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WHAT TIMAEUS CAN TEACH US: THE IMPORTANCE OF PLATO'S *TIMAEUS* IN THE 21ST CENTURY

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ABSTRACT. In this paper, I make the case for the continuing relevance of Plato's *Timaeus*. I begin by sketching Allan Bloom's picture of the natural sciences today in *The Closing of the American Mind: How Higher Education Has Failed Democracy and Impoverished the Souls of Today's Students* (1987), according to which the natural sciences have, objectionably, become increasingly specialized and have ejected humans *qua* humans from their purview. I argue that Plato's *Timaeus*, despite the falsity of virtually all of its scientific claims, provides a model for how we can pursue scientific questions in a comprehensive way that stresses their connections to other disciplines, including the humanities, and that puts humanity *qua* humanity back in the picture. I then argue that being led by Plato's philosophy to return humanity conceptually to the natural world can improve our thinking regarding climate change and other important environmental crises.

KEYWORDS: Plato, *Timaeus*, natural philosophy, Allan Bloom, climate change.

KO TIMAJAS GAL IMUS IŠMOKYTI: PLATONO *TIMAJO* SVARBA XXI AMŽIUJE

SANTRAUKA. Straipsnyje argumentuojama, kad Platono *Timajas* nepraranda aktualumo ir šiuolaikinėje filosofijoje. Pirmame skyriuje apžvelgiamas Allano Bloomo knygoje *Amerikietiškojo proto uždarymas: kaip aukštasis mokslas sužlugdė demokratiją ir nuskurdino šiandienos studentų sielas* (1987) piešiamas šių dienų gamtos mokslų paveikslas, kuriuo Bloomas prieštarauja vis didesnei gamtos mokslų specializacijai ir teigia, esą jie išstūmė žmones iš jų kaip žmonių veikimo srities. Įtraukdamas į Bloomo knygoje iškeltos problemos svarstymą Platono filosofijos perspektyvą, straipsnio autorius teigia, kad Platono *Timajas*, nepaisant beveik visų jo mokslinių pretenzijų klaidingumo, pateikia modelį, kaip galime išsamiai ir visapusiškai kelti mokslinius klausimus, pabrėždami jų ryšį su kitomis disciplinomis, įskaitant

humanitarinius mokslus, o tai sugrąžina į svarstymo lauką žmoniją kaip žmoniją. Antrame straipsnio skyriuje autorius argumentuoja, kad leidžiant Platono filosofijai konceptualiai sugrąžinti žmoniją į gamtos pasaulį, mums pavyktų geriau mąstyti apie klimato kaitą ir kitas svarbias ekologines krizes.

RAKTAŽODŽIAI: Platonas, *Timajus*, gamtos filosofija, Allan Bloom, klimato kaita.

Plato's scientific views are virtually all wrong: women's wombs do not wander through their bodies; humans do not breathe through their skin; blood is not made from food; human livers do not have images on them; oil does not have fire in it; there are no humans on other planets; and so on. Nevertheless, his *Timaeus*, which contains these views, was and remains one of the most important texts ever written in Western philosophy. It is possible, of course, that it is important *despite* these false scientific theories. The *Timaeus* also argues for many other claims that might well be true, including the claim that human happiness consists in contemplating the orderly universe that is our home. When we consider the historical scholarly reception of the *Timaeus*' natural philosophy in particular, we find that it seems to be in desperate need of defense, if it even deserves defense in the first place. Whether it is Benjamin Farrington's claim that "from a scientific point of view, the *Timaeus* is an aberration", or Gregory Vlastos' pronouncement that the *Timaeus* marks a "retrograde turn" in the development of science, Plato's credentials as a scientific thinker have been questioned, to the say the least.¹

One way of defending the importance of the *Timaeus* is by arguing that, although Plato's answers are virtually all wrong, he asks the right questions when it comes to scientific inquiry. This is no small feat: researchers owe a great deal of credit to anyone who can properly coordinate their investigations. Indeed, this is precisely how one British theoretical physicist, Anthony Leggett, has approached the value of the *Timaeus*.²

I do not disagree with Leggett's position. Plato should be praised for asking the right questions, and it is hard to deny the wrongness of many of his answers. I do, however, think that the *Timaeus* has more to contribute to 21st-century

¹ See Farrington 1961: 120 and Vlastos 1975: 29. Lloyd 1968 is a rather balanced assessment of Plato as a "natural scientist," as he puts it, but there are many other negative judgments. Dampier-Whetham 1929: 28 argued that "Plato was a great philosopher, but in the history of experimental science he must be counted a disaster." Riley 1926: 47 said that Plato "was largely responsible for turning back the clock of scientific progress. To explain the workings of the world he preferred imagination to observation." This older scholarship cast so much doubt on Plato's identity as a scientist that even today, we struggle to find positive evaluations.

² See Leggett 2000, who does a commendable job reading Plato as continuous with the history of science, rather than those, catalogued in the previous footnote, who think that he represents a step backwards for or even a step away from serious science.

thought than merely good questions, and there is much to recommend our return to Plato's attitude concerning the natural world. I shall begin by sketching a problem with what Allan Bloom in his famous *The Closing of the American Mind* calls the *natural sciences*, as opposed to the social sciences and the humanities. This problem concerns a deep and pervasive disunity between various departments of natural-scientific research, as well as the inability to find the place of humans and humanity in the world discovered by the natural sciences. Plato's *Timaeus*, I shall argue, offers a way of solving this problem.

Plato, as we shall see, does not just do natural science. He does *natural philosophy*. I maintain that the difference between these two things is that the latter does not suffer from the problem of disunity between its various departments; furthermore, the task of the natural philosopher is not done until he or she has placed humans into the picture. This is because natural philosophy is part of the humanities just as much as it contains the research of conventional natural science.

I shall conclude by arguing that Plato's ultimate natural-philosophical project in the *Timaeus*, in which humans are part of the cosmos and are *not* that for the sake of which the cosmos has come to be, says deeply important things about the on-going climate crisis and the profound loss of global biodiversity that we have witnessed in recent decades. For this last section, I also draw on the tenth book of the *Laws*. I suspect that there is a connection between the disunity that characterizes the natural sciences, our inability to respond meaningfully to the climate crisis, and the way that we humans think of ourselves as outside the natural world. Plato's natural philosophy presents a solution to these deeply urgent contemporary problems. The *Timaeus* can guide humanity back to the natural world: it can find a place for us in the study of the natural world, and it can reorient our thinking about environmental crises.

I have not written this paper in the way that I would write a typical research article on ancient philosophy. In line with the theme of this issue of *Athena*, I am not investigating some particular argument in Plato's dialogues, but rather making a case for the continued relevance of the *Timaeus*. In fact, I am making the case for the *Timaeus*' profound and enduring importance to this moment in 21st-century intellectual and cultural life. Accordingly, I am guided by major themes of Plato's thought, although I occasionally use particular examples and passages from the *Timaeus* and *Laws*, and my arguments here are intended to bring into relief these major themes, rather than reconstruct and defend Plato's arguments. I am writing in the same genre that Melissa Lane wrote in when she produced *Plato's Progeny*, which similarly made the case for why Plato and Socrates should continue to captivate minds today by highlighting the connections between such themes as

“education and legislation, democracy and culture, liberty and self-discipline” (see Lane 2001: 5). Here, I focus on what in particular *Timaeus* can teach us in the face of so much that he got wrong.

Natural Sciences, the Humanities, and Humanity

In his influential *The Closing of the American Mind*, Allan Bloom sounds the alarm on the current state of the natural sciences. Certainly, there is much to praise about them: the tangible benefits conferred by them are immeasurably important, and they present us with impressive achievements in the realm of prediction- and explanation-making (Bloom 2012: 356). However, Bloom sees a growing problem with the natural sciences that calls for remediation. The problem is that the natural sciences suffer from a lack of unity. At first, the connection between the sciences and other departments of “humane learning,” as Bloom puts it, such as philosophy and literature, were severed, but now, even within the sciences themselves, there is increasingly little connection and increasingly profound specialization (Bloom 2012: 349). Bloom never denies that the increased specialization is causally related to the impressive tangible and theoretical achievements: biologists, for instance, are able to explain and produce more when they focus more on biology and on debates within their own discipline. Yet, he does miss the days of Johann Wolfgang von Goethe, whom he holds up as “the last great literary figure who could believe that his contributions to science might be greater than his contributions to literature” (Bloom 2012: 349). Goethe is an important figure in Bloom’s analysis. For he is an example of someone who not only happened to do both poetry and science, but his science and poetry went hand in hand as guided by meditations on the world and its beauty.

Bloom laments that the relationship between the humanities, natural sciences, and social sciences has become paper-thin. The relationship is “purely administrative,” in the sense that they come together only at the start of a student’s undergraduate education as part of breadth requirements for a bachelor’s degree (Bloom 2012: 350). Bloom paints a powerful picture:

The great scientists of the nineteenth and twentieth century were in general cultivated men who had some experience of, and real admiration for, the other parts of learning. The increasing specialization of the natural sciences and the natural scientists gradually caused the protective fog to lift. Since the sixties the scientists have had less and less to say to, and to do with, their colleagues in the social sciences and humanities. The universe has lost whatever polis-like character it had and has become like the ship on which the passengers are just accidental fellow travelers soon to disembark and go their separate ways (Bloom 2012: 350).

The image of a ship that we researchers are all sharing accidentally, not *together* in any meaningful sense, captures the heart of Bloom's criticism. It also calls for the remediation that, as I shall argue below, Plato's *Timaeus* provides.

Before turning to the *Timaeus*, let us consider what the two major consequences of this state of the natural sciences are, according to Bloom. There is no sense in Bloom's writings that this has left facts about physics or chemistry undiscovered. This is, of course, a possibility, but the criticism is not that the natural sciences are any worse *as* natural sciences due to a lack of a substantial connection between them and the humanities.

The first problem is that the natural sciences lack a foundation. The scientists in these disciplines, Bloom thinks, are so interested in the questions that are so relevant and urgent at the time that they do not spend much time thinking about the foundations that are presupposed by the questions (Bloom 2012: 345). The focus on these questions is fair and legitimate, but it is the *opportunity cost* that Bloom is targeting here. As he puts it, progress in the sciences no longer appears to researchers as dependent "on the kind of comprehensive reflection given to the nature of science by men like Bacon, Descartes, Hume, Kant, and Marx" (Bloom 2012: 345). Foundational questions are neglected because they simply do not seem necessary to make progress on the questions that any given researcher is currently trying to answer. This is perhaps the only sense in which the natural sciences suffer from the lack of connection with the rest of humane learning: it is not that they struggle with producing impressive results, but that they struggle to understand themselves.

The second problem is that the natural sciences are limited in what they can say about what it means to be a human being. Of course, Bloom does not deny that the natural sciences can talk about human beings as organisms with a certain kind of digestive system with a certain physiology or as three-dimensional objects who are constrained by certain laws of physics and thermodynamics (Bloom 2012: 356). Yet, they cannot speak about humans *as* humans. Again, this is not a problem for the natural sciences *qua* natural sciences, but "it is certainly a problem for us that we do not know what this thing is, that we cannot even agree on a name for this irreducible bit of man that is not body" (Bloom 2012: 356-357). The "definitive ejection of man" from nature and from what is studied by natural science has worsened our *own* self-understanding.³ Let me also add to Bloom's view that I

³ I get the sense that he would not have been bothered by the silence of the natural sciences when it comes to humans *qua* humans if there were truly nothing for them to say about us. Bloom 2012: 357 gets at this obliquely when he says that "the divisions between the two camps resemble truce lines rather than scientific distinctions. They disguise old and unresolved struggles about the being of man."

suspect that this has led to an understanding of human beings as so separate from nature that some environmental problems are badly misunderstood. I shall argue below that we can think more sensibly about major environmental catastrophes threatening 21st-century society by finding a place for humans in nature. This is not part of the problem as Bloom himself saw it, but I think that this is something that Plato can solve.

The natural sciences, as Bloom sees them, are far removed from what we might call *natural philosophy*: the discipline that researches the same questions as the natural sciences but in a way that is interested in what goes on outside the sciences and in a way that finds a place for humanity *qua* humanity.⁴ Plato's *Timaeus* provides us with a model for a different way of pursuing natural-scientific questions, one that solves Bloom's problems. In what remains of this section, I shall first describe Plato's comprehensive reflections on natural-scientific questions; then, I shall describe the way that he fits humanity into this picture; and then I shall explain why even the *humanities*, not just the natural sciences, would benefit from taking the Platonic approach to intellectual life. In the next section, I shall explain how Plato's view can help us think through environmental problems.

It behoves me now to reconstruct Plato's natural philosophy before I proceed to describing his methodology. The *Timaeus* presents the reader with two cosmic principles: Reason and Necessity. Reason (*nous*) is exemplified by the Demiurge, also known as God, and his servants, whom scholars usually call the *lower gods* or the *young gods*. The forces of Reason act for the best and are guided in their creative acts by perfect, intelligible models. They are, however, limited by the principle of Necessity. Necessity appears in different guises through *Timaeus*' cosmogony and zoogony. It is present in its most prominent form as whatever exists in the material world that the forces of Reason are acting on that prevent them from completely achieving their aim of making the world as perfect as the intelligible models are. We can conceive of this as a source of resistance to the gods' creative labour that is internal to the world. These two explanatory principles yield the world as we experience it today: good and beautiful, yet also inescapably imperfect. This is the broader picture that Plato applies to the natural world.

Plato's approach to scientific questions is what I shall call *exhaustive*. In the history of philosophy and science, there are different ways of characterizing approaches to explanation-giving. Lloyd Gerson, in *Aristotle and Other Platonists*,

⁴ Bloom never makes a distinction, as far as I can tell, between natural sciences and natural philosophy, but Saul Bellow, the Nobel-winning novelist, does allude to this distinction in his introduction to Bloom's book (see Bloom 2012: 12).

distinguishes between top-down approaches and bottom-up approaches.⁵ To take a bottom-up approach is to explain a thing by means of appealing to its smallest and simplest parts. In ancient Greek philosophy, atomism and Epicureanism are the most visible examples of bottom-up philosophical traditions because they explain things and their properties by appealing to the nature and composition of their simplest parts, namely, atoms. To take a top-down approach is to explain a thing by appealing to a first or higher principle. For instance, instead of explaining the existence of a human being in terms of atoms, we could explain the existence of a human being in terms of God's creative activities. Gerson thinks that Plato's philosophy stands as the foremost example of a top-down approach. I agree that it *is*, but what is remarkable is that Plato *also* takes a bottom-up approach. This is what I mean when I say that Plato's approach to scientific questions is *exhaustive*: there is both a top-down and a bottom-up approach.

Let me illustrate this with an example from his biological system: human digestion (*Timaeus* 77c-81e).⁶ Plato believes that digestion is facilitated by fire that is internal to our bellies. Fire itself is analysed as a collection of tetrahedra sharp enough to cut up the food. This reduces the food to resources that are so small that they are able to travel through the bloodstream and replenish our tissues that have been worn down by use and by the environment. Plato's explanation is a very crude grasp of how we today know that digestion works. He is ignorant of the explanatory items in today's theories, such as enzymes. Enzymes are proteins that act on molecules and convert them into different molecules. Lactase, for instance, converts lactose into a compound that is useful for the body; people without lactase cannot digest lactose properly. Tetrahedra have a similar role in Plato's own explanation. Of course, I am not alleging that Plato's view is merely today's view with different explanatory terms. For Plato's view lacks virtually all of the complexity and explanatory power of today's theory. Consider that Plato could not explain why some people are unable to digest lactose while others can. Since he maintains that all of us have internal fire, and all digestion is facilitated uniformly by this fire, he is not able to explain obvious phenomena that we are able to explain today.

Nonetheless, this example suffices to show that Plato *does* produce bottom-up explanations of the natural world. His explanation of digestion hypothesizes explanatory items, such as an internal fire, and then tells us how they are able

⁵ See Gerson 2005: 31-32 and also the applications of this distinction throughout Gerson 2014.

⁶ See Schroeder 2021 and Pelavski 2014 for thorough studies of Plato's theory of digestion. In this paper, I am more interested what we can learn about Plato's overall approach than in the details of the theory.

to function as explanatory items by reducing them to their smallest or simplest components, such as the tetrahedra that make up fire, and appeals to the properties of those smallest components, such as the sharpness of the tetrahedra that allows them to cut up the food. The explanation he gives is a familiar reductive and mechanistic one.

As far as this sort of bottom-up explanation is concerned, Plato is not challenging the way that we do science today. In fact, his views can fit comfortably into the history of biology. However, what I want to note about Plato's approach is that he *also* provides a top-down explanation of digestion in the same passage (77c-81e). Throughout his explanation, he stresses that the gods are the ones responsible for this system. In order to explain why the digestive system has the physiology that it does, he appeals to higher explanatory principles: namely, the gods. Today we might say that the gods have nothing to do with our physiology; let us say for the sake of the argument that atheism is true. Still, we can appreciate the point that Plato thinks that biological explanations sometimes require looking outside biology. Consider how he brings cosmology into his theory:

Now both processes, the replenishment and the depletion, follow the manner of the movement of anything within the universe at large: everything moves toward that which is of its own kind. In this case, our external environment continually wastes us away and distributes our bulk by dispatching each [elemental] kind toward its own sort. The ingredients in our blood, then, having been chopped up inside us and encompassed by the individual living thing as by the frame of the universe, of necessity imitate the universe's motion. And so, as each of the fragmented parts inside moves toward its own kind, it replenishes once again the area just then depleted (81a-b).⁷

In this passage, Plato is describing the way in which the resources produced from food travel through our body as blood, complying with the same laws of physics that govern all corporeal things in the cosmos. To this extent, our bodies are microcosms, small reflections of the whole cosmos. Plato has provided yet another top-down explanation, one that is atheistic and that does not feature theology.

This is what it means for Plato's explanations to be *exhaustive*: they are both top-down and bottom-up. They are bottom-up in the sense that they are mechanistic and rely on features of the smallest components of the natural world. They are top-down in that they appeal to higher principles of explanations, perhaps the gods or the general workings of the cosmos. When Bloom laments that the natural sciences do not feature *comprehensive reflections* on the world, Plato's *Timaeus*

⁷ All translations of Plato are from Plato 1991, collected and edited by John Cooper and D.S. Hutchinson, with only slight revisions by me.

provides a model for correcting this.⁸ We do not even need to ask scientists to *stop* doing anything. Nothing is wrong with the bottom-up, mechanistic explanations that pervade the natural sciences. We just have to *add* conversations with other disciplines: for instance, cosmology, physics, or whichever disciplines might have something to say about higher principles. In particular, Bloom thinks that we ought to bridge the natural sciences and the humanities.

Let us talk about how we could add the humanities to the natural sciences. Again, Plato provides a model. In the *Timaeus*, he maintains that human happiness consists in aligning our lives, souls, and bodies with the organization of the cosmos.⁹ Consider this important passage:

Now there is but one way to care for anything, and that is to provide for it the nourishment and the motions that are proper to it. And the motions that have an affinity to the divine part within us are the thoughts and revolutions of the universe. These, surely, are the ones which each of us should follow. We should redirect the revolutions in our heads that were thrown off course at our birth, by coming to learn the harmonies and revolutions of the universe, and so bring into conformity with its objects our faculty of understanding, as it was in its original condition. And when this conformity is complete, we shall have achieved our goal: that most excellent life offered to humankind by the gods, both now and forevermore (90c-d).

Plato is saying here that caring for the soul – *self-care*, really – is a matter of familiarizing ourselves with the harmonies of the universe and bringing our soul in line with that harmony. In fact, the same goes for the body. His views of exercise and bodily health are such that just as the corporeal world is in constant motion, so too must we keep our body in constant motion (88b-e). Exercise is the process of assimilating our body to the body of the world.

Remarkably, Plato has brought into the discussion of the natural world what it means to be a human being. We could not restore the original condition of our souls without studying physics, cosmology, and astronomy.¹⁰ This does not

⁸ One more point that I shall make about how Plato views the body is that he does not see it as a collection of distinct systems. The *human body* is a system in its own right. (For that matter, we might more precisely say that the *human being* is a system, composed of a body and a soul.) Today, we walk through a hospital and see specialists in digestion, respiration, each organ of the body, and so on. In contrast, Plato thinks all of these things work together in a way that makes them inseparable. (There is not, in fact, a discrete theory of *digestion* in the *Timaeus*; there are only reflections on the way that digestion works in service of other processes that in turn keep us alive.)

⁹ This idea has been tremendously influential. For instance, Diogenes Laertius reports that the Stoics believed that “this very thing constitutes the virtue of the happy man and the smooth current of life, when all actions promote the harmony of the spirit dwelling in the individual man with the will of him who orders the universe” (VII.88; translated by R.D. Hicks). This reminds us that we do not have to be a Platonist to accept the broad outlines of Plato’s view.

¹⁰ See Carone 1997 for an inquiry into the ethical function of astronomy for Plato.

mean that every question in the humanities involves questions associated with the natural sciences, nor does it at all mean that natural scientists will always engage with the humanities. Yet, there is a *bridge* between these parts of humane learning that can be made if we follow the example of the *Timaeus*. Understanding of this aspect of the *Timaeus* allows us to better appreciate the unity of the dialogue, too. Scholars sometimes struggle to see the place of Plato's practical philosophy in the *Timaeus*. Consider, for instance, Charles Kahn's claim that Plato's ethics appears in the introductory portion of the dialogue as an echo of the *Republic's* system that is then followed up in the *Critias* (see Kahn 2013: xv). There is a more natural reading of the *Timaeus* in which ethics does not drop out only to reappear in the sequel: instead, the introductory conversation that is led by Critias is introducing certain motifs of human conduct and virtue that are sustained throughout the whole dialogue.

Plato's methodology can make it difficult to see these points. Luc Brisson described Plato's methodology in the *Timaeus* well when he characterized Plato as going *beyond nature in order to explain it* (see Brisson 2013: 213 for an example). This is a result of the top-down approach to the natural world: we need a principle higher than anything in the natural world in order to explain the natural world. It can be easy to lose sight of human beings in such a picture. That is why its combination with the bottom-up approach is so crucial. Plato does tell the reader that Timaeus' speech will "begin with the origin of the universe and conclude with the nature of human beings" (27a). It is our job as readers to see why a cosmogonical tale should conclude with the nature of human beings *and* why an account of the nature of human beings should begin with cosmogony. Plato's answer is that neither is complete without the other.¹¹

At one point, Bloom paints a sad picture of the humanities today as an "almost submerged old Atlantis," one without "the semblance of order, no serious account of what should and should not belong, or of what its disciplines are trying to accomplish or how" (Bloom 2012: 371). Plato gives the humanities a mission: to answer some of the most important questions, including the question of how we become happy. Humanists who want to continue answering the questions that they have been working on for years can continue to do so, but we can *add* something to the humanities: research projects that involve collaborating in the Platonic spirit with astronomers, physicists, cosmologists, and so on, in order to figure out what

¹¹ Compare Plato's natural philosophy with Cole 1977: 75's description of workaday science: "taking as one's task the characterization of the whole of physical nature with a view to illuminate each part and event is significantly different from the workaday study of this sort of thing or that. The study, for example, of living things, while gratifyingly general, is not cosmological."

our place is in the natural world. Perhaps we will discover that Plato was even more wrong than we initially suspected: not just wrong about how digestion works but about what our place is in the cosmos. Figuring that out means following in his footsteps and disproving his views, followed by further investigations into what our place in the cosmos actually *is* in order to discern the correct answer. In this way, if we are guided by the picture of humanity, intellectual thought, and natural-philosophical explanation that we inherit from the *Timaeus*, we can remediate the natural sciences as Bloom saw them by means of exhaustive, comprehensive reflections, as well as by means of a serious focus on what it means to be a human *as human* and on bridging the gaps between the departments of humane learning.

Plato and Environmental Thought

I suspect that one of the problems Bloom articulates – namely, the ejection of humans *qua* humans from our conception of nature – is part of a larger difficulty with how we think about our relationship to the environment. Bloom never says this, and it is hard to prove that this is the case. What we can say with a much greater degree of confidence, however, is that Plato's *Timaeus* – and, in the same way, the tenth book of the *Laws* – can help correct this way of thinking. Specifically, the problem is that we do not see ourselves as part of the natural world. The environment is something that surrounds us but stands apart from us. This bleeds into the way that questions about environmental ethics are posed in the news media, in political discourse, and even in contemporary environmental-ethics articles and classes.

For instance, some environmental ethicists will ask whether we should save humans or save nature. The debate is between conservation, on the one hand, and feeding the poor, on the other hand. Rosalind Hursthouse sets up such a problem (see Hursthouse 2007, especially 169). She argues that although we might have a duty to the environment to severely limit our use of greenhouse gases on account of their contribution to anthropogenic climate change, we might simultaneously have a duty *not* to do this on account of the immense harm this will do to society's most vulnerable people who depend on the amazing industrial achievements humanity has made through the use of greenhouse gases. At a certain level of analysis, she is right that this is a possibility, and there is a way of framing our duties to the environment as possibly in competition with duties to humans. However, her observation assumes that our duties to society's most vulnerable members can be satisfied *if we do not limit our greenhouse-gas emissions*. She overlooks the fact that vulnerable people will be harmed by the consequences of climate change and other environmental crises. In fact, they might be the people made *worst* off by these

problems because they lack the material resources required to mitigate the harms from these crises. While we can observe that people will be harmed by satisfying our duties to the environment, we ought to also observe that people will be harmed *if we do not*.

Not all environmental ethicists set up a misleading opposition between helping humanity and helping the environment (see, e.g., Rolston 1996). This opposition does pervade contemporary environmental ethics, but it is even more pervasive in political and news-media discussions. For instance, we often see a competition between economic and environmental interests. Even to the extent that there might, in fact, be economic damage to a firm's bottom-line profits by saving the environment, nevertheless the very people who would be negatively affected by whatever pro-environment action we are taking would ultimately be harmed by *failing* to conserve the environment.¹² They live on the same planet as everyone else.

Furthermore, there would undoubtedly be gross economic damage in the event of some environmental catastrophe. It is shortsighted to say that economic interests exist in some vacuum and, for that matter, that humans exist apart from the environment. Humanity cannot win if nature loses. This point can be made with respect to other environmental challenges beyond merely climate change. For instance, consider the loss of biodiversity. At one level, we might weigh human interests against the interests of other species, such as bees. At another level, however, we might see that human interests would be *damaged* by the loss of bees and other species. The nature of this damage varies from case to case, but the idea is that humans in one way or another rely on the ecosystems in which other species play a crucial role. The general picture that I am painting, in anticipation of a discussion of Plato's views, is one in which humans are *part* of a whole, rather than forming a distinct whole in their own right.

Indeed, Plato's *Timaeus* helps us appreciate this insight. In Plato's natural philosophy, humans exist for the same reason as the planets and all the animals: we exist to advance the resemblance between the created world and the intelligible model that God looked to as a blueprint during the cosmogony (39e-40a). God has a purpose when creating the world, which is to make this world resemble this

¹² Of course, there are exceptions: e.g., wealthy people who are so old that there is no realistic chance that they will be harmed by climate-related problems before they die. Furthermore, some wealthy people will be able to use their considerable wealth to mitigate the harms that they might face due to climate change, but even in that case, they cannot use the wealth that they are spending on harm-mitigation on other things that they might otherwise enjoy. Ultimately, though, my point is that economic interests in general depend on other kinds of human interests, bearing in mind that certainly there are exceptional *individuals* with exceptional investment portfolios.

model as much as possible. We humans are a tool by which God does this, and we on a par with all the other living things who, similarly, exist for that purpose.¹³

This view culminates in the *Laws*, where Plato's main character, the Athenian, addresses those who do not believe in God's orderly design and deep care for even the smallest detail, and declares that even these atheists contribute to the perfection of the cosmos:

The supervisor of the universe has arranged everything with an eye to its preservation and excellence, and its individual parts play appropriate active or passive roles according to their various capacities. These parts, down to the smallest details of their active and passive functions, have each been put under the control of ruling powers that have perfected the minutest constituents of the universe. Now then, you perverse fellow, one such part – a mere speck that nevertheless constantly contributes to the good of the whole – is you, you who have forgotten that nothing is created except to provide the entire universe with a life of prosperity. You forget that creation is not for your benefit: you exist for the sake of the universe (*Laws* X 903b-c).

Plato's argument is based on the nature of craft and expertise. Doctors, for instance, do not sacrifice the whole for the sake of a part, but they will often have to sacrifice a part for the sake of the whole, as they go about curing a body of some illness. Similarly, we humans are merely part of the cosmos. The cosmos is that for the sake of which *we* exist. We exist in order to achieve God's purpose of cosmic perfection, which in the *Laws* is conceived of as the victory of virtue over vice. This means that even the smallest detail of the cosmos is worthy of God's attention as he steers things towards the victory of virtue. So, each human being, even unknowingly or unwillingly, contributes to the cosmos.

The Athenian is speaking to the hypothetical atheist in this passage, but he might as well be speaking to all of us in the face of climate change, rampant pollution, and the catastrophic loss of biodiversity: *all of us are mere parts of the larger natural world*. Accordingly, if this thought guided us as we formulated questions about the environment, we might be led to thinking through the careful system of which we humans are a part. This does not mean that we have to accept Plato's view that God diligently manages and supervises the whole universe. After all, atheists might be right. It does mean, however, seeing that our economic interests are *part* of the natural world, such that environmental damage can cause, among other things, economic damage, and that we cannot have economic prosperity – or any kind of human prosperity – if the environment that humans are a part of fails.

¹³ For Plato on the coming-to-be of humans and non-humans from the same pool or inventory of souls, see Campbell 2022.

Plato only rarely comes up in discussions in environmental ethics. The reason for this is that some researchers portray him as deeply environmentally unfriendly. Val Plumwood, for instance, argues that Plato believes that nature is chaotic, and it is up to intelligent agents, either God or human beings, to colonize nature and introduce rationality to it; furthermore, she thinks that Plato believes that we humans should deny – and even disdain – the part of us that exists in the natural world and instead focus on a life of contemplation that is as far removed from nature as possible (see Plumwood 1993: 69–103). Plumwood is not alone, either: Eugene Hargrove argues that Plato asks his readers to cultivate an attitude of indifference to the corporeal world, such that Plato came to “accept and ignore environmental change as inconsequential” (see Hargrove 1989: 80). Robin Attfield held that Plato’s teleological worldview in which everything is ordered towards the good prevented him from ever being concerned about the environment (see Attfield 1994: 21).

There are a few scholarly defenses of Plato’s pro-environment credentials, but only a few.¹⁴ These criticisms of Plato appear to misread the text. For example, John Passmore maintains that Plato thinks that the natural world has only instrumental value (see Passmore 1980: 27, 101, and 106). It is hard to believe that this could be the case, when we saw in the above passage from the *Laws* that the whole natural world is the thing that the gods are primarily invested in perfecting; the things that exist in it, *including us humans*, are the things with instrumental value. It is true that Plato would deny the intrinsic value of every species of animal, such as frogs, but that is only *because* they are merely parts in a world that *does* have intrinsic value overall, and we humans are no exceptions. Plato is far from holding that the natural world is a tool and that the gods designed the world anthropocentrically.

As for Plumwood’s criticism that the life of contemplation and reason is what is best for us, consider that much earlier we saw the passage from the *Timaeus* that it is the orderly cosmos that we need to contemplate and then assimilate ourselves to (*Tim* 90c-d). In this passage, we are told that we need to come to “learn the harmonies and revolutions of the universe” (90d). Our happiness depends on it. Further, a few lines earlier, Plato warned us against a life in which a person has “become absorbed in [his or her] appetites or [his or her] ambitions and takes great pains to further them” (90b). There is a rather pro-environmental message here: we should not make our lives about satisfying our appetites or advancing our ambitions, but instead we should pay attention to the orderly universe around us. This begins with correcting what Bloom saw as problems in the first section above:

¹⁴ The only two that I can find are Mahoney 1997 and Carone 1998, both of which are compelling defenses of Plato.

we need to put humanity conceptually back into nature, which is our home and the object worthy of our attention.

What I am driving at is the idea that seeing humanity as part of the natural world should help us reframe some of the most pressing questions facing us today. It is not *humanity or nature*, in the sense that we can save only one; it is not *humanity against nature*, in the sense that economic or other interests need to be weighed against environmental interests; it is *humanity within nature*. Plato calls on us to think of humanity and humans as parts of the natural world, rather than forming a distinct unified whole that exists side-by-side other species who themselves are distinct unified wholes and the whole natural world that is a distinct unified whole.

I suspect that our tendency towards the erroneous, non-Platonic view is related to the fact that the natural sciences are remarkably good at talking about nature as something that contains humans *qua* three-dimensionally-extended bodies and *qua* living organisms with such-and-such a kind of skeletal system, and so on, but they do not engage at all with the identity of the natural world as a home for humans *qua* humans. We leave some of the most important questions unasked and unanswered by having taken this approach, and we leave both the natural sciences and the humanities in a worse state as a result. By no means is Plato always right. In fact, I began this paper by saying that he is virtually entirely wrong about the natural world. Yet, there is an approach to science, to the world, and to human beings that we find in his dialogues that helps make the case for the continuing relevance of his philosophy. Plato emphasizes that humans are merely parts of the cosmos, that parts exist for the sake of the whole, and that we exist on a par with, not as masters of, other parts of the natural world, and this approach might be exactly what we need as starting points of thought and culture as we tackle climate change and other issues. Accordingly, Plato helps us rethink the relationship between humanity and the natural sciences, as well as between humanity and the natural world. This is what Timaeus can teach us.

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