, without sincerely asking the *ti esti* question, one is unable to transcend the appearance, hence one is unlikely to start the search for Forms.

Differing from the asking stage which is restricted, the answering stage is basically unrestricted. It seems that the answer can be interpreted as the final decision, and it should be a true belief which survives the calculation and attains the formal properties of F-ness, but this suggestion must be rejected. Firstly, if answering refers to the final conclusion, then the affirmation and denial should be abundant. If answering in the very beginning is the same with Belief<sub>R</sub>, then one can always arrive at true beliefs without calculation, hence the effort from reason and education would be useless. Consequently, this interpretation should be rejected, since both effort and education are required by reason, and being governed by reason is indispensable, since it is the distinctive feature of Belief<sub>R</sub>. Secondly, even if the calculation were not abundant, the equation in content between answering and Belief<sub>R</sub> would make this stage sufficient for one’s grasp of Forms, and this is inconsistent with the fact that it is only a necessary condition of Belief<sub>R</sub>. For example, one may offer an initial answer to a question without any consideration, and by luck, this answer may always be same in content with Belief<sub>R</sub> which is justified and calculated. However, this account should also be rejected, since it assumes that the initial answer characterizes the formal properties of F-ness correctly, and never makes mistake, but this is inconsistent with the characterization of the mechanism, that it can produce false answers even after several unsuccessful attempts.

With these clarifications, one can illustrate the stage of asking/answering as in the figure below. One begins to develop Belief<sub>R</sub> by asking questions which requires both that the format of question is “what is F?” and that the present account is problematic, then one tries to search for its essence by offering an alternative account, and this new approach will become Belief<sub>R</sub> only if it survives the stage of calculation from reason. For example, the statement that beauty is a beautiful girl might be an initial answer, and the assertion that beauty is not a beautiful girl, but gold, might be a temporary decision which has been calculated, but Belief<sub>R</sub> should be that beauty is neither a beautiful girl nor gold. Consequently, Belief<sub>R</sub> is the final decision and true belief about F-ness, but the answer which is calculated is merely a temporary but justified answer which might be false, and the answering is merely an initial answer or a vague idea which needs to be examined, hence it can be false or poorly-formulated.

Merely offering an initial answer is necessary for the grasp of Forms, since this makes the

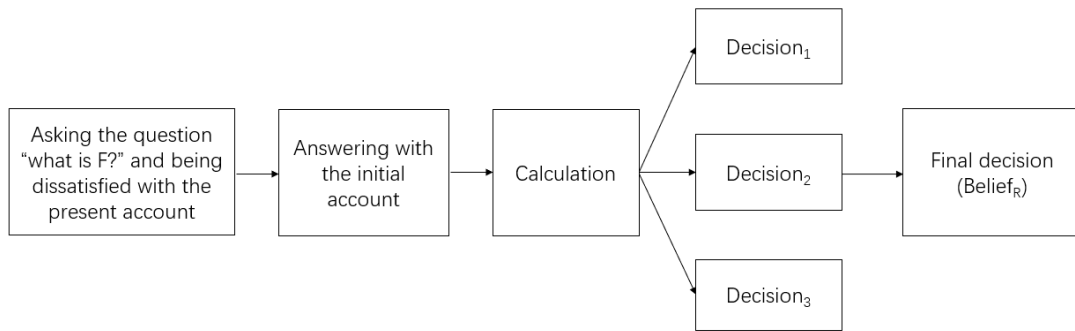


Figure 4.6: The distinction between the initial answer and  $\text{Belief}_R$

motivation concrete, and orientates the search for essence. If one only asks without offering any alternatives, then one might be satisfied with the puzzlement, hence one's investigation of the essence will make no process and is to failure, since "the only way to come up with the answer is to take some creative leaps in the dark and be informed by the results"[23](Dennett: 139). It is true that the initial answer might be false and lead one to another problematic account, but the true belief comes only by one's examination of these initial answers, just like real progress comes only by learning from mistakes, "[mistakes are] not just golden opportunities for learning; they are, in an important sense, the only opportunity for learning something truly new" (Dennett: 138). Indeed, one will make no error when one takes no shots, but one will never start the search for the essence without these attempts, and one will never advance even a little bit without these initial answers.

Now I will turn to  $\text{Belief}_I$ , and examine how its mechanism contributes to the grasp of F-ness. Although the asking stage in  $\text{Belief}_I$  differs from that in  $\text{Belief}_R$ , the stage of answering is the same between  $\text{Belief}_I$  and  $\text{Belief}_R$ , provided that both bear no restriction in formulation. Hence its contribution to the grasp of Forms can be seen from the discussion of answering stage in  $\text{Belief}_R$ . Consequently, I only need to cover the asking stage in  $\text{Belief}_I$ , and this will be carried out by answering two questions: what is the asking stage in  $\text{Belief}_I$ , and how does it contribute to the grasp of Forms? Regarding the first question, I will argue that the question is raised when one satisfies with one's account though it is incoherent, and that the question can be about essence or accidental attributes, or external relations, etc.

Differing from  $\text{Belief}_R$ , one with  $\text{Belief}_I$  must be satisfied with the adopted account even if they are forced to see the inconsistency. Firstly, this is implied by the distinctive feature of  $\text{Belief}_I$ . Obviously, it is impossible for one with  $\text{Belief}_I$  to go beyond the appearance, but the dissatisfaction with the present account can lead one to transcend the appearance, hence one with  $\text{Belief}_I$  must be satisfied with one's adopted account. This confidence can be confirmed by Protagoras in the *Theaetetus*, since he truly believes in his account of truth, "he for his part concedes that this belief too is true, to judge by what he has written"[69] (*Theaetetus*: 171b; trans. Rowe), so that he sticks to his account even when it is incoherent. Secondly, this is also implied by the agent of  $\text{Belief}_I$ . As I have argued earlier, the agent of  $\text{Belief}_I$  is the non-rational side, "it must therefore be a lower part whose *doxa* agrees with the appearances"[54] (Moss: 222), and its assent is not determined by reason, but by 'our own subjective likes or dislikes'. When one realizes that one's precious account is infected with incoherence, one must choose between one's likes, that is, the adopted account, and one's dislikes, that is, the incoherence which is illustrated by reason, and not surprisingly, one, being controlled by appetite, will stick with the



present account, rather than taking the incoherence seriously. Consequently, when Protagoras asks the question “what is truth?”, he is not really searching for something to appease the anxiety caused by reason, since he is sure that the answer does not reside in anywhere except in his own conviction, and the purpose of asking is to promote his own account.

Apart from the question “what is F?”, the questions in  $\text{Belief}_I$  can also be about accidental attributes or the external relation, since these questions are presupposed in order for one to realize the inconsistency of the adopted account. For example, for Protagoras to realize that the perception of the same object can be problematic, he must agree that “it’s [the wind is] cold for the person who is shivering, and not for the person who isn’t”[69] (*Theaetetus*: 152b; trans. Rowe), but this is achieved by answering questions about the feelings, such as, “are you cold?” or “how do you feel?” Obviously, these questions are not about the essence of wind, but about its affections in a particular person, hence Protagoras should be able to ask and answer these questions. Similarly, the question about external relations should also be assumed. For example, for one to recognize that the particular has opposite qualities, “in some respects he is wiser than others and in other respects others are wiser than him” (*Theaetetus*: 170a), one should be able to ask and answer the questions about relations, such as, whether Protagoras is wiser than Socrates in wisdom? Actually, it is plausible to maintain that there is no limit to the numbers of questions in the asking stage in  $\text{Belief}_I$ .

Having established the asking stage in  $\text{Belief}_I$ , I will now show how it guides one closer to the Forms. I will try to link Protagoras’ style of questioning and the grasp of the Forms here, by his moving back and forth between the adopted account and the request from reason. Firstly, the asking stage in  $\text{Belief}_I$  is helpful for one’s grasping of the Forms, since it enhances one’s proficiency in obeying reason. Although Protagoras sticks to his present account, he does agree that the inconsistency is a problem, though only a minor one, and to solve this problem, he introduces the notion of “wise”, “That is how it can be both that some people are wiser than others and that no one has false beliefs about anything” (*Theaetetus*: 167d; trans. Rowe). Consequently, Protagoras still obeys reason, not only because he is embarrassed when confronting the consistency, but also because the way he tries to pacify the conflict between the non-rationalside and reason, is to revise his account which is pleasing to the appetite. Without these practices in developing  $\text{Belief}_I$ , one cannot be proficient in obeying reason, hence there is no way for one to grasp Forms in the future. Secondly, it prepares for the final confrontation between reason and the non-rationalside, and this moment of turning around is significant for grasping the Forms. Of course, Protagoras did not solve the problem by introducing the notion “wiser”, and presumably, he might come up with other strategies to make the account consistent, but only to find that none of them will work. If Protagoras still cannot escape the charge of inconsistency with the best he can do, then he must choose between holding and rejecting the problematic account, and this is exactly the struggle between the non-rationalside and reason. Without one’s making every effort to defend oneself, one is unlikely to relinquish the present account, hence it is impossible for one to stand with reason which is necessary for one’s grasp of the Forms. However, there is no assurance that one will necessarily be elevated into  $\text{Belief}_R$  when one is proficient enough in formulating  $\text{Belief}_I$ , and this is why one needs to turn around rather than to go ahead, and why such turning around requires education and effort.

Therefore, both asking and answering stages contribute to one’s grasp of the Forms. The asking stage in  $\text{Belief}_R$  requires one to be dissatisfied with the present account, and without this dissatisfaction, it is impossible for one to transcend the appearance and to begin the search for the Forms. Although the asking stage in  $\text{Belief}_I$  only requires one to admit that the account is problematic rather than to reject it, it is still helpful, since it enhances one’s proficiency in obeying reason and prepares for the final confrontation between reason and the non-rationalside.

The answering stage in both  $\text{Belief}_R$  and  $\text{Belief}_I$ , requires one to offer an initial account and this leads one closer to the grasp of the Forms, since one will never begin the search for the essence without these attempts, and one will never advance even a little bit without these initial answers.

### 4.3.3 The calculation stage and Form-directedness

Having associated the stage of asking/answering with the grasp of the formal properties of F-ness, now I will turn to the stage of calculation. When Socrates characterizes the way in which the soul arrives at being by itself in itself at *Theaetetus* 186a-d, he clearly clarifies the operation of calculation, that is, examining the being “in relation to one another” and calculating the “past and present in comparison with future”[69] (*Theaetetus*: 186a-d; trans. Rowe). Granting that these two kinds of comparison are the foundation of calculation, I will explain (a) what these two kinds of comparisons are, and (b) how they can lead one closer to F-ness.

Regarding the comparison between one another, I suggest that it should be interpreted as meaning that the account of property F should be rejected if it is both F and not F. This has been illustrated by the exploration of what Beauty is in *Hippias Major*: the reason for rejecting the proposal of the beautiful pot is that it is not beautiful when compared to a beautiful girl, “But on the whole that’s not worth judging fine, compared to a horse and a girl and all the other fine things”[20] (*Hippias Major*: 289a; trans. Woodruff), and further the reason for rejecting the proposal of the beautiful girl is that it is not beautiful when compared with the gods, “Because compared to gods, anyway, the human race is not fine-that’s true”[20] (*Hippias Major*: 289c; trans. Woodruff).

Regarding the comparison with the future, it is clear that this refers back to *Theaetetus* 177c-179b where Socrates connects the “questions about advantage and disadvantage (or good and bad) and questions about the future”[50] (McDowell: 190), and its function is to determine whether the account which is effective for past and present is also effective for the future. For example, the reason why Socrates refutes a present law is that the society, governed by the same law, might bring the worst harm to its citizens in the future, “a city that is legislating for herself will necessarily often fail to achieve what is most beneficial”[69] (*Theaetetus*: 179a; trans. Rowe), and the reason why he rejects one’s assertion that one will have a fever in the future is that the fever is unlikely to occur based on one’s current situation. Consequently, the comparison with the future is to check whether the states of affairs predicted by the present account will come to be, and the account should be rejected when it fails to obtain in the future.

It is not mentioned whether the account should be applied to the events in the past, but it makes more sense to think it should be. This conclusion seems quite obvious, since the past for now is also a future, compared to the further past of the past, and it satisfies the requirement of the comparison with the future. However, this approach neglects the real issue, since it assumes that the comparison with the future is true, without asking why this comparison should be adopted. In my view, this comparison should be adopted because it is implied by the formal properties of F-ness, and this principle requires one to check whether the account works in the past and present before making a comparison with the future. Obviously, the reason why the previous account should be rejected is that it cannot explain a certain instantiation of property F, and the time in which the event occurs is insignificant. Consequently, as long as the event cannot be explained by the present account, no matter when it occurs, the account should be rejected. In other words, the controlling principle of this comparison is that the true account of property F should be unchanging over time.

One might interpret the controlling principle in the comparison with the future as being that the true account should be unchanging in all cases, but this tendency, though hitting the

target, should be resisted. I admit that the comparison with the future can be a comparison with any possible event if one interprets the future event as a possibility, but this is too much for comparison with the future, and will make the comparison between one another redundant. In my opinion, both kinds are regulated by the ultimate principle that the true account should work for all cases, but each of them has a more approximate purpose: one is time relevant, another is time irrelevant. Actually, the whole process of comparison works in a sequence: when confronting several accounts of property F, one first needs to choose the account which cannot be both F and not F by comparing it with another account, and to make sure that this account is effective for the events in the past and present. Then one needs to examine whether it can still defend its champion in terms of time, and this would be  $\text{Belief}_R$  if it satisfies all of these requirements. In other words, these two kinds of comparison work in different respects, and they, when combined, can offer one a negative but true account of property F.

Having established the controlling principles of these two kinds of comparison, it is easy to bridge the gap between them and the grasp of the Forms. When one is making a comparison with the future appropriately, one not only recognizes but also follows the principle that the true account of property F should be unchanging over time, hence one is lead closer to the Forms, given that this principle is implied by F-ness, that is, F-ness should be unchanging over time. The case of comparison between one another is quite similar, since one is required to be aware and obey the principle that the real account of property F should be absolute. This principle is implied by F-ness, hence one is consciously governed by the formal properties of F-ness, and this practice can definitely lead one closer to F-ness.<sup>17</sup>

## 4.4 Conclusion

In this chapter, I have solved three problems: (1) what I mean by saying that Plato's *doxa* is connected with being, (2) how *doxa* can lead one closer to the grasp of formal properties of F-ness, and (3) how the mechanism of *doxa* can guide one to grasp F-ness.

In the first section, I have argued (a) that *doxa* is composed of the rational generic belief ( $\text{Belief}_R$ ), the irrational generic belief ( $\text{Belief}_I$ ), and the passive perceptual belief ( $\text{Belief}_P$ ), and (b) that "being" should be explained by the predicative reading when interpreting Plato's *doxa*, that is, the corresponding Form or F-ness, and (c) that one's relation to F-ness in *doxa* should be interpreted as attempting to grasp. Consequently, I have clarified my position that Plato's *doxa* is connected with being, that is, in developing each kind of *doxa*, one is attempting to grasp the corresponding Form, but one has not yet fully grasped F-ness.

In the second section, I have further explained the relation of attempting to grasp by resorting to the intentional interpretation of truth-directedness, and characterized it as a combination of recognizing the controlling principles and the application of the principles by conforming to reason. Apart from this, I have explained why this interpretation should be adopted, since it helps one (a) to further arrange the different cases of  $\text{Belief}_I$ , (b) to recognize that it is because of truth-directedness that each kind of *doxa* is *doxa*, (c) to make it possible that one is in contact with F-ness without grasping the essential properties of F-ness, (d) to understand why some kinds of *doxa* are more Form-directed than other kinds, and (e) I have refuted Moss' argument that *doxa* cannot be of Forms.

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<sup>17</sup>I admit that there might be other interpretations of the controlling principles in the comparison between one another, for example, the principle that "REQ<sub>1</sub>: If same explanandum, then same explanans; and REQ<sub>2</sub>: if same explanans, then same explanandum"[64] (Politis: 70), since the beautiful pot, as the explanans of *Beauty*, can also explain the *Ugly*, hence it should be rejected as violating REQ<sub>2</sub>. However, I will be content with identifying one principle as an illustration, and the one I give is that the Forms should be absolute.

In the third section, I have explained that the mechanism of *doxa* contributes to one's grasp of the Forms. The mechanism of  $\text{Belief}_P$  is helpful, since the disposition is designed by the lesser gods with the purpose of helping one to grasp a certain truth of the original object, and even F-ness when one is ordered. The contribution from  $\text{Belief}_I$  resides in asking and answering, since asking enhances one's proficiency in obeying reason and prepares for the final confrontation between reason and the non-rational side, and trying to offer an initial answer makes the search for the essence concrete and oriented. The contribution from  $\text{Belief}_R$  can also be seen from the calculation, apart from asking and answering, since the comparison with the future requires one to recognize and obey the principle that the Forms should be unchanging over time, and the comparison between one another requires one to realize and adhere to the principle that the Forms should be absolute. Both principles are implied by F-ness.

Apart from offering my account of *doxa*, I would also like to remind the reader of how this account of *doxa* contributes to the overall argument by illustrating (a) that my account of *doxa* fits with the view that Plato defends a teleological reliabilist account, (b) that it is necessary for having some grasp of the Forms, and (c) that the capacity of *doxa* can be reordered in light of our knowledge of the Forms.

I have established that *doxa* is teleological and reliable, and this is the preparatory stage for the development of *dianoia* in the overall cognition. *Doxa*, especially the rational generic belief, is reliable, since the asking stage and the answering stage are regulated by the requirement of consistency, and the calculation stage is regulated by the principle that the Forms should be unchanging over time, together with the principle that the Forms should be absolute, and these principles are stable and well constructed. It is teleological, since one who develops the *doxa* as the design plan requires, will recognize the principles which are implied by the Forms, and will formulate the *doxa* based on these principles, given that one attempts to obtain the truth when one has "(a) the conscious recognition of the basic norm of truth and (b) the intention to respect and maintain this norm in the formation of one's beliefs"[25] (Engel: 84). Specifically, the requirement of consistency, the principle that the Forms should be unchanging over time, and the principle that the Forms should be absolute are all implied by the formal properties of F-ness, and the adherence to these principles enables one to be closer to the grasp of the Forms.

This account of *doxa* is indispensable for having some grasp of the Forms, because *doxa* in general is a judgement which is required in the mastery of *dianoia*. Apart from its contribution as a judgement, it also contributes to one's grasp of the Forms in other ways, since the process of producing the rational generic belief enables one to make judgements about the particular object, and it motivates one to doubt the appearance, and evaluates the reasons for the judgements about the particular object by the principle of consistency. All of them are required in the mastery of *dianoia*, and which in turn is required in the mastery of *noesis*.

When one is equipped with the knowledge of the Forms, the capacity of *doxa* will be reordered, because the capacity of *doxa* will be working in the correct way, and it will have the correct relationship with the other epistemic capacities, and be regulated by the properties of the Forms. Firstly, the capacity of *doxa* will be working in the correct way, since one will regulate the development of *doxa* by its design plan and one will do so voluntarily. When one is equipped with the knowledge of the Forms, one will be able to distinguish among the rational generic beliefs, the irrational generic belief and the passive perceptual belief, and one will recognize the design plan or the structure of them. Given that one has the desire to operate the capacity of *doxa* in the correct way, one will consciously operate the development of *doxa* according to the design plan of *doxa*, and thus, the capacity of *doxa* will function in the correct way in different situations. Secondly, the capacity of *doxa* will have the correct relationship with the other epistemic capacities. For example, the development of the rational generic belief is necessary to the mastery of *dianoia*, since the hypothesis, doubting the appearance, and following the

argument downward by the principle of consistency are all essential to the proper use of *dianoia*, and all of these are derived from the correct operation of the *doxa*. In this way, the cognition of *doxa*, by partaking in its own share of the truth of the whole, will live in harmony with the other cognitions. Thirdly, the operation of developing the *doxa* is regulated by the properties of the Forms. For example, when one consciously formulates the rational generic belief in the correct way, each stage of the mechanism contributes to one's attempt to grasp the Forms. Specifically, the asking stage in the rational generic belief enhances one's proficiency in obeying reason and prepares one for the final confrontation between reason and the non-rational side, the answering stage makes the search for the essence concrete and oriented, and the comparison stage requires one to realize and adhere to the principle that the Forms should be absolute. Consequently, one restores the cognition of *doxa* by these requirements which are implied by the Forms, and in this way, one, being regulated by the Form of the Good, becomes good as a whole in the respect of *doxa*.



# *Dianoia* and *noesis*

The critics are not in the agreement as to how to formulate *noesis*. They are generally divided into two groups depending on whether they agree that it is developed by directly grasping F-ness. The strategy of intuitionism which involves directly grasping F-ness has been adopted by Vlastos (1985), Mackie (1977), and Hare (1965). The strategy which resorts to the process of forming hypotheses and examining their implications has been defended by Benson (2015), Gentzler (2005), and Rowe (1993).

Regarding this issue, I will adopt the position that the formulation of *noesis* is based on the process of forming hypotheses and examining their implications. Specifically, I will argue that *noesis* is developed by examining the best *dianoia* through the confirmation stage.

To set up my position, several established accounts will be used. Firstly, in terms of the relation between *dianoia* and *noesis*, I will adopt Benson's (2015) account that *noesis* is the completion of *dianoia*, but I will supplement Benson's account by introducing the notion of the best *dianoia*, and I will achieve this theoretical possibility by illustrating a specific progression from the best *dianoia* to *noesis*. Secondly, in terms of the formulation of *dianoia*, I will adopt Benson's (2015) characterization of the method of hypothesis, but I will supplement his account by combining it with Rowe's (1993) notion of explanation which is a conjunction of multiple accepted hypotheses. Thirdly, I will show that each procedure of formulating *dianoia* is regulated by one's awareness of F-ness, and hence that each of them allows one to access the properties of F-ness.

## 5.1 *Dianoia* and its purpose

In order to establish the conclusion that both *noesis* and *dianoia* are correlated with F-ness, I will argue that each procedure of their formulation is regulated by F-ness.

In this section, I will argue (1) that *noesis* is closely related with F-ness, since each procedure of its formulation is regulated by F-ness, (2) that one, being directed by F-ness in formulating a *dianoia*, not only regulates one's procedures by the properties of F-ness, but also captures some necessary conditions of F-ness, and (3) that the formulation of *dianoia* is composed of the proof stage and the confirmation stage, by resorting to Benson's characterization of *dianoia*.

### 5.1.1 *Dianoia* is directed at F-ness

In this part, I will argue (a) that *noesis* is closely related to F-ness, since each procedure of its formulation is regulated by F-ness, (b) that one's methods in formulating a *dianoia*, being directed at F-ness, are regulated by some properties of F-ness, and (c) that one actually grasps

some necessary conditions of F-ness, “we described them as to some extent grasping what is”[20] (*Republic*: 533b; trans. Grube), though this grasp cannot be both complete and correctly.

There is no doubt that one grasps F-ness in formulating a *noesis*, since each procedure of its formulation is regulated by F-ness.<sup>1</sup> Firstly, the purpose of formulating a *noesis* is to grasp F-ness, since one pursues F-ness in the development of *noesis*, “whenever someone tries through argument and apart from all sense perceptions to find the being itself of each thing”[20] (*Republic*: 532a; trans. Grube). Secondly, the proper object of *noesis* is F-ness, since *noesis* is using “forms themselves and making its investigation through them”[20] (*Republic*: 510b; trans. Grube). Thirdly, its mechanism is regulated by F-ness, since it is developed by the method of dialectic, “reason itself grasps by the power of dialectic”[20] (*Republic*: 511b; trans. Grube). Given that dialectic is the only way for one to reach the the Form of the Good and the other Forms, “dialectic is the only inquiry that travels this road, doing away with hypotheses and proceeding to the first principle itself”[20] (*Republic*: 533c-d; trans. Grube), this method must be closely related to F-ness. Fourthly, the capacity which formulates a *noesis* is reason which is the appropriate capacity for knowing, “When it focuses on something illuminated by truth and what is, it understands, knows, and apparently possesses understanding”[20] (*Republic*: 508d; trans. Grube). Fifthly, its product is F-ness, “ it ... comes down to a conclusion without making use of anything visible at all, but only of forms themselves, moving on from forms to forms, and ending in forms”[20] (*Republic*: 511b-c; trans. Grube).

Before I turn to explain how the development of *dianoia* is regulated by the properties of F-ness, I have to say a few words about my usage of the term “the first principle”. This term is a translation of *ἀντὴν τὴν ἀρχήν* at *Republic* 533c, and I will refer to it as “the first principle” as it is translated by Shorey. There are several reasons for my adoption of this translation. Firstly, the part “first” in the term emphasizes its agreement with the foundationalism. As Plantinga has summarized, classical foundationalism states as follows: “A belief is acceptable for a person if (and only if) it is either properly basic (i.e., self-evident, incorrigible, or evident to the senses for that person), or believed on the evidential basis of propositions that are acceptable and that support it deductively, inductively, or abductively”[62] (Plantinga: 76). In other words, among all the beliefs, there are only two kinds of belief: the basic belief which is the foundation and the non-basic belief which is supported by the basic belief. Similarly, the first principle is the foundation of all the hypotheses, and it is the origin of all the hypotheses. Secondly, the part “first” in the term not only shows how it can be first, but also implies its special status, compared to other hypotheses. In other words, among all the reduced principles, only the unhypothetical principle to which the hypothesis is reduced is no longer a hypothesis. A similar relation can also be found in the relation between the unmoved mover and the moving mover. However, the point is that the foundation is categorically different from the things which are not foundational, though they are both obtained by the same method, that is, the reduction process. Consequently, both the unhypothetical principle and the reduced hypotheses are produced by the reduction process, but the unhypothetical principle is categorically different from the reduced hypothesis, since the former is no longer a hypothesis, but the latter is still a hypothesis. Thirdly, I will take the unhypothetical principle and the first principle as interchangeable in my dissertation. Although these two terms are typically taken as referring to the same thing, that is, the Form of the Good, this is not necessarily the case, since it is logically possible for them to have different meanings, or even different references. I admit that there might be such a possibility, but I will not explore this issue in this dissertation, and I will go with the traditional view by taking them

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<sup>1</sup>As Moss has pointed out, the term “*episteme*” is ambiguous, since it refers to both the whole upper half and the highest level in the divided line. Having acknowledged this fact, I will not be much concerned with the term, “Let us follow Socrates’ advice not to worry too much about terminology”[56] (Moss: 182), and I will call the whole upper half *episteme*, the second-highest level *dianoia*, and the highest level *noesis*.



as interchangeable.

Having established that each procedure of formulating a *noesis* is regulated by F-ness, now I will argue that *dianoia* allows one to access the properties of F-ness, by illustrating that its development is regulated by the properties of F-ness. However, this task is not as easy as in the case of *noesis*, since the way to formulate a *dianoia* is not yet determined.

However, the critics, though disputing over how to formulate a *dianoia*, do agree that the purpose of *dianoia* is to investigate the intelligible, “the soul is forced to use hypotheses in the investigation of it [the intelligible]”[20] (*Republic*: 511a; trans. Grube). This has been emphasized by the critics in illustrating Plato’s *dianoia*, for example, by Burnyeat(1987) when he summarizes the features of *dianoia*, “Socrates says that geometry is practised for the sake of knowledge of invariant being (527a9-b6)”[15] (Burnyeat: 151), and by Moss(2021) when she summarizes the relation between *dianoia* and the intelligibles, “Someone with *dianoia* ... acknowledges the existence of intelligibles, and tries to think about them”[56] (Moss: 186).

With this agreement in mind, in this part, I will explain that aiming at F-ness will contribute to one’s grasp of F-ness, and afterwards I will explain that each procedure of formulating a *dianoia* contributes to one’s grasp of F-ness.

In fact, to investigate the intelligible or F-ness does not equate to mere empty words, on the contrary, it imposes on its specific operations several requirements which are implied by F-ness. This can be confirmed from Plato’s dialogues and analyses from some critics. Firstly, when Hippias tries to answer the question what is Beauty, he, taking the inquiry into the essence of Beauty as the end, implicitly adopts a requirement, “I think you’re looking for an answer that says the fine is the sort of thing that will never be seen to be foul for anyone, anywhere, at any time”[20] (*Greater Hippias*: 291d; trans. Woodruff), and this requirement is a property of Beauty, that is, that Beauty is always beautiful, and can never not be beautiful. Secondly, the adoption of the properties of F-ness has also been emphasized by critics when they illustrate *dianoia*, for example, Moss(2021) stresses that one should acknowledge the existence of intelligibles when one pursues F-ness in formulating a *dianoia*, “these philosophers recognize the existence of Forms and are thinking ‘for the sake of them’ without yet fully grasping them”[56] (Moss: 191). Storey(2022), though not specifying the requirements, still highlights the fact that the cognition of *dianoia* captures some properties of F-ness, “it [*dianoia*] studies intelligibles and reliably reaches truths about them”[76] (Storey: 295). These imply that its operations are regulated by the properties of F-ness granted that the purpose of *dianoia* is to investigate F-ness.

The implication should not surprise one too much, since this has been explained by the notion of directedness. In explaining that *doxa* is directed at F-ness, I have argued that one is trying to obtain the truth when one has “(a) the conscious recognition of the basic norm of truth and (b) the intention to respect and maintain this norm in the formation of one’s beliefs”[25](Engel: 84). Following this line of thought, one, in investigating F-ness, is directing oneself towards F-ness, and this directedness requires that one must recognize some controlling principles which are related to F-ness, and that one has to regulate one’s adoption of propositions by these principles, that is, to refuse a new proposition when it violates these principles.

In summary, the purpose of *dianoia*, being F-ness, imposes on the procedures certain requirements which are implied by F-ness. This position has been confirmed not only by the definition of directedness, but also by textual evidence from Plato and the critics.

Although one is regulated by some properties of F-ness by aiming at F-ness in formulating a *dianoia*, one cannot recognize the properties of F-ness both completely and correctly, since *dianoia* is inferior to *noesis*. Obviously, the requirements used in *noesis* must be the properties of F-ness, and only be the properties of F-ness, and it is because of this that the product of *noesis*

is F-ness. Given that *dianoia* is inferior to *noesis*, its requirements which regulate its operations must also be inferior to those of *noesis*, and hence they must be incomplete characterizations of F-ness. It is in this sense that the grasp of F-ness in *dianoia* is only dreaming about F-ness, “the Forms themselves, which *dianoia* fails to grasp, but ‘dreams about’”[56](Moss: 190).

This does not mean that one does not capture any properties of F-ness, since one should recognize some necessary conditions of F-ness in formulating a *dianoia*. The grasp of necessary conditions is consistent with the fact that if formulating a *dianoia*, incorrect proposals can be refuted quite easily, while the real explanation is hard to determine. Firstly, the grasp of necessary conditions can explain why *dianoia* fails to grasp F-ness. Given that one is regulated merely by the necessary conditions of F-ness, one does not have enough information to identify F-ness itself, and hence the cognition of *dianoia* cannot be F-ness, but only the image of F-ness, “the Forms themselves, which *dianoia* fails to grasp, but ‘dreams about’”[56](Moss: 190). Secondly, this is also consistent with the fact that the inappropriate proposals of Beauty offered by Hippias can be refuted quite easily, but the real explanation is hard to determine. Indeed, provided that one is only offered the necessary conditions of Beauty, that Beauty cannot be both beautiful and ugly, one can be quite efficient in refuting the incompetent accounts which violate the requirements, but one is unable to select the correct account among the multiple competitors which equally satisfy the necessary conditions.

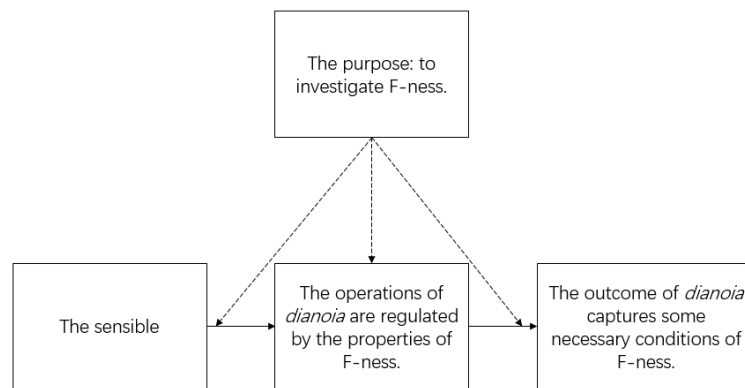


Figure 5.1: The teleological dimension of *dianoia*

Therefore, I have argued (a) that *noesis* is closely related to F-ness, since each procedure of its formulation is regulated by F-ness, (b) that the formulation of *dianoia*, being directed at F-ness, is regulated by some properties of F-ness, and this has been shown in the figure below, and (c) that one actually grasps some necessary conditions of F-ness, though this grasp cannot be both complete and correctly.

### 5.1.2 My account of *dianoia*

Although one can reach the conclusion that the operations of *dianoia* are regulated by the properties of F-ness, it is still unclear how to formulate a *dianoia*, and how each procedure can lead one to grasp the properties of F-ness. Now I will first give a sketch of how to formulate a *dianoia*, and then, in the subsequent sections I will explain how each of its procedures contributes to one’s grasp of F-ness.

In this part, I will argue (a) that the formulation of *dianoia* is composed of the proof stage and the confirmation stage by resorting to Benson's characterization, (b) that the proof stage is to ensure the validity of the argument, and (c) that the confirmation stage is to justify the hypothesis by both the internal and the external account of justification.

Benson has characterized the development of *dianoia* by resorting to the method of hypothesis. This development is composed of two stages, "the mathematical method consists of two stages—a proof stage and a confirmation stage"[12] (Benson: 267). Specifically, the proof stage is to ensure the validity of the argument whose conclusion is the answer to the initial question, and the confirmation stage is to ensure that the hypothesized principle should be adopted. One can make sense of Benson's strategy by resorting to a formal proof. Taking the simple proof as an example, " $A \rightarrow B$ , and  $A$ , consequently,  $B$ ". If one is to maintain that the conclusion  $B$  should be adopted, one should argue not only that the argument is valid which is fulfilled by the proof stage, but also that the premises are justified which is carried out by the confirmation stage. Indeed, such similarity between the method of *dianoia* and logic is not accidental, since the logic and the mathematics proceed in a similar manner, that is, "proceeding not to a first principle but to a conclusion"[20] (*Republic*: 510b; trans. Grube).

One may wonder why Benson's characterization should be adopted, that is, why one is allowed to interpret the formulation of *dianoia* by resorting to the reasoning in geometry. The evidence for such assimilation can be seen from Plato's dialogues and some critics' explanations of *dianoia*. Firstly, the reasoning in geometry is adopted by Socrates when he tries to explain the dianoetic reasoning. For example, Socrates illustrates the formulation of *dianoia* by the reasoning in geometry in the *Republic* 510c-d, "I think you know that students of geometry, calculation, and the like hypothesize the odd and the even, the various figures, ... And going from these first principles through the remaining steps, they arrive in full agreement"[20] (*Republic*: 510c-d; trans. Grube). This is also confirmed by Glaucon, "I understand that you mean what happens in geometry and related sciences"[20] (*Republic*: 511b; trans. Grube). Secondly, this assimilation is also defended by some critics, either with the purpose of explaining the method of hypothesis or the formulation of *dianoia*. For example, Ionescu(2017) argues that the conscious operations of formulating a *dianoia* are acquired from the reasoning process in geometry, "Hypothetical reasoning is borrowed from geometry and is therefore appropriately illustrated with a geometrical problem"[41] (Ionescu: 17), and Silverman(2022) characterizes the method of hypothesis in the same way as the reasoning in mathematics, "It seems that the mathematicians, for example, use discursive thought because they assume the starting points, i.e., the axioms or definitions, of their sciences"[73] (Silverman: 21).

Being persuaded by Benson's basic idea of how to formulate a *dianoia*, I will adopt Benson's strategy and terminology, though not unreservedly, and I will view the formulation of *dianoia* as consisting of the proof stage and the confirmation stage.

Having sketched Benson's characterization of how to develop a *dianoia*, I will now clarify both the proof stage and the confirmation stage. Regarding the proof stage, it is composed of the upward path and the downward path. In terms of the upward path, it reduces the initial question to a further question, and this reduction is based on an agreement which is adopted by the interlocutor.<sup>2</sup> For example, the question whether virtue is teachable can be reduced to the question whether virtue is knowledge, given that being knowledge is the sufficient and necessary condition of being teachable. In terms of the downward path, it starts by offering a position

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<sup>2</sup>It is not always the case that there is *exactly* one proposition in functioning, since there can be more than one agreement being assumed to answer the initial question. More importantly, the agreement and the hypothesis are merely adopted for the moment, and they are not examined by reason.

towards the reduced question, and this option guides one to arrive at a conclusion which is the answer to the initial question. For example, one may assume that virtue is knowledge, and based on this hypothesis, one may reach the conclusion that virtue is teachable.<sup>3</sup> Given that the hypothesis which survives the proof stage should effectively accomplish its mission, that is, to ensure the validity of the argument, I will call this hypothesis the effective hypothesis.

However, one qualification of the proof stage has to be mentioned now. Although the agreement in the previous example is a bi-conditional, this is not always the case. In fact, the agreement can be a mere sufficient condition between the hypothesis and the conclusion, “If Forms are, then Forms are the *aitia* of generation and destruction”[12] (Benson: 195), or a non-deductive relation, “it is difficult to see how the inferences from such explicit premises and the hypothesis that virtue is good to the lower hypothesis that virtue is knowledge can be thought to be deductively valid in a rigorous way”[12] (Benson: 165).

Granted these possibilities, I admit that the agreement, when being a bi-conditional, is the strictest and easiest case, but still, I will only discuss this case. This is for two reasons. Firstly, my purpose is not to exhaust every possibility in which the hypothesis is developed, but to lay the foundation for the examination, and hence I only need to determine, in structure, the components which affect such development. Having established the operations of the proof stage, I have determined the components of this stage, and they are the hypothesis, the agreement, the conclusion, and the relationship between them. With this compass in hand, one can derive different interpretations of the proof stage by choosing different relations among the multiple candidates, for example, deduction, induction, or abduction, etc., and hence one is provided with the structure of the procedures of *dianoia*. Secondly, the bi-conditional case, being the strictest case, sets the standard for validity. By investigating why this strictest case can ensure the validity of the argument, one has established a standard by which one can evaluate other different kinds of arguments, and hence one can determine whether a new argument is approximately valid.

Regarding the confirmation stage, its purpose is to justify the effective hypothesis, and this is achieved by the upward path and the downward path. In terms of the upward path, its operation is quite similar with that of the proof stage, “And when you must give an account of your hypothesis itself you will proceed in the same way: you will assume another hypothesis”[20] (*Phaedo*: 101d; trans. Grube), hence it consists of reducing the effective hypothesis to a further hypothesis which is based on an additional agreement. The upward path justifies the effective hypothesis, because it offers a valid argument whose conclusion is the effective hypothesis, although its premises are not yet examined. Given that this hypothesis is justified by a valid argument, I will call this hypothesis the valid hypothesis. In terms of the downward path, it examines the accordance between the implications of the valid hypothesis, “Socrates must also test the answer to the reduced question to see whether its *hormêthenta* agree or disagree with each other”[12] (Benson: 167).<sup>4</sup> Given that the valid hypothesis will be accepted when it agrees with its *hormêthenta*, “you will assume another hypothesis, the one which seems to you best of the higher ones until you come to something acceptable”[20] (*Phaedo*: 101d-e; trans. Grube), I will call this hypothesis the accepted hypothesis. My usage of these terms is summarized in the figure below.

Two features of the downward path must now be spelled out. Firstly, the disagreement between the implications of the hypothesis can be numerous, but each disagreement can be iden-

<sup>3</sup>I admit that there can be affirmative and negative answers to both the initial question and the reduced question, but I will only deal with the simplest case depending on the specific context.

<sup>4</sup>According to Benson’s illustration, *hormêthenta* of the valid hypothesis includes not only the logical inferences, either strictly or loosely, “not just those *hormêthenta* which follow in a vaguely logical way from the hypothesis”[12] (Benson: 174), but also its exemplifications, “but also all those observations, sayings, or common opinions(*endoxa*)-*phainomena*”[12] (Benson: 174).

Name	How is it developed?
Effective hypothesis	One reduces the initial question to a further question with the help of the agreement, and by providing a position towards the further question, one formulates an effective hypothesis, if the hypothesis reaches the conclusion by a valid argument.
Valid hypothesis	One reduces the effective hypothesis to an even further hypothesis with the help of a further agreement. The effective hypothesis will become the valid hypothesis, if this reduction works.
Accepted hypothesis	One examines whether the implication of the valid hypothesis agrees with its exemplifications. The valid hypothesis will become the accepted hypothesis if they agree.

Figure 5.2: My usage of the hypotheses

tified as being between one particular implication and its exemplifications. Taking the hypothesis that virtue is knowledge as an example, what is examined in the end is its implication that virtue is teachable and its exemplifications that there are in fact no teachers of virtue, “a consequence of this consequence—that is, a consequence of virtue’s teachability—is that there should be teachers and pupils of virtue”[12] (Benson: 167). Secondly, the disagreement leads one not to adopt the hypothesis for the moment, not because it shows that the hypothesis is false, but because it can be questioned, “it would not be unreasonable if this lack of teachers and students led one to doubt whether it was true. And doubting its truth is precisely what Socrates says he does”[12] (Benson: 168).

In conclusion, I have (a) provided my account of the investigation from the hypotheses by resorting to Benson’s characterization, which is composed of the proof stage and the confirmation stage, (b) clarified that the purpose of the proof stage is to ensure the validity of the argument, and that the hypothesis which survives the proof stage is the effective hypothesis, and (c) shown that the purpose of the confirmation stage is to offer the justification of the hypothesis from both the internal and the external account, and that the hypothesis which survives the confirmation stage is the accepted hypothesis.

Having established my account of formulating a *dianoia*, now I am ready to explain its contribution to one’s grasp of F-ness by means of each specific procedure, and this will be the main topic of the next two sections.

## 5.2 The proof stage of *dianoia* and F-ness

The purpose of the proof stage is to reduce the initial question to a hypothesized universal principle which is unexamined. To explain how the reduction is effected, I will resort to the method of using sensibles as images. By examining two possible interpretations of this method, I will argue that both interpretations can answer the question of why to carry out the reduction in this way, and that both are regulated by the properties of F-ness.

Specifically, I will argue (1) that the proof stage or the reduction is indispensable, and that it is required to be performed in this particular way, (2) that according to the abstraction account of formulating the hypothesis, the universality of the hypothesis is derived from one’s awareness of F-ness, and its content is based on one’s personal opinion or preference, and (3) that according to the summoning-application account, the universality is derived from the properties of F-ness,

but that this by itself cannot be the origin of the content.<sup>5</sup>

### 5.2.1 Why to perform the proof stage in this way?

Before I turn to explain why the reduction is indispensable, I must set the stage by adding two qualifications here. Firstly, the method of using sensibles as the image is used to explain how to formulate a hypothesis, but it is not confined to explaining the development of the effective hypothesis. In fact, this method can be used to explain the development of the unexamined universal principles, and this can be applied to the formulations of both the effective hypothesis and the agreement by which the effective hypothesis is developed. Secondly, I will only focus on the upward path, that is, the reduction, although the proof stage also includes the downward path which runs from the hypothesis to the conclusion. I, for the sake of brevity, will only examine the reduction in the proof stage, since the relation between these two paths is similar to the relation between devising a plan and carrying out the plan, and they only characterize the same argument in two different ways.

One, facing the reduction, may have two questions to ask: firstly, why bother to reduce, secondly, why reduce in this way under this circumstance? I will answer the first question here, and I will argue that the second question can be answered by the method of using sensibles as images.

Indeed, one may wonder why bother to reduce the initial question to a related question, since even a skilled geometry student can answer the question quite easily, and infer from the conditions to the conclusion, without any need to reduce. To be frank, the reduction may not be needed for the skilled student who is an imitator, but it must be required for the “first maker”. This distinction has been emphasized by Frede(1999), “Once a craft is established not much independent thinking is needed. But the first maker, the discoverer, does have to know and to conceive fully in his mind what his imitators later learn to do by routine”[28] (Frede: 206). Specifically, the imitator does not need to consider how to answer the question, but only to follow the established rules to reach the conclusion, just as one usually does when one encounters a familiar question. However, this reduction must be necessary for the first maker, or even for the one who tries to figure out the solution for oneself, since one is asked to devise a plan to connect the conditions and the conclusion, and this is achieved by reduction. Given that I will only discuss the case of the first maker, and that his purpose is to answer the initial question by devising a plan which is developed by reduction, the reduction will be necessary for the proof stage.

Having established the indispensability of the reduction, one may still wonder why one has to reduce the initial question to *this* question rather than *that* question, that is, why to *this* hypothesis in particular.<sup>6</sup> Given that the unexamined hypothesis is a universal principle, this question can be answered by replying to the two sub-questions: What is the origin of the universality? What is the origin of the content? In other words, if one is able to answer these two sub-questions, then one has answered the question of why to reduce in this way.

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<sup>5</sup>I have to admit that my strategy is based on Benson’s method, but this does not mean that nothing new is offered in my account. In fact, I have discovered two disadvantages of Benson’s strategy: firstly, that he does not realize that the hypotheses must be numerous and relative, and secondly, that he does not realize that the *dianoia* can be composed of multiple simple *dianoia*. It is these disadvantages that motivate me to offer my account, although my account is still based on Benson’s interpretation.

<sup>6</sup>Although the term being used here is the hypothesis, I am referring to the unexamined hypothesized principles in general. This includes both the effective hypothesis and the agreement. Specifically, *this* hypothesis refers to the effective hypothesis when the agreement is not used, and it refers to the agreement when the hypothesis is determined by the conclusion and the agreement. Consequently, I will use the hypothesis to refer to the hypothesized principles in this context, and this is not confined to the effective hypothesis.

In order to explain why the reduction has to be operated in this way, I will resort to the method of using the sensibles as the image of F-ness, “using as images the things that were imitated before [the sensibles]”[20] (*Republic*: 510b; trans. Grube). I am justified in doing so for two reasons. Firstly, this method is preferable, since this method explains how to formulate a hypothesis, and this is the same as the question of why to reduce to this hypothesis. This can be confirmed from Smith’s account of viewing the sensibles *qua* images, since it explains the development of the descriptions of the mathematical object, that is, the formulation of the hypothesis, “the objects at each level were given by Plato (and were taken by their consumers) under different descriptions”[74] (Smith: 41), and from Byrd’s account that the object of *dianoia* is the hypotheses it uses, since the descriptions or the hypotheses are developed by using sensibles, “Socrates’ descriptions of the correct study of mathematics illustrate how visible things summon the soul to hypothesize mental images of the Forms”[18] (Byrd: 120).<sup>7</sup> Secondly, this method is preferable, since it can answer the two sub-questions. Specifically, the procedure that one, by encountering the sensibles, selects a certain description of the sensible can be used to explain the origin of the content, and the procedure that one, by using it as image, elevates the description as being unqualifiedly true, offers one some awareness of F-ness which explains the origin of the universality. Consequently, one is allowed to employ the method of using sensibles as images to answer the question of why to reduce in this way.

In conclusion, I have established that the proof stage is indispensable since it is necessary for the “first maker”, and that the question why it is required to be performed in this way can be answered by the method of using sensibles as image.

As a result, to answer the question why one is forced to reduce in this way, one has to determine the processes of using sensibles as the image of F-ness. These processes have been cashed out by Burnyeat(1987), since he has offered two possible accounts: one is the abstraction and another is directly depending on F-ness, “One answer anticipates Aristotle’s view that mathematics are physical objects considered a certain way. The other has it that mathematics are directly dependent on the definitions with which mathematical discourse begins”[15] (Burnyeat: 159).

In the next part, I will consider these two accounts by following Burnyeat’s suggestion, and I will examine whether any of them can answer the question of why to reduce in this way, and whether any of them can explain that the proof stage is regulated by F-ness.

### 5.2.2 Burnyeat’s abstraction account

With this background in mind, now I will turn to Burnyeat’s abstraction account of the method of using sensibles as images. In order to justify that this account answers the question of why to reduce to *this* particular hypothesis, I will argue (a) that the universality of the effective hypothesis is derived from one’s awareness of F-ness, (b) that the content of the hypothesized principle is derived from one’s personal preference or opinion, and (c) that this account clarifies the operations of the proof stage.

Burnyeat’s abstraction can be characterized as being that the universal principle is generalized from the sensibles, and this process can be summarized as follows: (i) one tries to answer the *ti esti* question, that is, why this particular object is *F*, (ii) one selects a feature of this particular

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<sup>7</sup>I have to admit that the same object, for example, the mental image, can be discussed from two aspects, that is, from the ontological aspect or the epistemological aspect. I will focus only on the epistemological aspect, that is, the descriptions of the mathematical object, and I will not make a decision on the ontological aspect. Consequently, even if the hypotheses were viewed as the input of formulating a *dianoia*, I would not argue that these hypotheses are entities that have an independent ontological status, and this position differentiates me from Byrd.

object, for example, feature  $p$ , and one formulates a hypothesis about this object which explains its being  $F$  by its being  $p$ , and (iii) one elevates this hypothesis which is about this object to a universal principle which can be applied to any object. For example, any object which shares the feature  $p$ , should also be  $F$ , “they consider that what they infer about the given angle or straight line can be identically asserted for every similar case”[15] (Burnyeat: 162).<sup>8</sup>

One is justified in accepting this abstraction account, not only because this can be illustrated by Plato’s text, but also because this has been adopted by the critics. Firstly, this approach can be confirmed by Hippias’ explanation of why the pot is beautiful. To explain why a pot is beautiful, Hippias proposes that it is “turned by a good potter, smooth and round and finely fired”[20] (*Greater Hippias*: 288d; trans. Woodruff). Obviously, this explanation is based on a particular case of the pot, and based on this case, Hippias may infer, by abstraction, that any pot or even any object *should* be beautiful if it has these particular properties. This proposal is rejected simply because it is not unqualifiedly true. Secondly, this approach has been adopted by the critics in explaining the formulation of a *dianoia*. For example, it has been adopted by Benson(2015) who argues that the feature chosen can only be the *contingent* property of the sensibles in formulating a *dianoia*, “Dianoetic, however, employs these images and sense-experience incorrectly. It takes what are only contingent or artificial *hormêthenta ... hormêthenta* caused by the component Forms of the hypothesis”[12] (Benson: 262), and by Storey(2022) who argues that the feature selected is the invariable properties of the sensibles, “mathematics begins from certain invariable characteristics of the sensible world-basic observations ‘obvious to everyone’”[76] (Storey: 299).

If one is allowed to adopt the abstraction account, the question of the origin of the universality will be answered by procedure (iii) which elevates a feature of the object to an unqualified universal principle, and the question of the origin of the content will be answered by procedure (ii) by which one selects a feature of the particular object.

Although the hypothesized universal principle is unqualified, for example, any object which has these properties is beautiful, the origin of its universality is not something factual, but something normative, for example, any object which has these properties *should* be beautiful.<sup>9</sup> Indeed, it is only because one is regulated by a certain normative universal principle, that one adds a universal operator to the hypothesis.

Now I will argue that normative universality is derived from one’s recognition of the properties of F-ness. This is for two reasons. Firstly, the hypothesized universal principle should be unqualified, since this is required by the aim of the investigation, that is, to explain what F is. Given that one is supposed to answer the *ti esti* question, and that the question is to investigate F-ness, “The mathematician does this because he wants to understand that which is unqualifiedly F”[15] (Burnyeat: 159), one should ensure that the answer offered satisfies the requirement of being unqualified. However, satisfaction is not achieved by examining whether the proposal is unqualifiedly true, since this is the task of the confirmation stage rather than of offering a proposal. In fact, satisfaction is achieved by adding the hypothesis with an operator of “being unqualifiedly true”, and this addition enables the hypothesis to have the appearance of satisfying

<sup>8</sup>It is unclear what Burnyeat means exactly by “abstraction”, since the hypothesized universal principle can be abstracted in two ways: firstly, it is in the sensibles, and it can be seen quite easily just as a tool is quite eye-catching in a toolbox, and secondly, the universal principle, although not being in the sensibles, can be inferred based on the characterization of the sensibles. Nevertheless, I will not adopt the former way, since this has been refuted by critics. For example, Franklin argues that the universality of the hypothesis cannot come from the sensibles, “The arithmeticians simply speak of units without material composition, with no suggestion that they arrive at these units by stripping familiar particulars of their material features”[27] (Franklin :492). The similar charge has also been defended by Hume in his analysis of the problem of induction. Consequently, I will mainly focus on the second way.

<sup>9</sup>It is not factual, since it can be easily refuted by the counter examples, for example, a beautiful girl is not smooth and round and finely fired.



the requirement of being unqualified. Hence this proposal *answers* the *ti esti* question, whatever the content of the hypothesis is. Secondly, the hypothesized universal principle should be unqualified, since this is derived by one's awareness of the properties of F-ness which is unqualifiedly true. Given that the hypothesized principle should be applicable to any similar particulars, and that it should be universal, "their unqualifiedness is a condition of the mathematical sciences being"[15] (Burnyeat: 157), the universality cannot come from sensibles, but from nowhere apart from one's awareness of F-ness, "But if you ask him, 'What sort of item is it that is unqualifiedly F?', ... 'No perceptible F, but one accessible to thought alone'"[15](Burnyeat: 159).<sup>10</sup>

As a result, one, recognizing the requirement of F-ness, realizes that for any proposal to be the answer to the *ti esti* question, it must have the appearance of being universal. Consequently, one is required to add the operator of "being unqualifiedly true" to the hypothesized proposition, regardless of its content, and by this elevation, one formulates the universal principle which needs to be examined further.

Having established that the universality of the hypothesized principle is derived from one's awareness of F-ness, now I will determine the origin of its content. The content, that is, the selected feature of the object, is not necessarily connected with F-ness, since its application can violate the requirement of unqualifiedness, and its development is not examined by reason. Firstly, the selected feature is not necessarily a property of F-ness, since the elevated universal principle is generalized from the particular cases, and it can be false. As the case of the pot has illustrated, the standard developed by the beautiful pot cannot be applied to beautiful girls, or gods, and hence it cannot be the explanation of why a particular is beautiful. This position has been emphasized by Rowe(1993), when he argues that the effective hypothesis can be a false characterization of F-ness, "your initial choice may turn out not to have been a good one, in which case you will have to choose another"[68] (Rowe: 58), and by Benson(2015), when he argues that the hypothesis formulated in *dianoia* cannot capture the essence, "The other *hormêthenta* (or instantiation) was caused by various contingent and artificial features"[12] (Benson: 262). Secondly, the selected feature is not necessarily a property of F-ness, since its operation is not examined by reason. This position has been defended by Rowe when he argues that the effective hypothesis is only an acceptance, "it will itself be a 'hypothesis worthy of acceptance', but nothing more"[68] (Rowe: 58), since the selection of the feature is not regulated by reason, "That Forms exist is something Cebes and Simmias have both welcomed without argument"[68] (Rowe: 57).<sup>11</sup> This also explains why the hypothesis in a *dianoia* requires further examination, "That's why every man must think a lot about the first principles of any thing and investigate them thoroughly to see whether or not it's correct to assume them"[20] (*Cratylus*: 436d; trans. Reeve).

Although the formulation of the content is not regulated by the properties of F-ness, this does not mean that it is developed without any evidence, or purely accidentally, since it is determined by one's personal opinion or preference. Taking Hippias' proposals of Beauty as an example, the potter might choose being smooth and well fired as the explanation of why it is beautiful, but a trader may choose being expensive as the essence, and an inexperienced person may choose whatever feature interests one as the properties of F-ness, etc. Following this line of thought, the selection of the features in the sensibles and the formulation of the content, can be viewed as a "sight lover's" choice which is based on one's opinions or preferences, and this is why the content

<sup>10</sup>Of course, the unqualifiedness or the universality, in the strict sense, should work for any particulars. However, it can also be called unqualified in a loose sense when it is applicable to a certain group of things, for example, any pot is beautiful as long as it has these properties. Given that the strict sense of universality is hard to obtain, I will take both cases as being unqualified, although in different senses.

<sup>11</sup>When Rowe argues that the hypothesis is only an acceptance, he refers to the accepted hypothesis rather than the effective hypothesis. Although I disagree with his position, his assertion still implies that the effective hypothesis is only an acceptance without the involvement of reason, since the accepted argument, which meets more requirements, is still an acceptance.

can differ from person to person, and from time to time. If this is the case, then the selection of certain features cannot be purely accidental, since the justification for one to hypothesize in this way might reside in the testimony from other experts, or from one's daily experience, or even from one's wishful thinking, etc.

In fact, this abstraction account not only answers the question of why to reduce to *this* particular hypothesis, it also sheds light on the operations of the proof stage. Obviously, the proof stage does not run as follows: one realizes that there are several features in a certain sensible which can be responsible for F-ness, and by evaluating all of them thoroughly, one selects a particular feature and elevates it as the universal principle, that is, the effective hypothesis. This interpretation should be rejected, since the hypothesized universal principle is developed by reason, and this contradicts the established condition that the principle is adopted by one's preference.<sup>12</sup> On the contrary, it should proceed through trial and error: (i) one selects some features of the sensibles by one's opinion or preference, and one hypothesizes a proposition which is based on this particular case, (ii) one elevates this hypothesis to a universal principle in which the universality is derived from one's awareness of F-ness, and one takes this universal principle as the answer to the *ti esti* question, and (iii) the universal principle will be adopted as the accepted hypothesis if it passes the examination by the confirmation stage, but be rejected if it does not pass.<sup>13</sup>

More notably, the rejection of the present hypothesis is not the end of formulating a *dianoia*, since one has to rack one's brain to select another feature which might explain F-ness, and repeats the previous procedures, until one finally reaches the accepted hypothesis which survives the confirmation stage.

Therefore, I have answered the question of why to reduce in this way, by arguing (a) that the universality of the effective hypothesis is derived from one's awareness of F-ness, and (b) that the content of the hypothesized principle is derived from one's personal preference or opinion. More importantly, I have argued that what the capacity of *dianoia* does is to formulate an accepted hypothesis which survives both the proof stage and the confirmation stage, and this may be achieved by operating these stages repeatedly.

### 5.2.3 Byrd's summoning-application account

Having illustrated the abstraction account, I have answered the question of why to reduce in this way, and the question of why it is regulated by F-ness. Now I will turn to the second account of the method, and I will try to argue (a) that the universality of the effective hypothesis is derived from F-ness, though not purely from F-ness, (b) that this account by itself cannot explain the origin of the content, and (c) that these two accounts shed some light on the dispute over the object of *dianoia*.

To explain the account of directly dependence on F-ness, I will resort to Byrd's summoning-application process rather than Burnyeat's own characterization.<sup>14</sup>

<sup>12</sup>In fact, if the hypothesized principle is examined thoroughly by reason at the very beginning, then it must capture the properties of F-ness, and there is no need for the further examination by the confirmation stage.

<sup>13</sup>This does not mean that there *is* only one hypothesis in competition, but that only one hypothesis is investigated for the moment. The other hypotheses will be considered, if the present hypothesis does not pass the examination by the confirmation stage.

<sup>14</sup>Given that the descriptions of the mathematical are directly based on F-ness, "mathematical, given that they are not abstractable aspects of the sensible world, must be understood as directly dependent on Forms"[15] (Burnyeat: 162), one may argue that the sensible is not required, and hence that it is inconsistent with the method of using sensibles as images. However, this should be rejected, since the dependence of F-ness is still achieved

According to Burnyeat(1987), the hypothesis in mathematics depends on F-ness, because it is intrinsically good, “goodness is a property of numbers and units, because the One is the Good itself”[15] (Burnyeat: 171). Specifically, one, being presented with a sensible, recognizes its proportion or order, and one will be aware of both the existence and properties of F-ness with the help of one’s education, “It is the abstract study of certain good and beautiful structures which wise politicians will seek to realise in their own souls and in social life”[15] (Burnyeat: 172). In other words, the properties of F-ness are summoned by one’s recognition of the proportion in the sensibles, and it is in this sense that one uses the sensibles as the image of F-ness.

However, this interpretation does not specify which type of proportion can summon the awareness of F-ness, and how this summoning process is activated, how this process is performed in detail, etc. One more disadvantage is that this approach is limited in its extent of application, since it can only be used by those who are educated thoroughly, but not by anyone at all, granted that not everyone can recognize the proportion or the beautiful structure in the sensibles.

With these disadvantages of Burnyeat’s interpretation in mind, I prefer Byrd’s summoning-application interpretation which is illustrated in the figure below. According to the summoning-application interpretation, (i) one, being presented with sensibles, is puzzled by the opposites in a sensible, (ii) one’s reason is summoned by these opposites, and through recollection, one can be aware both of the existence and of the properties of F-ness, “Socrates introduces the summoner in order to explain how the soul makes the transition from trusting its senses to using thought”[17] (Byrd: 377), and (iii) by this feeble awareness of F-ness, one applies it under some further conditions, and one formulates several universal principles which can function as the axioms in a discipline, “the mathematician hypothesizes that the Form (F) would manifest itself in a certain way (f) under set conditions (x)”[18] (Byrd: 122).

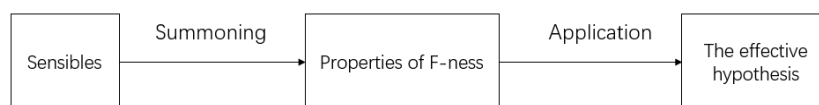


Figure 5.3: Byrd’s interpretation of formulating hypotheses

I prefer Byrd’s interpretation, not only because it shares a similar strategy with Burnyeat’s interpretation, that is, the awareness of F-ness is summoned by certain features in the particular objects, but also because it does not have the disadvantages of Burnyeat’s interpretation. Indeed, the summoning-application interpretation does not require one to recognize the proportion in the sensibles, but only to be aware that the sensibles are both F and not F, and this can be obtained by any “sight lovers”. Additionally, the summoning process is activated by the opposites, since they violate the requirement of consistency, and the process is performed by recollection. Finally, this interpretation can be used by the mathematicians who are educated, and by the “sight lovers” or ordinary people who are not educated, hence it can be applied by anyone.

As a result, I am allowed to use Byrd’s summoning-application interpretation to explain the account of directly dependence on F-ness.

Although Byrd views the summoning as a process which leads one from the sensibles to the *awareness* of F-ness, what is recognized includes not only the existence of F-ness, but also some

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by using sensibles as images, and this can be confirmed from the operations of mathematics. Specifically, the sensibles are required, not only because a mathematician needs “particulars to carry out his constructions and proofs”[15] (Burnyeat: 163), but also because this is the only way for them to achieve their purpose, “because there is no other way of doing deductive mathematics than by deriving theorems and solutions from what is laid down at the beginning”[15] (Burnyeat: 151).

properties of F-ness. Firstly, Byrd has emphasized both the recognition of the existence and that of the properties of F-ness. Obviously, the recognition of the existence of F-ness has been highlighted by Byrd when she illustrates the process of summoning, “This provokes the soul to ask what the equal itself is, thus recognizing that equality has a transcendent existence”[17] (Byrd: 377). This is consistent with the characterization of the summoning at *Republic* 524c, “understanding was compelled to see the big and the small, not as mixed up together, but as separate—the opposite way from sight”[20] (*Republic*: 524c; trans. Grube). Apart from the recognition of the existence, the awareness of the properties of F-ness is also emphasized by Byrd when she argues that Oneness should be indivisible, and this is why the “unity” used by the mathematicians is not Oneness, “Though the ‘one’ of which the mathematician speaks is an intelligible entity, it is not Oneness itself but a one among many”[18] (Byrd: 121). Secondly, the awareness should include the properties of F-ness, because the summoner problem is solved by the requirement that F-ness should always be F. When one is presented with the summoners, for example, a particular which is both a unity and a multiplicity, one, aiming to determine what Oneness is, examines the possible candidates by the principle that Oneness cannot be “both one and an unlimited number at the same time”[20] (*Republic*: 525a; trans. Grube). Hence one realizes that Oneness cannot be this particular, and that it must reside in another place. In fact, it is because one recognizes a property of Oneness that it is always one, and never many, that one is allowed to reject the explanations by the particulars, and to solve the summoner problem.

Consequently, one, encountering the opposites, becomes aware of F-ness, and this awareness includes both the existence of F-ness, and some of its properties, for example, the feature that F-ness should always be F, and never not F. It is by these properties that one solves the summoner problem.<sup>15</sup>

The application process, according to Byrd, is to apply the properties of F-ness in a certain context, “mathematicians ... seek to apply this grasp of properties to particular sets of circumstances in order to solve problems”[18] (Byrd: 122).<sup>16</sup> Taking the hypothesis for instance, that the three interior angles of a triangle will always have a sum of 180 degrees. Given that it is an axiom in plane geometry, it can be viewed as an application from the descriptions of the triangle itself. The axiom is not the characterization of the triangle itself, since it is false in non-Euclidean geometry, and hence it cannot be unqualifiedly true. In other words, the properties of a triangle itself can be applied to both the plane and solid geometry. When they are applied to the plane geometry, it derives an axiom which is always true in the system of the plane geometry, and when they are applied to the solid geometry, it derives another axiom which is unqualifiedly true in this discipline, and which differs from the one in the plane geometry.

Although the effective hypothesis is an application of F-ness in a certain context rather than the pure properties of F-ness, it is still universal, “the universality of mathematical theorems is of central interest to Plato”[27] (Franklin: 496). It is universal because it cannot be applied to the sensibles, for example, the sum of the three interior angles of the triangle in the sand or on the paper, cannot be exactly 180 degrees, granted that there must be some deviation in the sensible cases, no matter how minor it is. The same consideration enables Byrd to classify the hypotheses as the object of thought, rather than a particular object, “if circularity were to manifest within two dimensions as a non-material spatial figure with a radius of 6 cm, figure f would exist. However, since these conditions do not obtain, figure f exists only as an object of thought”[18](Byrd: 122).<sup>17</sup>

<sup>15</sup>When Storey offers his less demanding reading of summoners, he still agrees that the cognition of *dianoia* is activated by the summoning process, “perception is ‘inadequate’ and leaves the soul ‘puzzled’ (523e1-525a1), which creates a unique need to call on reason”[76] (Storey: 305).

<sup>16</sup>The typical illustrations of these circumstances or contexts are the different disciplines, for example, the plane geometry and solid geometry.

<sup>17</sup>It is unclear whether the new additional condition in the application is the properties of F-ness, but this does

In summary, the summoners stimulate one's reason to recollect a certain property of F-ness, and by applying this property to a certain context, one develops an effective hypothesis in this discipline, though it is only unqualifiedly true in this context.

As a result, the universality of the effective hypothesis is derived from the properties of F-ness through the application, and the awareness of F-ness is stimulated by the summoners.

Having established that the universality of the effective hypothesis can be explained by the summoning-application interpretation, I now intend to argue that the development of its content cannot be explained merely by applying properties of F-ness in a certain context.

To clarify the operation of the application, I will resort to the definition of human being which is, for example, the rational animal, since applying being animal in the context of being rational results in the definition.<sup>18</sup> If the content of the universal principle is derived merely from the application, then the effective hypothesis would derive its content, at least partially, from the higher universal principle, just as the term rational animal derives its content from the higher principle of being animal. Following this line of thought, there must be something informative in the awareness of F-ness in order to initiate the application, apart from its being unqualified which is merely a necessary condition of F-ness.<sup>19</sup> Specifically, there will be three possibilities of the properties, depending on which property is recognized in the recollection: (i), one fully grasps F-ness, (ii), one captures, at least, one informative property, that is, a positive property of F-ness, apart from the necessary conditions of F-ness, and (iii) one only captures the necessary conditions of F-ness.

If one pays closer attention to these possibilities, one will realize that none of them can explain the origin of the content merely by itself. Firstly, option (i) should be rejected, since this cannot be applied to *dianoia*. Of course, one, having a full grasp of F-ness, can derive the axiom in a certain discipline by application, but this is not *dianoia* any more, since only in *noesis* can one grasp F-ness fully. Secondly, option (ii) should be rejected, since this would lead to the problem of infinite regress. According to the summoning-application account, each hypothesis, being universal, must be developed by a correspondent summoning-application process. Given that the present universal principle is derived from a certain informative and higher universal principle, it follows that this higher principle, being universal, should also presuppose another summoning-application process, and an even higher universal principle. In other words, the principle's universality must always be derived from that of another universal principle, and this regression will never end. Thirdly, option (iii) can not explain the adoption of the content by itself. This option fails, not only because it is merely a necessary condition of F-ness which is insufficient to determine F-ness, but also because its operations cannot be performed unless one is offered a given hypothesis in advance.<sup>20</sup>

In summary, the summoning-application process runs as follows: firstly, one, when facing the sensibles, recognizes the summoners; secondly, one, based on the opposites, will have an

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not affect substantially the conclusion that the universality of the effective hypothesis is partially derived from the properties of F-ness.

<sup>18</sup>It might also be an application of being rational in the context of being animal. However, the same idea remains, that is, among the two origins of the application, one is the higher universal principle, and another is the newly added condition from the context.

<sup>19</sup>In my opinion, the requirement of unqualifiedness is a necessary condition of F-ness, and it can only aid one in distinguishing what is not F-ness, but it is unable to determine by itself which description is the characterization of F-ness.

<sup>20</sup>Still, option (iii) offers a way to explain the origin of the content, and shows that it comes from the content of the adopted hypothesis in advance. Consequently, the origin of the content of the universal principle will be determined by the origin of the adopted hypothesis. Given that the hypothesis is developed by the "sight lover", and that it has been elaborated in the abstraction account, it is more plausible to argue that the content of the hypothesis in the interpretation of direct dependence of F-ness, is still a personal adoption, and that it is based on personal opinion or preference.

awareness of F-ness; thirdly, by recognizing that one has already adopted a hypothesis about an object, one elevates this hypothesis to a universal principle by the properties of F-ness; and fourthly, one will apply this universal principle to a certain context whose outcome is the axiom in a certain discipline.

The clarification of the summoning-application account not only answers the question of why one reduces to this effective hypothesis, but also sheds some light on the dispute over the object of *dianoia*.

At first glance, it seems that the abstraction account differs from the summoning-application account, but this impression will disappear when one pays closer attention to their operations. In fact, these two accounts share four features in common: firstly, the cognition of *dianoia* starts from sensibles; secondly, one has adopted a hypothesis about the sensibles by one's personal opinions or preferences, and it is used to explain why *this* particular object is F by a feature of this object; thirdly, one recognizes the properties of F-ness either by abstraction or by summoning-application, and one elevates the adopted hypothesis to the universal principle by the awareness of F-ness; and fourthly, one examines the universal principle by the confirmation stage, and consequently, it will be adopted as the accepted hypothesis if it passes the examination by the confirmation stage, but be rejected when it does not pass.

I have to admit that these shared features are far from exhaustive. Even if they were, their characterizations would still be doubtful, given that the previous clarifications of these two account are also based on limited resources.

However, the features summarized above should be persuasive, since the characterization of *dianoia* is to "reconcile *dianoia*'s use of sensibles with its placement in the intelligible section of the Line"[76] (Storey: 295).<sup>21</sup> Indeed, it is because of its usage of sensibles that it must start from the sensibles, and it is because of its placement in the intelligible section that something from F-ness must be added in the formulation of the hypotheses. The first feature explains the origin of the content, and the second feature explains the origin of the universality and its correlation with F-ness.

If this is the case, then, merely from the epistemological aspect, both the sensibles and the hypotheses are positioned before the investigation of the hypotheses, and each of them can be qualified as the input of *dianoia*, depending on how to classify the mechanism of formulating a *dianoia*. Specifically, if the formulation of the universal principle is considered as the preparatory treatment which is prior to the development of a *dianoia*, then the object would be, at least in its function, the hypotheses; and on the other hand, if this is included in the formulation of a *dianoia*, then the object would be the sensibles. Consequently, the dispute over the mathematical object, when it is considered in its cognitive aspect, is determined by how to mark the boundary of the mechanism of *dianoia*.

As a result, these agreements on the cognitive part reveal the point over which the critics are argue, that is, the appropriate classification of the mechanism of formulating a *dianoia*.

In order to explain why the reduction has to be performed in this way, I must explain how the effective hypothesis is developed, and this can be explained by answering two sub-questions: what is the origin of the content? And what is the origin of the universality?

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<sup>21</sup>Given that the dispute over the mathematical object concerns the ontological issue rather than the epistemological issue, that is, the content of the hypotheses, "Somehow, the ontological relationships depicted by the Divided Line are more problematic than the cognitive relationships"[15] (Burnyeat: 149), it is more plausible to find agreements over the epistemological characterization of the *dianoia*. In fact, these common features, being interpreted only in the epistemological aspect, are also agreed by Storey(2022), Moss(2021), and Smith(1996).

Given that the formulation of hypothesis can be explained by the method of using sensibles as images, I have considered two accounts of this method, that is, Burnyeat's abstraction account, and Byrd's summoning-application account.

In conclusion, I have established that both accounts can explain how to reduce in this way and why the proof stage is regulated by F-ness. According to the abstraction account, the universality of the hypothesis is derived from one's awareness of F-ness, and the content of the hypothesis is based on one's personal opinion or preference. According to the summoning-application account, the universality of the principle is derived from the properties of F-ness which are summoned by the opposing features of the sensibles, but this by itself cannot be the origin of the content.

### 5.3 The confirmation stage of *dianoia* and F-ness

In order to establish that the confirmation stage helps one to capture F-ness, I will argue that both its upward path and its downward path are regulated by properties of F-ness. Specifically, I will argue (1) that the upward path is operated in a similar way to the proof stage, and that it is regulated by the theoretical consistency which is a property of F-ness, (2) that the downward path is an examination of the agreement between the hypothesis and its exemplifications, and that it is regulated by the participation relationship which is implied by F-ness, and (3) that the complex *dianoia* is a conjunction of multiple simple *dianoia* in some of which one accidentally grasps the essence without knowing it, and that it prepares the basis for the development of *noesis*.

#### 5.3.1 The confirmation stage

As soon as the hypothesized universal principles are developed, one will, as the divided line suggested, advance from the hypotheses to the conclusion, and one will encounter the problem of how to proceed from hypotheses to conclusion. In this section, I will explain this process by resorting to Benson's confirmation stage. Specifically, I will argue (a) that the upward path of the confirmation stage is operated in a similar way to the proof stage, and that it is regulated by F-ness, and (b) that the downward path of the confirmation stage is regulated by the participation relationship which is implied by F-ness.

As I have argued earlier, the confirmation stage is composed of the upward path which involves reducing the effective hypothesis to a further hypothesis, and the downward path which involves examining whether the implication of the effective hypothesis agrees with its exemplifications. The upward path offers an argument or logoi to justify the adoption of the effective hypothesis, and the effective hypothesis becomes the valid hypothesis when it can be derived from a further hypothesis.

Although the operation of the upward path is basically the same as that of the proof stage, it is still indispensable. Firstly, it is indispensable because it contributes to one's grasp of F-ness in a different manner, that is, it strengthens the effective hypothesis, which is only assumed, by a theoretical argument. Obviously, the effective hypothesis is supposed to answer the *ti esti* question, "An explanation is what is signified by the answer, if the answer is true, to the question 'Why is this thing as it is?' or 'Why is this thing, x, f (supposing it is f)?' [64] (Politis: 62). Although the effective hypothesis offers an answer to the question of why a certain object is F, this answer itself is far from being an explanation, since it is still an assumption which requires further explanation. This obliges one to offer further justifications for this effective hypothesis, and this justification is offered by the confirmation stage. Secondly, this is required, because this can explain why *dianoia* cannot go beyond the hypothesis. Evidently, each hypothesis

in the corresponding argument should be explained, and it should be explained by a further argument which runs from a further hypothesis to the present hypothesis. Consequently, there will always be a further hypothesis assumed in the distance, and this will never end. It is in this sense that *dianoia* cannot go beyond the hypothesis, since the presupposition of the unexamined hypothesis is internal to the procedures of formulating a *dianoia*, as long as the requirement of the explanation persists.

Still, one further difference between the upward path and the proof stage should be pointed out, that is, their targets are different. The purpose of the proof stage is to offer an explanation to the initial question, or to put it another way, to justify the conclusion which is the answer to the initial question. However, the purpose of the upward path is to justify the effective hypothesis with a theoretical argument, although its operation is similar to that of the proof stage. Consequently, to justify the conclusion, one should examine it through the proof stage and the confirmation stage, but to justify the effective hypothesis, one only needs to examine it through the confirmation stage.

As a result, in the subsequent part, I will only focus on the examination from the confirmation stage when I consider whether an effective hypothesis is justified.

Having established the upward path, now I will turn to the downward path. To answer the question why it contributes to one's grasp of F-ness, I will argue (a) that Plato is not an extreme externalist of justification, though the externalist account has been offered by the downward path, and (b) that this downward path is regulated by the participation relationship which is implied by F-ness.

The downward path requires an examination of the agreement between the hypothesis and its exemplifications, and this is an externalist account of justification. Firstly, the examined agreement is between the hypothesis and its exemplifications, and it is "a disagreement between a consequence of the hypothesis and the world"[12] (Benson: 170). Clearly, the hypothesis that virtue is teachable is refuted by the fact that there are no teachers of virtue, "The issue is that, despite what they believe, no such teachers are to be found"[12] (Benson: 172).<sup>22</sup> Provided that one rejects the hypothesis when it disagrees with its applications to particular cases, this rejection is determined by something independent of one's internal acceptance, "What is required is not that the premises are believed by Anytus and/or Meno, but that they are in some way independently plausible"[12] (Benson: 173). This is a justification from the external. Secondly, the justification employed here is an externalist account, since it refers to the mind-world warrant. According to Goldberg(2015), a belief, being justified by evidence, does not have a mind-world warrant, if its "evidence supervenes on (non-factive) mental states"[33] (Goldberg: 209), and the support relation between the evidence and the belief is the "logical, semantic, and probabilistic relations between the relevant contents"[33] (Goldberg: 210). Consequently, a belief will have a mind-world warrant in the loose sense, if its evidence is factual or its support relation supervenes on the relation between mind and world. Given that the evidence for the hypothesis is the exemplifications which are independent of the mental states, and that its support relation is the participation relation which is neither logic nor semantic, etc., it is an externalist account of justification by its reference to the mind-world relation.

Although I highlight the externalist account of justification, I do not mean that Plato is an extreme externalist, since Plato's characterization of *dianoia*, interpreted by my account, emphasizes both the justification from the externalist account and the internalist account. Firstly,

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<sup>22</sup>I have to admit that this is not always the case, since the *hormêthenta* by which the agreement is evaluated includes the external fact, the logical implications and the assertions, "not just those *hormêthenta* which follow in a vaguely logical way from the hypothesis, but also all those observations, sayings, or common opinions (*endoxa*)"[12] (Benson: 174).



Plato is not an extreme externalist, since the internal regulations are required in the proof stage and the upward path of the confirmation stage. Obviously, one has to check whether the effective hypothesis can be inferred from the further hypothesis, “you would ignore him and would not answer until you had examined whether the consequences that follow from it agree with one another or contradict one another”[20] (*Phaedo*: 101d; trans. Grube), and this examination is based on the logical relation which is a characteristic of an internalist account of justification. Secondly, Plato is not an extreme externalist, since even Smith(2000), who argues that Plato is a causal reliabilist, attributes internal responsibilities to Plato’s notion of *noesis*. Apart from the reliable process, Smith also emphasizes that one’s adherence to consistency is indispensable, “he counts coherence as a necessary condition of knowledge and measures cognitive success in part by the knower’s ability to produce and maintain a coherent system of judgements”[75] (Smith: 163), and that something normative is required, “Plato connects all knowledge with the Good, and thereby shows a clear commitment to the anti-naturalist’s claim that knowledge requires a normative element”[75] (Smith: 163).

The downward path guides one closer to F-ness, since it is regulated by the participation relationship which is implied by F-ness. Differing from the internalist account of justification which ensures a merely theoretical consistency, the downward path offers an externalist account of justification, since one is forced to doubt the valid hypothesis when it disagrees with its exemplifications. This examination is forceful, because the exemplification should partake of F-ness, and they are connected to F-ness by this participation relationship. Given that the externalist account of justification can help one to select the hypothesis which agrees with its exemplifications, it imposes one more requirement on evaluating the multiple candidates, and this, together with the theoretical justification, leads one closer to F-ness than by merely following the requirement of consistency.

Therefore, I have established (a) that the upward path of the confirmation stage is operated in the similar way to the proof stage, and that it is regulated by the theoretical consistency which is a property of F-ness, and (b) that the downward path is an examination of the agreement between the hypothesis and its exemplifications, and that it is regulated by the participation relationship which is implied by F-ness.

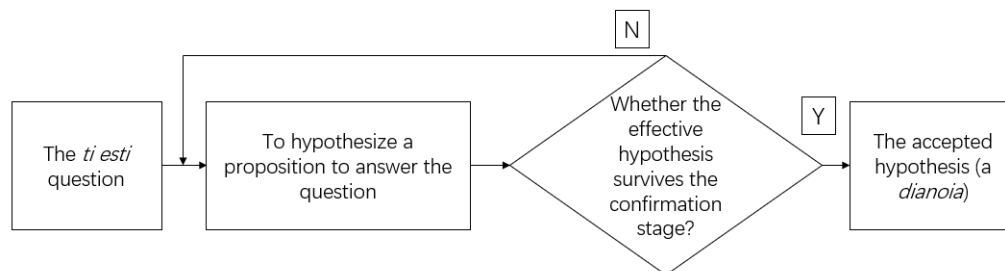


Figure 5.4: The formulation of a *dianoia*

Having explained both the proof stage and the confirmation stage, I can now summarize the whole process of formulating an accepted hypothesis, as is illustrated in the figure above. Specifically, it runs as follows: (i) one, being troubled by the *ti esti* question, offers a hypothesized proposition to answer the question, and this proposition is based on one’s opinion or preference; (ii) one has to make sure that this hypothesized proposition satisfies the first necessary condition of the explanation, that there is a valid inference from the hypothesized proposition to the conclusion, and hence that it becomes the effective hypothesis if it survives the proof stage;

(iii) one has to verify that the effective hypothesis satisfies the second necessary condition of the explanation, that there is a further valid inference in order to reach the answer, and hence that the effective hypothesis becomes the valid hypothesis if it passes the upward path of the confirmation stage; and (iv) one has to affirm that the valid hypothesis satisfies the third necessary condition of the explanation, that is, that its implications do not disagree with its exemplifications in the sensible world, and hence that the valid hypothesis becomes the accepted hypothesis, if it passes the downward path of the confirmation stage, “in which case you come across ‘something adequate’ (E1), i.e. a formulation which does not have the weakness you found in others”[68] (Rowe: 58).

More notably, the rejection of the valid hypothesis is not the end of formulating a *dianoia*, since one has to rack one’s brain to select another feature which might explain F-ness, and repeat the previous procedures, until one finally reaches the accepted hypothesis which survives the confirmation stage.

### 5.3.2 Two inferiorities of *dianoia* and the complex *dianoia*

With this formulation of a *dianoia*, one may be satisfied with a *dianoia*, since it is examined by both the internalist and the externalist accounts of justification, and its formulation is regulated by necessary conditions of F-ness. However, this satisfaction must be resisted, since it is still inferior to a *noesis*. It is inferior in two respects: one is that it uses the sensibles, “dianoetic in proceeding from hypotheses uses in some way the ordinary objects of L2, while dialectic does not”[12] (Benson: 244); and another is that it does not attain to the unhypothetical first principle, “Dianoetic proceeds from hypotheses not to an *archê* but to a conclusion, while dialectic proceeds from hypotheses to an *archê* that is unhypothetical”[12] (Benson: 244).

In this part, I will argue (a) that the first inferiority of *dianoia* is explained by one’s unselective treatment of the properties of the sensible, and that this is caused by one’s failure to recognize the properties of F-ness completely and correctly; (b) that the second inferiority can be explained by one’s mistaking a hypothesis for the unhypothetical principle; and (c) that the complex *dianoia* is a conjunction of multiple simple *dianoia* in some of which one accidentally grasps the essence without knowing it, and that this prepares the basis for the development of *noesis*.

Before I move to the illustration of the inferiorities of *dianoia*, I need to say a few words about my usage of the term “the unhypothetical principle”. This term is a translation of *τοῦ ἀνυποθέτου* (Republic: 511b) at *Republic* 511b-c, and I will refer to it as “the unhypothetical principle” as it is translated by Shorey.<sup>23</sup> There are several reasons for my adoption of this translation. Firstly, the part “unhypothetical” in the term emphasizes its dependence on the reduction process in developing *dianoia*. As the formulation of *dianoia* has shown, to justify the previous hypothesis, one has to offer a further argument whose conclusion is the previous hypothesis, and this task is partly achieved by reducing it to a further hypothesis. Normally, the reduced principle is still a hypothesis, and this is why the further principle is called the further *hypothesis*. In other words, the part “unhypothetical” in the term, by highlighting the reducing process, shows that there is a continuity between *dianoia* and *noesis*, “Plato does not contrast dianoetic with dialectic on the grounds that the former does, while the latter does not, proceed from hypotheses, nor that the former does, while the latter does not, proceed to a conclusion. On the contrary, both methods proceed from hypotheses to conclusions”[12] (Benson: 247). Secondly, the part “unhypothetical” in the term emphasizes not only the similarity between *noesis* and *dianoia*, but also their dissimilarities, since among all the reduced principles, only the unhypothetical principle to which the hypothesis is reduced is no longer a hypothesis. The

<sup>23</sup>Although the “principle” is not present in the Greek, it is implied in the context, and it is translated in this way.

relation between the unhypothetical principle and the reduced hypothesis can be illustrated as the relation between the basic belief and the non-basic belief. The basic belief can be the beliefs which are self-evident or incorrigible, and the non-basic beliefs are based on the basic belief, “if those others are not in the foundations, they will be accepted on the basis of still others that are acceptable and that support them, and so on, down to the foundations—that is, down to propositions that are self-evident, incorrigible, or evident to the senses for you”[62] (Plantinga: 76). Consequently, both the unhypothetical principle and the reduced hypotheses are produced by the reduction process, but the unhypothetical principle is categorically different from the reduced hypothesis, since the former is no longer a hypothesis, but the latter is still a hypothesis. Thirdly, I will take the unhypothetical principle and the first principle as interchangeable in my dissertation. Although these two terms are typically taken as referring to the same thing, that is, the Form of the Good, this is not necessarily the case, since it is logically possible for them to have different meanings, or even different references. I admit that there might be such a possibility, but I will not explore this issue in this dissertation, and I will go with the traditional view by taking them as interchangeable.

The first approach to interpret the inferiority of *dianoia* of using sensibles is to argue that *dianoia* is inferior to *noesis*, because it *uses* sensibles, but *noesis* does not use them. However, this approach should be rejected, since the development of *noesis* also requires one to use sensibles. Firstly, one, as a human being, has to use sensibles, because one’s soul is imprisoned in the body. I agree that Forms can be directly grasped by the disembodied soul, but this direct apprehension is inaccessible to human beings, since the soul is embodied, “it [the soul] is imprisoned in and clinging to the body, and ... it is forced to examine other things through it as through a cage and not by itself”[20] (*Phaedo*: 82e; trans. Grube). Consequently, one, as a human being, is forced to start from the perception of sensibles in order to achieve any cognition, “when the soul makes use of the body to investigate something ... for to investigate something through the body is to do it through the senses”[20] (*Phaedo*: 79c; trans. Grube). This implies that one’s development of *noesis* has to rely on sensibles. Secondly, this position has been argued by Benson(2015) when he explains the difference between *dianoia* and *noesis*, “Plato should not be objecting to the mere use of images or ordinary sensible objects ... he must be objecting to the way dianoetic uses them”, since Plato distinguishes “between the features of ordinary sensible objects which do not turn the soul toward truth and knowledge, and those that do”[12] (Benson: 253).

The second approach is to argue that *dianoia* is inferior to *noesis*, because it mistakes the accidental features of the sensibles for F-ness, “It takes what are only contingent or artificial *hormêthenta* ... to be genuine or essential *hormêthenta*”[12] (Benson: 262), but *noesis* will only take the essence of the sensibles as F-ness. To be honest, this approach can be used to explain another case of *dianoia* in which one mistakes the exemplifications for the examination of the agreement, “genuine *hormêthenta* of the hypothesis—that is, those *hormêthenta* that are caused by (*αἰτιά*) the natures involved in the hypothesis”[12] (Benson: 231). Although Benson argues that the problem of this case resides in one’s misinterpretation of F-ness, “for they lack the qualities and natural abilities necessary for genuine philosophy”[12] (Benson: 228-229), this is actually caused by one’s failure to describe F-ness by its own features. Taking, for instance, the example that these so called philosophers are not genuine philosophers, the reason why one takes these fake philosophers, for example, the sophists, as the image, is that one mistakes some features of the sophist as the essence of the philosopher, and hence one mistakes the features of F-ness. Consequently, this strategy argues that one uses the sensibles incorrectly in formulating a *dianoia*, because one mistakes the properties of F-ness, no matter whether one is encountering a sensible which is a genuine instantiation or an object which is a fake exemplification.

Benson’s approach will be supported if one recalls how one selects the features of the sensibles

in formulating a *noesis*. Presumably, in formulating a *noesis*, one takes and only takes the essence of the sensibles regarding F-ness as the effective hypothesis, and this is ensured by one's complete grasp of F-ness in advance. In other words, the development of *noesis* requires that one captures F-ness, and that one realizes that this captured feature is actually F-ness through the grasp of F-ness in advance. According to this analysis, Benson's strategy works for explaining the inferiority of *dianoia*, since one mistakes the features of F-ness in formulating a *dianoia*, and one does not grasp F-ness both completely or correctly.

However, this analysis not only supports Benson's approach, but also points out the third approach to explain the incorrect usage of the sensibles, that is, being unselective in choosing the features of the sensibles.<sup>24</sup> According to the analysis above, one, to formulate a *noesis*, is required not only to capture the essence, but also to be aware that the captured feature is the essence or F-ness. In fact, this approach should be more basic than Benson's approach, since it is only because one has recognized the features of F-ness completely and correctly, that one is able to actually capture the essence and that one never errs, and it is only because of one's failure to recognize the essence that one mistakes the features of F-ness. Indeed, it is hard for one to reach one's destination if one's compass is not working properly.

According to this unselective approach, the formulation of a *dianoia* will run as follows: firstly, one, not grasping F-ness completely and correctly, is not equipped sufficiently to select the properties of F-ness; secondly, one, based on the incomplete grasp of F-ness, will discover that multiple candidates satisfy the necessary conditions of F-ness, and that they are equally appealing; and thirdly, one will choose any one of these candidates as the properties of F-ness, and the choice is made unselectively. Consequently, sometimes, one will mistake the accidental features of the sensibles for F-ness, and sometimes, one may accidentally select the properties of F-ness or the essence, although without knowing that this is the essence.

The unselective approach not only determines why using the sensibles in this way is problematic, it also maps out different cases of *dianoia*, which are illustrated in the figure below. Obviously, case (2) refers to the situation in which one mistakes the exemplifications for the examination of the agreement, and case (1.2) refers to the situation in which one mistakes the accidental features of the sensibles for F-ness. These two cases have been covered by Benson. Case (1.1) refers to the situation in which one actually selects the essence of genuine exemplification, without knowing that these features are the properties of F-ness.

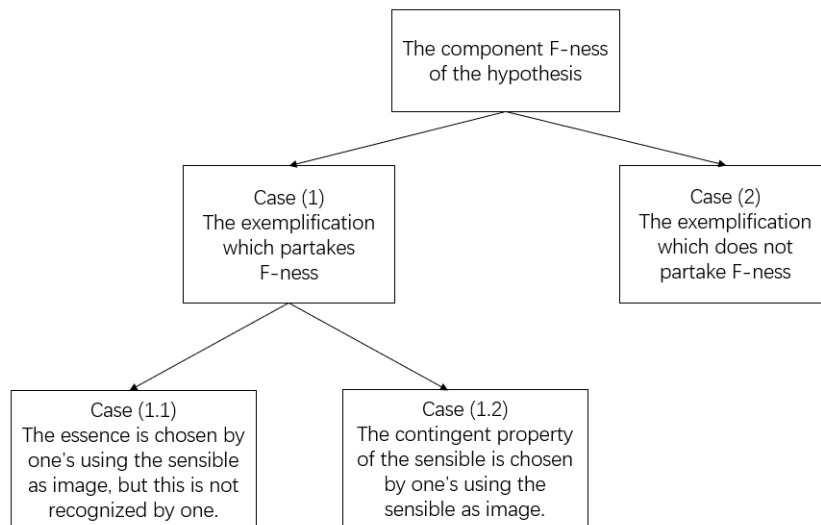
As a result, in determining the first inferiority of *dianoia*, being that dianoetic reasoning use sensibles, I have established that the better explanation should be that one chooses the features of the sensibles unselectively, and that this treatment is caused by one's failure to grasp F-ness completely and correctly.

The second inferiority of *dianoia* is that it does not reach the first principle, "the soul ... is forced to investigate from hypotheses, proceeding not to a first principle but to a conclusion"[20] (*Republic*: 510b; trans. Grube).<sup>25</sup> However, the charge is not that *dianoia* uses hypothesis, but that it uses the hypothesis in the incorrect way, "What accounts for dianoetic's inferiority to dialectic is the way they employ this method"[12] (Benson: 245).

Given the different cases of *dianoia* above, this charge can be applied, at least in principle, to any case of them, but I will mainly focus on case (1.1) in which one actually grasps the positive

<sup>24</sup>Let us suppose the sensibles here are the genuine exemplifications of F-ness.

<sup>25</sup>Given that both *dianoia* and *noesis* start from sensibles, it is inevitable for one, in formulating a *noesis*, to develop a hypothesis which captures the properties of F-ness, and to use hypotheses, "the soul is compelled to start from them [hypotheses] because there is no other way of doing deductive mathematics than by deriving theorems and solutions from what is laid down at the beginning"[15] (Burnyeat: 151).

Figure 5.5: Different cases of *dianoia*

properties of F-ness without knowing it.<sup>26</sup> This case belongs to the accepted hypothesis which satisfies multiple necessary conditions of F-ness, but still, is a special accepted hypothesis, since the content of the hypothesis not only offers the positive features of F-ness, but is always true. In the following part, I will call the *dianoia* formulated by the special accepted hypothesis the *simple dianoia*.

With the simple *dianoia* in hand, I will now introduce the *complex dianoia* which is a conjunction of multiple simple *dianoia*, and their relations are illustrated in the figure below. Specifically, one captures only the positive properties of F-ness in each simple *dianoia* without knowing it, and together, one captures only the positive properties of F-ness in the complex *dianoia* without knowing, at least, a certain property of F-ness.

The notion of the complex *dianoia* should be adopted, since the procedures of formulating a *dianoia* can be operated repeatedly. Although one formulates a simple *dianoia* by developing a special accepted hypothesis, this is not the end of formulating *dianoia*, since one can still offer justification to the present special accepted hypothesis, hence associating it with a further special accepted hypothesis. Given that the procedure of offering justification can be operated multiple times, there will be multiple complex *dianoia*, and each of them is positioned between the first special accepted hypothesis and the first principle. This is illustrated in the figure below.

Apart from the support of offering justification, the notion of the complex *dianoia* has also been illustrated by Rowe(1993), “the new answer does not supersede the old ‘safe’ one in terms of Forms, but supplements it”[68] (Rowe: 67), and especially by his characterization of the participation relation and its three accounts.

The one thing that is left unclear is what this actually amounts to—*how*, exactly, does the Form of *F* make any particular *F* *F*? It may be ‘safe’ to say something like this, but what exactly does it mean? That question, I take it, is what is intended by the requirement to ‘give an account of that (hypothesis) itself’ (101D5-6): what is

<sup>26</sup>In my view, the other cases will be self-refuted in the long run, since each of them fails to capture the essence, and each will inevitably fail to pass the examination by the confirmation stage.

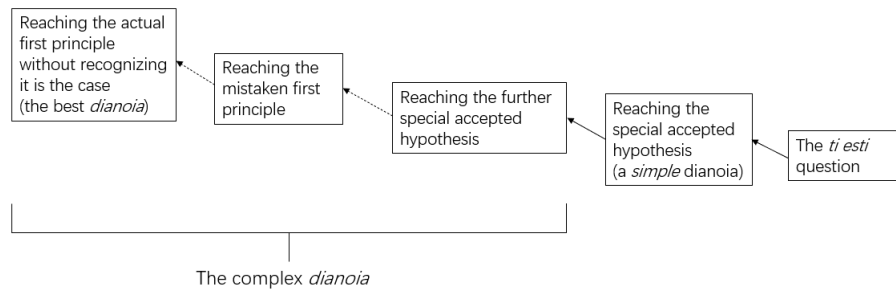


Figure 5.6: Different cases of failure to reach the first principle

required is a more precise statement which will justify (and explain) the claim that the particular  $F$  is  $F$  ‘by the  $F$ ’. [68] (Rowe: 57)

According to this illustration, the participation relation is a (special) accepted hypothesis, and it, although being safe, still requires explanation. In order to determine which accounts of the participation relation should be the (special) accepted hypothesis, one has to examine these accounts by the confirmation stage.<sup>27</sup> If one of the three candidates survives, then it will be the accepted hypothesis which accounts for the participation relation, but if none of them survives, one has to rack one’s brain to find another possible hypothesis for the examination, “he is genuinely still in search of the *aitia*—knowing what kind of explanation he would ultimately like to discover, but not yet able to find it” [68] (Rowe: 68). More importantly, one will repeat this process until one finds the accepted hypothesis which both explains the participation relation and survives examination by the confirmation stage, “he may be said to have been operating with a range of different hypotheses; Cebes and Simmias are required to reduce these to one” [68] (Rowe: 61).<sup>28</sup>

Having clarified that one, in formulating a *dianoia*, remains in the middle between the first accepted hypothesis and the unhypothetical principle, I now intend to explain why one rests in the middle. Specifically, one remains, because one mistakes a hypothesis which is not the first principle for the unhypothetical principle. This case is illustrated in the figure above as “reaching the mistaken first principle”.<sup>29</sup> Obviously, when one mistakes a hypothesis for the unhypothetical principle, one does not reach the unhypothetical principle, the best cognition one can have is *dianoia*, and this is the intermediate account “between the full-blown teleology of the Good ... and the initial statement of the theory of Forms and its corollary of participation” [73] (Silverman: 21). Indeed, it is not because one who possesses the dianoetic reasoning disregards the standard that the explanatory system should be based on the unhypothetical principle, but because one

<sup>27</sup>However, these accounts which serve to explain the hypothesis are not examined by the confirmation stage, and it is in this sense that they are multiple, “We have, then, an indefinite series of propositions, each of which is apparently a possible way of representing what is meant by saying that it is ‘by the beautiful’” [68] (Rowe: 56), and hence they are not safe yet.

<sup>28</sup>I am not saying that this further accepted hypothesis will be found, but only that it can be recognized in principle, “it is essential that he should believe that this ‘something adequate’ can in principle be found” [68] (Rowe: 60).

<sup>29</sup>Byrd argues that the reason why one with *dianoia* rests in the middle is that one values answering the question more than capturing all the properties of F-ness, “Though mathematicians have implicit awareness of Forms, they are not interested in investigating Forms themselves but instead seek to apply this grasp of properties to particular sets of circumstances in order to solve problems” [18] (Byrd: 122). However, this reason should not be taken seriously, since the problem is to answer the *ti esti* question, that is, to determine the properties of F-ness, and one should not rest in the middle if one really values more highly answering the *ti esti* question.

mistakes the present hypothesis for the first principle. Given that both the dianoetic reasoning and the dialectic reasoning accord with the standard, one with the dianoetic reasoning takes the hypothesis as obvious and as known when it is not, and takes the so-called first principle as the destination, and hence remains in the middle.

This formulation of *dianoia* can also be explained in another way, by resorting to a notion of obviousness, for example, a proposition is obvious when it is evident to the senses. Clearly, taking the hypothesis as the first principle, and taking it as obvious and known, cannot be maintained by *noesis*, since *noesis* is infallible, and it makes no mistakes. Consequently, taking a hypothesis as obvious and known must be developed by an inferior cognition. If this is the case, then the process of resting in the middle goes as follows: firstly, one, based on the inferior cognition, finds that a certain hypothesis is obvious; secondly, given that obviousness is a characteristic of being infallible, one takes it as the first principle which is the foundation of the whole explanation; and thirdly, hence one frees it from the examination by the confirmation stage and stops the investigation in the middle of pursuing the F-ness in the fullest sense.

Although I have explained one's not reaching the first principle by one's mistaking a hypothesis for the unhypothetical principle, this approach is only one possibility, and this, in my opinion, is not the real explanation of the inferiority. As I have explained the first inferiority of *dianoia* above, I will argue, in a similar manner, that the reason why one cannot reach the first principle resides in the fact that one does not know what the first principle is, although one takes it as the first principle accidentally. I will leave this discussion to the next section, given its close connection with *noesis*.

To explain why one does not reach the first principle, I have resorted to the complex *dianoia* which is a conjunction of multiple simple *dianoia*, and I have established that one's resting in the middle can be explained by one's mistaking a hypothesis for the unhypothetical principle.

Although I have established that the formulation of *dianoia* is regulated by the properties of F-ness, this is insufficient for me to explain the formulation of *noesis*, which is the purpose of my whole dissertation. To achieve this purpose, I will mainly focus on the complex *dianoia* which is a conjunction of multiple simple *dianoia* by which one accidentally grasps the essence without knowing it, since it not only brings one to be closer to F-ness, but also prepares the basis for the development of the best *dianoia* which is approximate to *noesis*. I will cover its contribution to F-ness here, and its function in developing *noesis* in the subsequent section.

The complex *dianoia* brings one to be closer to F-ness, and this can be confirmed from its input, its procedures, its outcome, and its employment of the method. Firstly, the special accepted hypothesis captures the properties of F-ness, and these features can in fact answer the *ti esti* question appropriately, although without conscious recognition. Based on the clarification of the special accepted hypothesis, the selected features actually capture the essence accidentally, and this does in fact direct one towards F-ness, without one's conscious recognition. Secondly, the procedures guide one closer to F-ness, since each of them is regulated by the necessary conditions of F-ness. Obviously, the proof stage and the upward path of the confirmation stage are both regulated by the requirement of consistency, which is a property of F-ness, and the downward path of the confirmation stage is regulated by the participation relationship between F-ness and its exemplifications, which is also a property of F-ness. Thirdly, the outcome contributes to one's grasp of F-ness, since it is composed of the properties of F-ness. As I have argued earlier, the simple *dianoia* is based on a special accepted hypothesis which captures the positive properties of F-ness accidentally, and which survives the examination by the confirmation stage. Similarly, the complex *dianoia*, being a conjunction of the multiple accepted hypotheses, should also be composed of the properties of F-ness, although incompletely so in most cases. Fourthly, the method of the *dianoia* leads one closer to F-ness, since *noesis* operates by using the same

method correctly, “dialectic is the method of hypothesis, correctly employed”[12] (Benson: 238). Indeed, one, in formulating the complex *dianoia*, is actually practising dialectic, “Socrates is practicing dianoetic preliminarily to his practice of dialectic”[12] (Benson: 253). This training no doubt prepares for one’s reaching the first principle and the complete grasp of F-ness.

Therefore, I have established: (a) that using sensibles incorrectly is explained by one’s unselective treatment of the properties of the sensible, and that this is caused by one’s failure to recognize the properties of F-ness completely and correctly; (b) that the fact that one does not reach the first principle can be explained by one’s mistaking a hypothesis for the unhypothetical principle; and (c) that the complex *dianoia* is a conjunction of multiple simple *dianoia* in which one accidentally grasps the essence without knowing it, and that it prepares the basis for the development of *noesis*.

## 5.4 The formulation of *noesis*

Having established the formulation of a *dianoia*, I will now illustrate that *noesis* is the completion of *dianoia*. To achieve this purpose, I will argue: (a) that the best *dianoia* is a *dianoia* in which one captures the first principle as the effective hypothesis without knowing it, and in which one still *takes* this hypothesis as first principle, but that it is still not *noesis*; and (b) that one can reach *noesis* through the best *dianoia*, since one, with the best *dianoia*, can realize that the so-called first principle is the unhypothetical principle and the Good. This is achieved by the additional examination in the confirmation stage.

Before I turn to explain the formulation of *noesis* by the best *dianoia*, I will argue that this idea is plausible, since one is justified in asserting that there is a continuity between *dianoia* and *noesis*. Firstly, the methods of developing *dianoia* and *noesis* are similar. As I have illustrated above, these two methods are both carried out by the proof stage and the confirmation stage, and the differences between them reside in the fact that the dianoetic reasoning uses the method incorrectly which has been shown by reason of its two inferiorities. It is in this sense that the process of formulating a *dianoia* has been interpreted as an elenctic-like test, “[it] is an elenctic-like test of the consistency of the *phainomena* associated with the hypothesis”[12] (Benson: 174). Secondly, the continuity between *dianoia* and *noesis* can also be confirmed by the continuity between the education of the mathematician and the training of the philosopher. Obviously, education in mathematics is required for one to master the dialectic reasoning, “having been educated in this way, he will welcome the reason when it comes and recognize it easily because of its kinship with himself”[20] (*Republic*: 402a; trans. Grube); and this implies that the method of *dianoia* must be closely related with that of *noesis*, “mathematics is no longer to be seen as a distinct discipline with a subject-matter realm of its own (the *mathematica*), but rather a methodology of thought-descriptive that is an essential part of the training of the philosopher-kings”[67] (Rescher:161). Thirdly, this position has been defended by critics. For example, Benson has argued that there is a progression from *dianoia* to *noesis*, “Dialectic looks more like the completion or the result of some methodology, rather than the methodology itself”[12] (Benson:254), and Silverman has pointed out that the method of hypothesis is part of formulating a *noesis*, “twice he alludes to a method of hypothesis, suggesting both in the *Phaedo* and *Republic* that hypotheses and their ultimately being rendered ‘non-hypothetical’ is part of the process by which one comes to know a Form”[73] (Silverman: 13).

However, the continuity between *dianoia* and *noesis* is not merely a theoretical possibility, it can also be established by my account of *dianoia*. Specifically, I will argue that *noesis* is



developed by examining the best *dianoia* through the confirmation stage, and that it is in this sense that *noesis* is the completion of *dianoia*.

To achieve this purpose, I have to clarify what the best *dianoia* is by using the complex *dianoia*. As I have argued earlier, a complex *dianoia* is a conjunction of multiple simple *dianoia* in which one accidentally grasps the essence without knowing it.<sup>30</sup> I have established that if one formulates a complex *dianoia*, then one will remain in the middle between the first simple *dianoia* and the first principle. If one is allowed to interpret the formulation of the complex *dianoia* from the first person perspective, then what happens can be illustrated as follows: firstly, one will always offer a further hypothesized principle to explain the present hypothesis if one is asked to justify the present hypothesis; secondly, one will take this further principle as known and clear to everyone, “They make these their hypotheses and don’t think it necessary to give any account of them, either to themselves or to others, as if they were clear to everyone”[20] (*Republic*: 510c; trans. Grube), and this assumption is developed by the inferior cognition; and thirdly, by taking the further hypothesized principle as being obvious, one mistakes it for the first principle, and one remains in the middle.

To figure out how the best *dianoia* is developed from among the complex *dianoia*, I will illustrate it by resorting to the analogy of the beetle in the box, although this is not the initial point of Wittgenstein’s thought experiment. According to his thought experiment, everyone has a box with something in it, and everyone will call it a “beetle”, no matter what is in it, either a piece of chocolate or a book, etc. Similarly, one, as long as one is regulated by the dianoetic reasoning, will develop a hypothetical principle, and one will call it “the first principle”, no matter whether this so-called first principle is actually the case or not.<sup>31</sup> Specifically, when the so-called first principle is not the unhypothetical principle, one mistakes the hypothesis for the first principle, “Dianoetic treats them as *archai*, as already known, as not needing a *logos*, as already clear to all, when they are not”[12] (Benson: 247-248), and when the so-called first principle is the unhypothetical principle, one reaches the best *dianoia*. Consequently, the best *dianoia* is a *dianoia* in which one captures the first principle as the effective hypothesis without knowing it, but in which one still *takes* this hypothesis as the first principle.

One might argue that the best *dianoia* is not *dianoia* any more, since the hypothesized principle is the first principle, and it is viewed as the first principle. However, this objection must be rejected, since the requirement of *noesis* is not that one views the hypothesized principle as the first principle when it is, but that one *knows* that the hypothesized principle is the first principle, “they fail to practice dialectic ... if ... they take as known, as an *archê*, as not needing confirmation, what is in fact unknown, not an *archê* and still in need of confirmation”[12] (Benson: 248-249).

Although the hypothesized principle is the first principle, and is viewed as the first principle, it is still not known by one, but only taken as if being known, “students of geometry, calculation, and the like hypothesize the odd and the even ... as if they knew them”[20] (*Republic*: 510c; trans. Grube). Firstly, one with the best *dianoia* does not know that the so-called first principle is the unhypothetical principle, since taking it as the so-called first principle is not determined by the fact that it is actually the first principle, “Though in each case the belief is true and justified, the fact that it is true plays no part in explaining why it is justified”[45](Appiah: 68). Given that taking something as obvious in *dianoia* is formulated by the same cognition, and that one mistakes, by the same method of taking, the hypothesized principle for unhypothetical principle in most cases, one not only views the first principle as the unhypothetical principle, but also views

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<sup>30</sup>Given that a complex *dianoia* is a conjunction of the simple *dianoia*, and that it captures the positive properties of F-ness, then each simple *dianoia* can also capture the positive properties of F-ness, although without recognizing that it is the case.

<sup>31</sup>I suppose that one takes this hypothesized principle as obvious.

the hypothesis which is not the first principle as the unhypothetical principle. Consequently, one will take the hypothesized principle, whether or not it is the first principle, as obvious and known. This fact implies that the content of the first principle is not responsible for the formulation of taking it as the first principle, and the fact that it is the first principle plays no role in one's taking it as obvious and known. In other words, one, even with the best *dianoia*, does not know that it is the first principle. Secondly, one, with the best *dianoia*, does not know, since the method which takes it as the first principle produces something mistaken in most cases, and hence it is unreliable in producing the first principle, "Plato's philosophers recognize the differences between barns and their images, and, hence, may be regarded as warranted in their judgements in virtue of the reliability of the cognitive powers and processes that generate them"[75] (Smith: 162). The method which takes the hypothesis as the first principle is unreliable, since on the one hand, it errs by mistaking the hypothesis for the unhypothetical principle in most cases, and on the other hand, one's acceptance of the so-called first principle seems accidental granted that one will adopt whatever appears obvious to one, and that the things which appear obvious are not stable. This case is quite similar to the case of jury's verdict which is formulated unreliably, "suppose they come to their decision upon hearsay, forming a true judgment: then they have decided the case without knowledge, but, granted they did their job well, being correctly persuaded"[20] (*Theaetetus*: 201b; trans. Levett).<sup>32</sup>

Consequently, the best *dianoia* is still a *dianoia*, since one with the best *dianoia* still does not know that the so-called first principle is the unhypothetical principle, but this knowledge is required in *noesis*, "Knowledge is the presence of the knowable in the knower and the infallible self-reflexive awareness of this presence"[31] (Gerson: 467).

With the best *dianoia* in hand, I will now show that *noesis* can be developed by examining the best *dianoia* through the confirmation stage. Evidently, the gap between the best *dianoia* and *noesis* is the realization of the first principle or of the Form of the Good when it is presented. Consequently, if I am able to derive the realization of the first principle from the operations of the best *dianoia*, then I have explained that the *noesis* can be developed by the best *dianoia*. Following this line of thought, I must establish that the realization can be achieved by the additional examination of the confirmation stage when one is equipped with the best *dianoia*.

Specifically, I will argue that (i) one, with the best *dianoia*, can recognize the first principle by the additional examination through the downward path; (ii) one can recognize the unhypothetical principle by the additional examination through the upward path; and (iii) one can recognize the first principle by the perfect match between the internal accounts and the independent Forms.<sup>33</sup>

To begin with, the recognition of the Form of the Good can be achieved by the additional examination through the downward path of the confirmation stage, since only the first principle can explain all of the sensibles. Obviously, if one, with the best *dianoia*, is asked to examine whether the so-called first principle agrees with its exemplifications, one will realize that it agrees with all particulars in the fullest sense, granted that the so-called first principle is actually the unhypothetical principle. Whereas if one does not in fact capture F-ness both completely and correctly, then one will at least realize that there is a disagreement between the hypothesis and the sensibles, and thus one will realize that this cannot be the first principle.

Based on this recognition of the agreement between the so-called first principle and the sensibles in the world, one will realize that this so-called first principle is the Form of the Good,

<sup>32</sup>Although one does view the first principle as the unhypothetical principle, and is justified in doing so by the inferior cognition, one does not know that the so-called first principle is the unhypothetical principle. This is a vivid example of Gettier's problem. One still does not know that p, when one both believes that p, and is justified inappropriately in believing that p.

<sup>33</sup>I am not arguing that this is the case, only that one is justified in holding that these operations can lead one to recognize the presence of the first principle, and hence that *noesis* is the completion of the *dianoia*.

“According to Plato, until one has reached the unhypothetical *archê* or the Form of the Good and has tested it against *all* contrary evidence, successfully explaining away all of the apparently contrary evidence, one has yet to acquire the knowledge of the answer to the question one set out to answer”[12] (Benson: 266). One is justified in arguing that one can realize the Form of the Good in this way, since the so-called first principle explains all particulars to the greatest extent, and one will realize that it is the *one real explanation*, “*One Real Explanation* is an explanation that can explain all the related matters in a unified and real way”[52] (Ghomi: 222). Granted that the *One Real Explanation* can only be based on the Form of the Good, one will realize that this is the Form of the Good if one realizes that this is the one explanation, “If then one wished to know the cause of each thing, why it comes to be or perishes or exists, one had to find what was the best way for it to be, or to be acted upon, or to act”[20] (*Phaedo*: 97c-d; trans. Grube). In my opinion, the agreement between the Form of the Good and the sensibles in the world can be confirmed in the *Timaeus*, since it is supposed to illustrate that each sensible thing in the world is regulated by the Form of the Good, “Reason prevailed over necessity by persuading it to steer the majority of created things towards perfection, and this was how the universe was originally created”[36] (*Timaeus*: 48a; trans. Waterfield). This point has been highlighted by Zeyl, “the universe as a whole as well as its various parts are so arranged as to produce a vast array of good effects”[82] (Zeyl: 1)

In addition, the recognition of the Form of the Good can be achieved through the additional examination in the upward path of the confirmation stage, since the unhypothetical *archê* should be an explanation whose system is most coherent. Evidently, if one, with the best *dianoia*, is asked to offer a further theoretical justification for the present so-called first principle, one will realize that the whole explanation which is based on the further hypothesis is no better than the explanation which is based on the previous so-called first principle, since the unhypothetical *archê* should be an explanation whose system is most coherent, “it contributes maximally to the coherence of the dialectician’s belief-set and thereby to the sort of justification”[30] (Gentzler :487). Whereas if one does not grasp the first principle, one might find a more coherent system than the previous system when one is asked to offer a further theoretical justification, and this discovery leads one to realize that the previous hypothesis is not the first principle.

Given that one has recognized that the explanation based on the so-called first principle is the one that maximally unifies the beliefs, one will realize that the so-called first principle is actually the unhypothetical principle, and that it is the Form of the Good, “Plato’s ideal ... is a comprehensive and purely intellectual view of the totality of *νοητά*, in which every department is seen in its connexion with every other, and all in their dependence on the Good”[8] (Adam: 67).

Moreover, the recognition of the Form of the Good can be achieved by the relation between the upward path and the downward path of the confirmation stage, since it will lead one to realize a perfect match between the internal account and the Forms. If one, with the best *dianoia*, is asked to examine the so-called first principle by the confirmation stage, one will realize that each sensible’s being F can be accounted for by the internal explanation which is based on the so-called first principle. Given that it is because of the Forms that sensibles being such can be explained, “it is precisely because this knowledge is not of sensibles, but of the forms, that it can reveal sensibles for what they are”[34] (Gonzalez:273), it is plausible to argue that one not only recognizes the correspondence between the internal account of justification and the external account of justification, but also the accordance between the internal theory and the independent Forms. In other words, one will realize that the coherent account is in accord with all the sensibles in the world, and with their corresponding Forms.

If one does realize that there is a perfect match between the external Forms and the internal accounts, “there is a perfect fit between our statements, accounts and theories about things, at

their best, and the things themselves, which is what our statements, accounts and theories are about [the Form of the Good]”[65] (Politis: 228), then one will recognize the Form of the Good, since the Form of the Good is the cause of both the Forms and the capacity to know, “What the good itself is in the intelligible realm, in relation to understanding and intelligible things, the sun is in the visible realm, in relation to sight and visible things”[20] (*Republic*: 508b-c; trans. Grube).

As a result, one, with the best *dianoia*, can realize that the so-called first principle is the unhypothetical principle and the Form of the Good. This realization is achieved by the additional examination in the confirmation stage, by which one can reach *noesis* through the best *dianoia*.

## 5.5 Conclusion

In this chapter, I have solved two problems: (1) how *dianoia* can lead one closer to F-ness, and (2) how one can formulate a *noesis* based on a *dianoia*.

In the first section, I have argued: (a) that *noesis* is closely related to F-ness, since each component of its formulation is regulated by F-ness; (b) that one, being directed by F-ness in formulating a *dianoia*, not only regulates one’s investigation by the properties of F-ness, but also develops the *dianoia* which captures some necessary conditions of F-ness; and (c) that the formulation of *dianoia* is composed of the proof stage and the confirmation stage, by resorting to Benson’s characterization of *dianoia*. Consequently, I have established that *noesis* is closely related to F-ness, and that *dianoia* can lead one closer to F-ness by aiming at F-ness.

In the second section, I have argued: (a) that the proof stage is indispensable, and that it is required to be performed in this particular way; (b) that according to the abstraction account of formulating the hypothesis, the universality of the hypothesis is derived from one’s awareness of F-ness, and the content of the hypothesis is based on one’s personal opinion or preference; and (c) that according to the summoning-application account, the universality of the principle is derived from the properties of F-ness, but this by itself cannot be the origin of the content of the hypothesis. Consequently, I have established that the proof stage contributes to one’s grasp of F-ness, and that this can be confirmed by two different accounts of the method of using sensibles as images.

In the third section, I have argued: (a) that the upward path of the confirmation stage is operated in a similar way to the proof stage, and that it is regulated by the theoretical consistency which is a property of F-ness; (b) that the downward path of the confirmation stage is an examination of the agreement between the hypothesis and its exemplifications, and that it is regulated by the participation relationship which is implied by F-ness; and (c) that the complex *dianoia* is a conjunction of multiple simple *dianoia* in which one may accidentally grasp the essence without knowing it, and that it prepares the basis for the development of *noesis*. As a result, I have established that each stage of the confirmation stage contributes to one’s grasp of F-ness.

In the fourth section, I have argued: (a) the best *dianoia* is a *dianoia* in which one captures the first principle as the effective hypothesis without knowing it, and in which one still *takes* this hypothesis as first principle, but that it is still not *noesis*; and (b) that one can reach *noesis* through the best *dianoia*, since one, with the best *dianoia*, can realize that the so-called first principle is the unhypothetical principle and the Form of the Good, and that this realization is achieved by the additional examination in the confirmation stage.

Apart from offering my account of *dianoia*, I would also like to remind the reader of how this account of *dianoia* contributes to the overall argument by illustrating (a) that my account of *dianoia* fits with the view that Plato defends a teleological reliabilist account, (b) that it

is necessary for having some grasp of the Forms, and (c) that the capacity of *dianoia* can be reordered in light of our knowledge of the Forms.

I have established that *dianoia* is teleological and reliable, and this is the last cognition which serves for the mastery of *noesis* in the overall argument. *Dianoia* is reliable, since in the proof stage, the universality of the hypothesis is derived from one's awareness of F-ness, and in the confirmation stage, the upward path is regulated by the theoretical consistency which is a property of F-ness, while the downward path is regulated by the participation relationship which is implied by F-ness. Each of these is stable and well constructed. It is teleological, since the principles by which the development of *dianoia* are regulated are implied by F-ness, and being regulated in this way, the development of *dianoia* is aimed at grasping the Forms. Specifically, one's awareness of F-ness, and the theoretical consistency, and the participation relationship are all implied by the formal properties of F-ness, and the adherence to these principles enables one to be closer to the grasp of the Forms. Following this line of thought, *noesis* is also teleological and reliable, given that *noesis* is developed by examining the best *dianoia* through the confirmation stage, and that they share a similar methodology, "Dialectic looks more like the completion or the result of some methodology, rather than the methodology itself"[12] (Benson:254).

This account of *dianoia* is indispensable for having some grasp of the Forms, since it provides the motivation to the rational soul to go beyond the image, and offers the tools with which to follow the argument downward under the principle of consistency, and allows the rational soul to go beyond the hypothesis. All of these are necessary to the operation of developing *noesis*.

When one is equipped with the knowledge of the Forms, the capacity of *dianoia* will be reordered, because the capacity of *dianoia* will be working in the correct way, and it will have the correct relationship with the other epistemic capacities, and be regulated by the Forms. Firstly, the capacity of *dianoia* will be working in the correct way, since one will regulate its development by its design plan and one will do so voluntarily. When one is equipped with the knowledge of the Forms, one will be able to distinguish among the *dianoia*, the simple *dianoia*, the complex *dianoia*, and the best *dianoia*, and one will recognize the design plan or the structure of them. Given that one has the desire to operate the capacity of *dianoia* in the correct way, one will consciously operate the development of *dianoia* according to the design plan of *dianoia*, and in this way, the capacity of *dianoia* will function in the correct way in different situations. Secondly, the capacity of *dianoia* will have the correct relationship with the other epistemic capacities. For example, the operation of *dianoia* contributes to the mastery of *noesis* by motivating the rational soul to go beyond the image, and by offering the tools with which to follow the argument downward under the principle of consistency allowing the rational soul to go beyond the hypothesis. In this way, the cognition of *dianoia*, by partaking in its own share of the truth of the whole, will live in harmony with the other cognitions. Thirdly, the operation of developing the *dianoia* is regulated by the properties of the Forms. For example, in the proof stage, the universality of the hypothesis is derived from one's awareness of F-ness, and in the confirmation stage, the upward path is regulated by the theoretical consistency which is a property of F-ness, while the downward path is regulated by the participation relationship which is implied by F-ness, and each of these is regulated by the properties of F-ness. Consequently, one restores the cognition of *dianoia* by these requirements which are implied by the Forms, and in this way, one, being regulated by the Form of the Good, becomes good as a whole in the respect of *dianoia*.



# Conclusion

In this dissertation, I have answered two questions: (1) whether, in Plato's epistemology, the Forms can be grasped without using the inferior epistemic capacities, and (2) whether the inferior epistemic capacities contribute to one's grasp of F-ness and the Form F?

Regarding the question whether, in Plato's epistemology, the Forms can be grasped without using the inferior epistemic capacities, I have argued that the ability to use *noesis* properly requires the mastery of *dianoia*, since only if one is an expert in following the argument downward to the conclusion, is it possible for one to investigate the hypothesis in a reasonable manner, and to follow the argument upward to the first principle. However, the mastery of *dianoia* in turn requires the involvement of the other inferior epistemic capacities, that is, sensation, *phantasia*, and *doxa*, since its usage of an image is carried out through sensation and *phantasia*, while the usage of hypothesis and following the argument downward to the conclusion by the principle of consistency are carried out, to a certain extent, by both *phantasia* and *doxa*.

However, the inferior capacities are required not only for the grasp of the Forms, but also for the grasp of the whole truth, since the whole truth cannot be captured merely by *noesis*. This can be confirmed by the cave analogy: when one knows all of the Forms, although one is unwilling to go back to the Cave, he is forced to go back to regulate these inferior capacities, "we mustn't allow them to do what they're allowed to do today ... To stay there and refuse to go down again to the prisoners in the cave and share their labors and honors, whether they are of less worth or of greater"[20](*Republic*: 519d; trans. Grube). If nothing new can be captured from ordering these inferior capacities, then there is no need for one to go back. In my opinion, the ordered inferior capacities allow one to grasp the truth of the particulars or the knowledge of the particulars. Consequently, to attain the whole truth, both of the Forms and the particulars, the inferior cognitive capacities must be reviewed and regulated by reason, hence they are indispensable for the grasp of the whole truth. In other words, only when each epistemic capacity is ordered is one able to grasp the whole truth.

Indeed, the knowledge of particulars partakes of its share of truth, since the knowledge is produced by the ordered inferior capacities, and each capacity is designed by the demiurge and the lesser gods with the purpose "to make the human race as good as possible, and so they organized even our base part so that it might have some kind of contact with truth"[36] (*Timaeus*: 71d; trans. Waterfield). Specifically, the knowledge of particulars partakes of its share of *truth* because its development is regulated by the properties of F-ness; and it is the knowledge of *particulars*, because its target is the sensibles in the external world, and it explains how the ordinary body can be harmonious and ordered by the introduction of the Forms, "That of 'equal' and 'double', and any other that puts an end to the conflict of opposites with one another, making them well-proportioned and harmonious by the introduction of number"[39] (*Philebus*: 25d-e; trans. Hackforth). Consequently, in order to account for the procedures of the inferior capacities which are ordered by reason, one must argue that each inferior capacity aims to lead

one to grasp some features of F-ness, and that this contact with F-ness is carried out by a reliable process which is regulated by the properties of F-ness. This requires one to offer the primary cause and the auxiliary cause of the inferior capacities, and it is also the origin of my teleological-reliabilist account of knowledge.

As a result, to account for why the inferior capacities partake of their share of truth, one must explain what the purpose of the inferior capacity is, and how its process is regulated by the properties of F-ness. Specifically, the question of whether the inferior epistemic capacities contribute to one's grasp of F-ness is answered by the explanation of these two causes of the inferior capacity, and the elaboration of this issue has been the main topic of each chapter.

To explain that each inferior cognitive capacity contributes to one's grasp of F-ness, I have shown that its purpose is to allow one to grasp the properties of F-ness, and that this grasp is achieved by a reliable process which is regulated by the properties of F-ness. Regarding the contribution from sensation, I have argued that sensation will be Form-related if it imitates correctly the motions of the external object, and that the correct imitation can be guaranteed by its procedures which include the formation of the kindred substance, the collision process, and the process of sensing a colour. Regarding the contribution from *phantasia*, I have argued that a *phantasia* will be Form-related if it preserves some of the truth of the original object, and that the reliable preservation of the truth can be ensured by its procedures which include the formulation of the mere presentation and the formulation of the presentation-*cum*-belief. Regarding the contribution from *doxa*, I have argued that *doxa* will be Form-related if its development is regulated by the properties of F-ness, and that the regulation by F-ness can be applied to its procedures which include the asking stage, the answering stage, and the calculation stage. Regarding the contribution from *dianoia*, I have argued that *dianoia* is in contact with F-ness, since it is directed at F-ness, and it allows one to grasp some necessary conditions of F-ness by the examinations in the proof stage and the confirmation stage, and these two stages are regulated by the properties of F-ness.

I have to admit that my teleological-reliabilist account of the inferior capacity in this dissertation does not exhaust all the features of the inferior capacity when it is ordered by reason, and that it only emphasizes some features which confirm the fact that it is in contact with the Forms by being regulated by the properties of F-ness. In fact, when one achieves *noesis*, one will recognize that the process of the inferior capacity is regulated by reason or F-ness in many more respects or even in all respects, and one will consciously and voluntarily obey these instructions in employing the inferior capacity.

In fact, even if my teleological-reliabilist account is a plausible way to interpret Plato's epistemology, this method of developing *noesis* is still incomplete and vague.<sup>1</sup> Firstly, the formulation of the best *dianoia* remains vague. Not only because it is difficult to figure out under what conditions one captures the positive features of F-ness *accidentally*, but also because it is difficult to determine whether it is possible for one to reach the first principle. Secondly, the agreement between the hypothesis and its exemplifications is also under-described, since it is difficult for one to determine whether the present definition captures the essence or merely the accidental features, when the disagreement between the hypothesis and its exemplification appears. However, apart from this defect, the strict agreement seems impossible to achieve, since it requires that the hypothesis cannot be falsified by any exemplifications, but to exhaust all the exemplifications is impossible for finite human beings. Thirdly, the notion of the most coherent is also incomplete, since it is unclear by which standard the coherency of a system should be evaluated in Plato's epistemology. More importantly, it seems impossible for one to determine the most

<sup>1</sup>I only mention the problems caused in the progression from the best *dianoia* to *noesis* here. More problems about the formulation of *dianoia* can be seen from Benson(2015): 268-269.



coherent account, since this requires one to exhaust all possible accounts, but this is inaccessible to finite human beings.

Although my teleological-reliabilist account of Plato's theory of knowledge is incomplete and vague, this account confirms that Plato has already recognized the primary cause and the auxiliary cause of the cognitive capacities, and their significance. In my opinion, Plato is insightful in holding the account of the two causes, since the two causes are still useful for the discussion of contemporary epistemological issues. Firstly, the highlighting of the primary cause, that is, the purpose of good, has shed light on the development of the evolutionary epistemology. For Plato, the inferior cognitive capacities partake of truth, because they are good. This similar strategy has also been adopted in the evolutionary epistemology. Specifically, a cognitive capacity is selected, because this particular capacity has some feature which can lead one to truth or to navigate the external world successfully, "it explores how ideas and theories compete with each other and are selected, in a way that is somewhat analogous to the process of the natural selection of biological traits"[10] (Appiah: 76). Secondly, the highlighting of the auxiliary cause, that is, a reliable process, implies that Plato is disenchanted with the intuitionism which is required in directly grasping F-ness. This can be confirmed not only by the fact that education in mathematics is required for one to master dialectic reasoning, but also by the cave analogy. If this is the case, then it has imposed a necessary condition for any account of knowledge, that is, it should be "a repeatable and intentional ... strategy for acquiring this knowledge on our own"[12] (Benson: 270). Thirdly, the emphasis on the two causes also predicts the new approach of explaining the notion of justification, that is, to include the justification from both the internal regulations and the external world. This approach has been developed by Conee(2007) who argues for an externally enhanced internalism, by Smith(2000) who argues for a good oriented causal reliabilist account of Plato's epistemology, and by Alston(1988) who argues for an internalist externalism.



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