

Teleological mortality in Plato's *Timaeus*

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I, Xi Ji, confirm that the work presented in this thesis is my own.
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Abstract

This thesis aims to show how Plato attempts to bridge the gap between immortal and mortal nature in the *Timaeus*. It explores the similarities and dissimilarities between the constitution of the immortal existents, i.e. the cosmic soul and human immortal souls, and the mortal existents, i.e. the cosmic body and the human bodies. In the knowledge of the similarities, that is, the soul and body are fashioned using the Forms and Receptacle as common components, the distinction between the immortal souls and mortal bodies seems not to be an absolute one. The dissimilarities lie in that the two kinds of existents are created in different ways, which entail that they differ in structures and modes of motion. The similarities and dissimilarities altogether explains why the immortal souls and mortal bodies appear to be utterly different existents but can be connected to and communicate with each other. The embodiment of the cosmic soul in the cosmic body yields an everlasting creature such as the cosmos itself. Whereas the embodiment of the human immortal soul in the physical body results in the former's being disrupted and the generation of two kinds of mortal souls, i.e. spirited and appetitive parts of souls. The spirited part of soul is designed as an intermediary between the immortal soul and the body as well as between the immortal soul and the appetitive part of soul. The tripartite soul and its interaction with the mortal body reveal Demiurgic concerns for humans. Humans are endowed with mortality intentionally for the sake of cosmic completion and perfection. The Demiurgic compensatory arrangement, i.e. the structural affinity between the cosmos and humans and purposefully designed bodily parts and organs, allows humans, as mortal creatures, to bridge their own gap with the everlasting cosmos by imitating the latter.

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Contents

Abstract.....	1
Acknowledgements.....	2
Contents.....	3
Introduction	4
Chapter 1 Cosmology and teleology	7
<i>Introduction.....</i>	7
1.1 <i>Timaeus' cosmology and the Timaeus.....</i>	8
1.2 <i>Αίτια and intentional teleology</i>	11
1.3 <i>The conception of divine craftsmanship.....</i>	17
1.4 <i>Conclusion</i>	23
Chapter 2 The physical account of mortality in the <i>Timaeus</i>.....	25
<i>Introduction.....</i>	25
2.1 <i>Mortality in the <i>Phaedo</i> and the <i>Timaeus</i>.....</i>	26
2.2 <i>The constitution of the human body.....</i>	28
2.3 <i>The physical process of death.....</i>	36
<i>Conclusion</i>	43
Chapter 3 The immortal soul.....	44
<i>Introduction.....</i>	44
3.1 <i>The construction of cosmic souls.....</i>	45
3.2 <i>The creation of individual human immortal souls.....</i>	57
3.3 <i>The allotment of the individual immortal souls and the cause of evils.....</i>	59
<i>Conclusion</i>	62
Chapter 4 The mortal souls.....	64
<i>Introduction.....</i>	64
4.1 <i>Πάθημα and αίσθησις.....</i>	65
4.2 <i>Emotions and the mortal parts of soul.....</i>	72
4.2.1 <i>Anger and the spirited part of soul</i>	74
4.2.2 <i>The appetitive part of soul.....</i>	79
<i>Conclusion</i>	86
Chapter 5 The teleological mortality.....	88
<i>Introduction.....</i>	88
5.1 <i>The inevitability and necessity of mortality.....</i>	90
5.2 <i>The combination of immortal soul and body.....</i>	94
5.3 <i>The Demiurgic concerns for humans</i>	98
<i>Conclusion</i>	102
Conclusion	104
Bibliography	107

Introduction

This thesis studies how, according to Timaeus' cosmology, Plato bridges, or attempts to bridge the gap between immortality and mortality. The subject might strike one as odd. Indeed, it might seem rather plain, first, that Plato holds a dualistic stand on the relationship between soul and body;¹ second, that even if he did intend to reconcile the apparently incompatible nature of immortal soul and mortal body, a *prima facie* reading of the *Timaeus* would not disprove a dualistic interpretation, let alone speak in favor of the bridge-the-gap theory. Since the late 19th century, there has in fact a revival of interest in the *Timaeus*, and Plato's views on cosmology and psychology have drawn more and more attention of classical scholars.² However, the topics pertinent to immortal and mortal natures are usually carried out in isolation from each other. For instance, Thomas Robinson's *Plato's Psychology* consists of a profound study of Timaeus' account of soul's constitution and nature, but virtually fails to provide a clear account of what it is that binds an immortal soul to a mortal body.³

Certainly, some scholars have noticed that the *Timaeus* has offered a complex and constructive account of the soul-body matter, and Plato reveals a shifting attitude towards the role of body in that account. For example, Thomas Johansen, in his book *Plato's Natural Philosophy*, notes that both soul and body enjoy spatial extension and their motions in space enables the soul-body interaction. But most of the work focuses on issues of the interaction of soul's circular and body's rectilinear motions, and thus lacks explanation of how, based on Timaeus' account of space, an incorporeal soul would possess spatial attributes that allow its interaction with a physical body.⁴ And more generally, Johansen places the emphasis on the dissimilarities of soul and body rather than similarities, even when he mentions that soul and body share some spatial attributes in common. An extensive treatment of how, according to

¹ The impression of Plato's holding a dualistic stand on the relationship between soul and body owes mainly to his remarks in the *Phaedo*, where he claims that the body is a prison for the soul and the latter would become better without the interference from the former (66b-c,67d,82d-e).

² For generic exegeses of the *Timaeus*, see Archer-Hind (1988), Taylor (1928), Cornford (1937). For cosmological and psychological interpretation, see Mohr (1985), Robinson (1995), Johansen (2004), Carone (2005), Vlastos (1995), Mohr & Sattler (2010), Broadie (2012).

³ Cf. Robinson (1995).

⁴ Cf. Johansen (2004) 138-142.

Timaeus' account, the immortal soul and mortal body form a union and are able to communicate with each other, despite their salient difference in nature, is lacking to this day.⁵

Let us now turn to the *Timaeus* itself. In Timaeus' telling of the cosmic and human creation, the soul-body problem occupies a large and important section.⁶ I believe that this is where we find that Plato bridges, or at least attempts to bridge, the gap between immortal soul and mortal body. It is my aim in this thesis to show that Plato has revealed what nature immortal soul and mortal body share in common that allows their communication both in the cosmos itself as a whole and in the human person. It is also my goal to argue that my bridge-the-gap interpretation will account for the possibility of human's imitation of the cosmos, which supports the Demiurge's ultimate goal of cosmic completion and perfection. For, it is acknowledged that, in Timaeus' account, Plato demonstrates a larger cosmological framework that underpins many of his late ethical views.⁷ Thus the cosmological background is essential for an understanding of the meaning of human life. And we can find answers about human happiness and the best way to achieve it in Plato's appreciation of the relation between humans and the cosmos. According to the *Timaeus*, as we shall see, human happiness resides in the goodness of the whole cosmos and the Demiurge. As I shall argue, imitation of the cosmos is the most practical method the Demiurge bestowed upon humans, which is grounded by the analogous origin and nature between the cosmos and the human race, in order that the human race can bridge the gap between the cosmos that is a divine and immortal being and themselves as being mortal creatures.

I will approach the overall subject matter of how Plato bridges the gap between immortality and mortality by developing a comprehensive interpretation of the constitution of the immortal soul and mortal body as well as how these two are bound together and how they interact with each other. In the first chapter, I will give a sketch of the cosmology and teleology demonstrated in the *Timaeus* so as to provide the context in which immortality and mortality is examined. I will

⁵ Although the connection and interaction between immortal soul and physical body receives relatively less attention in the studies of the *Timaeus*, there is some good literature on it. Cf. Brennan (2012), Brisson (1997), Carone (2005), Karfik (2005), Lorenz (2012).

⁶ Cf. *Tim.* 27a-34b The creation of cosmic body; 34c-37c The creation of the cosmic soul; 41d-42d The creation of human individual immortal souls and the embodiment of reincarnation of those souls; 42e-44d The embodiment of immortal souls; 44d-47d The creation of the human body; 64a-69a Sense perception and affection; 69a-72d The creation of the mortal souls; 72e-76e The creation of bodily parts and organs; 78e-79e The process of respiration; 80a-81e The process of metabolism, aging, and death; 82a-86a The nature of sickness and three classes of diseases; 86b-87b The diseases of the soul; 87c-90d The balance between the soul and the body.

⁷ Cf. Carone (2005), Johansen (2004).

also lay some stress on the concept of the Demiurge who actually performed the creative activities according to Timaeus' account. In Chapter 2, I will investigate the constitution of the cosmic body and the human body with regard to the materials, i.e. the elemental solids that the Demiurge used to compose them. It will contain discussion of the Forms and the Receptacle that are the components in fashioning the elemental solids. In Chapter 3, I will be talking about the constitution of the cosmic soul and individual immortal souls of humans. Chapter 3 will demonstrate that the distinction between immortal soul and mortal body is not an absolute one in that the Demiurge employed the Form and the Receptacle as integral components in constructing both the immortal soul and mortal body, and their dissimilarity lies only in that the ways in which the Demiurge actually constructed them. In Chapter 4, I will look at the construction of the two mortal kinds of soul, i.e. the spirited part of soul and the appetitive part of soul. By redefining the concept of πάθημα and ἄσθησις, I will argue that the ingredients the lesser gods used to create the mortal souls already contain the participation of the immortal soul. In this way, the mortal kinds of soul function as intermediaries in the communication between the immortal soul and mortal body. It is noteworthy that the spirited and appetitive parts of soul play different role in the process of communication. In Chapter 5, I will explore the teleology operating within immortality and mortality in the cosmological context. I will show that mortality is inevitable and necessary for the completion and continuous goodness of the cosmos as a whole. For humans, mortality is undesirable on the one hand and necessary on the other, since it ensures the opportunity for every individual immortal soul to regain its perfection and purity. I will also argue that there is affinity in the structure between the cosmos and the humans. And such affinity promotes the imitation that the structural similarities allow humans to practice. In this way, the gap between the cosmos that is a divine and immortal creature and the human race that is a mortal kind of creature is bridged by humans themselves.

Chapter 1 Cosmology and teleology

Introduction

According to Timaeus' cosmogonical account, the creation of the human race is part of the creation of the cosmos as a whole. For this reason, the investigation of the nature of human race cannot be conducted without a brief introduction of its cosmological context. Furthermore, the origin of the human race is presented as the result of deliberate Demiurgic creation rather than natural evolution. Hence, to develop a comprehensive understanding of the distinctive mortal-immortal nature of the human race requires not only an examination of the constitution of the soul and body but also an account of the teleology operating behind the creation of human beings. And the latter in turn also calls for the apprehension of the cosmological context within which the origin and nature of human beings is demonstrated. Additionally, the role the Demiurge plays in Timaeus' cosmological monologue is indispensable to the study of the cosmological context. Therefore, in this first chapter, Timaeus' cosmology, teleology, and the concept of the Demiurge are examined in order to characterize Plato's account of cosmic creation. It aims to provide the cosmological framework under which human's twofold nature of mortality and immortality are to be investigated in Chapter 2 and 3, and also the teleology operating behind such a twofold nature in Chapter 4.

I first give a sketch of what the *Timaeus* is about and examine the relation of the account of the origin and nature of human beings to Timaeus' cosmology and furthermore to the whole *Timaeus*. The study of that relationship will reveal that, firstly, human's mortal and immortal nature needs to be understood in a cosmological context; and secondly, the teleologies that operate behind the cosmic creation and the generation of the human race are consistent. Having shown that it is, I will then scrutinize what we should make of this teleology in the context of the *Timaeus*. A specification of the teleology that Timaeus holds in his cosmological accounts will show that Timaeus' cosmological teleology is intentional rather than natural, that is, why and how the cosmos came into being, as it is, is subject to the good intention and creative activities of the Demiurge. Finally, I will take a look at the Demiurge who performed the calculation and

deliberation so as to bring the cosmos into being as it is and who serves as an explanatory principle that accounts for the goodness of the cosmos.

1.1 Timaeus' cosmology and the *Timaeus*

Plato's *Timaeus*¹ opens with Socrates' recapitulation of a discussion from the previous day,² which described a best kind of political constitution and citizen quite familiar to readers of the *Republic*.³ Today,⁴ Socrates wishes to be entertained in return and wants to hear how a city such as that depicted in yesterday's⁵ talk would fare at war with other cities.⁶ The other participants of today's conversation have worked out a plan for the reciprocal accounts. At *Timaeus* 20d7-26e1, Critias gives a concise version of his intended account about ancient Athens, a city from nine thousand years ago that surprisingly matches the ideal city⁷ Socrates has portrayed, and its wars against Atlantis. With Socrates' approving the Athens-Atlantis story, Critias then suggests that Timaeus should give a cosmological account before he gives a fully detailed account of the warfare between the two cities. Critias sets out his plan as follows (27a2-b6):

All right, Socrates, what do you think of the plan we've arranged for our guest gift to you? We thought that because Timaeus is our expert in astronomy and has made it his main business to know the nature of the universe, he should speak first, beginning with the origin of the world and concluding with the nature of human beings. Then I'll go next, once I'm in possession of Timaeus' account of the origin of human beings and your account of how some of them came to have a superior education. I'll introduce them, as not only Solon's account but also his law would have it, into our courtroom and make them citizens of our ancient city – as really being those Athenians of old whom the report of the sacred records has rescued from obscurity – and from then on I'll speak of them as actual Athenian citizens.⁸

¹ The argument in this chapter and the other following chapters is all text-based, including the Demiurge's work of cosmic creation and the reality of the interlocutors. That means I will not be talking about the authenticity of the character Timaeus or the difference between a historical Socrates and a Platonic fictitious Socrates. Because there is no historical evidence showing the existence of Timaeus of Locri, I will simply take it that the text represents its author, Plato's viewpoints. For discussion of the identity of Timaeus, see Cornford (1937) 2-3). For discussion of the two Socrates figures, see Vlastos (1971), Kahn (1992), and Benson (1992).

² Cf. *Tim.* 17c1-3 and 17c6-19b2.

³ For the view that Socrates' talk refers to the *Republic*, see Taylor (1928) 13, Johansen (2004) chapter 1. For objection, see Cornford (1937) 4-5 and Clay (1997) 50-51.

⁴ For a brief introduction of the debate on the dramatic date of the *Timaeus*, see Zeyl (2000) xxvi-xxvii.

⁵ For the frequency of the word 'yesterday' (χθές) in the *Timaeus*, see Osborne (1996) footnote 3.

⁶ Cf. *Tim.* 19b3-c8.

⁷ Because Socrates calls the city 'best possible' at 17c, for convenience of reference, I will refer to it as 'ideal city' in the following discussion.

⁸ If not specified, all quotations from the *Timaeus* are from the translation by Zeyl (2000). ΟΤC greek text of the *Timaeus* is used in this thesis: Σκόπει δὴ τὴν τῶν ξενίων σοι διάθεσιν, ὦ Σώκρατες, ἢ διέθεμεν. ἔδοξεν γὰρ ἡμῖν Τίμαιον μὲν, ἅτε ὄντα ἀστρονομικώτατον ἡμῶν καὶ περὶ φύσεως τοῦ παντὸς εἰδέναι μάλιστα ἔργον πεπονημένον, πρῶτον λέγειν ἀρχόμενον ἀπὸ τῆς τοῦ κόσμου γενέσεως, τελεωτᾶν δὲ εἰς ἀνθρώπων

From this passage we can tell that Timaeus' cosmology and Critias' Athens-Atlantis story stand together in response to Socrates' request. Socrates makes it clear that what he wants to hear about is the martial performance of the best kind of city, which includes the citizens' martial behaviour and negotiation skills that would reflect positively on their education and training.⁹ Bearing Socrates' request in mind, his interlocutors arrange a plan of accounts that covers the origin of the cosmos, the nature of human beings, and the characteristics of the ideal citizens, so as to fulfill Socrates' wish. It is understandable that, in order that the characteristics of the ideal citizens should be fully illustrated, an account of the origin of human beings is both desirable and suitable as a preliminary to the account of how the ideal citizens possessing such a nature were educated, trained and would fare in war. However, does such a preliminary account necessarily have to include the origin of the cosmos as in Timaeus' cosmology? Considering the fact that the cosmos has come into being a long time ago before the existence of ancient Athens, what does the origin of the cosmos have to do with the characteristics of the ancient Athenian citizens and their corresponding performance in war?

Before answering this question, one point worth stressing is that, at the moment when Critias introduces the overall plan, Timaeus' cosmology is yet to be delivered, which means that, within the dialogue, the structure and content of Timaeus' cosmology seems to be determined by the purpose it sets out to serve, not the other way round. That is to say, Timaeus' cosmology does not aim at developing an account of the origin of the cosmos *per se*, but rather is motivated by the construction of a complete demonstration of the ideal city and citizens in action from the outset. This being the case, it is reasonable to suggest that, through Critias' introduction of the overall plan, Plato is encouraging his readers to understand the cosmology Timaeus is about to present not only as an account of the origin of the entire cosmos but also as an account that is fundamentally politically oriented in terms of its connection to Critias' and Socrates' accounts. More importantly, Socrates' comments on Critias' plan, i.e. 'a complete (τελέως), brilliant banquet of speeches (τῶν λόγων),'¹⁰ indicate that a demonstration of a mobile political constitution that

φύσιν. ἐμὲ δὲ μετὰ τοῦτον, ὡς παρὰ μὲν τούτου δεδεγμένον ἀνθρώπους τῷ λόγῳ γεγονότας, παρὰ σοῦ δὲ πεπαιδευμένους διαφερόντως αὐτῶν τινὰς, κατὰ δὲ τὸν Σόλωνος λόγον τε καὶ νόμον εἰσαγαγόντα αὐτοῦς ὡς εἰς δικαστὰς ἡμᾶς ποιῆσαι πολίτας τῆς πόλεως τῆσδε ὡς ὄντας τοὺς τότε Ἀθηναίους, οὓς ἐμήνυσεν ἀφανεῖς ὄντας ἢ τῶν ἱερῶν γραμμάτων φήμη, τὰ λοιπὰ δὲ ὡς περὶ πολιτῶν καὶ Ἀθηναίων ὄντων ἤδη ποιῆσθαι τοὺς λόγους.

⁹ Cf. *Tim.* 19b3-c8.

¹⁰ Cf. *Tim.* 27b7-8.

contains cosmology is to be regarded as 'complete'. In other words, if Timaeus and Critias provide Socrates with a discourse of the ideal city in action without a cosmological account, it might be possible that such a discourse is not complete.¹¹ This is also a claim that cosmology is essential to the overall demonstration. The essential status of a cosmological account, I think, lies in the fact that Plato wants the nature of human beings to be examined in the context of the origin of the cosmos as a whole. That is, to develop a sufficiently comprehensive understanding of the nature of human beings requires the investigation not only of what the nature of human beings is but also of why and how the nature of human beings became as it is. And the knowledge of the latter can only be grasped by the inspection of the origin of the human race, which is an integral part of the origin of the cosmos as a whole. That is to say, the nature of human beings is rooted in the origin of the cosmos and thus a cosmological account is indispensable in understanding the coming-into-being of such a nature.

According to Critias' plan, the origin of human beings serves as a connecting link between Timaeus' cosmology and Critias' Athens-Atlantis story. Timaeus' cosmology fits in the overall demonstration in that the origin of the cosmos as a whole contains the origin of human beings and the nature of human beings needs to be understood under the framework of cosmogony. And the Athens-Atlantis story can only be presented after Timaeus' cosmology, for the education, training, and warfare of the ideal citizens should be presented in the context of an understanding of the nature of human beings. The reason for such an arrangement of speeches is that a good political constitution should be established as aiming at the best interest of its citizens, and the best interest of the citizens is decided by the very nature of them as human beings, which has its origin in the origin of the cosmos as a whole. Therefore, the origin of the cosmos is necessarily significant for the Athens-Atlantis story in that the knowledge of cosmogony provides a cosmological perspective for the understanding of the nature of human beings, the very nature that underpins the political structure of a good city such as ancient Athens.

¹¹ The *Timaeus* is seen as part of the *Timaeus-Critias* trilogy, which is in fact unsatisfactorily incomplete. The *Critias* was left unfinished (breaking off in mid-sentence after 14 Stephanus pages) and the *Hermocrates* was never composed (not mentioned in the prelude in the *Timaeus* but in the *Critias* 108a-b). Here I'm not saying that the dialogue would be complete as long as it includes Timaeus' cosmology; rather my point is that as introduced in the prelude, the demonstration (Timaeus' and Critias') is expected to be complete and such completion cannot be fulfilled without Timaeus' cosmological monologue. Furthermore, if the dialogue were ever to be complete, it had to include Timaeus' cosmology, but not the other way round. But the theme of my thesis is not about politics after all, so I will not be talking about the Atlantis story told in the *Critias* in detail but rather mention it as reference wherever it is necessary.

On the basis of the above observations, we can now claim that the teleology operating at the level of Demiurgic creation is congruous with the political orientation at the level of Timaeus' cosmological narration. This is because human beings are integral to the cosmos, and thus the kind of goodness the cosmos was created to strive for is also the ultimate goal for which the human race was constructed. In this case, a political constitution aiming at goodness for human beings is equally aiming to contribute to overall goodness. It follows that not only the nature of human beings but also the nature of a political constitution should be understood in the context of cosmogony and cosmology, for the ends of an ideal city consist in its contribution to the realization of overall cosmic goodness.

As I have pointed out at the very beginning of this chapter, the study of the mortal-immortal nature of human beings requires the understanding of both the cosmological context within which the origin of the human race is demonstrated and the political context, i.e. the *Timaeus* discourse as a whole, to which the account of human origin and nature is integral. Now with the foregoing observations in place, we can conclude that, first of all, the investigation of the cosmic and political teleology behind the creation of the human race is of benefit to the study of the immortal-mortal nature of human beings. Secondly, the account of the origin and nature of human beings may in turn, on the one hand, reflect on the teleology underlying the creative decisions of the Demiurge, and on the other hand, be indicative of the natural characteristics of the ideal citizens. This is because, firstly, the cosmic teleology demonstrated in Timaeus' cosmology is congruous with the political teleology underlying his narration. And secondly, the origin and nature of the human race is an essential part of Timaeus' cosmological discourse. Bearing those conclusions in mind, I now proceed to look at the teleology illustrated in the *Timaeus* that underlies the creation of the cosmos and the establishment of the political constitution.

1.2 Αἰτία and intentional teleology

Timaeus' cosmology is teleological, of the sort that is called intentional teleology or unnatural teleology,¹² for, throughout his cosmogonic monologue, Timaeus has repeatedly

¹² Cf. Lennox (1985).

demonstrated that the Demiurge or the lesser gods endowed a cosmic part with this or that attribute in order that such-and-such a certain end should be met. This end is regarded as αἰτία of the coming-into-being of that cosmic part, in a sense that the structure or property of that cosmic part is coming to be for the sake of the results.¹³ In this section, I want to consider and distinguish the specification of the causal accounts Plato offers in *Timaeus*' cosmological monologue by making a comparison with those in the *Phaedo*.¹⁴ The justification for making such a comparison between the *Phaedo* and the *Timaeus* is that the two dialogues differ from each other in perspectives and emphases, so that the comparison between them will help us to discover if Plato had ever endowed the word αἰτία with a distinctive connotation under the framework of cosmological teleology.

In the *Timaeus*, Plato distinguishes two kinds of causes, primary causes (αἰτία) and auxiliary causes (ξυναίτια). The primary causes are those which possess intelligence and thus fashion what is beautiful and good, and the auxiliary causes are those which, without the persuasion and guidance of intelligence, produce only random and disorderly effects every time.¹⁵ The distinction made in the *Timaeus*, I think, echoes what is said in the *Phaedo*. In Socrates' famous autobiography, he distinguishes the cause (τὸ αἴτιον) from that without which the cause would not be able to act as a cause (ἐκεῖνο ἄνευ οὗ τὸ αἴτιον οὐκ ἂν ποτ' εἴη αἴτιον) (99b). Socrates explains his distinction by pointing out that it is not his physical constitution (bones, sinews, and so on) that is causing him to sit in the prison; but instead, his belief that to stay in prison is more right and honorable than to escape and run away. The latter is the correct answer to the question why Socrates is sitting in the prison. Here Socrates makes a very clear statement about what cannot be counted as causes: when he says that those that can both serve as the explanation of one thing and of its opposite should not be regarded as the cause of that thing,¹⁶ that is, Socrates' bodily constitution of bones and sinews would have helped him run away to Megara if he had decided against staying. This requirement for what makes a satisfactory causal account became clear to Socrates as he sought for a true teleological or causal account in his study of the natural

¹³ Cf. Furley (1996) 60.

¹⁴ I personally take the viewpoint that the *Timaeus* is later than the *Phaedo*. For the debate about the place of the *Timaeus* in the order of Platonic dialogues, see Zeyl (2000) xvi-xx, Cooper (1997) xii-xviii, Owen (1965), Cherniss (1965), and Brandwood (1992).

¹⁵ Cf. *Tim.* 46e.

¹⁶ Cf. Sedley (1998) 121.

philosophers. Unfortunately, according to Socrates, these natural philosophers generally take physical and material phenomena, sounds, air, hearing and so on, as true causes (ἀληθῶς αἰτίας). The same worry is described in the *Timaeus*, where it is said that most people think those phenomena that produce effects like cold or heat, compactness or dispersal, are the true causes of all things (46a-d).

T. K. Johansen has noticed a difference of terminology between the *Phaedo* and the *Timaeus*.¹⁷ In the *Phaedo*, Socrates claims that it is absurd to call those material or physical explanations causes (*Phd.* 99a). On the contrary, later in the *Timaeus*, Plato indeed calls those material or physical explanations ‘co-causes’ (ξυναίτια). The reason for the terminological change, is because in the *Phaedo*, before Socrates moves on to his second journey (δεύτερον πλοῦν), he fails to find out the true causes, and without the attendance of any true causes, it is problematic to call those material explanations causes of anything, since they are necessary conditions which serve the achievement of the true cause. Whereas, in the *Timaeus*, Plato has explicitly explained what the true causes are. Therefore, calling those that are under the guidance of true causes and assist in fulfilling the true causes ‘co-causes’ will not provoke any confusion, as long as one bears in mind a very clear understanding of the difference between primary causes and auxiliary causes.

Besides Johansen’s plausible explanation, I want to add that different terminologies might also be rooted in the different emphases and contexts of the *Phaedo* and the *Timaeus*. In the *Phaedo*, in Socrates’ first journey, as he studies Anaxagoras’ natural philosophy, he moves from expecting some satisfactory explanation through mind to becoming disappointed about Anaxagoras’ descent to material causes (97c-98e). In fact, before he continues his reading of Anaxagoras, Socrates has already presumed some criteria for establishing true causes. All things are under the arrangement of Intelligence (νοῦς) (97c), and a true cause should be able to explain why something is as it is of necessity (ἀνάγκην) and why it is better (ἄμεινον) for it to be so (97e). And when he finds that Anaxagoras’ causes fall back to the material level and turn out to fail to meet his criteria, Socrates decides to assert that they are not true causes at all: *to call those things causes is too absurd* (99a). The example given by Socrates himself, that his sitting in the prison rather than running away is not the result of his bodily constitution but because of his

¹⁷ Cf. Johansen (2008) 104.

intelligent decision, shows us his preference for intelligent explanations as true causes over physical ones. But we still cannot confirm what true causes really are, because from Socrates' preference we can only learn that he thinks true causes must relate to intelligence, and rejects the use of material or physical explanations as true causes. I think the significance of Socrates' first journey into Anaxagoras' natural philosophy is not to actually develop any causal theory but rather to rule out bewildering elements; that is to say, its real achievement is to eliminate natural philosophy's explanations from being real or true causes. And only with such a premise can Socrates begin his second 'sailing', seeking for a causal account among non-material elements. That is why he does not call the things without which a cause would not be able to act as a cause 'causes', for he is rejecting them.

The context is utterly different in the *Timaeus*. The subject of the *Timaeus* is cosmic creation, and for an integrated story of cosmic creation it is not sufficient only to present what has come to be out of the causative activity of the Demiurge, but a comparable exposition of how things have come to be as such physically is also required. Thus the accounts in the *Timaeus* contain the formation of immortal souls and the creation of physical things. Furthermore, fully half of Timaeus' monologue is concerned with the origin of the cosmos' physical body, which clearly shows that the material account has equal importance with the intelligent account. So it is not a surprise that when he comes to analyze the causal account of something, both its intellectual and material aspects should be taken into consideration.

Another difference between the *Phaedo* and the *Timaeus* with regard to the causal account is in their emphases. In the *Phaedo*, the specification of causes is under discussion, and the emphasis of this discussion is on categorizing various kinds of explanations and finding out among them which kind is qualified to be considered a true cause, while in the *Timaeus*, the distinction of causes is straightforwardly offered without any further discussion about the distinction itself. Previous to the distinction, Timaeus explains in detail how the eyes possess the physical power of sight (45b-46a). Immediately following his introduction of the difference between primary and auxiliary causes, he analyzes the intelligent purpose of sight as the primary cause. Furthermore, Timaeus reminds his audience that other bodily functions have come to be out of similar causes: that is, the pursuit of the good. In my opinion, Timaeus' introduction of the distinction of causes is not merely for the sake of making such a distinction. Despite setting up

the pursuit of the good as the general primary cause of everything, a particular bodily organ has its own corresponding function, and through the assistance of such unique functions a human being shall enjoy his own appropriate way of pursuing the general good. That the Demiurge endowed bodily organs with particular functions so that they can contribute to fulfill the greater goodness should also be accounted as a true cause. Take eyes and ears for instance: through the function of sight and hearing, men can learn harmony from observing the orbits of stars and listening to proper music. That eyes and ears have particular ways of achieving the good should also be regarded as true causes of why the god created the human race with eyes and ears. I shall talk about this in more detail in the following discussion. In brief, in the *Phaedo*, Plato's aim is to find out what a true cause is, whereas in the *Timaeus* he already has the answer and wants to enquire further into the particular causes of a certain thing from both primary and auxiliary perspectives. This is why it is fine to have auxiliary causes in the *Timaeus* but not in the *Phaedo*.

As to the discussion of primary (or 'true') causes, I think the emphasized aspects are also slightly different when we compare the *Phaedo* and of the *Timaeus*. In the *Phaedo*, Socrates in his 'second journey' defines a 'true cause' as follows: 'if F things are (or become) F because of F' — or as more subtly formulated by D. N Sedley, 'that F things should be made F by the presence of something which essentially brings the Form F-ness with it'.¹⁸ I think the *Phaedo* focuses more on the 'formal' aspect of causation. That is to say, the proposition 'F things are F because of F' is based on two premises: 1) F things are or exist or have come to be already, and 2) F things manifest the properties that qualify them to be named F after the Form of F-ness. For example, snow and fire exist, and snow is cold and fire hot. The question the *Phaedo* asks is why snow is cold and fire is hot, but the existence itself of snow and fire remains outside its area of concern. Instead, the existence of snow and fire is taken for granted by Socrates and his companions. Throughout the entire *Phaedo*, the creative agency or action is absent. This absence might suggest that in the *Phaedo* there is no need to discuss the existence of things. This may be because the objects that the *Phaedo* wants to discuss all exist already, and thus any discussion concerning the causes of those things is based on the fact that they *are being* as such, not from the perspective that they *come to be* as such from non-existence. On the contrary, that other perspective is the very one from which the *Timaeus* expounds its account of creation. At *Timaeus*

¹⁸ Cf. Sedley (1998) 115.

28a4-6 Plato says that ‘everything that comes to be must of necessity come to be by the agency of some cause (ὕπ’ αἰτίου), for it is impossible for anything to come to be without a cause’. The *Timaeus* focuses on answering the question why and how things come to be: the emphasis there is on the process of creation. Taking the snow and fire example again, the causal question the *Timaeus* would ask is why such things as snow and fire should be created and come to be as they are.

As I have argued above, I think that Plato’s unique perspective on causes in the *Timaeus* is founded on the idea that the particular good something being designed to pursue should also be categorized as a primary cause of that thing. Like I mentioned in previous discussion, both eyes and ears serve the purpose of discovering the harmony from the world in which we live and applying it to the transformation of our own understanding. Nevertheless, eyes and ears were created differently. Eyes were given the capacity of sight, by which we might observe the orbits of intelligence in the heavens (47b). And then we could invent number and the idea of time and begin inquiring about the universe: a pursuit that leads us eventually to philosophy (47a). Ears were assigned the capacity of hearing, by which we might listen to *logos*, music, and rhythm (47c-d). And then we could learn harmony from sounds and express harmony through sound, and by such means we could find an ally in sound who assists us in stabilizing our own internal orbits (47d-e). This example of eyes and ears may suggest that, from the perspective of creation, especially when explaining a certain thing’s coming to be, it may not be sufficient merely to say that the creation of something is for the pursuit of the good; instead, the explanation needs to be specific. While the pursuit of good is no doubt the true cause of eyes, and does explain the purpose the existence of eyes serves, still it fails to give an explanation why eyes were created as eyes, not ears, since the same cause can well explain the existence of ears and other bodily organs. My point is that the pursuit of good is unquestionably the primary and true cause, but that when it comes to seeking a causal account for a particular thing a satisfactory answer needs to be more precise.

Now based on the unique perspective of the *Timaeus* that I have analyzed previously, I want to investigate what primary causes and auxiliary causes are, using the example of eyes and eyesight. Let’s begin with auxiliary causes. If we eliminate the creative activities of the lesser gods from *Timaeus*’ description of the construction of eyes (45b-46a), the whole account

becomes a mere collection of mechanical principles describing how the gods took advantage of diverse properties of solids to make them serve the function of sight: the properties which explain, for example, how images are produced in mirrors or in any other reflecting surfaces (46a-c). The explanation of images is a very good example that shows the mechanical and automatic processes at work in cases of interaction between physical properties. Such a process itself lacks a purpose and has no essentially different effects on the results. The images of object A and object B produced in a mirror are essentially the same, since they are both the reflections of something. Likewise, Socrates' bodily constitution can be employed in the service both of staying in prison sitting and running away to Megara. Nevertheless, it is at least fair to claim that it is the mechanical process that produces the images of object A and B, and that it is Socrates' bodily constitution that enables him to remain sitting. As Plato admits, the auxiliary causes (ξυμμεταίτια) give the eyes the power of sight (46e). I think the auxiliary causes of a thing being F in the *Timaeus* refer to those that at the material level, or physically, enable the existence of a thing as F and the manifestation of its F-ness. A corresponding question, taking for instance the example of the eyes, is what the physical constitution of eyes might be, and what the mechanical principle of eyesight is. According to the *Timaeus*, the auxiliary causes are 'employed in the service of the god as he does his utmost to bring to completion the character of what is most excellent' (56c-d). As I have argued previously, the pursuit of good is the primary cause for all things in a general sense, but when it comes to inquiry about a certain object, the causal account should be able to explain what specific purpose the coming-to-be of this object is supposed to fulfill in order to achieve the ultimate purpose of making the cosmos as good and excellent as possible. If, therefore, we are to ask a corresponding question about the primary cause, taking the sight example again, it may be what the particular good that eyes bring forth was for the god who created them.

1.3 The conception of divine craftsmanship

In the above section, I have argued that αἰτία denotes not only cosmic goodness as the ultimate cause of and purpose for the coming-into-being of things but also the particular explanatory account of how things come to be as things which could fulfill their particular roles

in contributing to cosmic goodness. And we can notice that there is always a creative agency¹⁹ in the causal account. In this section, I will focus on discussing the concept of divine craftsmanship.

As we can see, in Timaeus' cosmological monologue, he offers a discourse of how a divine craftsman or the Demiurge (ὁ δημιουργός) created the cosmos by endowing the pre-cosmic chaos with goodness and order. He transformed the pre-cosmic disorder into materials for the construction of corporeal entities, that is, the whole cosmic body to which an immortal cosmic soul, constructed by the Demiurge himself, was bound. Thus came into being the cosmos as an eternal living creature. And the Demiurge also created the celestial stars and the lesser gods to whom he then gave the task of creating the human race and other mortal creatures to house the individual immortal souls he himself constructed. Readers since Plato's own time have been arguing whether the concept of a divine craftsman is indispensable in Timaeus' cosmological framework. Some scholars suggested that the Demiurge can be equated with other elements in Timaeus' cosmology,²⁰ since some of the terminologies employed by Timaeus to portray the Demiurge's creative actions, for example, that the Demiurge used a mixing bowl (ἐπὶ τὸν πρότερον κρατῆρα) to create the immortal souls,²¹ if read literally, which would entail that the Demiurge used a bowl as the container to create the cosmic soul, would only produce absurdities, whereas a metaphorical reading can explain away such absurdities. Thus how far are we to take the conception that the cosmos was created by the Demiurge seriously? Was there really a divine craftsman at all, the one who brought the cosmos into being a certain number of years ago, along with time itself? Or is the Demiurge merely a metaphorical figure Timaeus employs to serve a pedagogical purpose²² so that readers might understand more easily the causal role of Intelligence in the cosmos that has existed always and will exist for an infinite time span?

The exposition of the concept of the Demiurge brings about the investigation of another controversial issue, that is, whether the cosmos was created chronologically as having a temporal

¹⁹ Timaeus has used the singular 'god' in describing the creation of the cosmic body (27a-34b), cosmic soul (34c-37c), and individual immortal souls (41a-b). And he has made it really clear in 41a-d that the agency who created the human body was the lesser gods. However, he uses indiscriminately the singular 'god' and plural 'gods' as the creator/creators of the human body. Cf. singular 46e, 71a, 74d; plural 47c, 75b, 77a. Cf. Gerson (1990), pp268, note 87.

²⁰ For the view that the Demiurge is reducible to one of the other elements in Timaeus' cosmology, see Archer-Hind (1888) 38-40, to the cosmic soul; Cornford (1937) 37-38, to the Reason; Perl (1998); for an argument that the Demiurge represents no more than an impersonal intelligent causation, see Carone (2005) chapter 2. For the arguments for the Demiurge's irreducibility, see Robinson (1993), Broadie (2012) chapter 1.

²¹ Cf. *Tim.* 41d4.

²² Cf. Aristotle, *On the Heavens* 279b32-280a1.

beginning.²³ That the cosmos has a genetic origin is significant for the conception of divine craftsmanship in that, as Sedley concludes, the former serves as an indispensable premise for the latter.²⁴ Sedley takes Timaeus' words at 28c2-3 as specific to the coming-into-being of the cosmos and infers from it that the cosmos having a beginning is the sufficient condition of the cosmos having a craftsman. And whether or not the former is also a necessary condition of the latter, the same conclusion can be reached. I agree with Sedley's interpretation. And additionally, I want to lay some emphasis on the intentional perspective of the teleology illustrated by Timaeus. In my view, Timaeus' words at 28c2-3 cannot be read alone but belong to his comprehensive reasoning from 28a4 to 29a6. And the main point Timaeus tries to convey in those lines is not merely that the cosmos having a genetic origin entails its having a craftsman, but more importantly that a beautiful cosmos such as ours coming into being at a temporal beginning entails that the well-intentioned Demiurge implanted goodness and order to the pre-cosmic chaos modelling after the Forms.²⁵ I shall elaborate my point in the following discussion. For the sake of clarity, I quote Timaeus' words at 28a4-29a6 in full.

Now everything that comes to be must of necessity come to be by the agency of some cause, for it is impossible for anything to come to be without a cause. So whenever the craftsman looks at what is always changeless and, using a thing of that kind as his model, reproduces its form and character, then, of necessity, all that he so completes is beautiful. But were he to look at a thing that has been begotten, his work will lack beauty. Now as to the whole heaven, or world order – let's just call it by whatever name is most acceptable in a given context – there is a question we need to consider first. This is the sort of question one should begin with in inquiring into any subject. Has it always been? Was there no origin from which it came to be? Or did it come to be and take its start from some origin? It has come to be. For it is both visible and tangible and it has a body – and all things of that kind are perceptible. And, as we have shown, perceptible things are grasped by opinion, which involves sense perception. As such, they are things that come to be, things that are begotten. Further, we maintain that, necessarily, that which comes to be must come to be by the agency of some cause. Now to find the maker and father of this universe is hard enough, and even if I succeeded, to declare him to everyone is impossible. And so we must go back and raise this question about the universe: which of the two models did the maker use when he fashioned it? Was it the one that does not change and stays the same, or the one that has come to be? Well, if this world of ours is beautiful and its craftsman good, then clearly he looked at the eternal model. But if what it's blasphemous to even say is the case, then he looked at one that has

²³ For a discussion of Neoplatonic exegeses of cosmogony, see Phillips (1997). For a discussion of difficulties raised by a literal chronological reading, see Dillon (1997) and Tarán (1972).

²⁴ Cf. Sedley (2007) 105-106.

²⁵ In this chapter, I will not be talking about the nature of the Forms *per se*, but only the paradigmatic function of the Forms in Timaeus' cosmology. For discussion of the nature of the Forms in the *Timaeus* particularly, see Ostenfeld (1997) and Ferber (1997).

come to be. Now surely it's clear to all that it was the eternal model he looked at, for, of all the things that have come to be, our world is the most beautiful, and of causes the craftsman is the most excellent.²⁶

From this passage we can see that Timaeus' argument is as follows. First of all, he comes up with a generic reasoning²⁷ about the cause of things that come to be (28a4-b2), that is, everything that comes to be must have a cause, and those whose cause is a craftsman looking at the changeless model and reproducing them are of necessity beautiful, otherwise not.²⁸ This serves as a paradigm for the later argument of the specific case of cosmic creation.

As for the cosmos, there are two statements Timaeus takes as self-evident facts that he uses as the premises of his reasoning. One is that the cosmos is visible, tangible, and has a body, and thus is perceptible (28b7-c1). The other is that the cosmos within which he and his audiences live is the most beautiful (29a5), which is a plain fact to Timaeus. From the first statement Timaeus infers that the cosmos has an origin from which it came to be (28b7, 28c2-3), based on the distinction he makes between being and becoming and their respective methods of cognition at 27d6-28a4. That is to say, things that come to be are grasped by opinion, and the development of opinions involves sense perception (28a2-3), which means that things that come to be are perceptible. Now since the cosmos is perceptible, it must belong to things that come to be, and thus has come to be having a cause. At this point, we cannot yet claim that the cosmos came to be

²⁶ πᾶν δὲ αὖ τὸ γιγνόμενον ὑπ' αἰτίου τινὸς ἐξ ἀνάγκης γίγνεσθαι· παντὶ γὰρ ἀδύνατον χωρὶς αἰτίου γένεσιν σχεῖν. ὅτου μὲν οὖν ἂν ὁ δημιουργὸς πρὸς τὸ κατὰ ταυτὰ ἔχον βλέπων ἀεὶ τοιοῦτω τινὶ προσχρῶμενος παραδείγματι, τὴν ἰδέαν καὶ δύναμιν αὐτοῦ ἀπεργάζηται, καλὸν ἐξ ἀνάγκης οὕτως ἀποτελεῖσθαι πᾶν· οὐ δ' ἂν εἰς γεγονόσ, γεννητῶ παραδείγματι προσχρῶμενος, οὐ καλόν. ὁ δὲ πᾶς οὐρανὸς ἢ κόσμος ἢ καὶ ἄλλο ὅτι ποτὲ ὀνομαζόμενος μάλιστ' ἂν δέχοιτο, τοῦθ' ἡμῖν ὀνομάσθω - σκεπτέον δ' οὖν περὶ αὐτοῦ πρῶτον, ὅπερ ὑπόκειται περὶ παντὸς ἐν ἀρχῇ δεῖν σκοπεῖν, πότερον ἦν ἀεὶ γενέσεως ἀρχὴν ἔχων οὐδεμίαν, ἢ γέγονεν, ἀπ' ἀρχῆς τινος ἀρξάμενος. γέγονεν· ὁρατὸς γὰρ ἀπτὸς τέ ἐστιν καὶ σῶμα ἔχων, πάντα δὲ τὰ τοιαῦτα αἰσθητὰ, τὰ δ' αἰσθητὰ, δόξη περιληπτὰ μετ' αἰσθήσεως, γιγνόμενα καὶ γεννητὰ ἐφάνη. τῶ δ' αὖ γενομένῳ φαμὲν ὑπ' αἰτίου τινὸς ἀνάγκην εἶναι γενέσθαι. τὸν μὲν οὖν ποιητὴν καὶ πατέρα τοῦδε τοῦ παντὸς εὐρεῖν τε ἔργον καὶ εὐρόντα εἰς πάντας ἀδύνατον λέγειν· τόδε δ' οὖν πάλιν ἐπισκεπτέον περὶ αὐτοῦ, πρὸς πότερον τῶν παραδειγμάτων ὁ τεκταινόμενος αὐτὸν ἀπηργάζετο, πότερον πρὸς τὸ κατὰ ταυτὰ καὶ ὡσαύτως ἔχον ἢ πρὸς τὸ γεγονόσ. εἰ μὲν δὲ καλὸς ἐστὶν ὁδε ὁ κόσμος ὃ τε δημιουργὸς ἀγαθός, δῆλον ὡς πρὸς τὸ αἰδίον ἔβλεπεν· εἰ δὲ ὁ μὴδ' εἰπεῖν τινὶ θέμις, πρὸς γεγονόσ. παντὶ δὲ σαφὲς ὅτι πρὸς τὸ αἰδίον· ὁ μὲν γὰρ κάλλιστος τῶν γεγονότων, ὁ δ' ἄριστος τῶν αἰτίων. οὕτω δὲ γεγενημένος πρὸς τὸ λόγῳ καὶ φρονήσει περιληπτὸν καὶ κατὰ ταυτὰ ἔχον δεδημιούργηται·

²⁷ I hold the view that when ὁ δημιουργὸς and παράδειγμα are first introduced here at 28a4-b2, the distinction between a craftsman's using a changeless and a generated paradigm is to be a generic consideration with no specific reference to the Demiurge, the cosmic creator. Cf. Dillon (1997) 28 and Broadie (2012) 27-28.

²⁸ On a nuance of the reading of 28a4-b2 that whether the cause of things' coming-into-being refers to a craftsman exclusively, I consult and agree with Johansen's interpretation. Cf. Johansen (2004) 70-71. When and only when the cosmos exhaustively contains all those come to be can the cause of things coming to be and a craftsman (the Demiurge) exclusively refer to each other. However at the time when Timaeus is making this generic reasoning, the argument of the cosmos being the exhaustive All is yet to be developed. For the view that the cosmos' being the All is an unspeaken premise throughout the *Timaeus*, see Broadie (2012) 8.

by a craftsman. This is because, in his generic reasoning, Timaeus does not say that everything that comes to be must come to be by a cause, where this cause is necessarily a craftsman doing such and such. Rather, he only says that *when* the cause is a craftsman doing such and such, things would come to be accordingly. Therefore what Timaeus has confirmed so far is merely that the cosmos has a genetic cause rather than that the cosmos has a craftsman as its genetic cause.

One point worth stressing is that the significance of Timaeus' generic reasoning at 28a4-b2 is that he emphasizes the relationship between the craftsmanship and the outcome in the case where the cause is a craftsman. That is, first of all, only when the craftsman looks at the kind of model that is always changeless can the product he reproduces turn out to be beautiful. By contrast, if the craftsman chooses the kind of model that belongs to the realm of coming to be, the outcome would necessarily turn out to be lacking in beauty. The point here is that the craftsman gets to choose between two alternatives, which means the intention of the craftsman matters. Secondly, the craftsman also has to reproduce the form and character (28a8) of the model he looks at so that what he creates would resemble the model and become beautiful. This means the calculation and deliberation of the craftsman matters during the creation. In a word, when, and only when, a craftsman chooses the changeless model to look at and reproduce its form and character in his product can the outcome turn out to be beautiful.

Now since the cosmos within which Timaeus and his audience live is the most beautiful, the coming-into-being of the cosmos must then be the result of the Demiurge's creating it looking at the eternally changeless model (29a6-b1).²⁹ What the Demiurge confronted before his creation was the pre-cosmic chaos, which was in discordant and disorderly motion (30a4-5). But the Demiurge *wanted everything to be good and nothing to be bad so far as possible* (30a2-3), so he chose to implant order in the pre-cosmic disorder. In other words, it is because of the good intention of the Demiurge that he chose what is eternally changeless as the model for the creation of the cosmos. And it was through careful calculation that the Demiurge decided to create the cosmos as a living creature with intelligence (30b1-6).

²⁹ This argumentation is valid only when everything coming to be by the hand of a craftsman looking at the changeless model is the sufficient and necessary condition of it coming to be as beautiful. However, Timaeus' reasoning at 28a6-b1 only confirms that the former is the sufficient condition of the latter and is implicit about whether or not it is also a necessary condition.

From this argument, we can claim that the cosmos' having a generic origin is indeed required for the conception of a divine craftsmanship. And through further inspection, I point out that the coming-into-being of the cosmos as the most beautiful living creature is the result of the Demiurge's good intention of hoping everything to be as good as possible and his creative activities accordingly. In short, Timaeus' teleology is intentional, in a sense that the goodness throughout the cosmic creation and within the cosmos itself as a whole is endowed by the intention of the Demiurge. And the concept of the Demiurge itself is granted by the cosmos' having a temporal beginning. Thus we can say that the Demiurgic teleology demands a temporal beginning, in other words, the cosmos' having a temporal beginning is needed in order to ground the teleological structure of the cosmos, in which a good Demiurge aiming for goodness is essential.

Yet an objection arises from the very idea that the cosmos has a temporal beginning. That is, if time came to be along with the cosmos and before the cosmos came to be there was the pre-cosmic chaos, then it seems that the pre-cosmic chaos existed at a time *before* time. By showing that the time created by the Demiurge can be understood as *measurable* time, Vlastos has plausibly explained away this incompatibility.³⁰ It is worth adding to Vlastos' viewpoint that the creation of time itself is indicative of the Demiurge's creative decision. For, on the one hand, time came into being as an earthly moving image of the eternal nature of the changeless model the Demiurge looked at (37d5). On the other hand, time was made according to number (37d6), which was bestowed by the Demiurge upon pre-cosmic matter (53b4-5) in order to replace disorder with order. Therefore, the creation of time exemplifies the Demiurge's intention of making the cosmos resemble the eternal model as closely as possible (37d2).

The good intention of the Demiurge is challenged by Tarán.³¹ He asks why the Demiurge would allow the existence of the pre-cosmos, and why, if time is associated with number marked by celestial motions, the Demiurge imposed order on pre-cosmic disorderly motions at that specific point of their motive succession? Why not another 'time' so that time could begin five minutes earlier or later. I shall use an analogy to answer this question. Imagine drawing a coordinate in void space. After drawing the coordinate, there is a point in this space which is a

³⁰ Cf. Vlastos (1939) and (1964).

³¹ Cf. Tarán (1972) 381.

starting point (0, 0, 0) and every position in this space is then defined accordingly. Tarán's question, if applied in this coordinate analogy, is like this: why didn't we choose the point (2, 2, 2) to be the starting point (0, 0, 0)? And the answer simply is because there was no point (2, 2, 2) or any other point at all in this space because no position was differentiated before the coordinate came into being. Likewise, there could not be another point of time that was five minutes earlier than the beginning of time before there was a beginning of time as being a reference. And this is the very reason why the cosmos' having a temporal beginning is so significant, because it necessitates the causal role of the Demiurge who introduced order and beauty to the pre-cosmos, which is in turn essential to the teleological framework of Timaeus' cosmology.

1.4 Conclusion

In this chapter, I have looked at the cosmological background the *Timaeus* shows from the perspectives of cosmology, teleology, and the concept of the Demiurge. First of all, from the cosmological perspective, I have argued that since the creation of human race is part of the creation of the cosmos as a whole, the study of human's twofold nature of mortality and immortality must be undertaken in its cosmic context. In other words, when it comes to the discussion of the constitution of human's body and soul and the interaction between those two in Chapter 2 and 3, the relationship between the creation of human race and that of the cosmos as a whole will necessarily be taken into consideration. Furthermore, I have also argued that the teleology operating behind the creation of human race is consistent with that behind the creation of the cosmos as a whole. So we can claim that the creation of the human race is essentially in the service of the cosmic goodness. For this reason, when it comes to Chapter 4's discussion of the teleology of the creation of human race with regard to Plato's account of human's twofold nature of mortality and immortality and his attempt at bridging the gap between those two natures, cosmic goodness as the ultimate creative purpose ought to be considered as an indispensable contextual element.

Secondly, I have also demonstrated Timaeus' distinctive causal account. Timaeus' teleology is intentional and Demiurgic, in a sense that all the cosmic creation is to serve the purpose of cosmic goodness and perfection. And a salient feature about Timaeus' teleology is that, not only

is the cause why something comes into being important, but the creative process of how it comes into being in order to fulfill its cause of being created is also significant. It is because the creative process of something reveals the particular good it is designed to contribute to the overall goodness. Bearing this in mind, Chapter 2 and 3 will explore how the Demiurge bestowed both mortal and immortal nature upon the human race, and Chapter 4 will investigate the particular good with which the human race has been endowed by possessing such a twofold nature.

Thirdly, I have argued that the Demiurge plays an indispensable role in Timaeus' account, for it guarantees that the result of cosmic creation is good and perfect. One thing to be stressed is that I have not and will not discuss what the Demiurge is. So far, I have confined my argument to that there is and needs to be a Demiurgic element in Timaeus' cosmic creation, because, on the one hand, intentional teleology calls for a premise such as the Demiurge, and on the other hand, that the cosmos has a generic origin is a sufficient condition of the cosmos having a craftsman. In Chapter 2 and 3, the discussion of the materials employed to be the component of humans' body and soul will also involve and further explore the necessity of the Demiurge in Timaeus' cosmology.

Chapter 2 The physical account of mortality in the *Timaeus*

Introduction

The main question of the overall thesis is how Plato collapses the distance between human's mortal and immortal nature. To answer this question, it requires the investigation of not only the nature of mortality but also that of immortality, and the relationship between the two as well. This chapter will contribute to answering the main question by looking at human's mortal nature. Since it is obvious that the immortal nature is attributed to the soul¹ and the mortal nature to the body due to the soul's being indissoluble and the body's being the very opposite,² then, to develop an account of mortality is to look at the physical aspect of a human being, that is, the human body and its dissolubility. Furthermore, as I have argued in the first chapter, the creation of the human race is an essential part of the creation of the cosmos as a whole, which means that the investigation of the physicality of human body should not be conducted without the consideration of its cosmological context. So, in short, this chapter aims to explore the mortal nature of human race from the physical perspective of the body. The investigation involves the human body's constitution, exploring how the mortal nature is bestowed to the human race, and its decomposition, explaining how the mortal nature manifests itself in a human being.

As to the manifestation of mortality, it is commonly known that the mortal nature is manifested as the death of a human being. And death, by definition (the definition according to *Timaeus*' description at 81b4-e5), is nothing other than the separation of the soul from the body. That is to say, to understand human mortality thoroughly also calls for the investigation of the soul's departure from the body, which in turn is grounded in the examination of the relationship between the soul and the body. Thus, before the matter of immortality, that is, the constitution of the soul, is covered in Chapter 3, in this chapter, I will confine my interpretation to matters relating only to the physical aspect of the process of death, and leave the discussion of how the

¹ In this chapter, I speak of the soul indistinctively (without any specific reference to either the immortal part of soul or the tripartite soul as a whole) only for the sake of explanatory purpose. The tripartite nature of the soul illustrated in *Timaeus*' cosmology shall be discussed in Chapter 3 and 4.

² Cf. *Tim.* 41b7-d3.

immortal soul interacts with the mortal body in the following chapter.

I shall start with a brief discussion regarding the necessity of having a detailed and lengthy account of mortality in Timaeus' narration, by comparing Plato's shifting attitudes towards the body of humans in the *Phaedo* and Timaeus' cosmology. I then approach the matter of mortality from two perspectives. Firstly, I shall examine the constitution of the human body, in terms of the nature of the materials out of which and the manner in which the human body was constructed as dissoluble. Since the materials used to construct the human body are the same as those of the cosmic body, that is, the four elemental solids, the investigation will turn to demonstrate the constitution of the elemental solids so as to show how, at the micro-level, mortality is bestowed to the human body at the very beginning. Secondly, I investigate the physical process of death so as to see how the embodiment and departure of the soul relates to the inevitable dissolubility of the human body and the subsequent death.

2.1 Mortality in the *Phaedo* and the *Timaeus*

In the *Phaedo*, apart from defining death as the body's coming to be separated by itself apart from the soul and the soul's coming to be separated by itself apart from the body (64c), Plato offers no further details about how such separation of the soul and the body happens and why it happens. For Socrates in the *Phaedo*,³ the body is rather a concern, for it might very likely bring contamination to the soul and is an obstacle for the soul in learning the truth.⁴ He encourages his audience to disdain the body and refrain from associating themselves with it, because the body is merely a disposable container for the soul. However, years, or perhaps decades later, in the *Timaeus*, Plato makes a very explicit explanation of the physical constitution of the body⁵ as well as what happens before the dying process finally reaches the point where the soul leaves the body (81b4-e5). Then, why does the problem of mortality suddenly become worth discussing in the *Timaeus*? The question, I suggest, can be answered from two perspectives, that is, firstly, from the perspective that concerns the cosmological context within which the description of the body

³ For discussion about the historical vs. Platonic Socrates, see Chapter 1, footnote 1.

⁴ Cf. *Phd.* 65b-67a.

⁵ Cf. *Tim.* 42e8-a4 and 44d3-45b2, a summary of the lesser gods' constructing the human body; 45b2-c2, the construction of the eyes; 70a7-72d3, the construction of some bodily organs that house the mortal parts of soul; 72e1-81e5, the construction of the rest of the body, such as the bowel, the marrow, bones, flesh, sinew, etc. and the process of respiration and metabolism, ageing and death.

and death is offered, and secondly, from the perspective that concerns the explanation of mortality in its own right. The *Phaedo*'s entire discussion emphasizes matters concerning the soul. Hence, it looks like the purpose of talking about death is only to introduce the key subject matter, i.e. the immortality of the soul and its reincarnation, along with the problem of the purity of the soul associated with it. In this case, matters concerning the body or death by themselves are irrelevant and thus Plato is in no need of analyzing them in their own right. In contrast, Timaeus' monologue is a discourse of cosmogony and cosmology and is thus composed of accounts concerning the coming to be of various entities, among which the creation of the human race is one of the indispensable parts. That is to say, it is rather reasonable that Timaeus includes at length in his demonstration the construction of the human body, along with its birth, growth, and decay, for the creation of the human race is necessary for the completed creation of the cosmos as a whole.⁶ Furthermore, as I have pointed out in Chapter 1, to develop comprehensive understanding of the human race, it calls for investigations not only of its immortal features but also of its mortal ones. This means a physical account of mortality is necessary for the overall *Timaeus*.

It is noticeable that Socrates' attitude of contempt towards the human body could appear to discourage interest in research on the body. And Timaeus also claims that the soul feels pleasure when it flies away from the body (81d7-e1). Socrates' attitude and Timaeus' assertion together prompt the following question: if the body is of least importance and it would be a better thing for the soul to be free from the connection to the body, why would the Demiurge, who wanted everything to be good and nothing to be bad if possible (30a2-3), have the soul embodied in the first place? Is it possible that this is an exemplification of the limitation of the Demiurge's creative power when he dealt with the pre-cosmic chaos? Or is it indicative of the possibility that the body is in fact of some use to the soul after all? But if it is, why was the human race created such that the soul would eventually fly away from the body and leave it to decompose? Those questions cannot be answered without the knowledge of the constitution of the body, the constitution of the soul (with reference to the elaboration in Chapter 3), and the connection and the disconnection between the soul and the body. In a word, in order to understand comprehensively for what reasons the Demiurge endowed the human race with mortality, it is necessary to

⁶ Cf. *Tim.* 41b7-c2.

develop a physical account of mortality.

Nevertheless, from the above argument, we can see that, although Timaeus does not claim that the body is as significant as the soul to a human being, it is at least reasonable to suggest that Plato has changed his view that the body is nothing but a hindrance to the soul. This means that the body might be of benefit to an embodied soul at some point, and might be able to communicate with the soul and thus provides either help or harm to the soul. In conclusion, Plato's shifting attitude towards the mortal nature of human race in the *Timaeus* might be indicative that he does not declare for the idea that there is an utterly unbridgeable gap between the body and soul, not at least in Timaeus' cosmological context.

2.2 The constitution of the human body

At the command of the Demiurge,⁷ the lesser gods took over the task of constructing the body of human beings. The materials they used to create the human body were borrowed from the cosmic body, that is, the elementary solids of fire, water, air, and earth, which the lesser gods intended to pay back at the very beginning.⁸ This means that the materials out of which the human body was constructed are the very same materials out of which the cosmic body was created. Consequently, the properties that are attributed to the cosmic materials can equally be ascribed to the materials of the human body. This being the case, it is reasonable to suggest that the physical principles operating behind the cosmic body are, to a certain degree, applicable to the human body. This suggestion finds supporting evidence in the fact that Timaeus employs the inter-transformation of the four kinds of elementary solids as the most basic explanatory principle not only to demonstrate various cosmic phenomena but also to account for the construction and functions of different bodily organs and parts, along with their respective physical processes.⁹ That the explanation of the elementary solids and their inter-transformation is applied consistently throughout Timaeus' cosmological account is understandable, for everything that possesses a physical body is integral to the cosmic body and

⁷ Cf. *Tim.* 41a-d.

⁸ Cf. *Tim.* 42e-43a.

⁹ Cf. *Tim.* 61e-63e, the perception of hot, cold, hard, soft, light, and heavy, along with the concept of down and up; 64a-65b, the nature of pleasure and pain; 77c-78e, veins and irrigation in body; 78e-79e, respiration; 80a-81e, metabolism, ageing, and death; 82a-86a, diseases.

thus is necessarily subject to, at the elemental level, the very same physical principles operating behind the cosmic body. For this reason, it is justifiable to suggest that to examine the materials of the human body is to examine the materials of cosmic body, that is, the four kinds of elementary solids.

According to Timaeus' demonstration at 53c-55c, the four kinds of elemental solids, i.e. fire, water, air, and earth, can be further separated into more basic constituent parts, that is, two kinds of triangles. This means, the triangles are the originating principles of the four kinds of elemental solids, and thus the ultimate constituent materials of the cosmic and human bodies alike. Considering the complexity of the issue of the elemental triangles and solids, I shall not offer a full and thorough discussion of the coming-into-being and nature of the elemental triangles and solids. But instead, I shall confine my investigation to matters that provide necessary background knowledge to the examination of the physical account of bodily mortality, that is, the destructibility, the materiality, and the structure of the triangles and four elemental solids. I will explain in the following discussion why I take those matters as most important and essential to the understanding of mortality.

Are the triangles destructible or not? This question naturally follows on the description at *Timaeus* 81d 'they themselves (the triangles) are easily divided by those entering from without',¹⁰ which seems to imply that the triangles can be further broken up and thus are destructible. If they are, this might seem to lead to an inconsistency in the account. This is because, Timaeus' account (53c-54b) is not specific whether or not triangles can be reborn or replenished. So the triangles were presumably perishable and there were no new-born triangles, then the sum of the triangles and solids would get smaller and smaller as the result of their being destroyed by other triangles and solids, and given a long enough period of time, all triangles would eventually perish. At last, without any triangles and solids left, the physical body of the cosmos would perish as well. This is however obviously inconsistent with the assumption, expressed at *Timaeus* 36e,¹¹ that the cosmos as a whole is imperishable. In that case, that the triangles are destructible disagrees with the fact that the cosmos is an everlasting creature unless of course the triangles are somehow to be reborn or replenished to compensate for earlier losses.

¹⁰ αὐτὰ δὲ ὑπὸ τῶν ἔξωθεν ἐπεισιόντων εὐπετῶς διαίρεται

¹¹ ... it initiated a divine beginning of unceasing, intelligent life for all time.

Another problem raised by the possibility that the triangles are destructible is to be found in the phrase ‘the originating principle (ἀρχήν) of fire and of the other bodies’ (53d), which I take to imply that the triangles are indestructible with reference to some similar usages of this word ἀρχή elsewhere in *Timaeus* and *Phaedrus*. At *Phaedrus* 245d, Socrates says that an ἀρχή is something that is without coming to be from anything else, it is thus necessarily indestructible, for otherwise the mortal things which come to be from it would eventually cease to come into existence. And in the *Timaeus*, when using ἀρχή in just this sense, Plato uses it to indicate indestructible entities, such as the model the cosmos comes to be after (28b), the God who created the cosmos (29e), the subjugation of Necessity to wise persuasion (48a), and so on.¹² Therefore, ‘the originating principle’ in 53d can be meant in the same way and implies that the triangles are indestructible, since there is nothing to show that ἀρχή in 53d is being used differently from the other cited context. But, is it possible that Plato could really be making the opposite implication in the *Timaeus*? Or is there any interpretation that might reconcile our reading of 53d and 81d?

R. J. Hankinson’s interpretation of ἀρχή in the *Phaedrus* will be useful here.¹³ Hankinson offers a solution to the problem that an ἀρχή itself may possibly come to be from another source. He suggests if we understand the ἀρχή as strictly speaking the ἀρχή of some property or some particular thing, then as long as the property or thing exists, this ἀρχή will be the ultimate cause for its existence, beyond which there is no other source. This definition satisfies the description in the *Phaedrus*. And, if, in the meantime, we see this ἀρχή not strictly but as something individual in itself, then the ἀρχή can indeed come to be from another source. Here is an analogy to help understand Hankinson’s suggestion. If we draw a straight line extending from a point on a coordinate map, this point then can be regarded as the ἀρχή of this line because it defines the starting point for this line, and as long as we have this line, this point will always be the start for it and will not vanish. And as to the point itself, it comes to be from our random choice of position on the coordinate map.

¹² *Tim.* 48b, the four elemental solids in the sense that they’ve been mistaken to be the ἀρχή; 48c, origin or ultimate source of all things. The Greek word ἀρχή appears in the *Timaeus* 28 times, including 28b (3 times), 29e, 48a, 48b (4 times), 48c (twice), and 53d (twice). And at 42e and 79c, ἀρχή indicates the soul particularly, while at 17b, 20a, 21d, 24b, 24b, 36e, 44a, 48d (3 times), 48e, 55e, 57d, 69a, 69b, 73b, 73c, 79c, 80b, 89c, 90e, it simply means the beginning.

¹³ Cf. Hankinson (1988) 98-101.

Thus, when Plato presumes the triangles to be the ἀρχή of elemental solids, I think he probably means that the triangles are indestructible only in a limited sense, that is, as long as a solid exists, its triangles are indestructible. In other words, if we imagine the triangles, in the strict sense, as the ἀρχή of the elemental solids, as long as the elemental solids exist, the triangles will be the ultimate source for their existence, beyond which there is no other source. In this case, the triangles are indestructible, and we can only analyze a solid into triangles, regardless of the possibility that there might be some more ultimate component (*Tim.* 53d). But in the meantime, if we look at the triangles from the perspective of their own individual existence rather than as the originating principle of elemental solids, it will do no harm to the prior interpretation if we admit that the triangles themselves are created and can possibly be destroyed. In this way, we eliminate the problem of potential inconsistency in the *Timaeus*, that is, it is not contradictory to think of the triangles as the ἀρχή of the elemental solids and as to be destructible at the same time. That the triangles are indestructible only in a limited sense, i.e. in terms of being the ἀρχή of elemental solids, is not a strong claim in that we are still confronted with the matter that the triangles, being seen on their own, are indeed perishable. This entails that the cosmos would maintain eternal existence if only the triangles could be reborn or replenished. I will deal with that matter by examining the materiality of the triangles with regard to how the triangles came to be in the first place.

The reason why I think the triangles' materiality worth discussing is because, as I have argued above, the triangles are the basic components of the human body, hence it is the triangles' materiality that determines the materiality of the human body. Since, the investigation of humans' mortality relies on the study of the physicality of human body, it is then also reasonable to say that the understanding of the physical aspect of humans' mortal nature is grounded in that of the triangles' materiality. Furthermore, the materiality of the triangles determines the materiality of the marrow, which is the medium that binds the soul to the body (73b-c). Our understanding of the triangles' materiality will therefore affect the future discussion of how the soul is bound to the marrow, whose nature, particularly as it impacts on the problem of the body' decomposition, is to be understood in the light of how we understand the triangles' materiality.

Many interpretations can be sustained in the debate about the materiality of the triangles

and thus it has been examined from various perspectives.¹⁴ It will become a digression if I try to cover all the perspectives existing literature has demonstrated. But from the point of view of my overall argument, it is necessary to state my position on this issue to the extent that such a statement can at least help to solve the two problems raised at the end of the discussion of the triangles' destructibility, and provides a coherent background to the understanding of the triangles' nature, and how they fit into our discussion of human mortality. Furthermore, as the triangles are also the materials of the cosmic body, a discussion of the materiality of the triangles will prepare us for an investigation into the relationship between human beings and the cosmos and the teleology operating behind the human race's being created as both mortal and immortal.

In the context of the *Timaeus*, what does it mean to say that something is material? Before exploring the answer to that question, a more fundamental problem needs to be dealt with, that is, is it even appropriate to employ the concept of materiality in interpreting Timaeus' cosmology? For, Timaeus' discourse does not involve the concept of materiality by itself. Instead, Plato merely claims that the four elemental solids have bodily form (*Tim.*53c), and that the cosmos as a whole is visible and tangible and has a body, in other words, perceptible (*Tim.* 28b-c). And he attributes those features to things that come to be so as to distinguish them from those which always are. 'Materiality', I think, is merely a term interpreters employ to denote those features, so when we employ this term in the discussion related to the *Timaeus* we should refer to it as cautiously in a restricted sense as the cosmological context allows. Furthermore, it is worth emphasizing that it is not the same to say that the elemental solids are material and that a human body is material. As we can see, at 61e-63e and 65c-68d, Plato elucidates the principle of sense perception using the explanation of triangles and solids. From his exposition we can learn that sensation is the result of the movement of interaction of elemental solids. This means that a single solid does not possess either the nature of being perceptible or the capacity of perceiving on the one hand and it is the movement of many triangles and solids that enables the act of sense perception and the attribute of being perceptible on the other.¹⁵ This being the case, we can conclude that when we say that elemental solids, the human body, and the cosmos as a whole are all material things it means that they all possess bodily forms. And the nature of being perceptible can be seen as the

¹⁴ For various interpretations of what the triangles are since Antiquity, see Miller (2003) 173-179.

¹⁵ For an elaborate argument on the mechanical principles of perceiving and being perceptible, see Chapter 4, 4.1 Πάθημα and αἴσθησις.

movements of elemental solids on a micro level manifesting themselves in human and cosmic body on a macro level. Then, bearing in mind that the components of human body and cosmic body arise in the same source, that anything that is made out of the same source as the human body can interact with the body, and thus can be counted as visible, tangible, and has a body, in other words, perceptible.

So far, I have argued that the elemental solids being material means they have bodily forms, and human body is also material since it is composed of elemental solids. And due to the movement of the interaction of elemental solids, human body then possesses sense perception, and thus the nature of being visible, tangible, and perceptible embodies the materiality of the elemental solids on a macro level. Now that we have defined materiality in *Timaeus*' cosmological context, it seems to be inappropriate to say that the triangles are material in that sense, since Plato does not mention whether or not the triangles themselves possess bodily form (53c). This being the case, we are confronted with a question: is it possible for *Timaeus* that the basis, i.e. the triangles, of material existence, i.e. the four elemental solids, humans, etc. is not themselves exactly material? In other words, is it possible that, in the *Timaeus*, Plato is trying to blur the boundary line between material and non-material existence by constructing elemental solids that has depth out of the triangles? For Plato does not confirm that the triangles constituting the elemental solids are two-dimensional existence but he use the word 'surface' (βάσις, 53c) to refer to them. Thus it is open to discussion whether the triangles have depth, just as those elemental solids the former constitute.

According to *Timaeus*, the Demiurge gave the Receptacle distinctive shapes, using forms and numbers to create the triangles and solids (53b).¹⁶ This seems to imply that the Receptacle is the substratum of the triangles and solids. From the description at 52c, we can learn how the Receptacle received the shapes, and thus understand the relationship between the Receptacle and the triangles and solids:

Since an image does not have as its own that which it has come to signify (an image is invariably borne along to depict something else), it stands to reason that the image should

¹⁶ I do realize that the description of 52d-53a, according to which the Receptacle has become watery and fiery and received the character of earth and air and thus been agitating itself may provoke disagreement on the understanding of what the nature of the Receptacle is when it receives the distinctive shapes given by the God. However, whatever its nature, it is still out of the Receptacle that the God created the triangles and the solids.

therefore come to be in something else, somehow clinging to being, or else be nothing at all.¹⁷

Plato himself employs the gold-moulding analogy (*Tim.* 50a-b) to help his reader to understand how it works to create a triangle out of the Receptacle.¹⁸ A triangular shape modeled (μεταπλάττων) cannot truly be a geometrical figure, just as there is no such thing as a perfect geometrical circle in the world. If, however, the gold did not exist as a substrate for the triangular image to imprint on, the modeled triangular shape in gold could not have come to be. In this way, the triangular shape requires a substance in order to fulfill its coming-into-being. I agree with most of Miller's interpretation of the relation between the triangles and the Receptacle, that is, the Receptacle is both that out of which, and in which, the triangles come to be.¹⁹ To be more precise, when the Demiurge used forms and numbers to shape the Receptacle, the Receptacle turns out to have proportion and measure in itself, which manifests as distinct shapes like triangles and solids, but also be at the same time intrinsically itself, the Receptacle.²⁰ Hence, the Receptacle is that out of which the triangles come to be, or the triangles are generated 'in' the Receptacle. And the Receptacle also provides a fixed site (52b) for triangles and solids that come to be since the Receptacle receives the impressions of triangle and solids by its being shaped.²¹

However, I disagree with Miller's view that the triangles are three-dimensional existence,²² simply because such view is contradictory to Timaeus' claim that bodily form has depth, depth must have surface, and surface is bounded by triangles (53c). That is, admitting the triangles have depth equates with saying that the triangles (the most elementary ones, not those composed by the former) consist of triangles, which is, firstly, in opposition to the claim that the triangles are the ἀρχή; and secondly, in danger of endless regression in analyzing the coming-to-be of the triangles.

My point of view is that, first of all, the triangles Timaeus talks about are *not* geometrical figures; rather, they are the impression of form on the Receptacle. For instance, whenever the

¹⁷ ὡς εἰκόνι μὲν, ἐπεὶπερ οὐδ' αὐτὸ τοῦτο ἐφ' ᾧ γέγονεν ἑαυτῆς ἐστίν, ἑτέρου δὲ τινος ἀεὶ φέρεται φάντασμα, διὰ ταῦτα ἐν ἑτέρῳ προσήκει τινὶ γίνεσθαι, οὐσίας ἀμωσγέπως ἀντεχομένην, ἢ μηδὲν τὸ παράπαν αὐτὴν εἶναι.

¹⁸ For a reading of the gold analogy, see Mohr (1978).

¹⁹ Cf. Miller (2003) 186-195.

²⁰ For more discussion on the nature of the Receptacle, see Chapter 3, 3.1 The construction of cosmic souls.

²¹ For a brief introduction of the Receptacle and space, see Zeyl (2000) lxi-lxiv; for the discussion of it, see Archer-Hind (1888) 182-187; for an introduction of various interpretations of Receptacle and space among ancient and modern scholarship, see Miller (2003) 19-36. For an extensive account of Receptacle, see Miller (2003).

²² Cf. Miller (2003) 178-185.

Receptacle receives an image, e.g. that of one of the elementary triangles, a certain part of the Receptacle has been occupied by this image and has thus become a relative fixed or determined part with respect to other parts. And it is situated next to other five images of the same triangle so as to constitute an image of an equilateral triangle, and this equilateral triangle image neighbours other three same images so as to constitute an image of a solid of fire. This is how the Receptacle receives the images of forms of triangles and solids, and then the impression of those images is the generation of triangles and solids in the corporeal realm. In the fire solid case, we can indeed say that this fire solid enjoys bodily form and has depth because the impression of the image of the fire solid occupies a three-dimensional site. But we cannot simply claim that the triangles are two-dimensional existence because they also occupy space of the Receptacle, and on the other hand, neither can we simply claim that the triangles are three-dimensional existence, for that is in opposition to Plato's own demonstration of the constitution of the triangles and solids. So, by saying that the triangles are the impression of forms out of the Receptacle, Plato blurs the boundary between two-dimensional and three-dimensional existence. That is, on the one hand, the triangles are neither geometrical figures nor three-dimensional existence in the strict sense, while on the other hand, the triangles are the embodiment of geometrical triangles in the Receptacle and can be seen as the surface of elemental solids and also occupy space within the Receptacle.

As to whether the triangles are able to be reborn or replenished, according to *Timaeus* 50c, the image of form enters and leaves the Receptacle, making the impression of it appear different at different times. This seems to imply that the generation of the triangles does not happen once only, at the time when the Demiurge's first creation of the triangles (53d) took place; instead, such impressions on the Receptacle continuously occur. If this is so, even though some triangles will, after a while, cease to be, more will generate by impression, and so the cosmos will not perish.

One thing worth emphasizing is that we can see Plato's intention of collapsing the gap between the Forms and the corporeal realm by introducing the conception of the Receptacle. With the interference from the Demiurge, the Receptacle is able to receive images of the Forms and thus the impression of those images appears as things that come to be. However, Plato's language is rather obscure when it comes to the description of the Receptacle. This is because, I

think, the conception of the Receptacle is very difficult to grasp in its own right,²³ and also how the Demiurge enabled the impression of images of the Forms out of the Receptacle, is beyond human reason,²⁴ as we can find no trace in passages relating to the Receptacle.

I have so far argued that although the triangles, taken individually, are destructible, they as a whole will never run out as a source for what comes to be. This is because of their relationship with the Receptacle. As for the structure of the elemental solids, I will attempt a detailed description, taking the solids of fire as my example, in the following section.

2.3 The physical process of death

It is worth looking at the *Timaeus*' description of death (81b-e):

In every case, whenever there is more leaving a body than flowing in [to replenish it], it diminishes; whenever less, the body grows. So while a living thing's constitution is still young, and its elemental triangles are 'fresh from the slips,' as it were, the triangles are firmly locked together, even though the frame of its entire mass is pliable, seeing that it has just lately been formed from marrow and nourished with milk. Now when the triangles that constitute the young living thing's food and drink enter its body from the outside and are enveloped within it, the body's own new triangles cut and prevail over these others, which are older and weaker than they are. The living thing is thus nourished by an abundance of like parts, and so made to grow big. But when the roots formed by the triangles²⁵ are slackened as a result of numerous conflicts they have waged against numerous adversaries over a long period of time, they are no longer able to cut up the entering food-triangles into conformity with themselves. They are themselves handily destroyed by the invaders from outside. Every living thing, then, goes into decline when it loses this battle, and it suffers what we call 'old age.' Eventually the interlocking bonds of the triangles around the marrow can no longer hold on, and come apart under stress, and when this happens they let the bonds of the soul go. The soul is then released in a natural way, and finds it pleasant to take its flight.²⁶

²³ Cf. *Tim.* 48b-53b. For discussion of why it is so difficult to grasp the conception of the Receptacle, cf. Miller (2003) p.213-220.

²⁴ Cf. *Tim.* 53d. *Principles yet more ultimate than these are known only to the god, and to any man he may hold dear.*

²⁵ I follow Taylor's translation here and will explain why I choose his version in the following discussion.

²⁶ Translation is from Zeyl (2000) with slight modification. Greek: ὅταν μὲν δὴ πλέον τοῦ ἐπιρρέοντος ἀπίη, φθίνει πᾶν, ὅταν ἔλαττον, αὐξάνεται. νέα μὲν οὖν ξύστασις τοῦ παντός ζώου, καινὰ τὰ τρίγωνα οἷον ἐκ δρυόχων ἔτι ἔχουσα τῶν γενῶν, ἰσχυρὰν μὲν τὴν ξύγκλεισιν αὐτῶν πρὸς ἄλληλα κέκτηται, συμπέπηγε δὲ ὁ πᾶς ὄγκος αὐτῆς ἀπαλός ἅτ' ἐκ μυελοῦ μὲν νεωστὶ γεγονυίας, τεθραμμένης δὲ ἐν γάλακτι. τὰ δὴ περιλαμβανόμενα ἐν αὐτῇ τρίγωνα ἔξωθεν ἐπεισελθόντα, ἐξ ὧν ἂν ἦ τὰ τε σιτία καὶ ποτά, τῶν ἐαυτῆς τριγώνων παλαιότερα ὄντα καὶ ἀσθενέστερα καινοῖς ἐπικρατεῖ τέμνουσα, καὶ μέγα ἀπεργάζεται τὸ ζῶον τρέφουσα ἐκ πολλῶν ὁμοίων. ὅταν δ' ἡ ρίζα τῶν τριγώνων χαλᾷ διὰ τὸ πολλοὺς ἀγῶνας ἐν πολλῷ χρόνῳ πρὸς πολλὰ ἡγωνίσθαι, τὰ μὲν τῆς τροφῆς εἰσιόντα οὐκέτι δύναται τέμνειν εἰς ὁμοίότητα ἑαυτοῖς, αὐτὰ δὲ ὑπὸ τῶν ἔξωθεν ἐπεισιόντων εὐπετῶς διαιρεῖται. φθίνει δὴ πᾶν ζῶον ἐν τούτῳ κρατούμενον, γῆρας τε ὀνομάζεται τὸ πάθος. τέλος δέ, ἐπειδὴ τῶν περὶ τὸν μυελὸν τριγώνων οἱ ξυναρμοσθέντες μηκέτι ἀντέχουσι δεσμοὶ τῶν πόνῳ διωστάμενοι, μεθίσσι τοὺς τῆς ψυχῆς αὐτοῦ δεσμούς, ἡ δὲ λυθεῖσα κατὰ φύσιν μεθ' ἡδονῆς ἐξέπτατο.

The quoted passage tells us that death of a human body is the result of the bodily triangles being cut and prevailed by external triangles. And the dying process starts with the 'ἡ ῥίζα τῶν τριγῶνων χαλᾷ' (root formed by the triangles being slackened). The phrase, 'ἡ ῥίζα τῶν τριγῶνων,' Plato uses here is rather odd, for, in previous sections, including where the introduction of the solids' construction and interaction is described, and where Plato applies the explanation of triangles and solids to explain natural phenomena, there is no mention at all of such a thing as 'the root formed by the triangles'. The interpretation of the phrase 'ἡ ῥίζα τῶν τριγῶνων' is important, because, it answers the question whether Plato introduces new features of the triangles by employing those terms. If the answer appears to be affirmative, we need to explore what new features of the triangles 'ἡ ῥίζα τῶν τριγῶνων' implies, and moreover, how those features reflect on the mortal nature of human race. If the employment of the phrase 'ἡ ῥίζα τῶν τριγῶνων' is merely a matter of wording, we then need to examine what features of the triangles those words describe that are known to us according to Timaeus' earlier account of the constitution of triangles and solids (53c-56c), and how those features relates to the decomposition of human body.

There are two kinds of interpretation regarding the phrase 'ἡ ῥίζα τῶν τριγῶνων χαλᾷ'. One is that, some scholars treat the phrase 'ἡ ῥίζα τῶν τριγῶνων χαλᾷ' as a metaphorical expression. For instance, Cornford argues that the metaphor is taken from a tree's roots.²⁷ Pender thinks that the word 'ἡ ῥίζα' in 81c and 84a-b are used in exactly the same way, that is, 'the root of triangles' is like 'gums for teeth.'²⁸ I disagree with metaphorical reading and will argue later that how it will bring about inconsistency in our understanding of the relationship between the triangles and the Receptacle. Another kind of interpretation is geometrical. For example, Archer-Hind conceives ῥίζα to be the fundamental structure of the triangles, that is, their sides and angles.²⁹ Taylor, also using 84a-b as reference, suggests that the root of triangles refers to the sides, the edges of various solids. My interpretation is also a geometrical reading, but I disagree with both Archer-Hind's and Taylor's view on what ῥίζα means. I reach the conclusion that 'ἡ ῥίζα τῶν τριγῶνων χαλᾷ' means 'the base or foundation formed by the triangles loosens or is slackened by, firstly, considering what the word 'ῥίζα' means in ancient texts and how Plato

²⁷ Cf. Cornford (1937) p. 329, note 2.

²⁸ Cf. Pender (2000) p.167.

²⁹ Cf. Archer-Hind (1888) p.306, note 8.

uses it the *Timaeus*, and then testing different meanings of ῥίζα in the context of *Timaeus* to see if any of them would make sense and lead to a plausible interpretation.

LSJ list several meanings for the Greek word ῥίζα³⁰: 1. ‘the root of plants’; 2. ‘the root of something, like eyes, feathers, hair, teeth, etc.’; 3. ‘from or out of the root’, used with preposition ἐκ; 4. ‘that from which anything springs as from a root’; 5. ‘base, foundation’; 6. ‘mathematically used to refer to root or base of a series’. The word ‘ῥίζα’ appears twice in the *Timaeus* other than at 81c, that is, 84b (αὶ δ’ ἐκ τῶν ῥιζῶν ξυνεκρίπτουσαι, ‘and the flesh falling out of their roots’) and 90b (τὸ θεῖον τὴν κεφαλὴν καὶ ῥίζαν ἡμῶν ἀνακρεμαννὺν ὀρθοῖ πᾶν τὸ σῶμα, ‘the divine part suspends our head, like the root, and so keeps our whole body erect’). As to the ‘root’ at 90b, Plato uses it to indicate the relation between human soul and the heaven. He describes how the mortal human race was linked to the heaven: the first born was our soul (ἡ πρώτη τῆς ψυχῆς), which was then placed in our head, and just as a tree is connected to the earth by its root, we are linked towards the heaven by our soul,³¹ only in the contrary direction, and this is how the god made the human race erect.

It is obvious that ‘root’ in the phrase ‘ἡ ῥίζα τῶν τριγῶνων’ cannot mean 1. ‘the root of plants’, or 3. ‘from or out of the root’, used with preposition ἐκ, or 6. ‘mathematically used to refer to root or base of a series’. The ‘root’ that appears at 84b and 90a corresponds to metaphorical meaning 2 and 4. I now proceed to test them with regard to *Timaeus*’ account of triangles.

At *Timaeus* 84b, Plato uses ‘root’ to describe the fresh attachment to the bones. It is obvious that both Pender and Taylor think that 84b applies meaning 2, the root of something, only that they differ in what the root indicates. Considering this meaning can also be used to describe things such as feather,³² we can say that the metaphorical meaning 2 of ‘root’ applies to those physical entities whose bodies are partially rooted in something else, like a feather in skin, hair in skin, and teeth in the gums, with the rest growing independently upon separation from this something, just like a plant and its root.³³ Then ἡ ῥίζα τῶν τριγῶνων χαλᾷ, ‘the root of the

³⁰ Cf. *A Greek-English Lexicon*, 1570. I am aware that the meanings of ῥίζα listed by the LSJ might not be able to cover the philosophical nuance of Plato’s thoughts. However, I think the subtleness of a word is due to its context rather than its own. Therefore, I will choose a suitable meaning first and then examine its respective preciseness with the help of the context in which it lies.

³¹ Cf. Johansen’s translation: from there our divine part attaches us by the head to heaven, like a plant by its roots, and keep our body upright.

³² Cf. *Phaedrus* 251b, ῥιζῶν τε καὶ ὄρησε φύεσθαι ἀπὸ τῆς ῥιζῆς ὁ τοῦ πτεροῦ καυλὸς ὑπὸ πᾶν τὸ τῆς ψυχῆς εἶδος, the feather shafts swell and rush to grow from their roots beneath all forms of the soul.

³³ One might speculate we don’t have to strictly follow the manner in which 84b uses the word

triangles', can be interpreted as the triangles' being partially rooted in something, just as when the roots of a tooth are not securely rooted in the gums. This interpretation is problematic because it implies another existence, that is, the entity in which the triangles are partially rooted. If we think of 'the root of the triangles' as the triangles' attachment to the elemental solids, it is contradictory to the fact that elemental solids consist of the triangles and thus that the triangles are components of the solids. For, like earth to a plant, skin to feather or hair, or gum to teeth, the thing in which the triangles are rooted should be something that is utterly different from the triangles. And now we try to read 'the root of the triangles' to mean the relation in which the triangles stand to the Receptacle. But according to my previous discussion of the relationship between the triangles and the Receptacle, the Receptacle is that both out of which the triangles come to be and in which the triangles come to be. Then, insofar as the Receptacle is that out of which the triangles come to be, it is identical with the triangles. And insofar as the Receptacle is that in which the triangles come to be, the triangles are completely within the Receptacle. The fact that the Receptacle is the triangles themselves contradicts the criterion that this something the triangles are rooted in should be utterly different from them, and, the fact that the triangles are completely within the Receptacle contradicts the requirement that the triangles should be partially rooted in this something and partially not. In short, 'the root of the triangles' cannot describe the relationship between the triangles and the Receptacle. Since Plato is very clear about that the triangles are the most basic and sufficient principle in his account (53d), it seems very unlikely that he would allow any implication that there were something, other than the elemental solids or the Receptacle, in which the triangles could be rooted, which would bring unnecessary confusion to his account. Therefore, I think the metaphorical usage of ῥιζα³⁴ is inappropriate to this particular context, and that is why I say Pender's interpretation of 'root' is problematic at the beginning of this section, for, she argues that the 'root of triangles' indicates that which links the triangles together,³⁵ however 'Timaeus' account does not afford further complexity by allowing any third kind between the triangles and the Receptacle (the Forms will

metaphorically. But, in my opinion, since the *Timaeus* has offered an example of how Plato uses this word metaphorically and no other evidence supports any alternative possibility, it would be better to interpret in this way.

³⁴ Cornford's interpretation takes the view that Plato employed a metaphorical usage of 'root' taking from the loosening of a tree's roots. Cf. Cornford (1937) 329, note 2.

³⁵ Cf. Pender (2000) 167.

never actively interact with the Receptacle).

Entry 4, 'that from which anything springs as from a root' is likely to be applied to abstract ideas, that is, this 'anything' that springs from the 'ρίζα', like a plant from a root, tends to indicate abstract objects, such as a certain virtue (Plutarch) and a family tree (Aristotle).³⁶ *Timaeus* 90b is an example of how Plato uses the abstract meaning of 'ρίζα'. However, as I have said in earlier discussion the triangles are not merely abstract ideas or mathematical figures. Furthermore, if ρίζα is used in this sense, that is, if the triangles might originally have sprung from some sort of root, it seems to imply that there exists some sort of more ultimate principle than the triangles. Therefore, the ρίζα in ἡ ρίζα τῶν τριγῶνων cannot carry the meaning of that from which anything springs as from a root.

With all the other entries being ruled out, ρίζα as base or foundation becomes the last possible reading. Other examples³⁷ of this usage, such as Proclus, *Hypotyposis astronomicarum positionum* 3.23,³⁸ and Onasander, *Strategicus* 10.6,³⁹ suggest that the word can be used to indicate the base or foundation of something concrete, such as sundial (Proclus) or a hill (Onasander). If we apply this meaning to the phrase, it will turn out to be 'the base or the foundation of the triangles is slackened'. In this case, there is no need for the base or foundation of the thing in question to be separate from the thing itself, for the base or foundation is considered to be a part of the thing of which it is a base or foundation, as show the above examples. As I have mentioned above, in the metaphorical reading, scholars are likely to translate the phrase 'ἡ ρίζα τῶν τριγῶνων' as 'the root of the triangles'. I follow Taylor's suggestion to take τῶν τριγῶνων as a defining genitive,⁴⁰ 'ἡ ρίζα formed by the triangles',⁴¹ for it avoids the implication that the 'root' of triangles indicates something independent of the triangles.⁴² Then,

³⁶ Cf. Plutarch, *De Liberis Educandis*, section 7, πηγὴ γὰρ καὶ ρίζα καλοκαγαθίας τὸ νομίμου τυχεῖν παιδείας; And Aristotle, *Nicomachean Ethics*, 1161b, ... ἡ γὰρ πρὸς ἐκεῖνα ταυτότης ἀλλήλοις ταυτὸ ποιεῖ; ὅθεν φασὶ ταυτὸν αἶμα καὶ ρίζαν καὶ τὰ τοιαῦτα. I am aware that Plutarch might not be a good example here, since he might have been influenced by Plato's style, not the other way round, and the difference of several hundred years might also matter. Nevertheless I cite the passage here for the purpose of reference.

³⁷ These examples are much later than the *Timaeus*. I realize this may lower their value as supportive evidence. But considering that these examples dated much closer than us to the *Timaeus*' date and they were using still basically the same language, they at least prove that ρίζα can be used in this way in ancient Greek.

³⁸ Ἡ δὲ μεσημβρινὴ γραμμὴ λαμβάνεται γνώμονος ὀρθοῦ στάντος ἐπὶ τῆς πλακὸς ταύτης καὶ κύκλου γραφέντος περὶ τὴν ρίζαν τοῦ γνώμονος ὡς περὶ κέντρον καὶ τηρησάντων ἡμῶν,

³⁹καὶ περὶ αὐτὰς τὰς ρίζας τῶν λόφων, εφ' ὅσον δυνατὸν ἐστὶ καὶ τραχέων ἐπιψαύειν.

⁴⁰ Cf. Taylor (1928) 585.

⁴¹ For another interpretation of 'root' cf. Martin (1841) 217.

⁴² I have not mentioned the translation issue in the previous discussion because both entries have already implied something independent of the triangles by their own right.

we can translate the phrase ‘ἡ ρίζα τῶν τριγῶνων’ as ‘the base or foundation formed by the triangles’. And it is reasonable to suggest this base or foundation refers to the elemental solids’ plane surface that is composed by the triangles, for, according to *Timaeus* 53c, ἡ δὲ ὀρθὴ τῆς ἐπιπέδου βάσεως ἐκ τριγῶνων συνέστηκε, the plane base (or foundation) is composed of triangles. Plato here speaks of the facets of the elemental solids as a βάσις, a word which appears eight times in the contexts where he talks about the triangles and the solids, including the one quoted above: 53c, 55b (εἴκοσι βάσεις ἔχον ἰσοπλευροῦς τριγῶνους γέγονεν), 55c (ἕξ ἐπιπέδους τετραγῶνους ἰσοπλευροῦς βάσεις ἔχον), 55e (μάλιστα δὲ ἀνάγκη γεγόναι τοιοῦτον τὸ τὰς βάσεις ἀσφαλεστάτας ἔχον· βάσις δὲ ἢ τε τῶν κατ’ ἀρχὰς τριγῶνων ὑποτεθέντων ἀσφαλεστέρα), 56a (τὸ μὲν ἔχον ὀλιγίστας βάσεις εὐκίνητότατον ἀνάγκη πεφυκέναι), 59d (μαλακόν τε αὖ τῷ τὰς βάσεις ἦττον ἐδραίους οὔσας ἢ τὰς γῆς ὑπείκειν), and 62c (τετραγῶνων ὃν βάσεων, ἅτε βεβηκὸς σφῶδρα). Now we have learned that the elemental solids’ facets, composed of the triangles, is also called base or foundation in *Timaeus*’ account, it seems to be plausible to take ρίζα analogously, as another word for ‘base’ or ‘foundation’, and τῶν τριγῶνων as a defining genitive interpreting the phrase as ‘the base or the foundation formed by the triangles slackened’, that is, the facets of the solids are slackened. Then, what does this mean?

To understand this process by which the base or the foundation formed by the triangles ‘slackens’ or ‘is slackened’, I suggest we should first investigate how it is formed. Let us take the construction of the solids of fire as an example:

Leading the way will be the primary form, the tiniest structure, whose elementary triangle is the one whose hypotenuse is twice the length of its shorter side. Now when a pair of such triangles are juxtaposed along the diagonal [i.e., their hypotenuses] and this is done three times, and their diagonals and short sides converge upon a single point as center, the result is a single equilateral triangle, composed of six such triangles. When four of these equilateral triangles are combined, a single solid angle is produced at the junction of three plane angles. This, it turns out, is the angle that comes right after the most obtuse of the plane angles. And once four such solid angles have been completed, we get the primary solids form, which is one that divides the entire circumference [sc. of the sphere in which it is inscribed] into equal and similar parts. (54d-55a)⁴³

When six triangles bond firmly together in a particular way they compose a facet, an

⁴³ ἄρξει δὴ τὸ τε πρῶτον εἶδος καὶ σμικρότατον συνιστάμενον, στοιχεῖον δ’ αὐτοῦ τὸ τὴν ὑποτείνουσαν τῆς ἐλάττονος πλευρᾶς διπλασίαν ἔχον μήκει· σύνδυο δὲ τοιούτων κατὰ διάμετρον συντιθεμένων καὶ τρις τούτου γενομένου, τὰς διαμέτρους καὶ τὰς βραχεῖας πλευρᾶς εἰς ταῦτόν ὡς κέντρον ἐρεισάντων, ἐν ἰσόπλευρον τρίγωνον ἕξ ἕξ τὸν ἀριθμὸν ὄντων γέγονεν. τρίγωνα δὲ ἰσόπλευρα συνιστάμενα τέτταρα κατὰ σύντριες ἐπιπέδους γωνίας μίαν στερεὰν γωνίαν ποιεῖ, τῆς ἀμβλυτάτης τῶν ἐπιπέδων γωνιῶν ἐφεξῆς γεγονυῖαν· τοιούτων δὲ ἀποτελεσθειῶν τεττάρων πρῶτον εἶδος στερεόν, ὅλου περιφεροῦς διανεμητικὸν εἰς ἴσα μέρη καὶ ὅμοια, συνίσταται.

equilateral triangle, and four of such facets combine tightly together to form a solid of fire, shaping it like a pyramid. A newly formed solid thus has edges and points of true sharpness because of its good structure, and it will be very easy for this solid to overcome and cut other ones with inferior sharpness or with lesser bulk. However, due to a long period of time's wear and tear, the bond among the triangles is no longer as firm as it used to be, that is, the diagonals or short sides of the triangles no longer juxtapose one another, and the sixty-degree angles of the triangles no longer converge upon one single point as center, and the facets therefore no longer form equilateral triangles; we have arrived, I think, at the scenario that χαλᾶ (is slackened) describes. Since the facets are now not in the condition they used to be in, the combination of them will be consequently not be as good either, and the sharpness of the edges and points less good. In this way, this solid is then more easily decomposed.

On the basis of this interpretation, the process of growth and decay of the human body is as follows:

When first born and when the living creature is still young, the entire bodily formation, the facets of the triangles and the solids of the facets, is as new and good as possible, compared to which those of food and drink coming from outside appear to be old and weak. Thus it is very easy for the bodily triangles to overcome and dissolve the external ones, and absorb those decomposed parts into their own sorts. This is when the bodily triangles prevail in the battle (ἀγῶνας) against the external ones. In this way, the body grows. However, this situation will change. When having cut and prevailed over a long period of time, the triangles are no longer able to hold together as firmly as they used to, and the consequence is that the facets they form are not in the same condition as they used to be, no longer forming perfect equilateral triangles or squares (if it is a solid of earth). And further, the entire formation of the solids is damaged. In this way, the bodily solids are gradually decomposed by the external ones. And the decomposition does not just happen in one place in the body, rather it will spread to the entire body, and this change will manifest itself as ageing. Finally it happens to the marrow, where the soul is bound to the body. Once marrow, the medium that binds the soul to the body, is decomposed, the bonds (δεσμοί) between the soul and the body will definitely be undermined. When the soul is not bound to the body, it will leave, that is, the separation of the soul from the body occurs, and this is how death occurs.

Conclusion

In this chapter, I have studied the mortal nature of the human race by examining the constitution of human body. The body of the human race consists of, on the elementary level, triangles. Thus the nature of the triangles determines the mortality of human body, and furthermore, a whole human being. The coming-to-be of the triangles themselves are impressions of the images of the Forms out of the Receptacle. Thus, the triangles are indestructible in terms of being as the originating principle of elemental solids and thus of all things coming to be, whilst it is also true that the triangles keep being reborn and perishing all the time out of and in the Receptacle. With regard to the relation between the triangles and the Receptacle, I have also argued that the triangles can be seen as possessing both physical and non-physical nature, that is, being the basis of material existence while not themselves exactly material. It follows that in the *Timaeus* Plato might be seeking to bridge the gap between the Forms and the corporeal realm⁴⁴ by blurring the boundary between material and non-material existence. This expands the scope of the overall aim of the thesis in that not only does Plato try to bridge the gap between the mortal body and immortal soul of the human race, but also, from merely the perspective of mortality, he is attempting to lessen the difference between corporeal and incorporeal, at least on the elementary level.

I have also given detailed discussion on how the binding and disconnection of triangles actually work. The binding and disconnection process offers explanation for the grow, ageing, and death of a human being from a physical perspective, which, together with the discussion of the constitution of immortal soul in the following chapter, will yield insights into how the human body and soul are bound together, interact with each other, and are disconnected from one another on the elementary level.

⁴⁴ This is not a strong claim because we are given a very strong statement regarding the separation of *that which always is and has no becoming* and *that which becomes but never is* (*Tim.* 27d6-28a6) at the beginning of *Timaeus*' account. This distinction will be examined in Chapter 3, 3.1 The construction of cosmic soul.

Chapter 3 The immortal soul

Introduction

In Chapter 2, I have investigated the mortal nature of the human race in terms of the triangles' coming into being. One of the central claims of Chapter 2 is that the triangles are the impression of the images of Forms in the Receptacle. Thus, the Forms and Receptacle are integral components in constituting the body of the human race. In this and the next chapter, I want to look at the immortal nature of the human race with regard to the constitution of the human soul. The human soul introduced in the *Timaeus* is tripartite as consisting of the immortal part, the spirited part, and the appetitive part.¹ The immortal soul represents the immortal nature of the human race, while the other two mortal parts come into being out of the disturbance that occurs during embodiment of immortal soul and function as intermediaries that allow the communication between the immortal and mortal nature of a human being. Then, in this chapter, the discussion will focus on the constitution of the immortal soul, which, together with the discussion of the mortal nature of human body in Chapter 2, will support the explanation of how the interactions between the immortal and mortal souls as well as between the tripartite soul and the physical body take place in Chapter 4.

My argument proceeds as follows. One of the central claims I want to make in this chapter is that Forms and Receptacle are integral components in constructing the cosmic and human immortal soul as well as the mortal body of humans. Since human immortal soul shares a common origin with the cosmic soul, I start by shedding some light on the components that constitute the cosmic soul. I will argue that the components that the Demiurge used to create the cosmic soul and body are essentially the same, and they differ in that the ways in which the components were actually used to fashion the cosmic soul and body respectively. Then I turn to the constitution of human immortal soul by making a comparison between the cosmic and human immortal souls. The necessity of this comparison is based on the fact that the human's immortal soul is of second and third grade, compared to the cosmic soul. The degradation of

¹ Cf. *Tim.* 41d-42a and 69c-72d.

purity of human immortal soul not only entails that the immortal soul is subject to the disturbance from the body when embodied, but also give rise to the matter of the cause of evil. Then, at last, I will explain that human immortal soul's being created as less pure does not imply a failure of the Demiurgic teleology, on the contrary, it speaks in favor of Plato's intention to bridge the gap between the mortal and immortal nature of a human being by showing the intermediate nature of the other two mortal parts that draw together the immortal soul and mortal body.

3.1 The construction of cosmic souls

At *Timaeus* 41d4-42a3 Plato proffers an account of how the Demiurge created the immortal souls for the human race:

When he had finished this speech, he turned again to the mixing bowl he had used before, the one in which he had blended and mixed the soul of the universe. He began to pour in to it what remained of the previous ingredients and to mix them in somewhat the same way, though these were no longer invariably and constantly pure, but of a second and third grade of purity. And when he had compounded it all, he divided the mixture into a number of souls equal to the number of the stars and assigned each soul to a star. He mounted each soul in a carriage, as it were, and showed it the nature of the universe. He described to them the laws that had been foreordained: they would all be assigned one and the same initial birth. Then he would sow each of the souls into that instrument of time suitable to it, where they were to acquire the nature of being the most god-fearing of living things, and, since humans have a twofold nature, the superior kind should be such as would from then on be called "man." (transl. by Zeyl, D. J.)²

In order to achieve substantial clarity regarding the process of the creation of individual immortal souls, two problems must be stressed and resolved: first, what is the constitution of individual immortal souls? Second, what is the significance of the claim that each soul was assigned to a star?

A satisfactory investigation of the first problem calls for reference to the passage where *Timaeus* has explicitly demonstrated the constitution of the cosmic soul. Most scholars agree that individual immortal souls have their origin in the cosmic soul, reading 41d4-7 at face value.³ The

² Ταῦτ'εἶπε, καὶ πάλιν ἐπὶ τὸν πρότερον κρατῆρα, ἐν ᾧ τὴν τοῦ παντὸς ψυχὴν κεραννὺς ἕμισγεν, τὰ τῶν πρόσθεν ὑπόλοιπα κατεχεῖτο μίσγων τρόπον μὲν τινα τὸν αὐτόν, ἀκήρατα δὲ οὐκέτι κατὰ ταῦτά ὡσαύτως, ἀλλὰ δεύτερα καὶ τρίτα. συστήσας δὲ τὸ πᾶν διεῖλεν ψυχὰς ἰσαριθμούς τοῖς ἄστροις, ἔνειμέν θ' ἐκάστην πρὸς ἕκαστον, καὶ ἐμβιβάσας ὡς ἐς ὄχημα τὴν τοῦ παντὸς φύσιν ἔδειξεν, νόμους τε τοὺς εἰμαραμένους εἶπεν αὐταῖς, ὅτι γένεσις πρώτη μὲν ἔσοιτο τεταγμένη μία πᾶσιν, ἵνα μή τις ἐλαττοῖτο ὑπ' αὐτοῦ, δέοι δὲ σπαρείσας αὐτὰς εἰς τὰ προσήκοντα ἐκάσταις ἕκαστα ὄργανα χρόνων φῦναι ζῶων τὸ θεοσεβέστατον, διπλῆς δὲ οὐσης τῆς ἀνθρωπίνης φύσεως, τὸ κρεῖττον τοιοῦτον εἶη γένος ὃ καὶ ἔπειτα κεκλήσοιτο ἀνὴρ.

³ Cf. Cornford (1937) 142-143, Johansen (2004) 137, Robinson (1995) 85.

evidence supporting that viewpoint is that these phrases in the quoted passage, i.e. ‘what remained of the previous ingredients’ (τὰ τῶν πρόσθεν ὑπόλοιπα), ‘in somewhat the same way’ (τρόπον...τινα τὸν αὐτόν), and ‘of a second and third grade’ (ἀκήρατα...δεύτερα καὶ τρίτα), indicate that there is a comparable paradigm for Timaeus to refer to, which is, in this case, apparently the constitution of the cosmic soul. And it is worth stressing that referring to the creation of the cosmic soul is of particular necessity and importance to our investigation of Plato’s attempting to bridge the gap between the immortal and mortal nature of humans. A comprehensive investigation depends on the adequate knowledge of the bond between the individual soul and the body. Apart from 41d4-8, a brief account of the creation of individual immortal souls, and 44d3-6 and 73b8-d2, where it is shown that the lesser gods bind the individual immortal soul to the head, precisely, the brain, Timaeus does not provide any further account about the bond between the individual immortal soul and the body. Given that the bond in human beings is an imitation of the bond of cosmic soul and body,⁴ it is reasonable to turn to the passage describing the construction of the cosmic soul. Therefore, the investigation of the constitution of individual immortal souls should be conducted on the basis of the understanding of the constitution of the cosmic soul and, furthermore, its bond and interaction with the cosmic body. On the basis of those investigations, I will then discuss why the Demiurge made the choice to allot every individual immortal soul to a star and showed them the nature of the cosmos and the destined laws.

At 35a1-b3, we learn the ingredients and the preliminary mixture of the cosmic soul:

In between the being that is undivided and always changeless, and the one that is divided and comes to be in the corporeal realm, he mixed a third, intermediate form of being, derived from the other two. Similarly, he made a mixture of the Same, and then one of the Different, in between their undivided and their corporeal, divided counterparts. And he took the three mixtures and mixed them together to make a uniform mixture, forcing the Different, which was hard to mix, into conformity with the Same. Now when he had mixed these two together with Being, and from the three had made a single mixture, he redivided the whole mixture into as many parts as his task required, each part remaining a mixture of the Same, the Different, and of Being.⁵ (transl. by Zeyl with alteration)

⁴ Cf. *Tim.* 44d: Copying the revolving shape of the universe, the gods bind the two divine orbits into a ball-shaped body, the part that we now call our head.

⁵ τῆς ἀμεριστοῦ καὶ αἰεὶ κατὰ ταῦτὰ ἐχούσης οὐσίας καὶ τῆς αὖ περι τὰ σώματα γιγνομένης μεριστῆς τρίτον ἕξ ἀμφοῖν ἐν μέσῳ συνεκράσατο οὐσίας εἶδος, τῆς τε ταυτοῦ φύσεως [αὖ περί] καὶ τῆς τοῦ ἑτέρου, καὶ κατὰ ταῦτὰ συνέστησεν ἐν μέσῳ τοῦ τε ἀμεροῦς αὐτῶν καὶ τοῦ κατὰ τὰ σώματα μεριστοῦ. καὶ τρία λαβῶν αὐτὰ ὄντα συνεκράσατο εἰς μίαν πάντα ἰδέαν, τὴν θατέρου φύσιν δύσμεικτον οὔσαν εἰς ταυτὸν συναρμόττων βίᾳ. μειγνύς δὲ μετὰ τῆς οὐσίας καὶ ἐκ τριῶν ποιησάμενος ἕν, πάλιν ὄλον τοῦτο μοίρας ὄσας

Various exegetical and textual debates about this passage have arisen since antiquity.⁶ I am not going to investigate every issue, since that would be a task too comprehensive for my discussion here. I will confine myself to matters that are most relevant and vital to the question of the bond of cosmic soul and body, that is, which aspect of the nature of the ingredients enables a non-physical soul to be bound to and interact with a physical body? I shall examine the individual ingredients, the intermediate mixture, and the whole preliminary mixture in turn in order to determine which element(s) within the compound of the cosmic soul provides the compositional foundation (in contrast to the structural foundation – the redivision of the whole preliminary mixture by ratio and reform as two revolving circles)⁷ for the non-physical cosmic soul to be bound and interact with the cosmic body.

I shall begin with ἡ ἀμέριστος οὐσία and ἡ μεριστή οὐσία. One of the accepted interpretations, that of Cornford, Grube, and Robinson,⁸ is that ἡ ἀμέριστος οὐσία refers to Form and ἡ μεριστή οὐσία refers to sensible objects. The viewpoint is made on the grounds of the resemblance between the description of *Timaeus* 35a1-3 and 27d6-28a6. At 27d6-28a6, Timaeus makes a distinction of entities according to their respective existence, that is, there are ‘that which always is and has no becoming’ (τὸ ὄν αἰεί, γένεσιν δὲ οὐκ ἔχον), and ‘that which becomes but never is’ (τὸ γιγνόμενον μὲν αἰεί, ὄν δὲ οὐδέποτε). In this distinction, τί τὸ γιγνόμενον is introduced in contrast to τί τὸ ὄν in a way that seems very similar to that of ἡ μεριστή οὐσία to ἡ ἀμέριστος οὐσία at 35a1-3. Those scholars assume that it is reasonable to regard the undivided and divided being at 35a1-3 as identical to being and becoming at 27d6-7, and thus undivided being as Form and divided being as sensible objects.

In my view, the resemblance in these two passages does not necessarily warrant or justify the assumption that the two sets of phrases should be read as equivalent. I do not deny the apparent affinity between the two pairs of concepts, but I cannot see that their similarity indicates their equivalence as obviously as some suggest. I am particularly doubtful because, first

προσῆκεν διένειμεν, ἐκάστην δὲ ἕκ τε ταύτου καὶ θατέρου καὶ τῆς οὐσίας μεμειγμένην.

⁶ For a discussion of most ancient and modern exegeses, see Taylor (1928) 106~136; for a discussion particularly about the second ἄν περι, see Grube (1932) 80~82; for a more recent exegetical reading, see Lisi (1997) 251-259.

⁷ As sketched previously, the immortal part and the other two mortal parts of the soul communicate through their motions. In the following argument, I want to show if there is any compositional base that enables the motional communication in the first place.

⁸ Cf. Cornford (1937) 62; Grube (1932) 80; Robinson (1995) 71.

of all, the terminology Timaeus employs in the two passages is actually different. The employment of τὸ ὄν and τὸ γιγνόμενον found elsewhere in the *Timaeus* seems to be quite consistent, whereas the frequency of the term οὐσία suggests a richer sense that incorporates τὸ ὄν and τὸ γιγνόμενον.⁹ I will expand on and explain this point below. Briefly speaking, even though the variety in terminology cannot confirm the dissimilarity between the two passages, at least such inconsistency suggests the possibility of an alternative interpretation.

Secondly, the contexts where the two pairs of concepts are brought up are different. Since the birth of the cosmic soul is earlier than that of the cosmic body, as is explicitly noted at 34c2-35a1, that the construction of the cosmic soul took place pre-cosmos is without question. Whereas, at 27d6-28a6, when Timaeus introduces the distinction between τὸ ὄν and τὸ γιγνόμενον, it is not so clear whether he refers to entities in the cosmos or pre-cosmos, or maybe Timaeus makes this distinction to set up a general rule that is applicable to situations in both the cosmos and pre-cosmos. For, the unchangeable nature of τὸ ὄν and changeable nature of τὸ γιγνόμενον is consistent regardless of whether they are to be found in the cosmos or pre-cosmos. But if we take the passage word by word, the claim that τὸ γιγνόμενον can be grasped by sense perception implies a cosmic background, because that which perceives and that which is perceived are made of the same materials, i.e. the four elemental solids. Additionally, τὸ γιγνόμενον in pre-cosmos is chaotic and disproportional, that is, without forms and numbers. Hence, even if there were sense perception in the pre-cosmos, it could not perceive τὸ γιγνόμενον. Therefore, τὸ γιγνόμενον at 27d6-28a6 refers to sensible objects in the cosmos. This being the case, given the fact that the Form is the only entity which always is and never becomes, I accept the viewpoint that the undivided being refers to Form, but not that the undivided and divided being can be equated with τὸ ὄν and τὸ γιγνόμενον, for there was not such a thing as a sensible object when the cosmic soul was constructed.

Thirdly, the interpretation that undivided being means Form and divided being sensible objects involves two problems. First, as argued above, chronologically speaking, sensible objects are yet to be available for the Demiurge to use when he constructs the cosmic soul. Second, the cosmic body consists of various sensible objects and it as a whole is a sensible object per se.

⁹ For a discussion on the terms of the distinction between 'being' and 'becoming' in other Platonic dialogues, see Owen (1986).

Therefore, saying that the cosmic soul is constructed of Form and sensible objects equates to saying that the cosmic soul is composed of Form and cosmic body. This being the case, then what is the point of making a cosmic body when there is already a cosmic soul that contains the cosmic body and is superior in every sense? Furthermore, given that sensible objects come into being as the images of Forms, precisely, the impressions of Forms on the Receptacle (52c-d), a cosmic soul constructed of Form and sensible objects means a cosmic soul composed of Form and the images of Form. It is very unlikely that the Demiurge could have forced the Forms into mixture with any other entities since the Forms are unchangeable. It is also very unlikely that the Demiurge would have made the cosmic body as contingent upon the Forms as it is if he was able to mix the Forms with other entities, since he wanted the cosmos to come to be as good as possible. Therefore, the idea that the undivided being and divided being refer to Form and sensible objects is doubtful.

What, then, do 'undivided being' and 'divided being' mean? To answer this question, I will first consider the particular connotation of ὄν, γιγνόμενον, and οὐσία in the *Timaeus* by comparing the application of each term in the text. On the basis of that, I then decide what undivided and divided being refer to in the context of 35a1-b3.

A careful reading of 27d6-28a6 and 35a1-b3 will, as has been shown above, convince us that ὄν, γιγνόμενον, and οὐσία are employed disparately. At 27d6-28a6, τὸ ὄν and τὸ γιγνόμενον are the substantive use of εἶμι (to be) and γίγνομαι (to become) and indicate entities whose existential state is ὄν (being) and γιγνόμενον (becoming) respectively. And here τὸ ὄν and τὸ γιγνόμενον indicate Forms and sensible objects. Elsewhere in the *Timaeus*, e.g. 29b2-c2, 51d3-e6, and 52a1-7, there are similar distinctions of Forms and sensible objects and Timaeus also introduces the corresponding humanly possible ways to cognize them. In all those passages, Timaeus has employed τὸ ὄν and τὸ γιγνόμενον to indicate Form and sensible objects respectively. It is evident that Plato has applied specific terms to denote the two entities, therefore readers might expect terminological consistency in reference to Forms and sensible objects. However, one will find it startlingly odd that Plato has, in some other passages of the *Timaeus*, used another term to refer to both ὄν and γιγνόμενον (if the orthodox interpretation holds). For instance, he applies οὐσία to deliver the same meaning as ὄν at 29c2, 37e5, and 52c4, and entities that are and that become, even the intermediate mixture of the two, at 35a1-3 and 37a3. It is obvious that οὐσία enjoys a richer connotation than that of ὄν, unlike some other

dialogues in which Plato uses ὄν and οὐσία interchangeably.¹⁰ Otherwise the terminological variety of οὐσία seems to devalue the distinction Timaeus made at 27d6-28a6. This is because, now that textual evidence shows οὐσία can be used to indicate entities that become as well, if in the following account οὐσία and ὄν share one meaning, then inescapably γιγνόμενον equals ὄν, since there is no definitive evidence which shows that Timaeus used οὐσία in a way that excludes γιγνόμενον. Therefore, οὐσία must possess a connotation that covers the meaning of both ὄν and γιγνόμενον, whether or not ἡ ἀμέριστος οὐσία refers to Form and ἡ μεριστή οὐσία to sensible objects, since they must be indicative of disparate existence taking the mixing procedure into consideration. Thinking of the fact that οὐσία is applicable to indicating the connotation of ὄν, it is reasonable to infer that οὐσία is used by Timaeus as a term for modes of existence, one of which is being (ὄν) and one of which is becoming (γιγνόμενον), which are the participle form of “to be” and “to become”. And then we can have the substantial application of οὐσία, for instance, ἡ ἀμέριστος οὐσία as referring to Forms. This being the case, we can conclude that οὐσία has a more extensive category and application than that of ὄν and γιγνόμενον and thus can be used as an equivalent not only to ὄν and γιγνόμενον but also to other modes of existence, if any.¹¹

That οὐσία possesses a richer connotation allows a broader range of interpretation: οὐσία can indicate not only the modes in which entities exist, entities like τὸ ὄν and τὸ γιγνόμενον, in the cosmos, but also other possible modes of existence in the pre-cosmos. I refer to existence in the pre-cosmos particularly on the basis of our earlier discussion that in view of the order of cosmic creation the ingredients the Demiurge used for constructing the cosmic soul must belong to pre-cosmos. According to *Timaeus* 52d3, there were three modes of existence in the pre-cosmos: ὄν, γένεσις, and χώρα. It is reasonable to suggest that the divided being (ἡ μεριστή οὐσία) refers to either γένεσις or χώρα (the Receptacle). The difference between pre-cosmic γένεσις and cosmic τὸ γιγνόμενον, sensible objects, resides in the fact that the latter comes into being in an orderly fashion because of the interference from the Demiurge while the former was in a chaotic condition due to the lack of proportionality, as described at 30a3-5 and 52d4-53b4. Apart from that, both pre-cosmic γένεσις and τὸ γιγνόμενον refer to a kind of entity that exists in a way that is unstable and constantly changing. Therefore, firstly, the disorderly quality of

¹⁰ Cf. *Sophist* 232c8; 246b1 and 8, c2 and 7; 248c8, d2, e2.

¹¹ The way this terminology is used can also be found in other Platonic dialogues. Cf. *Sophist* 219b4; 239b8; 246d5; 248c2; 250b11; 251d1 and 5, e10; 252a2; 258b 2 and 10; 260d3; 261e5; 262c3.

pre-cosmic γένεσις invalidates its being one of the ingredients the Demiurge could use to construct the cosmic soul. This is because, in essence, the ways in which the pre-cosmic γένεσις and τὸ γιγνόμενον exist are the same, that is, they are always changing, and they differ only in that the latter is a proportional version of the former. That being so, it would be absurd to claim that the Demiurge could have considered the pre-cosmic γένεσις as an ingredient for the cosmic soul. This is because, as has been argued earlier, one reason the Demiurge would not use sensible objects to construct the cosmic soul is because it is contingent upon Forms, and the pre-cosmic γένεσις existed even in a worse fashion. Secondly, as has been briefly stated earlier, it is not possible, even for the Demiurge, to alter the unchangeable nature of the Form, let alone to force it into a mixture with its own reflection, that is, sensible object as the image of Form. Similarly, since the pre-cosmic γένεσις is a disorderly version of τὸ γιγνόμενον, it is impossible for it to be mixed with the Forms. The reason is as follows. On the one hand, according to 52a1-7, τὸ ὄν, Form, “neither receives into itself anything else from anywhere else, nor itself enters into anything else anywhere,” and the only way in which Form will ever have connection, or, inappropriately speaking, ‘interaction’, with other entities, as Timaeus claims (50d1-2), is to be the model of τὸ γιγνόμενον. On the other hand, just like sensible objects, the existence of pre-cosmic γένεσις was contingent upon the Forms, and without the creation of the Demiurge, it lacked proportion and measure (53a8) and merely had the traces of what were later to be called the four elemental solids (53b2) that compose sensible objects. The Demiurge wanted the best for the cosmos, whereas entities such as pre-cosmic γένεσις, whose nature was disproportional and unstable, could hardly suffice to be one of the ingredients for the construction of the cosmic soul. Furthermore, since the Demiurge was able to bring proportionality to pre-cosmic γένεσις, it seems very odd that he would have used pre-cosmic γένεσις directly instead of altering it first.

Now that I have argued against the claim that the divided being indicates pre-cosmic γένεσις, I shall proceed to demonstrate that the divided being refers to χώρα, the Receptacle, since the Receptacle is now the only material available. If the divided being is the Receptacle, then how are we to understand the description “that which becomes (γιγνομένης) divided in bodies (τὰ σώματα)?” Body (τὸ σῶμα) in the *Timaeus* relates to those that are perceptible, or, at a microscopic level, elemental triangles and solids (the former being the result of the cluster of the latter). The Receptacle is characterless, according to 50b7-c3, therefore it is impossible that one

part of it could be distinct from another by itself. Whereas when the Receptacle receives the imitations imprinted upon it, it becomes different at different times (50c3-6), the part that receives the imitation of an equilateral triangle shows divergence from another part that receives the imitation of an isosceles right-angled triangle. In this way, the Receptacle is divided. Take gold moulding for instance: one part of the gold is identical to another until the gold is moulded into, say, a figure of a man. You can tell which part of this gold figure represents eyes, which is obviously not identical to the part that represents mouth or nose. Hence, the gold becomes divided, in the sense that its parts are distinctive. One thing worth emphasizing is that, even though pre-cosmic γένεσις came into being in the Receptacle, it does not mean that the existence of the Receptacle entails pre-cosmic γένεσις. So the fact that the Demiurge used the Receptacle as one of the components to construct the cosmic soul does not conflict with the claim that the Receptacle is that in which pre-cosmic γένεσις came into being.

I think the obscurity of Timaeus' introduction of the Receptacle as 'divided being' is explained by the fact that he has not introduced the concept of the Receptacle yet when he talks about the construction of the cosmic soul. Moreover, the belated introduction of the Receptacle gives rise to an objection against my interpretation as to why it is admissible to rely on the Receptacle as an explanation before Plato introduces it in the *Timaeus*. First of all, the postponed introduction of the Receptacle can be explained by the fact that to discuss the nature of the Receptacle requires a lengthy digression from the main topic, thus, I think it is understandable that he only introduces the concept once his discourse requires it. Secondly, the Receptacle exists as one of the pre-cosmos existents, so it has to be involved in the creation of the cosmic soul, considering the order in which and the available components out of which the Demiurge created the cosmic soul.

Due to the nature of the Forms, the only possible way for the Demiurge to mix the Forms with other entities is to make an impression of the Forms out of those other entities, leaving the Forms themselves unchanged. In this case, to mix the undivided being, the Forms, and the divided being, the Receptacle, is to model an impression after the Forms out of the Receptacle, which is exactly how pre-cosmic γένεσις and τὸ γιγνόμενον come into being: the former is the haphazard images of the Forms and the latter is the proportional images of the Forms. I find it plausible to imagine that the Demiurge saw three kinds of existence in the chaotic pre-cosmos,

taking full advantage of which, he then rearranged their forms of existence by giving them proportionality instead of transforming them utterly: the Demiurge configured the pre-cosmic γένεσις as proportional τὸ γιγνόμενον, i.e. sensible objects, which are, at the microscopic level, elemental triangles and solids; prior to which, he created the cosmic soul to be governing those sensible objects in his absence by mixing the Forms and the Receptacle. Since the mixture of the Forms and the Receptacle is made by the hand of the Demiurge himself, and according to the *Timaeus* 41a7-8 and c2-3, whatever comes into being by the hand of the Demiurge will be exempted from being undone, the mixture of the undivided being and divided being shall be indissoluble, that is, that very impression made by the Demiurge himself will not perish like γένεσις¹² normally does.

Apart from the 'undivided being' and 'divided being', the Demiurge then also made a mixture of 'undivided Same' and 'divided Same', and a mixture of 'undivided Different' and 'divided Different', that is, 'intermediate Same' and 'intermediate Different'. The concepts of 'intermediate Same' and 'intermediate Different' will become even more difficult to grasp than 'intermediate being' if we try to imagine 'Same' and 'Different' as being actual entities. A relevant aspect that is worth stressing is that the account of 35a1-b3 applies two terms to indicate the intermediate mixture: one is οὐσία and the other is φύσις.¹³ To throw some light on the understanding of φύσις, we can, I suggest, use the connotation of οὐσία as a resource. As demonstrated above, Timaeus uses οὐσία to indicate variations of existence, such as being, becoming, and the way in which the Receptacle exists. With a specific attributive phrase modifying it, e.g. 'ἀεὶ κατὰ ταύτῃ ἐχούσης', οὐσία can be applied to refer to corresponding entities that exist in the way as attributed. What Timaeus tries to emphasize at 35a1-b3 by using οὐσία is not really the ingredients as entities themselves but rather the particular ways in which those entities exist. If this is the case, and if such understanding works for the φύσις of the Same and Different as well, φύσις can be interpreted as indicating the characteristics of the Same and Different that are abstracted from entities that possess such qualities, in other words, the conception of same and different by themselves rather than as attributes in some things. As Robinson points out, the text

¹² In the following discussion, I will use γένεσις to indicate becoming in a general sense, and will add 'pre-cosmic' or 'cosmic' as indicative of particular reference.

¹³ Cf. Grube (1932). Grube suggested that ἡ φύσις ταύτου is identical to ταύτου and ἡ φύσις τοῦ ἑτέρου το τὸ ἕτερον. Lisi (2007) noticed that Plato could use φύσις to imply something particular but he failed to develop any explanation.

provides no hint of any subordination among Being (οὐσία), Same, and Different, which means the three kinds must possess equal importance in the construction of the cosmic soul.¹⁴ If we associate the concepts of the Same and Different in the *Timaeus* with those of the *Sophist*, as Cornford suggests, we will reach a conclusion that Being, Same, and Different are ‘all-pervading’ in that every other Form ‘combines’ with them while they themselves cannot be identified with or derived from one another, or any other.¹⁵ Therefore, Being, Same, and Different indicate the attributes, in terms of the particular ways certain entities exist, of the ingredients for the cosmic soul. How, then, do we understand the “undivided” and “divided” Same and Different?

Robinson suggests, referring to the logical distinction of Being, Same, and Different that is applied to Forms in the *Sophist*, that ‘undivided Same’ could mean the self-identical, simple, single, unique nature of the individual Form and ‘divided Same’ could indicate the similar nature of sensible objects.¹⁶ Despite my objection to Robinson’s viewpoint that divided being equates to sensible objects, I find it quite explanatory if we apply the abstract concepts of Being, Same, and Different in the *Sophist* to help us understand the actual entities discussed in the *Timaeus*, in that undivided/divided Being, Same, and Different can be regarded as distinct and individual attributes ascribed to particular entities so that the readers can isolate them. Therefore, the undivided Being and divided Being denote the ways in which Forms and the Receptacle exist, that is, ὄν and χώρα. The undivided Same indicates that every individual Form is the same as itself and undivided Different indicates that it is different from any other Forms. The divided Same refers to the essence of the Receptacle that whatever impression has been imprinted, it is always characterless by itself, in other words, the unchangeable in nature. The divided Different refers to the fact that the Receptacle constantly receives various kinds of images and thus appears different at different times and different regions, in other words, it is different from itself from time to time.

The reading of 37a2-b3 makes some scholars believe that the ingredients of the cosmic soul essentially enable the capacity of cognition of the cosmic soul.¹⁷ Because the cosmic soul contains the attributes of Being, Same, and Different of the Forms and the Receptacle, it can,

¹⁴ Cf. Robinson (1995) 73.

¹⁵ Cf. Cornford (1937) 61-66.

¹⁶ Cf. Robinson (1995) 72-74.

¹⁷ Cf. Johansen (2004) 138-139.

according to the principle of 'like is known by like', cognize things discerning their sameness and difference by comparing them with itself. Another reason that this cognitive process is possible is because the constituents of the cosmic soul and the cosmic body are in a sense the same, that is, the Forms and the Receptacles are integral components in the fashioning of the cosmic soul as well as the cosmic body. As I have argued above, the Demiurge constructed the cosmic soul by modeling an impression after the Forms out of the Receptacle. In this way, he produced intermediate forms of Being, Same, and Different of the Forms and the Receptacle. As I have argued in Chapter 2, the triangles and solids come into being in a way that they are the impression of the images of the Forms out of the Receptacle. Combining the argument in Chapter 2 with the discussion of pre-cosmic γένεσις that it is that which comes into being in the Receptacle and then perishes out of it, only without forms and numbers, we can add some details about the creation of the triangles and solids, that is, the material the Demiurge used to create the elemental triangles and solids was actually the disproportional γένεσις, and by giving pre-cosmic γένεσις forms and numbers, the pre-cosmic γένεσις received distinctive shapes and then become proportional, in other words, the creation of the triangles and solids is the Demiurge' transforming pre-cosmic γένεσις into τὸ γινόμενον. In that case, the triangles and solids as well as the cosmic body as a whole are also created as a result of the 'interaction' between the Forms and the Receptacle under the interference of the Demiurge. Therefore, both the cosmic soul and the cosmic body are made out of the 'mixture' of the Forms and the Receptacle. In other words, the basic components that constitute the cosmic soul and body are the same.

And the difference in the construction of the cosmic soul and body resides in that, firstly, when constructing the cosmic soul, the mixture of the Forms and the Receptacle had been deliberately and carefully arranged by the Demiurge, while on the contrary, the Demiurge directly used pre-cosmic γένεσις as the component to create the triangles and solids. After the mixing process, the Demiurge then constructed the cosmic soul compound by dividing it into intervals according to mathematical ratios, and further cut up the proportioned compound into two bands and bent these two bands into circles, joining one another at two opposite points of the circles. He designated the outer circle as the Same, the revolution of which is uniform, and the

inner the Different, which was further divided into seven unequal circles.¹⁸ In this way, the Demiurge endowed the cosmic soul with circular motions and thus he completed the construction of the cosmic soul. In contrast, the way the Demiurge configured the pre-cosmic γένεσις was to alter it with geometrical shapes and give it rectilinear motions that allow the inter-transformation among the solids. The similarity in constituents and proportional construction, on the one hand, enables the bond and interaction between the cosmic soul and cosmic body; while the structural superiority of the cosmic soul over that of the cosmic body explains its priority to the cosmic body, as well its invisibility.

As to the invisibility of the cosmic soul, T. K. Johansen suggests that it is the perceptibility of the cosmic body and the invisibility of the cosmic soul that distinguish them from each other.¹⁹ He argues that the cosmic soul is an infinitesimally thin layer that has spatial extension but occupies non-spatial volume at the same time.²⁰ However, at 45b-46c and 65b-68d, Timaeus explains that the inter-transformation and interaction among elemental triangles and solids are the cause of physical sensation of the human body. And Timaeus also warns his audience that only clusters of the elemental triangles are humanly perceptible at 56b-c. This means that whatever is perceptible is material, that is, composed of elemental triangles and solids; however, whatever is imperceptible is not necessarily non-material but may be too small to be perceived, as clearly stated at 56b-c. As is shown above, the cosmic soul and the cosmic body share the same constituents, and differ in the ways those constituents are constructed. Therefore, that the cosmic body is perceptible and the cosmic soul is invisible are not the attributes that distinguish the cosmic soul from its body. This is because those attributes themselves are caused by the difference in structure of the cosmic soul and body. And the structural difference between the cosmic soul and body is what essentially distinguishes the cosmic soul and its body.

So far, I have discussed the constituents and the construction of the cosmic soul, and explained why the non-material soul is able to be bound to and interact with physical cosmic body: the cosmic soul is non-material not in a sense that it is absolutely incompatible with and different from the cosmic body, it is non-material only in a sense that its constituents are constructed in a way that is different and superior to that of the cosmic body and nevertheless its

¹⁸ Cf. *Tim.* 35b4-36d7.

¹⁹ Cf. Johansen (2004) 140.

²⁰ Cf. Johansen (2004) 141.

constituents are the same as that of the cosmic body. And likewise, the cosmic body is regarded as physical in the sense that it was constructed in such-and-such a way that is different from that of the cosmic soul. This being the case, the cosmic soul is allowed to be connected to the cosmic body on the one hand, and to govern the latter on the other hand.

3.2 The creation of individual human immortal souls

For the constitution of the individual immortal souls, the Demiurge used ‘what remained of the previous ingredients’ (τὰ τῶν πρόσθεν ὑπόλοιπα) that he had used to construct the cosmic soul and mixed them ‘in somewhat the same way’ (τρόπον...τινα τὸν αὐτόν), which turned out to be no longer as pure as the preliminary mixture that served for the creation of the cosmic soul but was ‘of a second and third grade’ (ἀκήρατα...δεύτερα καὶ τρίτα) (41d). This description, as I have pointed out at the beginning of this section, indicates the affinity that Plato wants his readers to notice between the constitution of the cosmic soul and that of the individual immortal souls. The ingredients that compose the cosmic soul are the intermediate mixture of Being, Same, and Different, the remainder of which, as Taylor and Cornford interpreted correctly, are the ingredients for the construction of individual immortal souls.²¹ The phrase ‘in somewhat the same way’ indicates that individual immortal souls have similarity in composition to the cosmic soul, that is, the Demiurge first forced the intermediate mixture of Difference into conformity with that of the Same and then mixed it with the intermediate mixture of Being to form a uniform mixture (35a6-b1). On the other hand, the phrase may also be implying that there is possibility that the ways in which the Demiurge created human immortal souls and the cosmic soul are not exactly the same, which then allows and explains the degradation of purity of human immortal soul. But it is unclear what Plato means by saying ‘purity’ (ἀκήρατα) and what causes the degradation of purity. At 41d4-42a3, Plato does not mention the complex process of dividing and reforming after the mixing process, then whether the way in which the Demiurge constructed the

²¹ Cf. Taylor (1928) 255 and Cornford (1937) 142. For an alternative view, see Lisi (2007). Lisi argued that the remainders indicate the undivided Being, divided Being, undivided Same, divided Same, undivided Different, and Divided Different. The reason he thought Taylor and Cornford were wrong is the intermediate mixtures of Being, Same, and Different were used up to create the cosmic soul, which, I think, is where he misinterpreted the text. The intermediate mixtures of Being, Same, and Different were not used up, but the mixture of Being, Same, and Different was used up in the process of division (*Tim.* 36b5-6). The Demiurge used the former mixtures to form the latter mixture, but Plato never mentions that the Demiurge had used all the intermediate mixture (*Tim.* 35a6-b3).

two revolutions in human immortal soul is exactly the same as that of the cosmic is open to dispute, i.e. it might even be possible that the Demiurge changed the mathematical ratios in dividing the soul compound so as to affect the purity of the created souls. Thus, I agree with Archer-Hind's suggestion that purity represents the harmonious proportion among the mixture of Being, Same, and Different, and hence the 'second and third grade of purity' describes the inferior proportionality of the preliminary mixture, particularly the resistance of the Different.²²

However, the degradation of the individual immortal souls seems to violate the principle claimed at 41c2-3 by Timaeus that the direct product of the Demiurge would have been as good and perfect as the gods.²³ Such degradation, however, as Archer-Hind comments, fits Plato's scheme of a cosmology within which the entities, from celestial stars to human beings to plants, manifest their remoteness from the Forms correspondingly and hierarchically.²⁴ Therefore, this degradation of proportionality in individual immortal souls may be a deliberate work of the Demiurge in order that the individual immortal souls are potentially corruptible; in this way, then they can degenerate and reincarnate to bring the other mortal creatures into being and thus subserve for the completion of the cosmos.²⁵

Despite the fact that the re-division of the preliminary mixture and the creation of two revolving circles of the Same and Different is not mentioned in Timaeus' discourse,²⁶ the structural similarity between the individual immortal souls and the cosmic soul – there are internal revolutions of the Same and the Different in both souls – can be inferred from the description of the disturbance of the revolution within the individual immortal souls when they are embodied (43d-e):²⁷ the revolutions of the Same and the Different in the immortal soul are

²² Cf. Archer-Hind (1888) 141. Cornford (1937), on page 143 and 145, argued that 'second or third purity' referred to the superiority of men's soul over women's. I cannot see any connection of this phrase to the superiority of men's soul over women's first of all; secondly, the first incarnation of all souls was the same, that is, all men at the first incarnation, and women only came into being after the degeneration of the men's soul.

²³ For arguments and application of this principle, see Robinson (1995) 80, 84-85.

²⁴ Cf. Archer-Hind (1888) 141.

²⁵ I shall talk about the intention of the Demiurge in creation in detail later.

²⁶ Taylor (1928, 256) suggested the circle-making process has been covered by 'μίσγων τρόπον ... τινα τὸν αὐτόν' in objection to Chalcidius' viewpoint that the Demiurge dividing 'τὸ πᾶν' indicates the circle-making process. But I cannot see how it is possible that the word 'μίσγων' connotes both the process of mixing and the process of dividing and reshaping. Archer-Hind (1888, 141) was partly right in pointing out 'τὸ πᾶν' refers to the preliminary mixture and the Demiurge then divided it into portions equal in number to the stars. This is where, I think, Plato skips the complicated process of dividing and reshaping that could become a digression. But Archer-Hind mistook the meaning of 'τὸ πᾶν', for a detailed refutation of which, see Taylor (1928) 256-257.

²⁷ Also at 42c5, the restoration of the internal revolution of the soul is mentioned.

destroyed by the rectilinear motions of the bodily elemental solids when the immortal soul is first embodied.

3.3 The allotment of the individual immortal souls and the cause of evils

The Demiurge next formed individual immortal souls equal in number to the stars (ἰσαρίθμους τοῖς ἄστροις),²⁸ and then allotted those souls into each star. This description, as has been pointed out by many scholars,²⁹ implies that the number of the individual immortal souls is finite, and this finite number is equal to that of the stars, which themselves have souls and are the first living kind the Demiurge created within the cosmos, that is, the lesser gods.³⁰ Timaeus describes the stars as the chariots (ὄχημα) for individual immortal souls, a setting in which the Demiurge showed them the nature of the cosmos and the destined laws, which possibly intends to recall *Phaedrus* (246e-248b), where the procession of the gods and the individual souls closely following climbed up onto the rim of the heaven to get a vision of the Forms. However, the terminological affinity between the *Timaeus* and the *Phaedrus* may be misleading. In the *Phaedrus*, the chariot (ὄχημα, 247b2) refers to the soul as a united whole consisting of, metaphorically, a charioteer and two horses, whereas, in the *Timaeus*, the chariot indicates the fixed stars, to which the Demiurge assigned individual immortal souls as their temporal dwelling. Similar applications of this word 'ὄχημα' can be found at *Timaeus* 44e2 and 69c7, where it is used to express the relation between the soul and the body as the body being the soul's vehicle. Despite that, the analogue between the two dialogues is noticeable, on which scholars tend to lay stress in an epistemological perspective as connecting it with the theory of Recollection,³¹ and thus fail to consider the possibility that this allotment and demonstration may be conducted to serve a particular purpose under the framework of cosmogony.

Despite the terminological difference between these two dialogues, a parallel reading of the description in the *Phaedrus* can help to sketch the possible scenario of the allotment and demonstration described in the *Timaeus*. In the *Phaedrus*, there are various gods that

²⁸ The stars here indicate the fixed stars the Demiurge created as the adornment for the cosmos (40a-b). And Plato uses the instruments of time (ὄργανα χρόνου) to refer to the wanderers (πλάνητες), that is, the sun, the moon, and other planets, at 41e5 and 42d5. Cf. Taylor (1928, p.256).

²⁹ Cf. Cornford (1937) 143, Taylor (1928) 256, Robinson (1995) 85-86.

³⁰ Cf. *Tim.* 39e-40b.

³¹ Cf. Cornford (1937) 144, Taylor (1928) 257-258, Robinson (1995) 86.

accompanied the individual souls on the difficult journey to have a glimpse of the Forms; thus the circumstances for individual souls shall vary due to the diverse characteristics of the gods. And in the *Timaeus*, each individual immortal soul was allotted to a carriage according to the arrangement of the Demiurge.³² Thus, if the *Phaedrus* case is equally applicable to the *Timaeus*, the allotment and demonstration will result in the variation of individuality with regard to the extent to which each immortal soul has grasped the knowledge showed by the Demiurge. And that Plato neither confirms nor denies the diversity of the stars shows that the Timaeian account is at least open for diverse interpretations.³³ As Archer-Hind comments, the allotment to each star can be 'a fanciful way of accounting for innate diversity of character and disposition.'³⁴ At the same time, considering the fact that the lesser gods created the physical bodies for human beings,³⁵ the diversity of the lesser gods themselves can also be responsible for the outcome of individual distinctiveness not only in soul but also in physicality.

That the diversity of the stars and thus of the lesser gods entails the variation of individuality is compatible with the claim Plato makes in the following lines that the first incarnation of all individual immortal souls was the same out of the Demiurge's hand (41e3-4) and the Demiurge himself is exempt from being the cause of any evils that might be brought upon human beings (42d3 and e3-4). The Demiurge gave every single immortal soul the same opportunity to behold the nature of the cosmos and the destined laws. This being the case, regardless of their distinctive comprehension, from the perspective of the Demiurge, then, the first incarnation of all immortal souls was indeed undifferentiated. However, this individual distinctiveness is obviously the inevitable consequence caused by the degradation of the purity of individual immortal souls, which seems a deliberate work by the Demiurge. If this statement is correctly inferred, the account is apparently self-contradictory in claiming, on the one hand, that the Demiurge is not responsible for any evils, and implying, on the other hand, that the Demiurge could be the indirect origin of evils. Besides, the idea 'evolution by degeneration' itself is contradictory to the fact that the Demiurge is so benevolent as Plato affirms (30a).

In order that the teleological premise that the Demiurge should be the most benevolent and

³² Cf. *Tim.*40e.

³³ Cf. *Tim.* 40a-b.

³⁴ Cf. Archer-Hind (1888) 142.

³⁵ Cf. *Tim.* 42e-43a.

wanted the best for the cosmos shall not fail, the contentious matter of the cause of evils must be dealt with. Whereas, a Demiurge that is possibly the cause of evils, on the contrary, cannot stand as such a premise. I will discuss the matter of evils from two perspectives. The first, relative aspect we need to put into perspective is the denotation of evil in the *Timaeus*. For, it is possible that a moral-related idea of evils may not be identical with the nature of evils in the *Timaeus*' framework. Our argument could be misled by not defining the evils Timaeus refers to. The second perspective from which to regard this matter is to construct it as under the framework of the overall Demiurgic work of cosmic creation instead of within the confines of anthropocentric creation activities.

What is evil then? According to the description at 42b-c, evil refers to the opposite of the condition in which the mortal parts of soul are under control.³⁶ In a later part of Timaeus' monologue, where he introduces bodily diseases and mental illness, the disproportion, either among the bodily elemental solids or between soul and body, is asserted to be both the cause and the manifestation of evils.³⁷ It is obviously a kind of evil that the mortal parts of the soul become the master of a person. This is because there is disproportion between the immortal and mortal soul, and thus disorderliness between the soul and the body.³⁸ If such is the denotation of evil, there is no justification for attributing evils to the Demiurgic work, since the Demiurge did not bring any disproportionality into the constitution of the individual immortal souls: second or third grades of purity in the individual immortal souls should not be regarded as being disproportional. Even though the degradation of purity brought about the possible corruption of the immortal souls, still, such corruption of the immortal souls and any sequential evils themselves are not created by the Demiurge himself.³⁹

And neither is the Demiurge the indirect source of evils, which may be clarified with reference to the calculation of pros and cons of human beings' longevity and well-being in the process that the lesser gods created the human body (75b-c). When creating the human body,

³⁶ Cf. *Tim.* 42b-c. 'And if they could master these emotions, their lives would be just, whereas if they were mastered by them, they would be unjust. ... then he still could not refrain from wickedness (κακίας) ...' The context is very clear that wickedness (κακίας) refers to the mortal parts of soul being master.

³⁷ Cf. *Tim.* 86e and 87d.

³⁸ Cf. Cherniss (1954) 27. Cherniss argued that the disproportional manifestations, in relation to the circumstances, of the phenomenal world should be termed as evils.

³⁹ Cf. Meldrum (1950) 68. Meldrum argued that a merely potential discord among the mixture of Existence, Same, and Different should account for the actual evil in the world. His line of thought is similar to my argument here.

due to the fact that the nature of the materials restrained the lesser gods to two alternative characteristics that were both desirable for the building of the human head, the lesser gods had to sacrifice the less favorable characteristic – longevity – in order to achieve the other characteristic, – less flesh with keen and responsive sensation – which they determined to be of more benefit to the life of human beings. No one would blame the lesser gods for choosing well-being over longevity, and neither would any one think of it as a deliberate deed that might provoke evils in terms of the desire for longevity. Likewise, the Demiurge should not bear any responsibility for the corruption of individual souls, since, first of all, it is incontrovertible that the Demiurge should fulfill the overall finalization and continuous completion of the cosmos rather than the welfare of a particular race that is but an integral part to the whole cosmos. In other words, the cosmic paradigm entails the inevitability and necessity of the corruption and degeneration of individual souls, in that the corruption and degeneration of individual souls helps to realize the wholesome nature of the cosmos, which accords with the internal cosmic harmony.

Besides, the Demiurge showed individual immortal souls the nature of the cosmos and the destined laws, and this is likely to be the compensation for the lesser degree of purity in their composition in order to enhance the internal harmonious revolutions and thus their mundane life would be as good as possible. Secondly, as evils in the *Timaeus* are manifestations of disproportionality, that the Demiurgic work of finalizing and ensuring the continuous completion of the cosmos is grounded in yielding the perfection of individual immortal souls does not give rise to any kind of disproportionality. Rather, the fulfillment of perfection in individual immortal souls would violate the overall cosmic well-being and thus might originate disproportional phenomena, since the other mortal beings come into being by the reincarnation of the corrupted immortal souls. For that reason, a lesser grade of purity in the composition of individual immortal souls is preferable to its perfection, and thus, the Demiurge is not the source of evils.

Conclusion

In this chapter I have argued that there is an analogy between the constitution of immortal soul and mortal body, that is, Forms and Receptacle are integral components for the construction

of both immortal soul and mortal body. The analogy is applicable to cosmic soul and body as well as human immortal soul and mortal body. That the immortal soul and mortal body essentially have same constituents offers an explanation of the substance underlying and enabling the bond between immortal soul and mortal body. I have also argued that out of the same components the Demiurge employed different processes to create immortal soul and mortal body respectively. It entails that immortal soul and mortal body appear to be utterly different in existence. They differ not only in the ways in which they were constructed but also in the modes of movement the Demiurge designated to them. Then, we can infer from the analogy between the immortal soul and mortal body that in the *Timaeus* Plato is trying to bridge the gap between the immortal and mortal nature. Moreover, the dissimilarities between the immortal and mortal nature reveals what the 'gap' actually is: immortal soul and mortal body differ in their structural and kinetic modes. In conclusion, the observations about the analogy and dissimilarities between immortal and mortal nature will help to foreground Chapter 4's explanations of the precise ways in which the immortal soul and mortal body interact.

I have also argued that compared with the cosmic soul, human individual immortal souls are less pure in terms of proportionality. The degradation of purity allows corruption and reincarnation of individual immortal souls. It follows the matter of the source of evil. My view is that the Demiurge is not the source of evil because although he willingly created less pure souls, it does not mean that he willingly created evil. I have also redefined evil in *Timaeus'* context, that is, evil refer to manifestations of disproportionality. And since the Demiurge shows no intention or action of disproportionality in cosmic creation, he cannot be counted as the source of evil. If we apply the concept of evil to our understanding of the relation between the immortal and mortal nature, it can be inferred that the best condition for a human being is to keep proportionality between his soul and body as well as between the immortal soul and mortal ones. And we can also observe that the design of the human body, i.e. bodily organs and their respective functions, is in service of a proportional interaction between the immortal soul and mortal body. I will elaborate this claim in the following chapter.

Chapter 4 The mortal souls

Introduction

Chapter 2 discussed the construction of the human body at the elementary level. Chapter 3 explained the constitution of the immortal soul, including that of the cosmic soul and human individual ones. In this chapter, I want to look at the nature of the two kinds of mortal souls. After the creation and allotment of individual immortal souls, the Demiurge predicated to the lesser gods that that which is regarded as the mortal kind of soul would arise from the immortal soul's embodiment (42a3-b1). The description is rather brief. What follows the Demiurgic predication is not a more detailed account of the mortal soul's constitution, as readers might expect, but is an exposition of the nature of the four elemental solids and the application of such a nature to physiology as well as psychology (pleasure and pain, 64a-65b). Then, at 69c3-d6, Timaeus recapitulates the composition of the mortal kind of soul following which he describes the two specifications of the mortal kind of soul: the spirited and the appetitive (69e5-72d3).

The argument in this chapter will focus on two aspects: first, the constitution of the mortal kind of soul and the two respective specifications; second, the communication between the immortal and mortal kinds of soul. The first aspect aims at exploring the relation between the mortal kind of soul and the body, for the fact that the mortal kind of soul will arise once the immortal soul is embodied and the digressive physical account at 44d-69a seem to strongly imply the connection between the mortal kind of soul and the physical body. The second aspect aims at revealing the way in which the two distinctive kinds of souls cooperate as a unity hierarchically so as to deepen the understanding of tripartite soul demonstrated in Timaeus' cosmology. The two aspects together are intended to bridge the gap between the immortal soul and the physical body. If the mortal kind of soul, on the one hand, has connection to the physical body, and on the other hand, is capable of communicating with the immortal soul, then the immortal soul and the physical body are not irrelevant to each other having the mortal kind of soul as intermediate link. In this way we shall obtain the knowledge of how the immortal soul and body mutually affect each other.

4.1 Πάθημα and αἴσθησις

Let's first take a look at the ingredients the lesser gods used to construct the mortal kind of soul:

So, once the souls were of necessity implanted in bodies, and those bodies had things coming to them and leaving them, the first innate capacity they would of necessity come to have would be sense perception (αἴσθησις), which arises out of forceful disturbances (παθημάτων). This they all would have. The second would be love, mingled with pleasure and pain. And they would come to have fear and spiritedness as well, plus whatever goes with having these emotions, as well as all their natural opposites. (42a3-b1)¹

In reading this outline, readers might expect a more detailed account of the mortal soul's constitution to follow the discourse of embodiment. However, Timaeus does not return to the topic until 69c3, after a thorough elucidation of the construction of the four elemental solids and the application of the rules of their inter-transformation to physiology. I will come back to discuss this digression shortly. But, first, let's take a look at how Timaeus recapitulates the generation of the mortal kind of soul at 69c3-d6:

He himself fashioned those that were divine, but assigned his own progeny the task of fashioning the generation of those that were mortal. They imitated him: having taken the immortal origin of the soul, they proceeded next to encase it within a round mortal body, and to give it the entire body as its vehicle. And within the body they built another kind of soul as well, the mortal kind, which contains within it those dreadful but necessary disturbances (παθήματα): pleasure, first of all, evil's most powerful lure; then pains, that make us run away from what is good; beside these, boldness and also fear, foolish counselors both; then also the spirit of anger hard to assuage, and expectation easily led astray. These they fused with unreasoning sense perception (αἴσθησις) and all-venturing lust,² and so, as was necessary, they constructed the mortal type of soul.³

As commentators have noticed,⁴ Timaeus restates the ingredients the lesser gods used to constitute the mortal kinds of soul showing a slight difference in order and mixture. When the Demiurge predicted what would happen once the immortal soul was embodied, the ingredients

¹ ὁπότε δὴ σώμασιν ἐμφυστευθεῖεν ἐξ ἀνάγκης, καὶ τὸ μὲν προσίοι, τὸ δ' ἀπίοι τοῦ σώματος αὐτῶν, πρῶτον μὲν αἴσθησιν ἀναγκαῖον εἶη μίαν πᾶσιν ἐκ βιαιῶν παθημάτων σύμφυτον γίνεσθαι, δεῦτερον δὲ ἡδονῇ καὶ λύπῃ μεμειγμένον ἔρωτα, πρὸς δὲ τούτοις φόβον καὶ θυμὸν ὅσα τε ἐπόμενα αὐτοῖς καὶ ὅποσα ἐναντίως πέφυκε διεστηκότα.

² I take 'lust' here as 'a passionate desire for something' rather than 'sexual desire'.

³ καὶ τῶν μὲν θείων αὐτὸς γίγνεται δημιουργός, τῶν δὲ θνητῶν τὴν γένεσιν τοῖς ἑαυτοῦ γεννήμασιν δημιουργεῖν προσέταξεν. οἱ δὲ μιμούμενοι, παραλαβόντες ἀρχὴν ψυχῆς ἀθάνατον, τὸ μετὰ τοῦτο θνητὸν σῶμα αὐτῇ περιετόρνυσαν ὀχημά τε πᾶν τὸ σῶμα ἔδοσαν ἄλλο τε εἶδος ἐν αὐτῷ ψυχῆς προσωκοδόμου τὸ θνητόν, δεινὰ καὶ ἀναγκαῖα ἐν ἑαυτῷ παθήματα ἔχον, πρῶτον μὲν ἡδονήν, μέγιστον κακοῦ δέλεαρ, ἔπειτα λύπας, ἀγαθῶν φυγὰς, ἔτι δ' αὖ θάρρος καὶ φόβον, ἄφρονε συμβούλω, θυμὸν δὲ δυσπαραμύθητον, ἐλπίδα δ' εὐπαραγωγόν. αἴσθησει δὲ ἀλόγῳ καὶ ἐπιχειρητῇ παντὸς ἔρωτι συγκερασάμενοι ταῦτα, ἀναγκαίως τὸ θνητὸν γένος συνέθεσαν.

⁴ Cf. Archer-Hind (1888) 256; Cornford (1937) 281.

were: perception, love mixed with pleasure and pain, fear and spiritedness, and all their natural opposites; whereas in the account of the actual creation of the mortal kind of soul by the lesser gods, the ingredients are, as listed in order: pleasure, pain, boldness and fear, spirit of anger and hope, all together mixed with perception and love. As Johansen points out,⁵ the alteration could be merely stylistic, or it could be indicative of substantial change when the lesser gods proceeded with the creation of the mortal soul. In order to shed some light on the alteration of the constitution of the mortal soul, I will first examine the nature of those ingredients listed in these two accounts, since, in spite of the difference in order and mixture, the ingredients the lesser gods used to generate the mortal kind of soul remain mostly the same.

The first problem to be addressed about the ingredients is how those ingredients came into being. The term *πάθημα* is used to indicate the disturbances provoked by embodiment of the immortal soul. The arising of sense perception and other emotional ingredients (pleasure, pain, fear, etc.), and love (*ἔρωσ*) as well, are ascribed to the disturbances. In contrast, at 69d, *πάθημα* is mentioned as a generic term for all emotional ingredients, only except love, and those emotional ingredients are supposed to be mixed with sense perception and love. In the former passage, it is explicit that the mortal kind of soul would consist of sense perception and emotions, both caused by *πάθημα*. In the latter passage, it is unclear whether or not the lesser gods themselves created the emotions, and the elements composing the mortal kind of soul turn into emotions (denoted as *πάθημα* here), sense perception, and love. Then, does such adjustment of ingredients merely represent the modification of the Demiurgic plan by the lesser gods when it came to actual construction? Or could it be Timaeus retelling the same account, with more precise wording, after having explicated the conceptions of the Receptacle and elemental solids, and based on these also the mechanical principles of affections and perception, if we read the latter passage not in isolation but with the preceding discourses?

I propose the latter hypothesis. The reason why the difference between these two passages gives rise to such confusion, I think, is the terminological ambiguity of *πάθημα*, that since Timaeus uses *πάθημα* to indicate the disturbances that engender perception and emotions, terminological consistency would lead us to expect Timaeus not to apply the identical term to indicate those which are caused by the phenomena denoted by this very term in previous

⁵ Cf. Johansen (2004) 147.

account. Therefore, if we can sort out the mechanical principles that underlie the disturbances, perception, and emotions, as well as the sequentiality in which they generate, whether the former causes the latter two or otherwise, we will be able to reveal the interconnection among those phenomena. And based on this, we can then decide the connotation of πάθημα and explain away the inconsistency in Timaeus' terminology.

For that reason, I suggest we correlate our investigation with Timaeus' account at 61c-69a of how πάθημα provokes perception that is common to the whole body (61c-64a) and to particular bodily organs as well (65b-69a), along with a specific explication of the origination of pleasure and pain (64a-65b). Another piece of textual evidence supporting my suggestion is at 61c7-d2, where Timaeus outlines his following account and warns his audience that the account of πάθημα and of bodily construction and the mortal kind of soul are inseparable, although to treat them simultaneously is impossible. On that account, Timaeus decides to assume the nature of bodily organs and the mortal kinds of soul for the sake of demonstration. I think it is plausible to suggest, upon the reading of those lines, that the mechanical principles of πάθημα are integral to the account of the generation of the mortal kind of soul, that the reading of the former can be complementary to the understanding of the latter, and vice versa.

As Karfik argues, and I agree with, the mechanical principles of πάθημα can be explained in terms of the movement of elemental solids.⁶ Karfik's interpretation is largely successful in that he employs the concept of πάθημα to explain the ingredients composing the mortal soul. But he misunderstands the relation between πάθημα and the mortal soul, for he claims that the mortal soul is a place where πάθημα takes place, which may imply the prior existence⁷ of the mortal kind of soul to πάθημα and this implication is in contradiction with the fact that the ingredients used to compose the mortal kind of souls arise out of πάθημα (*Tim.* 42a3-b1). In the following discussion, I will argue that the relation between πάθημα and the two kinds of mortal souls is not like a motion and that in which the former takes place. Karfik fails to make a distinction between πάθημα that only takes place in the human body and πάθημα that indicates inter-transformation of elemental solids in a generic sense. It is not that any movement of elemental solids occurring in

⁶ Karfik (2005) 204-207.

⁷ Πάθημα indicates the motions of elemental solids, thus it enjoys kinetic and temporal attributes. So there will always be succeeding πάθημα that comes into being after other πάθημα that has already taken place in the mortal souls, according to Karfik's interpretation, which entails that at least some πάθημα come into being after the mortal kind of souls' coming into being.

the mortal soul is counted as πάθημα; quite the contrary, it is πάθημα, a specific kind of movement of elemental solids within the human body constitutes the mortal soul. I will then elaborate my view in the following discussion.

The term πάθημα is first mentioned in Timaeus' discourse at 42a, the passage quoted earlier. It is used again at 43b7 and 44a8, where Timaeus introduces what shall happen when the immortal soul is first embodied. In that demonstration, Timaeus has also briefly summarized the psychophysiological process that he later elaborates at 61c-69a. The physiological process of how an external object affects a psychic recipient is as follows: both the object and the body of the recipient are made of elemental solids, i.e. fire, air, water, and earth. And when the body of the recipient encounters an external object that consists of elemental solids other than that of the recipient's body, interaction between the external and bodily elemental solids will naturally be engendered due to the non-uniformity of sizes and shapes between their constituent triangles. Such interaction will not only occur between the object and the part of the recipient where they make contact but the motion will be passed on through the whole body and reach the immortal soul. The revolutions within the immortal soul are thus suspended or distorted by the dissimilar motions from outside. It seems obvious that Timaeus uses πάθημα here to indicate the interaction and continuous internal motions caused by the recipient's encounter with the external object and αἰσθήσεις to indicate the receipt and awareness of such πάθημα by the immortal soul.⁸ In short, πάθημα are in essence a kind of motion and αἰσθήσεις the consciousness of the former. Then, what kind of motion precisely does πάθημα denote?

In the account of 61c-69a, Timaeus employs the term πάθημα to also indicate those properties of external objects he illustrates. Take hot for instance.

We notice how fire acts on our bodies by dividing and cutting them. We are all aware that the experience (πάθος) is a sharp one. The fineness of fire's edges, the sharpness of its angles, the minuteness of its parts, and the swiftness of its motion – all of which make fire severely piercing, so that it makes sharp cuts in whatever it encounters – must be taken into consideration as we recall how its shape came to be. It is this substance, more than any other, that divides our bodies throughout and cuts them up into small pieces, thereby giving us the property (πάθημα) (as well

⁸ Brisson argues that it is not the primary elemental solids but the secondary substances that are sensible to the percipient, because the former are just too small to be perceived. Cf. Brisson (1997) 149. I think he is right in that only a certain amount of aggregation of elemental solids' effects upon the percipient's body can be transmitted through the body because the bodily elemental solids are themselves in constant internal interactive motion; it is impossible for, for instance, a single external solid of fire to make any change in the form of motion of the bodily solids. The statement that gradual and mild disturbances cannot be perceived at 64d2-3 supports this viewpoint.

as the name) that we now naturally call hot. (61d5-62a5)⁹

The hotness of fire is in fact the constituent solids of fire cutting the subject's bodily elemental solids, for the latter give way to the incomparable sharpness in shape of the former. This being the case, the property of hotness cannot be possessed by fire independently, since the cutting process, or referring to it as a πάθημα, presupposes a recipient. This viewpoint is corroborated by the exposition of what are cold, hard and soft, heavy and light, above and below, and smooth and rough at 62a5-64a1. All the mechanical processes underlying the properties that we ascribe to respective objects involve the engagement of elemental solids from both the objects and any recipient that encounters them. And the way in which the elemental solids of the two groups will interact is determined by the diverse sizes and shapes of those solids, complying with the rules of the inter-transformation among various elemental solids, on which Timaeus has shed light at 56c8-57c6. That the forms of the interaction between external and bodily elemental solids vary explains why a percipient¹⁰ will be affected differently when they encounter disparate objects.

It is now clear that Timaeus applies πάθημα to both the disturbances caused by the encounters with external objects within the body of a recipient and the properties those objects possess, because in fact both the disturbances and the properties refer to the same processes of the interaction of elemental solids that are distinguished by alternative perspectives, like the two sides of a coin. That is, to be precise, if we examine the process from the aspect of how a recipient is affected by any external object, we refer to the interaction as the disturbances occurring inside the recipient's body. Whereas if we examine the process from the aspect of how a particular external object brings distinctive effects upon a recipient, we attribute the interaction in micro-scale, or phenomena in macro-scale, to this particular external object, designating it as properties of hot, cold, etc.

So far, I have examined what mechanical process πάθημα denotes when a percipient encounters an external object. Now I proceed with the investigation of what follows within the

⁹ πρῶτον μὲν ἢ πῦρ θερμὸν λέγομεν, ἴδωμεν ὧδε σκοποῦντες, τὴν διάκρισιν καὶ τομὴν αὐτοῦ περὶ τὸ σῶμα ἡμῶν γιγνομένην ἐννοηθῆμεθα. ὅτι μὲν γὰρ ὄξύ τι τὸ πάθος, πάντες σχεδὸν αἰσθανόμεθα. τὴν δὲ λεπτότητα τῶν πλευρῶν καὶ γωνιῶν ὀξύτητα τῶν τε μορίων σμικρότητα καὶ τῆς φορᾶς τὸ τάχος, οἷς πᾶσι σφοδρὸν ὄν καὶ τομὸν ὀξέως τὸ προστυχὸν αἰεὶ τέμνει, λογιστέον ἀναμνησκομένοις τὴν τοῦ σχήματος αὐτοῦ γένεσιν, ὅτι μάλιστα ἐκείνη καὶ οὐκ ἄλλη φύσις διακρίνουσα ἡμῶν κατὰ σμικρὰ τε τὰ σώματα κερματίζουσα τοῦτο ὃ νῦν θερμὸν λέγομεν εἰκότως τὸ πάθημα καὶ τοῦνομα παρέσχευ.

¹⁰ I use 'recipient' in previous discussion to emphasize the physical aspect of the subject, and I use 'percipient' here to emphasize the engagement of consciousness of the subject.

body of a percipient after the πάθημα has emerged. At 43c7-d2:

It was just then, at that very instant, that they produced a very long and intense commotion. They cooperated with the continually flowing channel to stir and violently shake the orbits of the soul.¹¹

And a similar but more elaborate and comprehensive account at 64b3-c7:

When even a minor disturbance affects that which is easily moved by nature, the disturbance is passed on in a chain reaction with some parts affecting others in the same way as they were affected, until it reaches the center of consciousness and reports the property that produced the reaction. On the other hand, something that is hard to move remains fixed and merely experiences the disturbance without passing it on in any chain reaction. It does not disturb any of its neighboring parts, so that in the absence of some parts passing on the disturbance to others, the initial disturbance affecting them fails to move on into the living thing as a whole and renders the disturbance unperceived. This is true of our bones and hair and of the other mostly earth-made parts that we possess. But the former is true of our sight and hearing in particular, and this is because their chief inherent power is that of air and of fire.¹²

These two passages taken together tell us that there are two opposite consequences that the πάθημα (as in disturbance) will lead to within the percipient's body: one is that the πάθημα will be transmitted to the immortal soul, and the other is that the πάθημα will remain on the bodily part where it happens and not be reported to the immortal soul. Which consequence will be the case depends on the mobility of the elemental solids that constitute the bodily part that the external object affects, that is, if the πάθημα involves the participation of, e.g. fiery solids, the active nature of those solids will pass on the πάθημα to inner bodily parts and thus generate internal disturbances that will eventually reach the immortal soul. Whereas if those elemental solids, e.g. earthy ones, are not mobile enough to transmit the πάθημα inward in the percipient's body, a consecutive reactive motion¹³ within the body will not be generated. Whether a bodily part's constituent solids are mobile or not is decided by their own geometrical structures. In light of these observations, we can now categorize various παθήματα into two groups according to their general consequences: those that are perceived, that is, those παθήματα whose forms of

¹¹ καὶ δὴ καὶ τότε ἐν τῷ παρόντι πλείστην καὶ μεγίστην παρεχόμεναι κίνησιν, μετὰ τοῦ ῥέοντος ἐνδελεχῶς ὀχετοῦ κινουῖσαι καὶ σφοδρῶς σείουσαι τὰς τῆς ψυχῆς περιόδους.

¹² τὸ μὲν γὰρ κατὰ φύσιν εὐκίνητον, ὅταν καὶ βραχὺ πάθος εἰς αὐτὸ ἐμπίπτῃ, διαδίδωσιν κύκλω μόρια ἕτερα ἐτέροις ταῦτόν ἀπεργαζόμενα, μέχριπερ ἂν ἐπὶ τὸ φρόνιμον ἐλθόντα ἐξαγγελίῃ τοῦ ποιήσαντος τὴν δύναμιν· τὸ δ' ἐναντίον ἐδραῖον ὃν κατ' οὐδένα τε κύκλον ἰὸν πάσχει μόνον, ἄλλο δὲ οὐ κινεῖ τῶν πλησίον, ὥστε οὐ διαδιδόντων μορίων μορίους ἄλλων ἄλλοις τὸ πρῶτον πάθος ἐν αὐτοῖς ἀκίνητον εἰς τὸ πᾶν ζῶον γενόμενον ἀναίσθητον παρέσχεν τὸ παθόν. ταῦτα δὲ περὶ τε ὅστ' αἰ καὶ τὰς τρίχας ἐστὶν καὶ ὅσ' ἄλλα γήϊνα τὸ πλείστον ἔχομεν ἐν ἡμῖν μόρια· τὰ δὲ ἔμπροσθεν περὶ τὰ τῆς ὄψεως καὶ ἀκοῆς μάλιστα, διὰ τὸ πυρὸς ἀέρος τε ἐν αὐτοῖς δύναμιν ἐνεῖναι μεγίστην.

¹³ Brisson thinks that the agent transmitting the μάθημα is the blood. Cf. Brisson (1997) 157-159. Karfík endorses Brisson's viewpoint specifying the agent more accurately as the solids of fire that constitute the blood. Cf. Karfík (2005) 205, note 45.

motion are passed on through the body by mobile solids and finally become apprehended by the immortal soul (the problem how the immortal soul can be conscious of παθήματα will be discussed later), and those that are not, that is, the transmission of the motion is stopped by the immobility of the bodily parts in which the παθήματα initially occur. As to those perceived παθήματα, Timaeus has specified them as 'αἰσθήσεις (sensations or sense perception)' at 43c6: *that is no doubt why these motions as a group came after to be called 'sensations,' as they are still called today.*

So far I have investigated the mechanical process of sensation and made clear what πάθημα and αἴσθησις denote in the process. Let me recapitulate my interpretation. The denotation of πάθημα can be specified into two aspects for now: one is the interaction of elemental solids between the body of the recipient and the external object, which can be examined in terms of disturbances and properties depending on the perspective; the other is the transmission of such interaction inside the recipient's body, which can be distinguished into two groups generally with regard to the consequences, that is, unperceived and perceived. The perceived πάθημα is called αἴσθησις. Therefore, αἴσθησις is essentially a kind of πάθημα, which involves the engagement of the immortal soul. On that account, it is not problematic to claim that αἴσθησις is caused by πάθημα, for the occurrence of the former has presupposed that of the latter. Hence, this interpretation is explanatorily applicable to the Demiurge's account of mortal soul at 42a.

Furthermore, since αἴσθησις itself involves interaction with the immortal soul, and, as Timaeus claims at 69d4, αἴσθησις is one of the ingredients composing the mortal kind of soul. Then the distinction of the immortal soul and mortal soul is not an absolute one. There is a connection between them in that the immortal soul is incorporated in the constitution of the mortal soul. Moreover, αἴσθησις also comprehends the movement of elemental solids with the human body. In this way, there is a connection between the mortal soul and the mortal body. Therefore, we can say that, the subtle shift of expression at 69c3-d6 is substantial, for it is indicative of the mortal soul's connection with the immortal soul as well as the mortal body, on the basis that the ingredients composing the mortal soul can be explained in terms of πάθημα and αἴσθησις.

4.2 Emotions and the mortal parts of soul

Now that we have these clarifications of the relationship between πάθημα and αἴσθησις, I will continue with the examination of what the emotions are. According to 64c7-d3, pain is an unnatural disturbance (πάθος)¹⁴ that comes upon a percipient with great force and intensity, and pleasure is the equally great and intense departure of that disturbance and the restoration of the natural state of the bodily parts. From this description we can tell that both pain and pleasure are essentially παθήματα, the kind that is perceived and depicted as violent (βίαιον) and sudden (ἄθροον), and most importantly relates to the change of the natural state of relevant bodily parts. This being the case, we can conclude that pleasure and pain are specific αἰσθήσεις and that their occurrence is accompanied with a violent and sudden change of the bodily parts' previous conditions, be it naturally normal or gradually depleted (64e4-65a3). In other words, the one character that distinguishes pleasure and pain from regular αἰσθήσεις is that the παθήματα that give rise to pleasure and pain cause the change of the nature of whichever bodily part they affect.

Following the above train of thought, we can immediately surmise that the coming-into-being of the remaining emotions, namely, love (ἔρως), boldness (θάρρος) and fear (φόβος), and spiritedness (θυμός) and expectation (ἐλπίς), is highly likely subject to the very mechanical principles that underlie the generation of pleasure and pain, i.e. those emotions fall into particular categories of αἰσθήσεις that are aroused by specific παθήματα. However, apart from the reference at 42a3-b1 and 69c3-d6, there is no trace elsewhere in his monologue that Timaeus ever provides an account for the generation of the remaining emotions. This being noted, we must now change our perspective. The approach to the study of the nature of the mortal kind of soul that I have employed earlier is to first analyse the nature of the ingredients of which the mortal kind of soul consists and then examine how the lesser gods availed themselves of those ingredients accordingly to construct the mortal kind of soul. Now that the textual account for the generation of the remaining emotions is unavailable and thus it is impossible to obtain the knowledge of emotions first, I shall proceed to investigate Timaeus' discourse at 69e5-72d3, where he demonstrates the division of the mortal kind of soul in two parts, that is,

¹⁴ Plato used both πάθημα and πάθος, seemingly distinctive and confusingly interchangeable, in his account at 61c-69a. Cf. Zeyl (2000) lxxv, note 146.

spirited (*θυμός*) and appetitive (*ἐπιθυμητικόν*), and specifies the bodily seats of the two distinct parts of the mortal kind of soul and accounts for their collaboration with the bodily organs they are housed within. The mechanical principle of how the two parts of mortal soul function with bodily organs corresponds to the cooperation of the remaining emotions' respective work with their associated bodily organs. As a result, the study of the function of the mortal parts will contribute to our understanding of the remaining emotions, and our understanding of the remaining emotions can complement the account of the creation of the mortal parts.

The account for the construction of the mortal kind of soul starts at 69d7. In the hope of preventing the immortal soul from being stained by the mortal kind as far as possible, the lesser gods situated the mortal kind of soul in the trunk of the body, between which and the head, which they bounded the immortal soul within, they built the neck as isthmus to keep the two parts apart. And inside the trunk the lesser gods further divided it into two parts separated by the diaphragm, the upper section to house the relatively superior part of mortal soul, i.e. spirited (*θυμός*) and the lower section to hold the inferior part, i.e. appetitive (*ἐπιθυμητικόν*). It is not clear at this point whether the lesser gods decided to divide the mortal kind of soul into two parts or the mortal kind of soul inevitably broke up into two parts due to the nature of its ingredients of affections and perception. As this question is being addressed, another question arises subsequently, whether both the spirited and the appetitive parts contain all the ingredients Timaeus lists, or are each of the two parts assigned corresponding ingredients? If the former were true, then we are troubled with the problem why there would be two distinct parts of mortal soul in the first place now that both parts consist of exactly the same ingredients? If the latter were the case, then we are challenged to specify the ingredients the lesser gods assigned to each part. The textual evidence, I think, apparently is in favor of the latter interpretation. It is very unlikely the spirited and the appetitive parts are composed of the same ingredients since Timaeus is quite explicit about the spirited part's capacity of understanding the commands from the immortal soul (70a4-6) and the appetitive part's inability to listen to or obey the orders from the immortal soul (71a3-5). The lesser gods, foreseeing the nature of each ingredient, chose those that are favorable to the ruling of the immortal soul over the whole body to construct the spirited part and settle it in the heart where it is not remote from the head. And they took those that are not as much of positive benefit to make the appetitive part and gave it the liver as seat.

4.2.1 Anger and the spirited part of soul

Now, let's first take a look at the account of the lesser gods' arrangement of the spirited part of mortal soul at 70a2-d1. I also quote the lines depicting how the spirited part collaborates with heart and lungs:

Now the part of the mortal soul that exhibits manliness and spirit (τῆς ψυχῆς ἀνδρείας καὶ θυμοῦ), the ambitious part, they settled nearer the head, between the midriff and the neck, so that it might listen to reason and together with it restrain by force the part consisting of appetites, should the latter at any time refuse outright to obey the dictates of reason coming down from the citadel. The heart, then, which ties the veins together, the spring (πηγή) from which blood courses with vigorous pulse throughout all the bodily members, they set in the guardhouse. That way, if spirit's might (τὸ τοῦ θυμοῦ μένος) should boil over (ζέσειεν) at a report from reason that some wrongful act involving these members is taking place – something being done to them from outside or even something originating from the appetites within – every bodily part that is sensitive may be keenly sensitized, through all the narrow vessels, to the exhortations or the threats and so listen and follow completely. In this way the best part among them all can be left in charge.

The gods foreknew that the pounding of the heart (which occurs when one expects what one fears or when one's spirit is aroused) would, like all such swelling (οἰδήσις) of the passions (τῶν θυμουμένων), be caused by fire (διὰ πυρός). So they devised something to relieve the pounding: they implanted lungs, a structure that is first of all soft and without blood (ἄναιμον) and that secondly contains pores bored through it like a sponge. This enables it to take in breath (τό ... πνεῦμα) and drink (τὸ πῶμα) and thereby cool the heat, bringing it respite and relaxation in the heat. ...¹⁵

From the reading of the above quotation, it is at least safe for us to claim that emotion of anger is one of the ingredients composing the spirited part of soul¹⁶ so that to investigate what the emotion of anger is and how it comes into being will help us to examine the nature of the spirited part of soul. We can tell from the above passage that the emotion of anger is a boiling in

¹⁵τὸ μετέχον οὖν τῆς ψυχῆς ἀνδρείας καὶ θυμοῦ, φιλόνηκον ὄν, κατώκισαν ἐγγυτέρω τῆς κεφαλῆς μεταξύ τῶν φρενῶν τε καὶ ἀχέρος, ἵνα τοῦ λόγου κατήκοον ὄν κοινῇ μετ' ἐκείνου βία τὸ τῶν ἐπιθυμιῶν κατέχοι γένος, ὁπότ' ἐκ τῆς ἀκροπόλεως τῷ τ' ἐπιτάγματι καὶ λόγῳ μηδαμῇ πείθεσθαι ἐκὼν ἐθέλοι· τὴν δὲ δὴ καρδίαν ἄμμα τῶν φλεβῶν καὶ πηγὴν τοῦ περιφερομένου κατὰ πάντα τὰ μέλη σφοδρῶς αἵματος εἰς τὴν δορυφορικὴν οἴκησιν κατέστησαν, ἵνα, ὅτε ζέσειεν τὸ τοῦ θυμοῦ μένος, τοῦ λόγου παραγγείλαντος ὡς τις ἄδικος περὶ αὐτὰ γίνεσθαι πρᾶξις ἔξωθεν ἢ καὶ τις ἀπὸ τῶν ἐνδοθεν ἐπιθυμιῶν, ὀξέως διὰ πάντων τῶν στενωπῶν πᾶν ὅσον αἰσθητικὸν ἐν τῷ σώματι, τῶν τε παρακελεύσεων καὶ ἀπειλῶν αἰσθανόμενον, γίνοιτο ἐπήκοον καὶ ἔποιτο πάντα, καὶ τὸ βέλτιστον οὕτως ἐν αὐτοῖς πᾶσιν ἡγεμονεῖν ἐῶ. τῇ δὲ δὴ πηδήσει τῆς καρδίας ἐν τῇ τῶν δεινῶν προσδοκίᾳ καὶ τῇ τοῦ θυμοῦ ἐγέρσει, προγιγνώσκοντες ὅτι διὰ πυρός ἢ τοιαύτη πᾶσα ἔμελλεν οἰδήσις γίνεσθαι τῶν θυμουμένων, ἐπικουρίαν αὐτῇ μηχανώμενοι τὴν τοῦ πλεύμονος ἰδέαν ἐνεφύτευσαν, πρῶτον μὲν μαλακὴν καὶ ἄναιμον, εἶτα σήραγγας ἐντὸς ἔχουσαν οἶον σπόγγου κατατετρημένας, ἵνα τὸ τε πνεῦμα καὶ τὸ πῶμα δεχομένη, ψύχουσα, ἀναπνοὴν καὶ ῥαστώνην ἐν τῷ καύματι παρέχοι·

¹⁶ Manliness or ambition (ἀνδρείας) is mentioned here. But we can see that neither 42a3-b1 nor 69c3-d6 mentioned manliness, and throughout the quoted passage, Plato give no further explanation of what manliness refers to. The text limits our understanding of the spirited part of soul to the extent of our understanding of the emotion of anger.

the region of the heart.¹⁷ To understand anger as being a boiling, we need to answer these two questions: what is it that boils and how do we understand the motion of boiling in the Timaean context? The answer to the first question can be found at the beginning of the second quoted paragraph: the pounding of the heart, like all such swelling of the passions, is caused by fire. If that which boils in the region of the heart is the elemental solid of fire, then the answer to the second question has already been plainly pointed out by Timaeus himself using the verb 'boil (ζέω)', which vividly pictures the motion of the elemental solid of fire. The fact that the heart is the knot of the two blood veins (70b1) and also the intersection where all the narrow channels (πάντων τῶν στενωπῶν) throughout the body converge by joining to the veins supports the interpretation that anger is the elemental solid of fire boiling in the region of the heart.

The term 'boil' allows us to imagine something that conducts a kind of motion in the region of the heart just like when water boils, something liquid. The heart is depicted as the spring from which blood courses, and the blood consists mostly of elemental solids of fire in micro-scale and appears to be liquid in macro-scale. We all have the common sense that water boils because of heating, and heating is to deliver hotness from one object to another. As argued previously, hotness is essentially the movement of fiery solids and the interaction of those fiery solids with other elemental solids they encounter. Bearing this in mind, we can claim that water boils when heated is the process that the motion of the fiery solids transmits from the source of hotness to the water and then due to the sharpness of fiery solids the watery solids are disintegrated, and thus yield non-uniformity within the water and the water is then more susceptible to motion, which, in this case, is boiling.¹⁸ Since that the blood has the fiery solids as its main constituents,¹⁹ the sharpness and mobility induce non-uniformity within the blood and render it more susceptible to motion, which is, in this case, boiling, than any other bodily parts. And the region of the heart, which is the spring of blood, of fiery solids, is even more so.

In the knowledge that anger is the boiling of the blood at the macro-scale and the dividing and cutting motion of elemental solids of fire at the micro-scale in the region of the heart, the

¹⁷ Cf. Cornford (1937) 283.

¹⁸ Cf. *Tim.* 58e, another type of water, the metal, melts by the acts of fire.

¹⁹ At *Tim.* 78e7-79a4, it is clear that the blood consists of tiny parts that are food and drink dissolved and taken into the two veins by the fiery bodily solids. At 79d1-2, Timaeus describes the area around the veins as the hottest part within every living body, and this is because the veins contain large amounts of fiery solids.

clarification of the nature of anger still requires us to stress one feature, that is, it is the fiery solids' nature to divide and cut other solids they encounter, which happens inside the body constantly, so what specifies the motion of fiery solids in the region of the heart at a certain moment as anger? Using the boiling of water again as analogy, we can see that the characteristic of anger is that the amount of fiery solids that emerge in the region of the heart is much greater than usual, just as only when the accumulation of hotness in the water reaches a certain point will the boiling begin. The fact that the lesser gods invented the lungs to soothe the heart (the second quoted passage) is supporting evidence that there are too many fiery solids²⁰ in motion in the region of the heart such that a cooling system is required. This accounts for the claim that the lungs are firstly devoid of blood, so as to prevent further increase of fiery solids, and secondly sponge-shaped containing pores, so that to absorb fiery solids when the anger in the heart reaches its peak in order to avoid excessive anger.

Let me recapitulate what we have so far learned about anger. Anger is in essence a great amount of fiery solids gathering together in the region of the heart and actively conducting the motion of dividing and cutting. The function of the heart and the two veins connecting to it is to supply sufficient – sufficient in a sense that the amount becomes identifiable – fiery solids to this process. And the purpose for the lungs is to ease the burden around the heart by decreasing the amount of fiery solids if necessary in order that the heart shall function better in the process of anger. In other words, anger can be regarded as a particular kind of motion of fiery solids. As discussed above, πάθημα is motions of the elemental solids. Then, being a kind of motion of elemental solids itself, anger can count as a specific kind of πάθημα. Accordingly, it is understandable that at 69c3-d6 Timaeus refers to anger as πάθημα while at 42a3-d1 he mentions the emotions singled out.

Now that we have grasped the knowledge of anger, then what is the mortal kind of soul Timaeus refers to as the spirited part? Answering this question requires further clarification about the term θύμος Timaeus uses in his account. When mentioned at 42a7, 69d3, and 70a3, θύμος obviously means the emotion of anger. Whereas at 70b3, c2, and d5, where Timaeus depicts the creation of the spirited part of soul, it is not certain whether he uses the word to refer

²⁰ Cf. *Tim.* 70c3-4, διὰ πυρὸς ἢ τοιαύτη πᾶσα ἔμελλεν οἴδησις γίγνεσθαι τῶν θυμουμένων. Since in the Timaeian cosmology, there is no void among the elemental solids, the only way in which anger swells or ferments, which implies the expansion of space, is to draw together the fiery solids that are in motion.

to anger alone or to represent the whole spirited part of soul. Since at 70a 2-3, Timaeus has explicitly addressed the spirited part of soul as the part of soul that consists of bravery and anger (τὸ μετέχον τῆς ψυχῆς ἀνδρείας καὶ θυμοῦ), it won't be problematic to consider the account of the function of anger (70a2-d5) as also that of the function of the spirited part of soul. This being the case, we can then conclude that the spirited part of soul is essentially a particular kind of motion of the elemental solids, or, πάθημα, that is circumscribed by the lesser gods within the region of the heart.

An important aspect about the function of the spirited part of soul worth stressing is that the lesser gods devised two veins and narrow channels throughout the whole body as passages (77c-e) that enable fiery solids to move all around the body. In this way, the motion of the fiery solids can be promptly transmitted inside the body, which benefits a soul-body individual in two ways. On the one hand, as shown at 70b, when anger boils over at any internal or external wrong deed, the message of the occurrence of something unjust can be easily and quickly transported to every sensitive bodily part by the transmission of the fiery solids' motion through the blood vessels, such that the immortal part of soul is able to deliver its demand to and coordinate those bodily parts. On the other hand, as shown in earlier discussion, there are two consequences following the occurrence of πάθημα, one of which is that the πάθημα reaches the awareness of the immortal soul. Since the blood veins are situated alongside the spine (77d), where the lesser gods placed marrow that connects to both immortal and mortal parts of the soul, the transmission of those παθήματα can arrive at the consciousness of the immortal part as soon as possible through the veins and blood vessels as well. This is how the immortal part of soul communicates with the mortal part and the body: by the transmission of various kinds of elemental solids' motions via blood channels throughout the body. The demands from the immortal part of soul are delivered by the active motions of fiery solids through the veins and vessels to the body, and παθήματα become αἰσθήσεις when the motions of elemental solids are passed on and at last reach the immortal soul due to the dynamic character of certain elemental solids, mainly fiery solids in this case. In this way, the communication is bidirectional.

There is one crucial problem remaining unsolved, that is, how can an immortal soul interact with the spirited part of soul in the first place. I have argued, in Chapter 3, '3.1 the construction of cosmic soul', that the immortal soul shares with sensible objects the same constituents, that is,

they are both the impressions of the Forms in the Receptacle. Hence, ontologically speaking, it is possible for the immortal soul to interact with sensible objects, despite their structural difference. The Demiurge guaranteed the dominance of the immortal soul over sensible objects when he endowed it with circular motions.²¹ The reason why the spirited part of soul is able to communicate with the immortal part while the appetitive is not is because the blood circulation, starting from the heart, passing throughout the body, and ending back in the heart, roughly resonates with the revolutions within the immortal soul. In my view, the motions of elemental solids exclude the kind that is circular, thus the body itself is devoid of understanding and intelligence. This is because, according to 34a, circular motion is especially associated with understanding and intelligence and can only be awarded by the Demiurge, for instance, the self-rotation of the cosmic body (34a), the two revolutions of the cosmic soul (36b-37c), and the orbits of the planets (38c-e). So in order that the body can be coordinated with the immortal soul and not always disturb the revolutions within the immortal soul as when it is first embodied, the lesser gods rearranged and organized the motions of bodily elemental solids, endowing them with auxiliary bodily organs and parts to create the circuit, in which the blood moves in cycle, and in this sense it resembles the revolutions in the immortal soul.

In conclusion, the spirited part of soul is set up as an intermediary between the immortal soul and the mortal body owing to its specific function and activity of delivering demands from the immortal soul to the body as well as *παθήματα* from the body to the immortal soul. The intermediary function of the spirited part of soul is grounded in that, as explained in terms of *πάθημα* and *αἴσθησις*, the emotion of anger enjoys connection with both the immortal soul and mortal body, and so does the spirited part of soul. This connection is further justified by the explanation of the immortal soul and mortal body are both constructed using Forms and Receptacle as integral components. Although the kinetic difference between the immortal soul and the spirited part of soul entails that the latter is a hindrance to the former, the presence of the circuit of bloodstream helps spirited part of soul overall to be less troublesome to the restoration of the revolutions within the immortal soul and even to be an intermediary in the communication of the immortal soul and mortal body.

²¹ Cf. *Tim.* 34a.

4.2.2 The appetitive part of soul

Likewise, as to the creation of the appetitive part of soul, I will first take a look at where the appetitive part of soul is situated and with what organs it is associated, and why it is housed in those organs. I then investigate how the appetitive part of soul communicates with the spirited part and further the immortal part of soul.

It is not expressly indicated what ingredients the lesser had taken to create the appetitive part of soul. I quoted the full passage (70d6-71d4) that demonstrates the lesser gods' situating it within the belly and inventing the liver as its correlating organ.

The part of the soul that has appetites (ἐπιθυμητικόν) for food and drink and whatever else it feels a need for, given the body's nature, they settled in the area between the midriff and the boundary toward the navel. In the whole of this region they constructed something like a trough for the body's nourishment. Here they tied this part of the soul down like a beast, a wild (ἄγριον) one, but one they could not avoid sustaining along with the others if a mortal race were ever to be. They assigned it its position there, to keep it ever feeding at its trough, living as far away as possible from the part that takes counsel, and making as little clamor and noise as possible, thereby letting the supreme part take its counsel in peace about what is beneficial for one and all. They know that this part of the soul was not going to understand the deliverance of reason and that even if it were in one way or another to have some awareness of them, it would not have an innate regard for any of them, but would be much more enticed by images and phantoms night and day. Hence the god conspired with this very tendency by constructing a liver, a structure which he situated in the dwelling place of this part of the soul. he made it into something dense, smooth, bright and sweet, though also having a bitter quality, 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. So the force of the mind's thoughts could frighten this part of the soul whenever it could avail itself of a congenial portion of the liver's bitterness and threaten it with severe command. And by infusing the bitterness all over the liver, it could project bilious colors onto it and shrink the whole liver, making it wrinkled and rough. It could curve and shrivel up the liver's lobe and block up and close off its receptacles and portal fissures, thereby causing pains and bouts of nausea. And again, whenever thought's gentle inspiration should paint quite opposite picture, its force would bring respite from the bitterness by refusing to stir up or to make contact with a nature opposite to its own. It would instead use the liver's own natural sweetness on it and restore the whole extent of it to be straight and smooth and free, and make that portion of the soul that inhabits the region around the liver gracious and well behaved, conducting itself with moderation during the night when, seeing that it has no share in reason and understanding, it practices divination by dreams.²²

²² Τὸ δὲ δὴ σίτων τε καὶ ποτῶν ἐπιθυμητικὸν τῆς ψυχῆς καὶ ὄσων ἔνδειαν διὰ τὴν τοῦ σώματος ἴσχει φύσιν, τοῦτο εἰς τὸ μεταξύ τῶν τε φρενῶν καὶ τοῦ πρὸς τὸν ὀμφαλὸν ὄρου κατώκισαν, οἷον φάτνην ἐν ἅπαντι τούτῳ τῷ τόπῳ τῆ τοῦ σώματος τροφῆ τεκτηνήμενοι· καὶ κατέδησαν δὴ τὸ τοιοῦτον ἐνταῦθα ὡς ἄρεμμα ἄγριον, τρέφειν δὲ συνημμένον ἀναγκαῖον, εἶπερ τι μέλλοι ποτὲ θνητὸν ἔσεσθαι γένος. Ἴν' οὖν ἀεὶ νεμόμενον πρὸς φάτνη καὶ ὅτι πορρωτάτῳ τοῦ βουλευομένου κατοικοῦν, θόρυβον καὶ βοῆν ὡς ἐλαχίστην

By the reading of the quoted passage above,²³ we can tell that the lesser gods endowed the appetitive part of soul with two main functions. One is that the appetitive part of soul is housed in the region of the belly and the lesser gods assigned the function of nourishment to it. Another is that the appetitive part of soul is associated with liver, the organ that the lesser gods constructed in order that the immortal soul can take control of the appetitive part in an imagistic way.²⁴

Let's first take a look at the nourishment function of the appetitive part of soul. According to Timaeus' account at 77a, the reason why human beings need food and drink is that we live a life surrounded by fire and air, which are the two most mobile kinds of elemental solids.²⁵ Hence the constant inter-transformation between external and bodily elemental solids would cause the human body to waste away and be depleted, and moreover to perish, if without replenishment. Therefore, the lesser gods created plants to nourish us (77a-c) and fashioned the irrigation system (78a-81b) so that the food and drink digested in the belly can nourish the whole body. Here is Timaeus' summary of this process (78e3-79a4 and 80d3-81a).

This entire pattern of action and reaction, irrigating and cooling our bodies, supports their nutrition and life. For whenever the internal fire, united with the breath that passes in or out, follows it along, it surges up and down continually and makes its way through and into the belly, where it gets hold of food and drink. There it dissolves or breaks up into tiny parts, which it then takes through the outbound passages along which it is advancing, and transfers them into the [two] veins, as water from a spring is transferred into water pipes. And so it causes the currents of the veins to flow through the body as through a conduit.

The fire cuts up the food [in our bellies] and as it follows the breath it oscillates inside us. As the oscillation goes on, the fire pumps the cut-up bits of food from the belly and packs them into veins. This is the mechanism by which the streams of nourishment continue to follow

παρέχον, τὸ κράτιστον καθ' ἡσυχίαν περὶ τοῦ πᾶσι κοινῆ καὶ ἰδίᾳ συμφέροντος ἕω̄ βουλευέσθαι, διὰ ταῦτα ἐνταῦθ' ἔδοσαν αὐτῷ τὴν τάξιν. εἰδότες δὲ αὐτὸ ὡς λόγου μὲν οὔτε συνήσειν ἔμελλεν, εἴ τέ πη καὶ μεταλαμβάνοι τινὸς αὐτῶν αἰσθήσεως, οὐκ ἔμφυτον αὐτῷ τὸ μέλειν τινῶν ἔσοιτο λόγων, ὑπὸ δὲ εἰδώλων καὶ φαντασμάτων νυκτός τε καὶ μεθ' ἡμέραν μάλιστα ψυχαγωγῆσοιτο, τούτῳ δὲ θεὸς ἐπιβουλεύσας αὐτῷ τὴν ἥπατος ἰδέαν συνέστησε καὶ ἔθηκεν εἰς τὴν ἐκείνου κατοίκησιν, πυκνὸν καὶ λεῖον καὶ λαμπρὸν καὶ γλυκὺ καὶ πικρότητα ἔχον μηχανησάμενος, ἵνα ἐν αὐτῷ τῶν διανοημάτων ἢ ἐκ τοῦ νοῦ φερομένη δύναμις, οἷον ἐν κατόπτρῳ δεχομένῳ τύπους καὶ κατιδεῖν εἰδῶλα παρέχοντι, φοβοῖ μὲν αὐτό, ὅποτε μέρει τῆς πικρότητος χρωμένη συγγενεῖ, χαλεπῆ προσενεχθεῖσα ἀπειλῆ, κατὰ πᾶν ὑπομειγνῦσα ὀξέως τὸ ἥπαρ, χολώδη χρώματα ἐμφαίνοι, συνάγουσά τε πᾶν ῥυσὸν καὶ τραχὺ ποιοῖ λοβὸν δὲ καὶ δοχὰς πύλας τε τὸ μὲν ἐξ ὀρθοῦ κατακάμπτουσα καὶ συσπῶσα, τὰ δὲ ἐμφράττουσα συγκλείουσά τε, λύπας καὶ ἄσας παρέχοι, καὶ ὅτ' αὐτὰν ἀντία φαντάσματα ἀποζωγραφοῖ πράότητός τις ἐκ διανοίας ἐπίπνοια, τῆς μὲν πικρότητος ἡσυχίαν παρέχουσα τῷ μῆτε κινεῖν μῆτε προσάπτεσθαι τῆς ἐναντίας ἐαυτῆ φύσεως ἐθέλειν, γλυκύτητι δὲ τῆ κατ' ἐκεῖνο συμφύτῳ πρὸς αὐτὸ χρωμένη καὶ πάντα ὀρθὰ καὶ λεῖα αὐτοῦ καὶ ἐλεύθερα ἀπευθύνουσα, ἴλεών τε καὶ εὐήμερον ποιοῖ τὴν περὶ τὸ ἥπαρ ψυχῆς μοῖραν κατωκισμένην, ἔν τε τῆ νυκτὶ διαγωγὴν ἔχουσαν μετρίαν, μαντεῖα χρωμένην καθ' ὕπνον, ἐπειδὴ λόγου καὶ φρονήσεως οὐ μετεῖχε.

²³ Due to the limited length of this chapter, I will not discuss the nature and significance of divination, and will have it mentioned in Chapter 5.

²⁴ Cf. Wilburn (2014) 628.

²⁵ Cf. *Tim.* 56a.

throughout the bodies of all living things. The bits of food, freshly cut up and derived from things like themselves – from fruits or from vegetables which god had caused to grow for this very purpose, to serve us as food – come to have a variety of colors as a result of being mixed together, but a reddish color pervading them predominates, a character that is the product of the cutting and staining action of fire upon moisture. This is why the color of the liquid that flows in our bodies looks the way we've described; this liquid we call blood, which feeds our flesh and indeed our whole bodies. From this source the various parts of our bodies are watered and so replenish the supports of the depleted area.²⁶

From the above passages, we can learn that the digestion and nourishment process within the human body is in essence the inter-transformation of the elemental solids. That is to say, taking into account Plato's wording when he introduced the appetitive part of soul, that is, 'the part of the soul that has appetites for food and drink and whatever else it feels a need for', I think it is reasonable to suggest that the appetitive part of soul indicates human body's nature tendency to replenish itself with new elemental solids as compensation for those lost during the inter-transformation between the external and bodily elemental solids. In other words, the appetitive part of soul can be regarded as a particular kind of motion of the elemental solids, or πάθημα, that is circumscribed by the lesser gods within the region of the belly. And its mechanical process is as follows: the bodily elemental solids of fire first come into the region of belly through the irrigation system and cut up those elemental solids that constitute food and drink coming from outside, and then deliver those cut-up bits to the veins that run through the whole body.

According to the specification of πάθημα and αἴσθησις we have made in previous discussion, we can claim that the mechanical process of the appetitive part of soul involves not only the interaction of elemental solids between the body of the recipient (the fiery solids in the belly) and the external objects (food and drink), but also the transmission of such interaction inside the recipient's body (delivery of the cut-up bits into the veins). Then can the πάθημα of the

²⁶ 78e3-79a4: πᾶν δὲ δὴ τό τ' ἔργον καὶ τὸ πάθος τοῦθ' ἡμῶν τῷ σώματι γέγονεν ἀρδομένῳ καὶ ἀναψυχομένῳ τρέφεσθαι καὶ ζῆν· ὁπόταν γὰρ εἴσω καὶ ἔξω τῆς ἀναπνοῆς ἰούσης τὸ πῦρ ἐντὸς συνημμένον ἔπηται, διαιωρούμενον δὲ αἰεὶ διὰ τῆς κοιλίας εἰσελθὼν τὰ σιτία καὶ ποτὰ λάβη, τῆκε δὴ, καὶ κατὰ σμικρὰ διαιροῦν, διὰ τῶν ἐξόδων ἥπερ πορεύεται διάγον, οἶον ἐκ κρήνης ἐπ' ὄχετους ἐπὶ τὰς φλέβας ἀντλοῦν αὐτά, ῥεῖν ὡσπερ ἀυλῶνος διὰ τοῦ σώματος τὰ τῶν φλεβῶν ποιεῖ ῥεύματα.

80d3-81a: τέμνοντος μὲν τὰ σιτία τοῦ πυρός, αἰωρουμένου δὲ ἐντὸς τῷ πνεύματι συνεπομένου, τὰς φλέβας τε ἐκ τῆς κοιλίας τῆ συναιωρήσει πληροῦντος τῷ τὰ τετμημένα αὐτόθεν ἐπαντλεῖν· καὶ διὰ ταῦτα δὴ καθ' ὅλον τὸ σῶμα πᾶσιν τοῖς ζώοις τὰ τῆς τροφῆς νάματα οὕτως ἐπίρρυτα γέγονεν. νεότμητα δὲ καὶ ἀπὸ συγγενῶν ὄντα, τὰ μὲν καρπῶν, τὰ δὲ χλόης, ἃ θεὸς ἐπ' αὐτὸ τοῦθ' ἡμῖν ἐφύτευσεν, εἶναι τροφήν, παντοδαπὰ μὲν χρώματα ἴσχει διὰ τὴν σύμμιξιν, ἢ δ' ἐρυθρὰ πλείστη περὶ αὐτὰ χροὰ διαθεῖ, τῆς τοῦ πυρός τομῆς τε καὶ ἐξομόρξεως ἐν ὑγρῷ δεδημιουργημένη φύσις. ὅθεν τοῦ κατὰ τὸ σῶμα ῥέοντος τὸ χρῶμα ἔσχευ οἶαν ὄψιν διεληλύθαμεν ὃ καλοῦμεν αἶμα, νομῆν σαρκῶν καὶ σύμπαντος τοῦ σώματος, ὅθεν ὑδρευόμενα ἕκαστα πληροῖ τὴν τοῦ κενουμένου βᾶσιν·

appetitive part of soul cause αἴσθησις, in other words, arrive at the consciousness of the immortal soul? I think the answer is positive. The reasons are as follows. The cut-up food and drink bits shall eventually be sent into the veins and through the veins then transmitted throughout the whole body. And the veins, as we have examined, are the channels through which the transmission of παθήματα can arrive at the consciousness of the immortal soul. We have drawn a conclusion from earlier discussion that the spirited part of the soul can communicate with the immortal soul employing the blood circulation through the veins. Now that the mechanical process of the appetitive part of soul ends with taking part in the blood circulation, there is no reason to doubt the possibility that the πάθημα taking place in the region of the belly should reach the awareness of the immortal soul and become an αἴσθησις. This being the case, the sensation of being full or hungry can be then explained with reference to the sensations of pleasure and pain (64c7-d3). As we have studied, pleasure and pain are caused by a violent and sudden change of the bodily parts' previous conditions, which can be regarded as a particular kind of πάθημα. Following that train of thought, we may infer that feeling full or hungry may be caused by the replenishment or depletion of the elemental solids in the region of the belly.

That the appetitive part of soul is a particular kind of πάθημα occurring in the region of the belly entails that the appetitive part of soul is totally devoid of opinion, reasoning, or understanding, though it does share in sensation, pleasant and painful, and desire.²⁷ That the appetitive part of soul is a particular kind of πάθημα occurring in the region of the belly entails that the appetitive part of soul is totally devoid of opinion, reasoning, or understanding, though it does share in sensation, pleasant and painful, and desire.²⁸ As I have mentioned before, the spirited part of soul is capable of communicating with the immortal soul because its circulation within the whole human body roughly resonates with the revolutions within the immortal soul. And circular motion is the only kind of motion that is associated with understanding and intelligence (34a). The mechanical process of cutting up external food and drink's elemental solids does not involve any sort of circular motion. That is why Timaeus affirms at 71a and 77b that this part of soul cannot understand to deliverance of reason. Nevertheless, the participation of the cut-up food and drink bits in the blood circulation supports Timaeus' following claim that

²⁷ Cf. *Tim.* 77b. where Timaeus claims the similarity between the appetitive part of soul and that of plants; for a detailed investigation of the souls of plants, cf. Carpenter (2010).

²⁸ Cf. *Tim.* 77b.

the appetitive part of soul in one way or another has some awareness of reason. And it is also the supporting evidence that it involves sensations in that the appetitive part of soul can indirectly communicate with the immortal soul employing the spirited part of soul as intermediary. That is, the appetitive part of soul connects itself with the spirited part of soul by having the cut-up food and drink bits take participation in the blood circulation that is an integral part of the spirited part of soul. And in this way, the appetitive part of soul is able to send message to the immortal soul via the spirited part of soul.

Now I shall proceed to discuss the appetitive part of soul's association with the liver. According to the quoted passage (70d6-71d4), the appetitive part of soul has the tendency to be much more enticed by images and phantoms night and day. So the lesser gods took advantage of this very nature to construct the liver as a mirror to receive either frightening or soothing images from the immortal soul and the liver shall infuse bitterness or restore sweetness accordingly. In this way, the immortal soul can take control of the appetitive part of soul by causing either pain or pleasure in the liver around which region the latter lives.

In order to deepen our understanding of the role the liver functions in the communication between the immortal soul and the appetitive part of soul, these three questions, I suggest, should be addressed. First, why is the appetitive part of soul inclined to be persuaded by images and phantasms? Second, how does the immortal soul send images to the liver? Third, what is the mechanical process of the liver's infusing bitterness and restoring sweetness, and thereby causing pain and pleasure in the surrounding region? Pender's interpretation²⁹ answers those three questions: the language Plato employs to portray the communication between the immortal soul and appetitive part of soul supports a 'homoculi' reading, that is, Plato speaks of the immortal soul and appetitive part of soul in a metaphorical sense so as to convey difficult concept, that is, the soul's apparatus of communication. Her metaphorical reading is plausible. My interpretation, on the contrary, pays more attention on the mechanical principles underlies the communication, with regard to *πάθημα* and *αἴσθησις*, rather than terminologies.

Then, in order to answer the first question, I want to first take a look at the mechanical process of the production of images and phantasms so as to find out if there is any affinity between the generation of images and phantasms and the mechanical principles of the appetitive

²⁹ Cf. Pender (1997) 286-288.

part of soul. At 45b-46a, following the introduction of the creation of eyes, Timaeus demonstrates how sight and images are generated, from which I excerpt the most related passages as follows.

Now 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. This happens wherever the internal fire strikes and presses against an external object it has connected with. 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.'(45c2-d3) ... But if some fairly strong motions remain, they produce images similar in kind and in number to the kinds of motions they are, and the kinds of regions in which they remain – images which, though formed within, are recalled upon waking as external objects.(45e4-46a2)³⁰

From the quoted passage above, we can tell that the generation of images and phantasms is in essence the motions caused by the interaction of the fiery elemental solids between the eyes of the recipient and the external object, and these very motions then are transmitted through the whole body and reach the awareness of the immortal soul eventually. The only difference between the images and phantasms is that the latter are caused by stronger motions and can remain within the body when the internal fire stops interacting with the external one. Hence, we can say that the images and phantasms can be specified as a particular kind of πάθημα that involves merely the elemental solids of fire. This being the case, the affinity between the images and phantasms and the appetitive part of soul is then obvious. That is, the appetitive part of soul, as I have discussed earlier, can be regarded as a particular kind of πάθημα taking place within the region of the belly, and the main bodily elemental solids that participate in this very πάθημα are the fiery solids, which run into and out of the belly through the veins continually.³¹ Therefore, it is understandable that the images and phantasms can have effect on the appetitive part of soul when they are transmitted through the veins, for it is very likely that the motions of those images and phantasms pass on to the fiery solids that are making their way to the belly through the very same veins.

Having understood that it is the motions of the fiery elemental solids in the blood

³⁰ ὅταν οὖν μεθημερινὸν ἢ φῶς περὶ τὸ τῆς ὄψεως ῥεῦμα, τότε ἐκπίπτουν ὅμοιον πρὸς ὅμοιον, συμπαγῆς γενόμενον, ἐν σῶμα οἰκειωθὲν συνέστη κατὰ τὴν τῶν ὀμμάτων εὐθυωρίαν, ὅπηπερ ἂν ἀντερείδῃ τὸ προσπίπτον ἐνδοθεν πρὸς δὲ τῶν ἕξω συνέπεσεν. ὁμοιοπαθὲς δὲ δι' ὁμοιότητα πᾶν γενόμενον, ὅτου τε ἂν αὐτὸ ποτε ἐφάπτηται καὶ ὃ ἂν ἄλλο ἐκείνου, τούτων τὰς κινήσεις διαδιδόν εἰς ἅπαν τὸ σῶμα μέχρι τῆς ψυχῆς αἴσθησιν παρέσχετο ταύτην ἢ δὴ ὀρᾶν φαμεν. ... καταλειφθεισῶν δὲ τινῶν κινήσεων μειζόνων, οἷαι καὶ ἐν οἷοις ἂν τόποις λείπωνται, τοιαῦτα καὶ τοσαῦτα παρέσχοντο ἀφομοιωθέντα ἐντὸς ἕξω τε ἐγερθεῖσιν ἀπομνημονευόμενα φαντάσματα.

³¹ Cf. *Tim.* 78e3-79a4.

circulation that allow the impact of images and phantasms on the appetitive part of soul, I now proceed to answer the second question, that is, how does the immortal soul send images to the liver? As I have argued in previous discussion, the immortal soul can communicate with the spirited part of soul by affecting the latter's circulation, which is mainly conducted by fiery elemental solids. In this way, the immortal soul can also employ the circulation within the body to transmit motions that generate either frightening or soothing images to the appetitive part of soul. One thing that is worth stressing is that the immortal soul does not send the images directly to the appetitive part of soul. Rather, the images can be sent first to the liver like being stamped upon a mirror and the liver then returns visible images to the appetitive part of soul.³²

And as to how the liver receives those images, we can investigate it with reference to how images are produced on mirrors or other kinds of smoothing object. Here are Timaeus' depiction.

And so there is no longer any difficulty in understanding how images are produced in mirrors or in any other smooth reflecting surfaces. On such occasions the internal fire joins forces with the external fire, to form on the smooth surface a single fire that is reshaped in a multitude of ways. So once the fire from the face comes to coalesce with the fire from sight on the smooth and bright surface, you have the inevitable appearance of all images of this sort. (46a-b)³³

The mechanical process of producing an image on a mirror differs from that of a mere image in that in the latter process the motions caused by the interaction of fiery elemental solids between the eyes of the recipient and the external object are transmitted within the body immediately once that interaction occurs. Whereas in the former process the fiery elemental solids of the recipient interact and coalesce with those of the external object, and then such interaction forms on the surface of the mirror a new mode of motion, which depends on the condition of the surface.³⁴ In a similar way, we can imagine that the command from the immortal soul manifests as a motion of elemental solids transmitted through the veins and channels to the region of the belly. This motion then interacts and coalesces with the motions of elemental solids in the belly and then it forms a new mode of motion on the surface of the liver. If the command from the immortal soul means to frighten the appetitive part of soul, the liver then becomes depleted of moisture and even dissolves some of itself so that it becomes wrinkled and rough

³² Cf. *Tim.* 71b.

³³ τὸ δὲ περὶ τὴν τῶν κατόπτρων εἰδωλοποιίαν καὶ πάντα ὅσα ἐμφανῆ καὶ λεῖα, κατιδεῖν οὐδὲν ἔτι χαλεπὸν. ἐκ γὰρ τῆς ἐντὸς ἐκτὸς τε τοῦ πυρὸς ἐκατέρου κοινωνίας ἀλλήλοις, ἐνός τε αὖ περὶ τὴν λειότητητα ἐκάστοτε γενομένου καὶ πολλαχῆ μεταρρυθμισθέντος, πάντα τὰ τοιαῦτα ἐξ ἀνάγκης ἐμφαίνεται, τοῦ περὶ τὸ πρόσωπον πυρὸς τῷ περὶ τὴν ὄψιν πυρὶ περὶ τὸ λεῖον καὶ λαμπρὸν συμπαγοῦς γιγνομένου.

³⁴ Cf. *Tim.* 46b-c.

(71b8). This is because the liver is constructed by the lesser gods as dense, smooth, bright, sweet, and bitter as well, at the very beginning. And properties, such as bitter, sweet, etc. with reference to Timaeus' description at 65c-66c, are results of elemental solids' contractions and dilations. Moreover, the command to threaten the appetitive part of soul employs a kindred portion of the liver's bitterness (71b), which I interpret as that the pattern of motion transmitted from the command of the immortal soul is in common with the bitterness of the liver, the bitterness in terms of a kind of πάθημα. Now that the surface of the liver is wrinkled and rough, the image formed on it must share the liver's bitterness and pass on such a property to the appetitive part of soul, causing pain and nausea (71c). In this way, the immortal soul sends threatening to the appetitive part of soul. Now if the command from the immortal soul means to inspire and soothe the appetitive part of soul, we can assume that the motion transmitted from the immortal soul must be congruent with the natural condition of the liver, which refers to the liver's own property of sweetness. And the liver's restoration of such sweetness will make a positive impact on the appetitive part of soul so as to make it gracious and well behaved (71c-d).

Now I have explained how the immortal soul communicates with the appetitive part of soul in a imagistic way. Images, in Timaeus account, are essentially a particular kind of πάθημα that involves merely the solids of fire. Since the appetitive part of soul itself is also a particular kind of πάθημα in the region of the belly and mainly consists of the solids of fire, images can be sent to the appetitive part of soul through the circuit of bloodstream and the cut-up food and drink bits are transmitted from the belly to the blood veins. And noteworthy is that the circuit of bloodstream is an integral part of the spirited part of soul. Thus, by taking part in the blood circulation, the appetitive part of soul sets up connection with the spirited part. In this way, the latter functions as an intermediary in the communication between the former and the immortal soul.

Conclusion

In this chapter, I have explained what are the ingredients composing the two mortal parts of soul in terms of πάθημα and αἴσθησις. I also argued that the communication between the immortal and mortal souls can then be understood in the knowledge of πάθημα and αἴσθησις.

Πάθημα, roughly speaking, refers to the interaction of elemental solids in the human body. Taking into account the various results of the interaction, πάθημα can be specified as denoting properties of sensible objects and disturbances within the human body. Αἴσθησις, then, refers to perceived πάθημα. I then argued that emotions and sense perceptions are all particular kinds of πάθημα and αἴσθησις. Also noteworthy is that πάθημα and αἴσθησις is not created by the lesser gods, thus nor do emotions and sense perceptions. In this sense, the lesser gods's creative activities are restricted to, firstly, selecting particular πάθημα as ingredients and looking ahead how these will arise themselves from the embodiment of the immortal soul and later bodily experiences; secondly, making the best accommodation for there ingredients respectively. Thus Timaeus' account emphasizes on 'housing' rather than 'mixing'.

I then explained what are the spirited and appetitive parts of soul and how they communicate with the immortal soul on the basis of my interpretation of πάθημα and αἴσθησις. The boundary between the immortal and mortal soul is already blurred since the concept of αἴσθησις itself involves the immortal soul. The spirited part of soul is able to communicate with the immortal soul by itself while the appetitive part of soul needs the spirited part of soul as intermediary. This is because, firstly, the circuit of bloodstream allows πάθημα of the spirited part of soul reaches the consciousness of the immortal soul while the appetitive part of soul is restricted in the region of the belly and thus the latter can only communicate with the immortal soul through the help of the circuit of bloodstream, in other words, the intermediation of the spirited part of soul.

Therefore, we can see that the distinction between the immortal and mortal soul is not an absolute one. Firstly, the constitution of the two mortal kinds of soul, examined in terms of πάθημα and αἴσθησις, already contains element of the immortal soul. And secondly, the spirited part of soul functions not only as an intermediary between the immortal soul and body but also between the immortal soul and the appetitive part of soul. Chapter 5 will, then, discuss how should we think of the teleology operating behind the cosmic creation as well as the creation of the human race, on the basis that the gap between the immortal and mortal nature is not unbridgeable in the *Timaeus*.

Chapter 5 The teleological mortality

Introduction

Chapter 2 and 3 have argued that the Forms and the Receptacle are integral components in the construction of immortal souls, including the cosmic soul and human individual immortal souls, as well as mortal existence, including the elemental triangles and solids and the human body that consists of the former. In this way, we can see Plato's attempt at bridging the gap between the immortal and mortal nature by seeking analogy between their respective constructions. Chapter 4 explained, on the basis of the knowledge we have learned in Chapter 2 and 3, with regard to the human race, the ways in which the interactions between the immortal soul and mortal body are enabled and mediated by the two mortal kinds of soul. Then, in this chapter, I want to look at the teleology operating behind the creation of the human race, with regard to the purposes for which the human race are created as possessing such immortal and mortal nature that is demonstrated in previous chapters. My argument will show that not only did the Plato try to bridge the gap between immortal and mortal nature by blurring the boundary between their respective constitutions, but by doing so, the absolute gap between the divine existence, i.e. the cosmos itself, and the human race as mortal being can be bridged to a certain extent.

As I have argued in Chapter 1, the human race is a compositional part fashioned so as to contribute to the goodness of the entire cosmos rather than the priority in the Demiurge's creative decisions. On the one hand, the relationship between the human race and the entire cosmos can be understood referring to that of a jigsaw puzzle and its pieces. The pieces of a jigsaw puzzle are supposed to be placed together to compose a picture. This means that every piece, being printed with a distinctive pattern and cut into a certain shape, should be posited in harmony with other pieces according to their relative patterns and shapes, in order that the jigsaw puzzle should be complete and perfect. Analogously, the human race, being a constitutive part of the whole cosmos, is endowed with such and such nature so as to benefit the overall cosmic creation and well-being afterwards. This seems to suggest that the human race was

brought about only as an auxiliary necessary to the completion of cosmic creation, and its mortal nature was designed as supplementary to that auxiliary. For this reason, Timaeus' cosmology seems not to be anthropocentric whatsoever.

However, to say that the cosmology of the *Timaeus* is not anthropocentric is not equivalent to saying that no concern for the human race was taken into consideration during the cosmic creation at all. This is because the similarity in construction between the cosmos and the human race is evident. For instance, at *Timaeus* 44d3-5, the lesser gods situated the immortal soul in a round head, imitating the revolving shape of the cosmos and the combination of the cosmic soul and body, which shows a purposefully crafted structural resemblance between the human race and the cosmos. In addition, in his cosmological monologue, Timaeus has occupied quite some length in covering the constitution of various bodily organs and their corresponding functions, and their respective benefits for the immortal souls as well. Both the structural affinity between the human race and the cosmos and the explicitly demonstrated characteristics of the human body speak in favor of the interpretation that the Demiurge designed the human race to come into being as it is because he wanted us also to strive for goodness and beauty, like the cosmos as a whole. This being the case, we can say that there are indeed some particular concerns for the well-being of the human race in its creation, no matter how limited compared to the overall goodness of the cosmos as a whole.¹

Therefore, my argument in this chapter will proceed in the cosmological context. I will first explain the relationship between the human race and the cosmos by how the mortal nature bestowed upon the human race is physically inevitable and necessary for the completion of cosmic creation. I then demonstrate mortality as being a necessary and beneficial condition for the well-being of human individuals. I will draw structural similarities and dissimilarities between the cosmos and the human race in order to show how individual immortal souls benefit from the immortal-mortal structure they embodied on the one hand and how human individuals can avail themselves of the connection between the cosmos and themselves.

¹ For a discussion about the limited anthropocentricity in the *Timaeus*, see Johansen (2004) 2-3.

5.1 The inevitability and necessity of mortality

Chapter 1 has argued that the teleology operating behind the creation of the cosmos as a whole and that of the human race is consistent. In other words, the human race, being a compositional part of the cosmos, must share the same $\alpha\tau\tau\iota\omicron\nu$ with the latter, no matter whether it is during or after the creation stage. Therefore, we are safe to claim that the mortality of the human race is designed to serve the cosmic end of being the best and most beautiful creature. But such a statement does not expand our understanding about the particular $\alpha\tau\tau\iota\omicron\nu$ of mortality, for everything in the cosmos is brought into being for the sake of the cosmic end. What, then, are the particular ends the Demiurge appointed to the human race that require its bodily mortality, through which the death of human beings can contribute to the overall cosmic goodness and beauty?

I have investigated the physical process of death in Chapter 2, '2.3 The physical process of death': death starts with bodily decomposition, and bodily decomposition is the result of the elemental solids' decomposition, that is, the solids' component triangles no longer hold on to each other, which is the result of being overcome and cut apart by the food-and-drink-triangles. However, at *Timaeus* 89c Plato says that *'the triangles are so made up, right from the beginning, as to have the capacity to hold up for a limited time beyond which life cannot be prolonged any further'*. Furthermore, as I have pointed out in Chapter 2, '2.2 The constitution of the human body', the bodily elemental solids are subject to the same nature as external elemental solids because the human body is made of materials borrowed from the cosmic body, and when the lesser gods borrowed those elemental solids from the cosmic body, they fashioned them directly into bodily parts without altering their nature (43a1-4). And the four kinds of elemental solids are in constant inter-transformation (58c2-4) and thus would not aggregate as any unit perpetually, which entails the fact that the cosmic elemental solids are perishable, and so are the bodily ones. This then necessitates the perishability of the human body. By the foregoing observation, we can conclude that the decomposition of the body of a human being is physically inevitable, not only because the bodily elemental solids would be eventually overcome and prevailed over by the external ones, but also because such an end is decided by the very nature of its compositional materials at the very beginning when it was created.

Another aspect that is worth stressing is that Timaeus claims that the materials the lesser gods borrowed from the cosmic body were intended to be returned (43a1). This statement is an apparent implication that, apart from the limitation in material nature, death has also been an intentional arrangement for the human race. Further evidence in favor of this claim is that any entity created by the Demiurge himself (41c2-3) is imperishable, or² any entity that is endowed with the nature of indestructibility through the will of the Demiurge (41b4-6) shall be imperishable, like the cosmic body as a whole and the heavenly stars where the lesser gods dwell. But instead of intervening, the Demiurge handed over the task of creating the human race to the lesser gods (except for the creation of immortal souls). Hence, we can say that the Demiurge and lesser gods took advantage of the elemental solids' nature of being perishable and employed them as the materials for the construction of the human body so as to realize the mortality of the human race.

So far we have examined that the bodily mortality of human beings is inevitable for two reasons: one is that the materials that constitute the human body are perishable, and another is that the Demiurge deliberately created the human race as being mortal. So the question that needs to be addressed now is for what purpose the lesser gods chose those elemental solids to create the human race as being mortal.

On Timaeus' account of the ordinances of the Demiurge to the lesser gods (42a-c), apart from the human race, there were still other kinds of mortal being left to be created and they would come into being as a result of the corrupt souls' reincarnation.³ When death occurs, the soul is released from the body (81d4-e1). And the released soul, judging from its former life, if remaining pure and good, will ascend to live a life of happiness with the gods in one of the stars that is appropriate for it (42b3-5); if otherwise, determined by the extent to which it is corrupted, the soul shall reincarnate into the forms of woman and wild animals accordingly and hierarchically (42b5-c4): cowardly and unjust souls reincarnate as women, innocent but simpleminded souls as birds, philosophy-less souls led by their spirited part as reptiles and more mindless sort as snakes, and last the most stupid and ignorant souls into water creatures

² I use 'or' instead of 'and' because it is not clear from the text whether Demiurgic creation and Demiurgic will are both necessary for a created product to be indestructible or alternatively sufficient or mutually entailed.

³ Cf. *Tim.* 90e-92c.

(90e-92c3). We can say that the generation of the other kinds of mortal creatures would not have taken place without the souls being released from human bodies. And the souls' being released from the bodies is the phenomenon that we call death, which would not have occurred without the decomposition of bodily elemental solids. Therefore, we can infer that if it were not for the decomposition of bodily elemental solids, the other creatures, whose coming-into-being is necessary to the completion of the cosmos (41b7-8), would not have come into existence, and thus the cosmos would not have become the best and most beautiful creature the Demiurge wanted it to be. For this reason, the Demiurge or the lesser gods could not and would not alter the nature of the elemental solids that used to be the materials for human bodies, but rather employed such nature to bring mortality to the human race intentionally in order that the cosmos as a whole should become completed. In conclusion, the decomposition of human bodies in due course is indispensably required for the sake of the completion and goodness and beauty of the entire cosmic creation.

What we should bear in mind as the most ultimate purpose for the Demiurgic creation is the overall cosmic goodness; thus, it is then plausible to suggest that the cause for the perishable nature of the elemental solids is congruent with the human body's being constructed out of those perishable materials. As I have mentioned above, the four elemental solids within the cosmos are in constant inter-transformation. If those solids were indestructible, that is, their constituent triangles could hold up together forever and maintain the same kind of elements they have come to be, as the agitation of the Receptacle separates each of the kinds of elemental solids to their own regions (57b-c), those elemental solids would eventually '*reach the point of being thoroughly separated from each other kind by kind, so that their movement towards their own region would come to a halt*' (58a), and the cosmos would be dead inside. But such point has not been reached, as Plato claims at *Tim.* 58a. The interaction among the elemental solids causes permanent non-uniformity among them and thus leads to changes of quantity and position of each kind. In this way, the cosmos maintains perpetual motion within itself and the existence of all kinds of things as designed. What, then, is the connection between the elemental solids that become the materials of the human body and the rest? As we have learned, the bodily solids are meant to be returned to the cosmos; on this account, we can suggest that the bodily solids are supposed to participate in the inter-transformation with the other elemental solids after death, and some

solids or other will, presumably, become the materials of the bodies of newborns. This means that the human body is taking part of the movement of the elemental solids inside the cosmos. Then, what if the elemental solids of the human body were created to be indestructible? First of all, the four kinds of elemental solids that are taken up to constitute the body of the human race would not be returned to the cosmic body. Then given a sufficiently long period of time, with numerous newborns taking up the solids from the cosmic body and at the same time no solids returned, there would not be enough of the four kinds left available for the coming-into-being of other kinds of corporeal entities, like plants, or mountains, etc.⁴ This is because the cosmos is designed to be a sphere (33b4), which means the cosmos has a limitation, though so extreme as to be humanly impossible to reach or even imagine, and thus the materials within it should amount to a limitation in principle. In this hypothetical case, the cosmos would become not as complete and good and beautiful as it is supposed to be because it might lack entities or creatures that are integral to its completion and hence would suffer from an absence of proportionality. Therefore, the opposite case being preferable, the elemental solids that used to be the materials of human bodies must retain their nature of being destructible and in constant inter-transformation in order to maintain the movement of elemental solids in the cosmos and prevent it from being short of materials for other corporeal entities' coming-into-being.

In conclusion, due to the perishable nature of the materials that the lesser gods used to build the human body, the decomposition of the human body is, on the one hand, physically inevitable and thus so is death, and on the other hand, for the sake of both the internal and eternal inter-transformation among the four kinds of elemental solids and the generation of other mortal kinds and thus the completion of the cosmos as a whole, of which the decomposition of our bodies is the essential condition, death is a necessary requirement. Additionally, after the fulfillment of cosmic creation, the death of humans shall also play an irreplaceable role in the continuous generation of mortal kinds and the maintenance of the best state of the cosmos as a whole, for the same reasons I have presented above.

⁴ I didn't mention other kinds of animals because there wouldn't be other kinds of animals if the human race were immortal.

5.2 The combination of immortal soul and body

The most evident resemblance in construction between the cosmos and the human race is that both were created as binding the immortal soul with a physical body. The similarities and dissimilarities in the combination of the soul and body between the cosmos and the human race can be investigated in three aspects: the constitution of the body and that of the immortal soul, and the combination of those two.

In previous argument I have mentioned that the materials the lesser gods used to construct the human body were the four elemental solids borrowed from the cosmic body, and thus the body of the human race is subject to the nature of the four elemental solids. The similarity between the cosmic body and the human body lies in the fact that the four elemental solids, that is, fire, water, air, and earth, are used to construct both bodies. Moreover the cosmic body and the human body are both constructed by bonds that connect the four elemental solids. Whereas the dissimilarity lies in the fact that the ways in which the four elemental solids were bound together to create the cosmic body and human body differ noticeably from each other, and as a result, the cosmic body came into being as indissoluble whereas the human body possesses the mortal nature. First of all, the agency that brought about the cosmic body is the Demiurge himself, while the task of constructing the human body was handed to the lesser gods. Since both the cosmic and human body are things that are bound, and according to *Timaeus* 41b-c, that '*it is true that anything that is bound (δεθὲν) is liable to be undone (λυτόν)*', but for those who have received the guarantee of the Demiurge's will (βουλήσεως) a greater, more sovereign bond (δεσμοῦ) shall not be undone, it is reasonable to claim that the cosmic body, being constructed by the Demiurge himself, must be indestructible unless the Demiurge himself decided to undo the bond (32c), and in contrast, the human body, being created by the lesser gods, who themselves are brought into being by the Demiurge,⁵ must be susceptible to decomposition.

Secondly, the cosmic body's being indestructible and the human body's being decomposable is entailed by the fact that the former's constituent materials were bound proportionately whereas the latter's four elemental solids are riveted together by external forces (43a). How the Demiurge bound together the four elements is as follows (32b3-c8).

⁵ Cf. *Tim.* 40a.

Hence the god set water and air between fire and earth, and made them as proportionate to one another as was possible, so that what fire is to air, air is to water, and what air is to water, water is to earth. He then bound them together and thus he constructed the visible and tangible heavens. This is the reason why these four particular constituents were used to beget the body of the world, making it a symphony of proportion. They bestowed friendship upon it, so that, having come together into a unity with itself, it could not be undone by anyone but the one who had bound it together.

Now each one of the four constituents was entirely used up in the process of building the world. The builder built it from all the fire, water, air, and earth there was, and left no part or power of any of them.⁶

What's worth stressing is that the constituent elements of fire, water, air, and earth here are referred to as an entity of each kind, for instance, fire is a collective name for all the elemental solids of fire within the cosmos. Hence, in the macroscopic sense, the Demiurge created the cosmic body, he established a proportion among fire, water, air, and earth, to bind them together so that the body of the cosmos would be indestructible. And in the microscopic sense, the Demiurge gave the chaotic pre-cosmos forms and numbers, shaping it, arranging proportion within it,⁷ which, however, does not equate with the claim that the Demiurge created every single elemental solid by himself. The relationship between the elements as entities and elemental solids is analogous to the role cells play in the human body, that is, every second, countless cells die and are born, whilst the overall number of each kind of cells remains balanced, and the human body appears to be unchanged. In this case, every single elemental solid within the cosmos can be destructible, whereas the collective of each kind of elemental solids lasts forever. In this case, that the elemental solids can be seen as being both indestructible and destructible, observing from respective perspectives. The relationship between the cosmic body and the human body is analogous to that of a single elemental solids and the kind it belongs. In this sense, we can say that the mortality of the human body contributes to the cosmic body's being everlasting by being a part of the cosmic body.

The cosmic body was shaped as round, which is the most appropriate shape since the

⁶ οὕτω δὴ πυρὸς τε καὶ γῆς ὕδωρ ἀέρα τε ὁ θεὸς ἐν μέσῳ θείας, καὶ πρὸς ἀλλήλα καθ' ὅσον ἦν δυνατὸν ἀνὰ τὸν αὐτὸν λόγον ἀπεργασάμενος, ὅτιπερ πῦρ πρὸς ἀέρα, τοῦτο ἀέρα πρὸς ὕδωρ, καὶ ὅτι αἴρ πρὸς ὕδωρ, ὕδωρ πρὸς γῆν, συνέδησεν καὶ συνεστήσατο οὐρανὸν ὄρατὸν καὶ ἀπτόν. [32c] καὶ διὰ ταῦτα ἕκ τε δὴ τούτων τοιούτων καὶ τὸν ἀριθμὸν τεττάρων τὸ τοῦ κόσμου σῶμα ἐγεννήθη δι' ἀναλογίας ὁμολογήσαν, φιλίαν τε ἔσχεν ἐκ τούτων, ὥστε εἰς ταύτων αὐτῶ συνελθὼν ἄλυτον ὑπὸ τοῦ ἄλλου πλὴν ὑπὸ τοῦ συνδήσαντος γενέσθαι.

Τῶν δὲ δὴ τεττάρων ἐν ὅλῳ ἕκαστον εἴληφεν ἢ τοῦ κόσμου σύστασις. ἐκ γὰρ πυρὸς παντὸς ὕδατός τε καὶ ἀέρος καὶ γῆς συνέστησεν αὐτὸν ὁ συνιστάς, μέρος οὐδὲν οὐδενὸς οὐδὲ δύναμιν ἐξωθεν ὑπολιπῶν.....

⁷ Cf. *Tim.* 53a-c.

cosmos contains within itself all other kinds of things (33b-d), and endowed with circular motion alone (33b-34a), which is especially associated with understanding and intelligence (νοῦν καὶ φρόνησιν, 34a) that can be possessed only by soul (30b). In this case, we can say that the shape and motion of the cosmic body were fashioned in a way that is most congruent with the revolutions of the cosmic soul, which prevents the revolutions within the cosmic soul from being disturbed by rectilinear motions caused by the interaction among elemental solids. On the contrary, though, imitating the revolving shape of the cosmic body, the lesser gods bound the individual immortal souls to a roughly round head (44d) through the marrow,⁸ and they also created other bodily parts so as to carry the head around (44d-45b). This being the case, not only the human body as a whole, but also the bodily elemental solids that are in constant motion of inter-transformation within the body and with the external elemental solids, move in a way that involves all six kinds of motions. Those motions are rectilinear and have no connection with understanding and intelligence, and thus are not compatible with the revolutions within the immortal souls. The conflict between the revolutions of the immortal soul and the rectilinear motions of the bodily elemental solids will lead to disturbance within the former.⁹ As a consequence, a newly embodied immortal soul is deprived of intelligence. Therefore, even though the lesser gods imitated the cosmic soul-body combination to situate the individual immortal souls in round heads, the combination of the human soul and body does not remotely resemble that of the cosmic soul and body in that the latter results in the motion of the cosmic soul is compatible with the cosmic body as a whole whereas the revolutions of the individual immortal souls are disturbed by the human body.

Another dissimilarity between the cosmos and the human race in terms of the combination of soul and body is that the combination of the cosmic soul and body is unique and once for all whereas that the combination of the individual immortal souls and human bodies varies not only in the stage when the human race was first created but also at a later time when the individual immortal souls reincarnate after death. Among all sorts of combination of the immortal souls and bodies, an appropriate proportion between the immortal soul¹⁰ and body is most preferable

⁸ Cf. *Tim.* 73b-d.

⁹ Cf. *Tim.* 43b-44b. For discussion on the occurrence of the 'disturbance' within the body and the immortal soul, see Chapter 3, section 3.2. Πάθημα and αἰσθησις.

¹⁰ I take ψυχήν here as indicating the immortal soul, for the reasons that the other two mortal parts of soul

(87c d), for all that is good is well-proportioned (87c4-5). This being said, according to *Timaeus* 87d1-88b5, neither the combination of a vigorous and excellent soul and a frail and puny body nor the combination in a converse way is desirable, for in the former situation the soul would wear out the body and in the latter the body would become predominant and thus the whole living being would be driven mostly by the natural desire of the body, that is, for food rather than for wisdom. I will focus on examining factors that affect the combination of the immortal souls and bodies as follows.

When the individual immortal souls were first embodied, the variation of the combination of the individual immortal souls and the bodies is determined by the individuality of the immortal souls themselves and that of the human bodies the former was bound with. The individuality of the immortal souls was generated when the Demiurge allotted those newly created immortal souls into diverse stars and showed them the nature of the cosmos.¹¹ The individuality of human bodies can be inferred from the fact that the four elemental solids that constitute the human body are in constant interactions without proportionality, from which it is reasonable to infer that the condition in which the elemental solids interact within human bodies and with external solids is very likely to vary from one body to another. Therefore, to what extent the revolutions of an immortal soul, when first embodied, would be distorted depends on the individuality of this immortal soul and on the motions of bodily elemental solids. The distorted revolutions within an immortal soul can be restored at a later time, and the restoration is subject to the condition of the body with which this immortal soul was bound as well as the education it received later. This being the case, the corruption of some immortal souls that was required for the generation of the other kinds of mortal creatures, is in fact a result of one or another undesirable condition of the bodies those immortal souls were bound with and an uneducated upbringing.¹² In this sense, *Timaeus* claims that no one is wilfully bad (86d7-e1). However, if we consider the combination of the immortal souls and body in relation to the completion of the cosmic creation, we have to admit there must be a portion of individuals in the human race whose immortal souls became corrupt in order that they can reincarnate into other kinds of mortal bodies so that the cosmos

are generated when the immortal soul is embodied and the condition of the latter are thus affected by the interaction between the immortal soul and the body, though this very interaction is realized by the mortal parts. Cf. Chapter 3, section 3.2 The creation of the mortal parts.

¹¹ Cf. Chapter 3, 3.3 The allotment of the individual immortal souls and the cause of evils.

¹² Cf. *Tim.* 86e.

came to be as complete as possible, containing all kinds of mortal creatures.

Likewise, in order to maintain the completion and perfection of the cosmos after the creation stage, there must continuously and always be a portion of individuals in the human race whose corrupt immortal souls take part in the cycle of reincarnation. In that case, the individuality of an immortal soul is determined by how it used to be interacting with the other two mortal parts of soul, which are generated once the immortal soul is embodied,¹³ and affected by this very interaction when embodied in the last body. And the condition of the human bodies that are not made by the lesser gods themselves after the creation stage is determined by the condition of the four elemental solids that constitute them. According to Timaeus' account on the origination of diseases at 82a-86a, it will happen now and then that the body is disproportionately composed of the four kinds of elemental solids via, for instance, inadequate or excessive amounts, dislocation, or incorrect variety of the four kinds (82a2-6) in certain bodily parts. Such disproportionality among the bodily elemental solids will result in many and various diseases. That it is possible that the human body can come to be and become disproportionately constituted guarantees that a portion of immortal souls are inclined to be corrupt if reincarnated into ill-proportioned bodies. In this way, when death occurs, those corrupt immortal souls can then participate in the cycle of reincarnation so as to sustain the generation of all other mortal creatures within the cosmos.

5.3 The Demiurgic concerns for humans

Having the observation of the dissimilarities in the soul-body combination between the cosmos and the human race, the fact that human bodies were inevitably and necessarily created to be mortal and that the individual immortal soul are embodied in and thus disturbed by those mortal bodies seems put us in a much less favorable position to ever succeed in the pursuit of goodness and beauty. This is because mortality makes human beings greatly different in essence from the cosmos. As said in previous discussion, in order that mortality would be realized, the four elemental solids were used to construct the human body. And the four elemental solids, if not regarded collectively, are in constant interactions with one another disproportionately. The

¹³ Cf. Chapter 4.

four elemental solids, used as the material to create the cosmic body and referred to as collective entities, were bound proportionately. However, there is no trace in Timaeus' monologue indicating that the Demiurge had ever endowed the interactions among elemental solids with any sort of proportion. These very disproportionate interactions among elemental solids entails, firstly, the eventual decomposition of the human body that leads to death,¹⁴ which comes to be as a barrier of temporality that constrains human beings' pursuit of goodness and beauty, and secondly, the distorted revolutions within the immortal souls, which, if not restored afterwards, prevent us from understanding the cosmic surroundings correctly.¹⁵ It is not possible for any human individual to strive for goodness and beauty if he or she cannot understand what is goodness and beauty in the first place.

Foreseeing the troubles the mortal body might bring about to the embodied immortal souls, the Demiurge made compensatory arrangement for humans in order to benefit their immortal souls. Briefly speaking, mortality and reincarnation ensures the opportunity for every individual immortal soul to become as good and pure as possible. My argument proceeds as follows. When first created, every individual immortal soul was equally good and pure (41e3-4), which entails that, in principle, every individual immortal soul is able to restore its original good and pure status and ascend to its dwelling star sooner or later (42b). As I have pointed out in previous discussion, the harmonious combination of soul and body is most preferable, and in addition the only way to preserve oneself from becoming soul-body-disproportionate is to make the soul balanced by the body and vice versa at the same time. This being said, the extent to which an immortal soul is able to regain its original goodness and purity by restoring the revolutions within itself is limited by the condition of the body into which it is embodied. And the occurrence of disproportion in the constitution of a body is random, which means that, in principle, the chance that every individual immortal soul may be incarnated in a disordered body (innate or becoming) is the same. This is equivalent to saying that the chance that every individual immortal soul maybe incarnated in a body of good condition is the same. This being the case, even if an immortal soul was embodied into a diseased body in one life, it is still possible that this very immortal soul can reincarnate into a healthy body in the next life and then restore a greater

¹⁴ Cf. Chapter 2, 2.3 The physical process of death.

¹⁵ Cf. *Tim.* 37a-c, the cognitional function of the revolutions within the immortal soul; and 43b-44a, how distorted revolutions within the immortal soul affect our understanding.

extent of goodness and purity. If human beings were created to be immortal, immortality would then preserve an immortal soul's being incarnated in one body and thus prevent it from becoming ever as good and pure as it used to be, if the body it embodied was disproportionately constituted. In that case, mortality becomes desirable since it provides individuals the chance to reincarnate into a healthy body and become as good and pure as possible, or even as its birth status. In other words, without mortality, some immortal souls would be deprived of the chance of restoring the revolutions within them to their original state and then living a life of happiness with the gods in one of the stars that is appropriate for them. Therefore, we can say that although human individual immortal souls' embodiment in mortal bodies is undesirable but inevitable, individuals can take the advantage of their mortality as using different incarnation as intermediary steps towards the perfection and purification of their souls.

We can also see Demiurgic arrangement as compensation for the embodiment of the individual immortal souls from the structural similarities between the cosmos and the human race as discussed earlier and from that the human body is designed to help the improvement of the embodied immortal souls. I will then examine the ends of the affinity in structure between the cosmos and the human race and the purposes of the construction of bodily organs from a causal perspective,¹⁶ that is, for what purpose that is of benefit to the well-being of human beings was the human race created as such.

Take the eyes for instance. According to *Timaeus* 47b5-c4, the Demiurge gave the human race sight so that we can observe the heavenly revolutions and practice these revolutions in ourselves by imitating them in our own souls in order that the disturbed revolutions of our own souls shall be restored. For there is a kinship between the heavenly revolutions and the revolutions within our immortal souls, that is, the planets were placed into the orbits traced by the revolution of the Different within the cosmic soul (38c-d), and the individual immortal souls have their origin in the cosmic soul,¹⁷ and thus the revolutions of the planets can help to stabilize the straying revolutions within ourselves. Furthermore, the celestial motions are supposed to provide measurement for time that represents the sempiternity of the Forms in the corporeal realm (38b-c, 39b-e), whereby we could learn numbers by the revolution of the Same within our

¹⁶ Cf. Chapter 1, 1.2 Αἰτία and intentional teleology.

¹⁷ Cf. Chapter 3, 3.2 The creation of individual immortal souls.

immortal souls, which is akin to that of the cosmic soul. Therefore, it is plausible to suggest that the eyes, though constructed using materials that are perishable,¹⁸ are designed to bring about supreme benefit to human beings, as Timaeus describes (46e7-47b2).

We must next speak of that supremely beneficial function for which the god gave them to us. As my account has it, our sight has indeed proved to be a source of supreme benefit to us, in that none of our present statements about the cosmos could ever have been made if we had never seen any stars, sun, or heaven. 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 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.¹⁹

Likewise, hearing is also invented for the human race to acquire knowledge about harmony by listening to proportionate sound, like speech and rhythm (47d1). At 47d, the studying of harmony is also for the purpose of achieving goodness and purity within the immortal soul. In view of our earlier discussion about the proportional combination of soul and body, the knowledge of heavenly revolutions and harmony can also be applied to the harmonizing of the combination of soul and body by understanding the extent to which the revolutions of the soul should be stabilized so that the soul becomes proportionate to the body. In addition, other bodily organs, such as heart, lungs, and liver, are designed to be associated with the mortal parts of soul in order that the communication with the immortal soul and the body can be realized,²⁰ which then keeps a balance between the immortal soul and the body and in this way the combination of the two can remain well-proportioned.

For instance, the lesser gods even bestow divination upon the human race by setting the receiver of the divination in the region where the appetitive part of soul is situated.²¹ For the appetitive part of soul lacks the capacity of understanding and reasoning but is inclined to be affected in an imagistic manner;²² in that case, the lesser gods invented the liver to receive and return visible images coming from the immortal soul. When this process takes place either in our

¹⁸ Cf. *Tim.* 45b-46a.

¹⁹ τὸ δὲ μέγιστον αὐτῶν εἰς ὠφελίαν ἔργον, δι' ὃ θεὸς αὐθ' ἡμῖν δεδώρηται, μετὰ τοῦτο ῥητέον. ὄψις δὴ κατὰ τὸν ἐμὸν λόγον αἰτία τῆς μεγίστης ὠφελίας γέγονεν ἡμῖν, ὅτι τῶν νῦν λόγων περὶ τοῦ παντὸς λεγομένων οὐδεὶς ἂν ποτε ἐρρήθη μήτε ἄστρα μήτε ἥλιον μήτε οὐρανὸν ἰδόντων. νῦν δ' ἡμέρα τε καὶ νύξ ὀφθεῖσαι μῆνες τε καὶ ἐνιαυτῶν περίοδοι καὶ ἰσημερίαί τε καὶ τροπαὶ μεμηχάνηται μὲν ἀριθμὸν, χρόνον δὲ ἔννοιαν περὶ τε τῆς τοῦ παντὸς φύσεως ζήτησιν ἔδοσαν· ἐξ ὧν ἐπορισάμεθα φιλοσοφίας γένος, οὐ μείζον ἀγαθὸν οὔτ' ἦλθεν οὔτε ἤξει ποτὲ τῷ θνητῷ γένει δωρηθὲν ἐκ θεῶν.

²⁰ For the discussion about the creation of heart, lungs, and liver, and their association with the mortal parts of soul, see Chapter 4, 4.2.1 Anger and the spirited part of soul and 4.2.2 The appetitive part of soul.

²¹ Cf. *Tim.* 71d-e.

²² Cf. Chapter 4, 4.2.2 The appetitive part of soul.

dreams or by sickness, it is called divination. In my opinion, what the liver receives in the form of divination might be the nature of the cosmos and the destined laws that the Demiurge had showed the individual immortal souls before their initial embodiment, the trace of which might have been left in the immortal souls. This explains why only a man with sound mind (σώφρωνι, 72a5) is competent to render judgment on his own divination (72a), for when embodied, the revolutions of his immortal soul are not in their best condition whereas the understanding of cosmic nature and laws would require the well functioning of the revolutions of the Same and Different of the immortal souls.²³ In this way, analyzing divination is of benefit for the restoration of the revolutions of the immortal souls. This being the case, we can now understand why Timaeus thinks of divination as a gift (71e2-3) compensating for the appetitive part of soul's being devoid of understanding and reasoning (71d5-71e1).

In short, the affinity of structure between the cosmos and the human race and the construction and functions of bodily organs demonstrates the compensatory arrangement of the Demiurge for the purpose of the restoration of the revolutions in the individual immortal soul that are disrupted in the first embodiment. The affinity between the cosmos and the human race allows humans as mortal beings to imitate the structural similarities, while the construction and function of bodily organs enables the actual practice of imitation. In this way, the human race is able to bridge their own gap between the cosmos that is a divine and immortal being and themselves as mortal creature by practicing and enhance the similarities between these two.

Conclusion

In this chapter, I have first argued the inevitability of necessity of the mortality of the human race bestowed by the Demiurge with regard to the relationship between the cosmic and human body. I then demonstrated Demiurge's compensatory arrangement for humans in order to benefit their immortal souls by, firstly, showing the structural similarities and dissimilarities between the cosmos and the human race; secondly, arguing that the dissimilarities are denoted by mortality, which can be seen as teleological in that it ensures the opportunity for individual immortal soul to regain perfection and purity; thirdly, demonstrating how bodily organs are

²³ Cf. *Tim.* 37a-c.

created to function as auxiliaries so as to be of benefit for the individual immortal souls.

In the knowledge of Chapter 2, 3, and 4, that is, how the gap of immortality and mortality can be bridged in humans. This chapter has shown how humans, as mortal creatures, can avail themselves of their own immortality and mortality so as to bridge the gap between the cosmos as immortal being and themselves.

Conclusion

In this thesis, I have argued how Plato tries to bridge the gap between immortal and mortal nature in the *Timaeus*. There are three aspects from which this thesis observes Plato's bridging. Firstly, Timaeus' cosmological account introduces the concept of the Demiurge, who was the active agent and cause of the cosmos' coming into being. The interference from the Demiurge enables the 'interaction' between the Forms and the Receptacle: the images of the Forms imprint impressions in the Receptacle. Secondly, in this way, the Receptacle receives distinctive shapes and so come into being the triangles and elemental solids that are the ultimate components of physical bodies. Forms and the Receptacle are integral components in the construction of the cosmic soul and the individual immortal soul as well. But the ways in which the Demiurge created the souls and bodies are utterly different. It entails that, on the one hand, the immortal existents, i.e. the cosmic soul and individual immortal souls, can be connected to and communicate with the mortal existents, i.e. the cosmic body and human bodies, for they have common constituent components; and on the other hand, the immortal souls and mortal bodies appear to be utterly different existents, for they differ in both structure and modes of motion. Knowing that there is indeed similarity between the constitution of the immortal souls and mortal bodies, the separation of the former from the latter no longer seems to be an absolute one. Thirdly, the combination of the cosmic soul and body is very different from that of the human immortal soul and body. The former yields an everlasting creature that is most beautiful and perfect. Whereas the embodiment of the individual immortal souls in human bodies renders the revolutions of the immortal souls disrupted and also gives rise to the two kinds of mortal souls. Since the constitution of the two kinds of mortal souls already contains elements of the immortal soul at the very beginning, the mortal kind of souls are created to be the intermediary between the immortal soul and the mortal body.

From those three aspects, we can see that Plato's attempt at bridging the gap between immortality and mortality is consistent throughout Timaeus' account of cosmic creation. That is, the Demiurge interfered the relationship among the pre-cosmic existents: the Forms, the pre-cosmic becoming, and the Receptacle by imprinting the images of the Forms in the

Receptacle in order to transform the pre-cosmic becoming into proportionate cosmic becoming. In this way, the Demiurge then created the cosmic soul and body employing respective modes of construction. The cosmic soul is immortal, and so does the cosmic body as a whole. Whereas the individual elemental triangles and solids that compose the cosmic body are perishable. The Demiurge then created the individual immortal souls for the human race and handed the rest creative tasks over to the lesser gods. The lesser gods embodied the individual immortal soul in mortal bodies that they created out of materials borrowed from the cosmic body, i.e. the elemental triangles and solids. Thus the human body is constructed to be mortal. The embodiment brings about the generation of the ingredients, out of which the lesser gods created the two mortal kinds of souls as intermediary between the immortal soul and body. Therefore, we can say that the Demiurge's creating the cosmos is his creating the immortal and mortal existents as well as connecting them to each other respectively.

As we can see, the teleology operating behind the Demiurgic creation of the immortal and mortal existents is also consistent throughout Timaeus' cosmology, that is, the completion of the cosmic creation and the goodness of the cosmos as a whole. The Demiurge introduced proportionality to pre-cosmos because he decided order is better than disorder. And he endowed the cosmic body with round shape and rotation in order it is compatible with the revolutions of the cosmic soul, and in this way, the cosmic soul and body can be connected to and interact with each other. The lesser gods, following the Demiurge's commands, intentionally created the human race to be mortal creatures so that death can lead to the release of the immortal souls. The reincarnation of the released immortal souls then brought about the generation of other mortal creatures. In this way, the cosmos becomes and will continue to be complete and perfect. But even in this cosmic-centric teleology, there are indeed concerns for the well-being of the human race. The lesser gods constructed the human race by imitating the combination between the cosmic soul and body: the individual immortal souls are embodied in but thus disrupted by the mortal bodies, whose parts and organs are purposefully designed as compensatory arrangement in order to benefit the disrupted immortal souls. The structural affinity between the cosmos and humans allows the latter to practice and promote the imitation by availing themselves of the purposefully designed mortal body to benefit their immortal souls. In this way, humans, as mortal beings, are able to bridge their own gap with the everlasting cosmos.

Noteworthy is the extent to which Plato has succeeded in bridging the gap between immortality and mortality. The role of a craftsman, such as the Demiurge himself, is indeed indispensable to Plato's bridging-the-gap attempt in *Timaeus* cosmological account, for the 'interaction' between the Forms and Receptacle requires the interference from the Demiurge. This thesis holds on to a literal reading of the *Timaeus* that allows craftsmanship and thus intentional teleology, as I have argued in Chapter 1. Whereas I am aware that a metaphorical reading of the *Timaeus*, which reduces or eliminates altogether the role of the Demiurge, would weaken the argument of this thesis in that, without the interference and creative plan of the Demiurge, the interpretation that the Forms and Receptacle are integral components in fashioning both immortal and mortal existents would be challenged by a question: how come the immortal existents come to be automatically different from the mortal ones if they are composed of common components? A literal reading can answer the question by suggesting the difference to be as the result of creative choice made by the Demiurge with regard to the overall goodness of the cosmos as a whole. But nevertheless, Plato offers no further explanation of the nature of the Demiurge. Maybe Plato thinks introducing the Demiurge is sufficient for the cosmological account in the *Timaeus*, or maybe he thinks the nature of the divine craftsmanship is beyond human capacity. Apart from the Demiurge's indispensable role in Plato's bridging-the-gap attempt, it is also worth paying attention to what Plato thinks humans can actually avail themselves of the bridgeable relationship between immortal and mortal existents. It is that humans can balance the interaction between their own souls and bodies by the means of imitating the proportionality of the cosmos so as to bridge their own gap with the cosmos.

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