Making Sense of 'The Appropriate' in Plato's *Timaeus*

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Graduate Department of Philosophy
University of Toronto

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Plato seems to have taken the concept of appropriateness, as expressed by the two word-families to prepon and to prosêkon, to be of considerable value in cosmological speculation, judging from a number of passages in the Timaeus. The same language was used by Xenophanes (B26, in Diels-Kranz’ Die Fragmente der Vorsokratiker) and possibly by Anaximander (A26, D-K). A fresh examination of these words in their contexts shows that the accounts of prepein and prosêkein in Liddell, Scott, and Jones’ Greek-English Lexicon (9th ed., 1996) are incomplete. An epistemic interpretation of these verbs, when they are used impersonally, e.g. "it makes sense," "it is plausible," "it stands to reason," or "it is likely," is sometimes an important aspect of their composite sense and sometimes makes better sense of the text than does its main rivals. Those rivals are a moral one, on one hand, e.g. "it is right," "it is necessary," or "it is obligatory," and a generally normative or "quasi-moral" one, on the other, e.g. "it is fitting," "it is suitable," or "it is appropriate."

In chapter one I present a case against the adequacy of moral or quasi-moral interpretations of this language in a sample of cosmological texts in the Timaeus. Chapter two illustrates, from a number of passages in non-Platonic authors, that the epistemic sense of this language was available to Plato. Chapter three shows that Plato himself used this language epistemically in a number of texts other than the Timaeus. In chapter four I make use of the results of chapters two and three to illuminate Plato’s meaning in Timaeus 29b, and
29d. regarding methodological discourse; 38a, 38b, 48b, 50d, and 62d. regarding meta-cosmological discourse; and 33b, 35b, 51a, 52c, 54c, and 55d. regarding cosmological discourse. I conclude this chapter with an estimate of how this study affects our overall interpretation of the Timaeus. In chapter five I argue that since Plato stands in a tradition of using language of this kind in this way to speculate in matters strictly speaking beyond verification, there is good reason to interpret both Xenophanes B26 and Anaximander A26 epistemically as well.
Acknowledgements

This dissertation sees the light of day largely because of the support I received while writing it. My mentors, Tom Robinson, Doug Hutchinson, and Brad Inwood, gave generously of their time and energy, were gracious and encouraging in helping me to take my first philological steps, and constantly radiated a sense of scholarly adventure. Financial support came in the form of an Ontario Graduate Scholarship, 1995-96; an Instructorship in the Department of Philosophy to teach PHL 303: Plato, Fall 1995; a Research Assistantship to produce the Department’s Newsletter, to maintain its web site, and to assist as required its Chair, Mark Thornton, 1996-97; and a tuition bursary from the School of Graduate Studies. January 1997. My wife, Brigitte, has managed in these years of government cutbacks to get enough teaching contracts to keep body, soul, and us together. Her contributions of time, enthusiasm, and sensible discussion can best be described as inspiring. It is to her that I dedicate this work.
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1: Why We Need an Epistemic Construal of prep- and prosēk-

Now and then in the cosmological passages of the *Timaeus* Plato says that something is appropriate or fitting. The net effect of this, particularly when such language is applied to the cosmos itself, and by implication to its maker, is that both are thought of as being good in some vaguely normative, moral, or quasi-moral manner. But as the sample of texts included in this chapter suggests, in some cases there are good reasons to doubt that this is at all a correct translation, and in other cases there are good reasons to doubt that it conveys Plato’s meaning completely.

*Timaeus* begins his discourse naturally enough with some methodological remarks (27d-29d). The upshot of this section is that, given the sort of thing the world is, the best one can hope for in cosmology is plausibility. Knowledge, strictly speaking, is out of the question simply because the world is physical. The best possible, he says, is a "plausible account" (*eikōs logos*) or a "likely story" (*eikōs muthos*). This appears to be a way of making non-arbitrary decisions about things strictly speaking beyond our reach, a ‘way of opinion.’

Plato probably did not invent this ‘way.’ In the transition from the Way of Truth to the Way of Seeming Parmenides speaks of the deceptiveness of mortal words in cosmological speculation. By this he appears to mean that discourse about physical nature, by virtue of its reliance upon opposites -- i.e. multiplicity, fundamental discreteness among two or more things or processes taken to be real -- for explaining natural change, is in fact for that very

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1 The relevant texts are: 29b, 29d, 32b, 33b, 38a, 38b, 38e, 39b, 41c, 41e, 42b, 46d, 48b, 50d, 51a, 52c, 54c, 55d, and 62d.
reason inherently incapable of representing reality just because reality is in his view something single and not multiple. The only other kind of thing there might be, in addition to a real thing, would be a non-real thing, i.e. a thing which does not exist. But of course nothing actually is non-existent (except perhaps in language, and therefore, deceptively, in thought). Still, Parmenides does not therefore conclude that there is simply nothing worth saying about the natural world:

Here I stop my trustworthy speech to you and thought
About truth; from here onwards learn mortal beliefs,
Listening to the deceitful ordering of my words;
For they established two forms in their minds for naming,
Of which it is not right to name one -- wherein they have gone astray --
And they distinguished opposites in body and established signs
Apart from one another: here, on the one hand, aetherial fire of flame,
Which is gentle, very light, everywhere the same as itself,
But not the same as the other; but on the other hand, that one too by itself,
In contrast, dark night, a dense and heavy body;
All this arrangement I proclaim to you as plausible
(ton soi egō diakosmon eikota panta phatizō)
Thus no opinion of mortals shall ever overtake you [fr. 8.50-61].

In this fragment Parmenides contrasts the Way of Seeming, which is plausible at best, with the Way of Truth, which surely aims to go well beyond mere plausibility: fragment 8.1-49 strongly gives the impression of a goddess who knows that what she is saying is true.

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2 Parmenides' confidence in his conclusion that "there is only one way left, namely that it is," as Furley shows, is based upon strictly formal considerations: "Stripped to its essentials, Parmenides' argument takes the following form: Either p, or q, or both p and q. But not q. And if not q, then not both p and q. Hence 'it remains' that p" (39). Furley observes that "there is no positive reasoning to support the claims of this (continued...)"
Xenophanes, by tradition Parmenides' teacher, also seems to have made use of this idea of plausibility, most likely in a theological context. In fr. 34 Xenophanes points out that human beings engage in speculation concerning the gods and "all things" (probably including cosmology, as part of natural philosophy) from behind a veil of ignorance (fr. 34):

... and of course the clear and certain truth no man has seen nor will there be anyone who knows about the gods and what I say about all things. For even if, in the best case, one happened to speak just of what has been brought to pass, still he himself would not know. But opinion is allotted to all.5

If no one will ever know about the gods, it follows that every potentially informative utterance about the gods expresses something other than knowledge, viz. opinion. This does not imply that no opinion is true, but only that the truth of any opinion could never be definitively ascertained. Nor does it imply that some opinions aren’t better than others.

Consider the following "opinions" concerning the divine in the fragments of Xenophanes:

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5(...continued)
remaining Way: its only recommendation is that its rivals have been refuted" (D. Furley, "Truth as What Survives the Elenchos," in D. Furley, Cosmic Problems: Essays on Greek and Roman Philosophy of Nature [Cambridge: Cambridge University Press, 1989]) 44.


The range of ‘all’, in ‘opinion is constructed in all cases’, is obviously likely to be determined by the area in question. But we do know at least that all claimed knowledge about the gods falls under Xenophanes’ denial. So the entire framework, taken for granted by Homer and Hesiod, of generally accepted truths about the gods, on which in particular rested their own claims to be speakers of interesting truths, is here swept away [19].

1. "Ethiopians say that their gods are snub-nosed and black; Thracians that theirs are blue-eyed and red-haired" [fr. 16].

2. "Mortals suppose that gods are born, wear their own clothes and have a voice and body" [fr. 14].

3. "If horses or oxen or lions had hands or could draw with their hands and accomplish such works as men, horses would draw the figures of gods as similar to horses, and the oxen as similar to oxen, and they would make the bodies of the sort which each of them had" [fr. 15].

4. "Homer and Hesiod have attributed to the gods all sorts of things which are matters of reproach and censure among men: theft, adultery, and mutual deceit" [fr. 11; cf. fr. 12].

5. "One god is greatest among gods and men. not at all like mortals in body or in thought" [fr. 23].

6. "... whole he [sc. the god] sees, whole he thinks, and whole he hears" [fr. 24].

7. "... but completely without toil he [sc. the god] shakes all things by the thought of his mind" [fr. 25].

8. "... always he [sc. the god] abides in the same place, not moving at all. nor is it seemly for him to travel to different places at different times" [fr. 26].

I see no reason to disagree with general scholarly opinion that opinions 5-8 represent Xenophanes' own views and that opinions 1-4 report and implicitly criticize the views of others.\(^6\) It would follow, if this scholarly opinion is correct, that Xenophanes thinks opinions 5-8 are *better* than opinions 1-4. But in what sense or senses are they 'better'? How can one evaluate competing opinions regarding the non-evident in terms of their likelihood of being

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true, since one is not, on Xenophanes' view, able to determine which opinion or opinions are in fact true? As Hussey notes, Xenophanes' criticism of the Homeric and Hesiodic theologies does not, of course, entail the falsity of the Homeric and Hesiodic accounts of the gods; only that those accounts are not well based and cannot be treated as 'known for certain'. From many other fragments and reports it is clear that Xenophanes took them to be not only improbable, but religiously and morally offensive as well. Any account of the gods will not only not be able to put itself forward as known for certain, but will, to command Xenophanes' approval, have to be built on some radically new foundation.  

It is hard to see how this "radically new foundation" might be correctly construed in terms only of purified moral and religious canons of acceptability. While such canons seem to do a reasonable job of accounting for opinion 4 and an at least prima facie reasonable job of accounting for opinion 8, opinions 1 and 2 appear rather to express Xenophanes' awareness of culturally relative, literally anthropomorphic tendencies on the part of human beings when they engage in theological speculation. Opinion 2 seems clearly to imply that mortals mistakenly suppose that gods are born, wear their own clothes, and have voices and bodies. But what inference we are to draw as to Xenophanes' own view on the subject of divine embodiment is not clear: both interpretations -- that the god has a divine body, that the god has no body -- have been defended.  

If Xenophanes held that that which is divine has no body, then any depictions of gods, including those of the Ethiopians and the Thracians, would be implausible ones simply because they are depictions. According to this interpretation, Xenophanes thought that the reason gods are neither snub-nosed nor red-haired is not that their noses are hooked and that

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7 Hussey 19.

8 For a useful discussion of this point, see Lesher 97-102.
their hair is some color other than red, nor is it that theological matters stand such that if the gods are snub-nosed then they cannot also be red-haired, nor is it that the gods have beaks rather than noses and are bald rather than hairy; the reason that the gods are neither snub of nose nor red of hair is that gods do not have bodies at all. This would explain why, if it is the god who "shakes all things," he must do so with his mind. It would also go some way toward explaining why the god sees, thinks, and hears "whole;" for the language of part and whole seems to make more sense when applied to a body than to a mind, because the latter does not obviously have parts. But it must be conceded that it does not explain very well why it would not be "fitting" for the god to travel from one place to another, as though it were better for him to stay in one spot; for if the god has no body, how can he either move or stay in one place?

On the other hand, Xenophanes might have meant that the divine has a special sort of body. This is suggested by the god's being unlike mortals in body and in thought (opinion 5) and his being capable of some kind of mental activity (opinions 6 and 7). Thus the god is unlike mortals in respect of mind but possessed of mind nonetheless. It seems plausible, then, that whatever dissimilarities there might be between human and divine bodies does not extend to the point of existence in the former case and non-existence in the latter one. Still, why it would be inappropriate for the god's body to travel from here to there is not clear, particularly in light of opinion 7, which seems to imply that there is no need for it to do so.

It might be useful to ask on what grounds Xenophanes might reasonably have expected that anyone would believe his opinion concerning divine embodiment. He has not given us that information, but we might speculate that he reasoned along some such lines as
follows. Suppose that the Thracians held that the gods had blue eyes and the Corsicans held that they had brown eyes. Clearly it would be arbitrary to decide in favor of either color rather than the other; an impartial judge would easily see that any reason pro on the part of the Thracians could with equal plausibility be countered with a reason contra on the part of the Corsicans. There is clearly no way to resolve theological differences as long as the debate remains on this level. But now suppose that divine bodies are not at all like mortal ones, whatever this might finally amount to. Then the dilemma between brown and blue eyes is obviously a false one, the relevant dilemma being rather between the gods' having eyes and their not having eyes. (In case Xenophanes held the incorporeality thesis, the dilemma is between embodiment and non-embodiment.) Whatever else might be said for or against such a way of proceeding in theological speculation, it does seem to have at least some usefulness for resolving otherwise undecidable differences of opinion. It resolves differences by abolishing the very terms in which those differences were cast. The price to be paid consists in giving up as illusory all anthropomorphic depictions of the god: some consolation, however, might be found in its being a price to be distributed equally among all. This speculation, if correct, seems to suggest that the canon of plausibility is to Xenophanes' way of reckoning superordinate over those of religious and moral acceptability, both because the former comprehends and gives whatever force both of the latter are thought to have, and because in so doing it is evidently adequate to the task of making sense of all of the opinions listed above and not only some portion of them. As well, it makes sense out of, and so accounts for, Xenophanes' apparent belief that there is in fact a reasonable prospect of real intellectual progress in obscure things, as frr. 18 ("Indeed not from the beginning did gods
intimate all things to mortals, but as they search in time they discover better") and 35 ("Let these things be accepted, certainly, as like the realities") suggest, even if the final truth about topics in theology (and probably natural philosophy, including cosmology)\(^9\) might forever elude us.

Recall that Hussey, cited above, said that "Xenophanes took them [i.e., the Homeric and Hesiodic accounts of the gods] to be not only improbable, but religiously and morally offensive as well" (emphasis mine). In general, however, it seems preferable to use the word "plausibility" rather than "probability" wherever possible in order to avoid any suggestion that the ancient and modern conceptions of probability -- on the questionable assumption that the ancients had a concept of probability at all -- have something in common. "Plausibility" conveys the idea of the degree to which one account is to be accepted as being more likely to represent the truth than another account is, and is in fact still the basis upon which certain types of legal verdicts are to be rendered (e.g. the jury’s decision as to the defendant’s guilt or innocence). "Probability" by contrast conveys the idea of the statistical likelihood of one event’s occurring rather than another. Rescher describes the concept of plausibility as follows:\(^{10}\)

The core of the present conception of plausibility is the notion of the extent of our cognitive inclination towards a proposition -- of the extent of its epistemic hold upon us in the light of the credentials represented by the sources from which it derives.\(^{11}\)

Rescher then goes on to drive a wedge between the plausibility of a thesis and its probability:

\(^9\) Frr. 19, 27, 28, 29, 30, 31, 32, 33, and 37 (Lesher 120-148).


\(^{11}\) Rescher 14.
The plausibility of a thesis will not be a measure of its probability -- of how likely we deem it, or how chagrined we would be to find it falsified. Rather, it reflects the prospects of its being fitted into our cognitive scheme of things in view of the standing of the sources or principles that vouch for its inclusion herein. The key issue is that of how readily the thesis in view could make its peace within the overall framework of our cognitive commitments, considering that we find it generally easier to stand by the declarations of sources we class as reliable and correspondingly trustworthy than those of sources whose reliability we evaluate as less substantial.\textsuperscript{12}

The Greeks had a concept of plausibility, he continues, but not of probability as it is currently understood: "the Greek idea of truth-likeness, verisimilitude, or 'approximation to what must actually be so' ... represents an altogether different fundamental construction of the plausible/probable from that which ultimately gave rise to the calculus of probability.\textsuperscript{13}" He cites in support of this claim, *Metaphysics* 1010a4, which makes no sense if it is construed in terms of probability (or of likelihood, for that matter). Here Aristotle rejects the metaphysical theory of certain philosophers: they speak plausibly (*eikotês*) but do not say what is true (*alêthê*). Fortunately, "probability" is not the only way of talking about "approximation to what must actually be so;" "likelihood" will do just as well, and will make the ensuing discussion clearer than it would otherwise be. The concept of likelihood indeed seems most similar to what contemporary epistemologists call the revised concept of "subjective probability." Lehrer, for instance, construes this kind of probability in terms of "degrees of belief representing rational betting quotients," by which he means expressions of belief in the


\textsuperscript{13} Rescher 38 n. 1.
most likely outcomes of events based on some species of rational calculation. Lehrer's concept of the 'best bet' is very useful in the context of making forecasts. But we must distinguish another kind of 'best bet' in order to deal adequately with the cases I am interested in here, which seem at least sometimes to have nothing to do with the repeatability of events. While sometimes the 'best bet' *qua* forecast is precisely what is needed, in Xenophanes' frs. 18 and 35 what seems required is not an 'expected outcome' but rather a 'reasonable guess,' on the supposition that Xenophanes' hope is in these cases not related to making more accurate *predictions* but rather to making more accurate *inferences* or gaining superior *insight into the way things actually are,* "approximation to what must actually be so," as Rescher puts it. If so, then while Xenophanes' *eoikota tois etumoisi* may well *mean* "[being] like the realities" (Lesher) or "resembling the truth," it seems to *amount to* "being plausible" or "being likely."

We might profitably imagine hypotheses of this non-demonstrable but nonetheless more or less plausible sort as being put to a jury deemed rationally competent to decide and whose rendered verdict functions in an important sense as the criterion of rational acceptability. This does seem to be the model for reasonable persuasion in Aristotle's *Rhetoric.* Bumeyeat, in an illuminating discussion of Aristotelian enthymeme, argues that an

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enthymeme was not originally a syllogism missing a premise, as is commonly thought, but rather a "consideration" or "a sort of argument" distinct from full-blown syllogistic demonstration. In syllogistic demonstration, Aristotle says at Posterior Analytics 1.2. 71b20 ff., one infers a necessary conclusion "from premises which are true, primary, immediate, better known than, prior to, and causative of the conclusion."\(^{16}\) Rhetoric, on the other hand -- what Burnyeat calls "relaxed" reasoning -- is useful in lawcourts or in discussions modelled on them; for in rhetoric

the task of a speaker is to prove a case to the satisfaction of an audience (pistis). That is above all a matter of demonstrating various things (apodeixis tis), and a speech that sets out to demonstrate various things (apodeixis rhetorike) does it by presenting considerations for the audience to think about (enthumēma).\(^{17}\)

The idea that in such "informal reasoning," as it would later be designated, what matters is the vote of the voter, recurs at Topics 8.11, 161b34 ff.:

One ought not to demand that the reasoning of every problem should meet with the same general acceptance and be equally convincing; for it is an immediate result of the nature of things that some subjects of inquiry are easier and some more difficult, so that, if a man carries conviction by means of views which meet with the widest acceptance possible, he has argued well.\(^{18}\)

Burnyeat claims that "this is the moment at which enthymeme is first focused as an object of


\(^{18}\) E.S. Forster (tr.), Aristotle: Topica, in Tredennick, Posterior Analytics. Emphasis mine.
logical study," and interestingly observes that "more often than not, it [i.e. enthymeme] is argument in a context where certainty and conclusive proof are not to be had .... yet a judgment must be made." He interprets eikos helpfully in terms of "common sense" so as to acknowledge, as he puts it, that "eikos is a good deal more culture-relative than 'probability'." Thus construed, eikos naturally figures prominently in legal contexts, where neither the speaker nor the audience is typically expert in the topics being debated -- and, we may add, is reasonably to be expected when authors such as Xenophanes and Parmenides feel themselves to be speculating about what is beyond verification.

Something similar to this is going on in the Timaeus. A "plausible account" or "likely story." we saw, is the best one can hope for in cosmology, according to Timaeus. He has, indeed, a good deal of argument to back this claim up, which is the sort of thing one would expect when dealing with non-self-evident matters. Why, then, does he conclude his methodological statement by saying that it's good not to look for more, as though one had an option? And why does he appear to repeat himself?

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20 Bumyeat, "Logic" 26 n.66.

21 Bumyeat, "Logic" 21.

22 Similarly, E. Garver (Aristotle's Rhetoric: An Act of Character [Chicago: University of Chicago Press, 1994] 145) says that "in deliberative and instrumental reasoning, reason persuades me because I want it to; otherwise I would not have engaged in reasoning in the first place. Prior to deliberation, I am committed to following reason where it leads, because I am deliberating about means to an end I already have" (emphasis mine). In the sort of cases we are considering, cosmological or theological ones, that end seems to be: trying to figure out what is most likely by means of what is most plausible.
Don't be surprised then, Socrates, if it turns out repeatedly that we won't be able to produce accounts on a great many subjects -- on gods or the coming to be of the universe -- that are completely and perfectly consistent and accurate. Instead, if we can come up with accounts no less likely than any, we ought to be content, keeping in mind that both I, the speaker, and you, the judges, are only human. So we should accept the likely tale on these matters. It behoves us not to look for anything beyond this (hōste peri toutōn ton eikota muthon apodechomenous prepei toutou mēden eti pera zētein).

The usual interpretation of this methodological conclusion is in a generally normative manner. However, Timaeus does not argue that it is wrong or in any way bad to succeed in acquiring knowledge in the case of the universe; rather, it is not possible to succeed. Is it then perhaps wrong or bad to try to succeed to acquire cosmic knowledge? But there is no suggestion that any divinity is threatening those who would try; rather, there is only inevitable defeat because the object of investigation is incapable of yielding knowledge.

Still, it's somehow obvious that it's not a good idea to attempt the impossible. What

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23 Unless otherwise indicated, all translations of the *Timaeus* in this chapter are those of D.J. Zeyl, in J.M. Cooper and D.S. Hutchinson (edd.), *Plato: Complete Works* (Indianapolis: Hackett, 1997). As a matter of convention, I italicize foreign words and things I wish to emphasize and underline words I merely wish to point out without implying any emphasis in so doing.

24 D. Lee (*Plato: Timaeus and Critias* [London: Penguin, 1965, 1977]): "one should not look for anything more than a likely story in such matters," H.G. Zekl (*Platon: Timaios*, [Hamburg: Felix Meiner, 1992]): "so ist es angemessen, darüber hinaus nichts weiter suchen zu wollen," L. Brisson (*Platon: Timée/Critias*, [Paris: Flammarion, 1992]): "il ne sied pas de chercher plus loin," and F.M. Cornford (*Plato's Cosmology* [London: Routledge and Kegan Paul, 1937, 1956]): "it is fitting that we should, [i.e. we should] in these matters, accept the likely story and look for nothing further." In the case of citations from Plato’s *Timaeus*, I compare the translations of the object passage from the editions indicated above in the hope that it will be illuminating to do so. For sometimes translation A will notice an important feature of the Greek that translation B misses; sometimes A simply emphasizes a different aspect of the Greek than B does; occasionally all that can be said is that (for whatever reasons) A and B agree.
is it about Timaeus' argument which makes it appropriate to be satisfied with plausibility?

What does he mean by "it's appropriate?" *Does* he in fact mean "it's appropriate?" Or is there a more satisfying way of rendering Timaeus' words so that they mean what they must reasonably mean, namely that *one should be willing* to accept such an account in such a context, where "should" denotes, not a canon of morality or quasi-morality, but rather of *reasonability*?

One of the premises which supports Timaeus' conclusion contains a semantically similar word, *prosēkei*. He uses it to say something about the relationship between an account and what it is an account of:

> Now in every subject it is of utmost importance to begin at the natural beginning, and so, on the subject of an image and its model, we must make the following specification: the accounts we give of things have the same character as the subjects they set forth. So accounts of what is stable and fixed and transparent to understanding are themselves stable and unshifting. We must do our very best to make these accounts as irrefutable and invincible as any account may be (*kath' hoion te kai enelenkois prosēkei logos einai kai anikêtois, toutou dei mèden elleipein*). On the other hand, accounts we give of that which has been formed to be like that reality, since they are accounts of what is a likeness, are themselves likely, and stand in proportion to the previous accounts, i.e., what being is to becoming, truth is to conviction [29b-c].

In this case my sample of translators does not even agree whether *prosēkei* is to be construed normatively rather than non-normatively. Zeyl seems to leave it unconstrued altogether, on the supposition that it is *hoion te* and not *prosēkei* which is rendered by "may." Is Timaeus perhaps making a comment of a non-normative sort about the kinds of things which are natural for accounts just because they are accounts, as Cornford suggests?²⁵ That seems

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²⁵ "so far as it is possible and it lies in the nature of an account to be incontrovertible and irrefutable, there must be no falling short of that."
somehow unlikely, given that there are two different kinds of accounts, each with its own degree of "stability." Is Timaeus perhaps making a comment about what is and is not somehow *permitted* or tolerated in the case of accounts, as Zekl suggests? If so, who or what permits or tolerates such things in the case of accounts? Is it perhaps a matter of what is appropriate for accounts, as Brisson suggests? But what does it mean to say that it's appropriate or fitting for a discourse to be irrefutable and invincible? For one thing, only rational speech has any hope of being irrefutable. Is Timaeus then making a comment about rational speech as opposed, say, to aesthetic speech, i.e. poetry? Is he perhaps suggesting that some arguments are irrefutable and invincible but inappropriately, or somehow or other wrongly, so? That doesn't seem likely, since having an irrefutable argument would seem to be the closest one can come to having truth itself, the sort of thing Xenophanes would be content with, and something pre-eminently desirable. How is one to specify the sort of normativity relevant to arguments, if indeed the word is to be taken normatively?

Timaeus uses the same language in two other broad contexts, namely to talk about cosmological discourse and to engage in cosmological discourse. For an example of the former, consider the digression on the appropriate use of language at 37e-38a. His argument may be analyzed as follows:

(1) It's ___ to predicate "was" and "will be" of the becoming that passes in

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26 "soweit das überhaupt geht und Reden unwiderlegbar sein dürfen und unbesiegbar, dürfen sie es da an nichts fehlen lassen."

27 "pour autant qu'il est possible et qu'il convient à un discours d'être irréfutable et invincible."
(2) It's ____ for anything which is always changeless and motionless to become neither older nor younger in the course of time;^9

[therefore]

(3) According to the true account it’s ____ to predicate only "is" of something changeless. even though we do predicate "was" and "will be" of it as well.^0

When we think it's appropriate to say X and inappropriate to say Y, we generally and reasonably expect approval in the first case and disapproval in the second. And it is clear that there is an aspect of approval and disapproval involved in this sort of case. But again the disapproval appears to be cognitive rather than moral in tone: there do not seem to be any moral consequences of not getting this language right. The so-called "inappropriate" or "wrong" language seems in a case like this one to be incorrect language, given Timaeus' metaphysical commitments, rather than bad language, given whatever social sensibilities he might have, and as the epithet "inappropriate" might easily suggest. Still, it does make some sense to suppose that one ought to prefer speaking correctly to speaking incorrectly, that someone who prefers incorrect speech to correct speech is somehow perverse -- certainly a normative matter. One might even reasonably claim that the very notion of "correct speech" is inherently normative insofar as it involves criteria for distinguishing the good from the bad.

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^8 to de eîn to t'esi peri iên en chronôi genesin iousan prepei legesthai -- kineseis gar eston.

^9 to de aei kata t'auia echon akinêtôs ouden presbuteron ouden neôteron prosêkei gignesthai dia chronou.

^0 legomen gar dê hôs eîn estin te kai estai, têi de to estin monon kata ton alêthê logon prosêkei.
and the better from the worse. But the precise question I want to deal with is how to understand that kind of normativity, what the sense is in which one ought to prefer the correct to the incorrect. It is in some sense appropriate to do so, to be sure; but that does not tell us precisely what "appropriate" means in such a case.

For two cases in which Timaeus uses this language in relation to the universe itself we may cite 33b and 54c. In the former he says that the Demiurge gave the universe the appropriate shape (to prepon), namely a sphere. In the latter each of the 'elements' is said to have its own appropriate (ta prosêkonta) shape. These shapes do not seem to be understood simply as those which have been arbitrarily assigned by the Demiurge to the fundamental units of fire, air, water, and earth and to the whole universe; rather, he seems to have assigned them to them for a number of reasons, including that they are in some sense the finest (kallista. 30a, 53b) of shapes. This tells us that the Demiurge is motivated by the criteria of to prepon, to prosêkon, and to kalon, but it does not tell us how to think of these criteria. So what makes one shape better than another? It cannot be how beautiful they look, since no color is assigned to these natural bodies and since shape without color cannot be seen. Could the Demiurge have assigned the various shapes differently, or would doing so have violated some supra-cosmic normative order presumed to govern even him? If so, is the normativity best construed in terms of appropriateness? If not, how might we more profitably construe it?

At 52c Timaeus argues that copies of Forms, i.e. the four kinds of ultimate natural bodies, exist in something, and this something is the Receptacle (Place or Space). Because an image is borne neither by itself nor by the thing it is an image of, it must come to be present
in something different, namely the Receptacle. This "must" cannot be either moral or quasi-moral in sense, since there is no question that the Demiurge might have had to -- or, for that matter, have even been able to -- prepare the Receptacle in such a way that it reflects things accurately, since it has its own inherent nature, whatever it is, from eternity (52d). Nor, consequently, can there be any obligation upon the Demiurge to do something to the Receptacle, or upon the Receptacle to have one character rather than another, either: it simply has whatever character it has. There are no alternatives for it. But in that case, what sense does it make to talk about it in moral or quasi-moral terms, if, that is, the language is intended normatively?

A large number of these questions can be intelligibly and satisfyingly answered by virtue of the hypothesis I suggest in this dissertation. I will argue that the apparent oddity of Plato's use of to prepon and to prosēkon in a cosmological context is an illusion resulting from a misinterpretation of this language. I propose a new, widely unrecognized and not yet clearly established, construal for to prepon and ω prosēkon. This construal may be thought of as essentially epistemic in sense, and when used this way it performs cognitive and rational tasks. The epistemic sense of this language appears in general to be useful for dealing with that which strictly speaking falls short of knowledge, i.e. within the domain of intelligent opinion or rationally informed guesswork. It seems to have two related applications: (1) to estimate the likely character of things objective (better rendered as "it is likely" than "it is probable"), on one hand, and (2) to express one's state of rational consciousness (well-

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31 dia tauta en heterōi prosēkei tini gignesthai.
rendered as "it makes sense," "it stands to reason," or "it is plausible") on the other. A helpful way of conceiving their relationship seems to be as follows: if some person S (or, if S is not reasonably qualified to judge, S's proxy, someone reasonably qualified to judge, i.e. an expert) finds A to be more plausible, i.e. to make more sense, than B, then S has good reason to regard, and perhaps ought rationally to regard, A as being more likely to be true, or as being more likely to represent the truth, than B is. One might object that, despite finding quantum mechanics less intelligible than Newtonian mechanics, most people accept the former as more likely to be true than the latter. This objection is easily met by observing that most people's acceptance of quantum mechanics as being superior to Newtonian mechanics is not due to any insight of their own into the explanatory preferability of the former to the latter, given that they are in all likelihood not sufficiently well acquainted with the data requiring explanation to be able to tell which theory performs better; rather, their confidence, such as it is, is borrowed from and dependent upon that of the experts, who are reasonably deemed most competent to decide. These experts, in turn, could not reasonably accept quantum mechanics over Newtonian mechanics as being more likely unless they were of the opinion that the former made more sense in relation to the data to be explained than did the latter, i.e. did a superior job of accounting for those data.

It is naturally not always clear whether or not the context is simply epistemic and not also, for instance, what I have called "quasi-moral," i.e. generally normative. This may help to explain why the epistemic sense of these two verbs was for so long overlooked. In such cases, a reasonable and sensible compromise between "it is appropriate" and "it makes sense" -- a compromise which itself both seems appropriate and to make sense -- is called for. This
compromise or intermediate sense may often plausibly be rendered by "it is reasonable" or "it is sensible."

My review of the literature revealed surprisingly little on the subject of the use of this kind of language at all, let alone in cosmological or theological contexts. Pohlenz had written an article on to prepon, but his main concern was with Stoicism. Besides that, I found no record of scholarship specifically concerned either with to prosēkon or with the puzzling fact that Plato, and before him Xenophanes and perhaps Anaximander, seem to have thought it was appropriate, or made sense, to apply criteria of appropriateness not only to discourse about the universe and the gods but to the very universe and gods themselves.

The plan of this thesis is as follows: chapter two illustrates, from a number of passages in non-Platonic authors, that the epistemic sense of this language was available to Plato. The texts I have selected are as follows: Sophocles (Antigone 92, Electra 639, 1213, Philoctetes 111); Euripides (Orestes 1071); Herodotus (History 2.120.4); Xenophon (Memorabilia 1.4.4, Anabasis 3.2.15-17, Cyropaedia 2.1.15, Symposium 8.26, Apology 24);

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32 M. Pohlenz, "To Prepon: Ein Beitrag zur Geschichte des griechischen Geistes", in Nachrichten der Gesellschaft der Wissenschaften zu Göttingen, Philologische-Historische Klasse (1933), 53-92. Pohlenz was interested in Panaetius' concept of decorum, which Cicero said was similar to the Greek to prepon. See W. Miller (tr.), Cicero: De Officiis (London: Heinemann, 1913, 1921) 1.27-43 and pertinent comments by M. Pohlenz (Stoa und Stoiker [Zurich: Artemis Verlag, 1964, 1950] 234-37) and J.M. Rist (Stoic Philosophy [Cambridge: Cambridge University Press, 1969] 190-94). Lesher (111) would later claim pretty much the same thing about epiprepô with respect to Xenophanes fr. 26 as Pohlenz did about prepô.

Isocrates (Panathenaicus 206, Areopagiticus 2, Antidosis 230, Callimachus 57); Isaeus (Philoctemon 11, Hagnias 6, Euphiletus 9); and Demosthenes (Aphobus I 59, Eubulides 34). Chapter three shows that Plato used this language epistemically himself in Charmides 154e, Ion 539e, Lysis 221b, Menexenus 238a, Republic 2.362c, Theaetetus 150a, Sophist 230e, Statesman 309c, Phaedrus 259b, Laws 3.678c, 11.931d, and 12.950c. In chapter four I make use of the results of chapters two and three to illuminate Plato’s meaning in Timaeus 29b and 29d, regarding matters of method; 38a, 38b, 48b, 50d, and 62d, regarding meta-cosmological discourse; and 33b, 35b, 51a, 52c, 54c, and 55d, regarding cosmological discourse. I conclude this chapter with an estimate of how this study affects our overall interpretation of the Timaeus. In chapter five I use the results of chapters two, three, and four to re-interpret Xenophanes B26 (epiprep-) and Anaximander A26 (prosēk-).
2: Extra-Platonic Evidence for an Epistemic Use of prep- and prosēk-

Homer, Hesiod, Pindar, and Aeschylus

The root sense of prep-, as is known from Homer and Hesiod, is visual. Between their time and that of Pindar and Aeschylus, according to Pohlenz and Lesher, prep- had come to acquire a new, distinctly normative meaning. In so doing, however, it did not shed either its older, distinctively non-normative meaning or its joint -- or perhaps not-yet-analyzed -- non-normative and normative meaning.

The non-normative sense of prep-, X is plain to see, or X stands out from Y, is in Homer and Hesiod restricted to the visual domain, but by the time of Aeschylus includes those of olfaction and audition as well. This sense is illustrated in Homer, Iliad 23.453, where a particular horse in the race is clearly perceptible in the dust cloud; Pindar, Pythian Ode 2.38, where Ixion embraces a cloud that looks like Hera; and Aeschylus, Agamemnon 1428, where blood is visible on Clytemnestra's face, Agamemnon 1311, where Cassandra

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34 Pohlenz, "To Prepon" 53:

Das Verbum prepō ist Homer ganz geläufig, um die in die Augen fallende äußere Erscheinung ... zu bezeichnen. Bald verwendet man es dann besonders für die Züge, die als charakteristisch für diese Erscheinung empfunden werden, und von da aus wird es in Aischyllos' und Pindars Zeit zu einem Wert- und Normbegriff, der besagt, daß das ins Auge Fallende dem Träger der Erscheinung 'ansteht', normaler Weise an ihm vorhanden ist und vorhanden sein soll.

For Lesher, see below.
observes that the air coming from her house smells like that from a tomb, and *Libation Bearers* 18, where Orestes hears Electra wailing.\(^{35}\)

The combined -- or not-yet-analyzed -- sense is generally rendered as "outstanding" or "pre-eminent," and seems to connote both obviousness and excellence. For examples of this type see Homer, *Iliad* 12.104, where Sarpedon thinks of himself as *pre-eminent* over all others, and *Odyssey* 8.172, where Odysseus says that fine speakers stand out from the crowd in a positive manner (a similar point is made by Hesiod at *Theogony* 92; cf. 377 and 430); Pindar, *Isthmian Ode* 5.44, where Aegina is praised as a *glorious* isle, and *Pythian Ode* 7.13, where reference is made to a *famous* victory at the Olympian festival of Zeus; and Aeschylus, *Eumenides* 995, where Athena forecasts *pre-eminence* for Athens.

The new, if vague, normative sense of *prep* is as a rule construed by translators quasi-morally in some such way as "it is appropriate," "it is proper." or "it is fitting," morally as "it is right" or "it is obligatory," or more generally normatively simply as "it is good." In the case of Pindar, more mundane, social expectations or pressures are in play at *Olympian Ode* 2.46, where *it's appropriate* [= good, proper, fitting] for Aenesidamus' son to be praised, because he won a prize at Olympia. In the case of Aeschylus, one may cite *Suppliants* 195 and 203, both of which involve behavior deemed appropriate for, or expected of, foreigners in

\(^{35}\) Interestingly, Pindar construes *prepei* literally and metaphorically in *Pythian Ode* 10.67, where, like gold, an upright mind reveals its true nature when tested by the touchstone. The "revelation" and correlative "sight" involved in the case of discerning the uprightness of a mind cannot, clearly, be sensory sight; it must rather be mental or intellectual in kind. Even proto-behaviorism, on the off-chance that that describes what Pindar has in mind here, requires rational interpretation of observable behavioral data. The step from "mental seeing" to "making sense," i.e. to understanding, I note, is neither at all a big one nor one which we are unfamiliar with.
need of protection while in another's territory: in the former text they are to answer questions put to them by the local authorities in a manner appropriate for, or socially expected of, foreigners, i.e. submissively; the reason is given in the latter text: it's not appropriate for those inferiors to speak boldly to their superiors.

Braswell agrees with Pohlenz that it is only with Pindar and Aeschylus that prep- comes to bear a distinctively normative sense, Pohlenz' "anstehen" being equivalent to Braswell's "fitting." Braswell himself analyzes the normativity involved into moral and aesthetic kinds:

While Pindar sometimes employs the verb in its older sense "to be conspicuous" (cf. Py. 10.67), he uses it much more often, as here, in the new moral (and aesthetic) sense "to be fitting", which is first attested (in Pindar and Aeschylus) in the fifth century and which later became an important technical concept of philosophy ... and literary criticism. It is unclear whether Braswell intends a combined moral-aesthetic normative sense; at any rate he cites no illustrative cases of this new normative type. The most likely case of specifically aesthetic usage would seem to be Olympian Ode 3.9, where Pindar says he is going to combine melody, air, and verses in a fitting manner. Compare this to Pythian Ode 4.147, where Pindar's meaning seems more probably moral than aesthetic: Jason tells Pelias that "it is unfitting for us two to divide up the great prerogative of our forefathers by bronze-piercing swords or by spears." Lesher's semantic taxonomy of prep- usefully sums up the discussion so far:

37 Braswell 46.
Both prepō and epiprepō range across three different (but loosely related) senses: [1] what something seems or appears to be (or be like), [2] what something characteristically is (or is like), and [3] what is fitting or seemly for something to be; that is, from what is empirically evident, to what is objectively the case, to what is normatively correct.38

Prosēk-, which is first attested in Aeschylus, also has both non-normative and normative senses. Chantraine39 lists only two senses, "«concerner», et au sens particulier d'«être apparenté à»." The entry in Liddell, Scott, and Jones (hereafter LSJ)40 is more complete. They claim that prosēk- has three root senses: (1) X has arrived at, or is present or available for, Y; (2) X belongs to, or concerns, Y; and (3) X befits, or is proper or meet for, Y. Of these three senses (1) is, (2) is often, and (3) is not value-neutral. Sense (1) pertains not only to literal arrivals of persons at places but also, metaphorically, to acquired characteristics, features, and capacities of situations, things, and persons. LSJ cite Aeschylus, Persians 143 as their illustrative text. Here the Chorus, indicating that Xerxes has been gone for an unnervingly long time, raising serious worries as to how he is faring, recommends that the Persians sit down together and ponder their next move, since it has become needful.41 Sense (2) includes the non-normative notion that X is related to, or relevant to, Y, whether biologically in the case of human beings or otherwise in the case of situations or things; often

38 Lesher 111.
41 Chantraine assigns this sense to kathēkō.
older translations in the language of "X belongs to Y" can be usefully modernized as "X is natural for Y." The notion of "concern" connotes both (non-normative) "relevance" and (normative) "interest." For examples of this sense, one may cite Aeschylus, *Libation Bearers* 689, where Orestes returns home after a long absence (so long that Clytemnestra, his own mother, does not recognize him) to avenge his father’s murder. He tells her that her son Orestes has been killed, and then says, as though to ensure that she is in fact his mother, that he doesn’t know whether he happens to be speaking to the relevant people. Similar usage can be seen at Aeschylus, *Agamemnon* 1074 ff., where Cassandra wails and weeps; the Chorus remarks that she is calling for help from a god who has nothing to do with lamentation and grief. Sense (3), finally, is generally speaking conceived quasi-morally in terms of propriety, fittingness, or appropriateness to express judgments concerning socially desirable behaviors and attitudes; but it is also used to express the more weighty matter of moral and religious obligation and duty. One text illustrating this sense is Aeschylus, *Libation Bearers* 173, where Electra discovers a lock of hair upon her father’s tomb, but does not yet realize that it is Orestes’. Whose can it be, she wonders, if not her own? Good question, replies the Chorus, since those for whom it would be appropriate, or those whom one might have expected, to make this sort of offering with their hair are in fact enemies.\(^{42}\)

The philological heart of this thesis is the claim that neither of these typologies is complete. Translators in general appear to have felt that in Aeschylus they had the full range of meaning for these two word-families, and that there was therefore no need to look further. Subsequent authors, from Sophocles onwards, were thus as a rule translated in Aeschylean

\(^{42}\) Chantraine also assigns this sense to *kathēkō*. 
semantic categories, often with mildly, and sometimes, as I tried to show in chapter one, with highly puzzling results. In fact, however, an epistemic sense of prep- and of prosēk- can be detected already in Sophocles. A recognition of this construal, described in chapter one, clarifies a good many otherwise puzzling passages.

The cases I marshall in the pages that follow are of two sorts: unambiguous and ambiguous. Clearly only the former can be used for the purpose of establishing the epistemic sense in which I am interested. My justification for including ambiguous cases is to show that sometimes an epistemic sense is part of the word's total meaning, sometimes to show that an epistemic construal is an equipossibility of interpretation which is at least a candidate for consideration. The important point is that whether such an epistemic interpretation is to be accepted or rejected must be decided by a re-examination of the wider context and not simply by a re-examination of the lexicon, because the present hypothesis constitutes an addition to that lexicon.

Generally speaking, when prep- and prosēk- are used impersonally translators have rendered them in moral or quasi-moral terms such as "one ought," "one should," "one must," "it is appropriate," "it is fitting," and so on. Indeed this procedure often produces intelligible English even where the context is not quasi-moral but cognitive or rational. The reason for this is that such English locutions are themselves in fact used epistemically as well as morally and quasi-morally. To illustrate, most people understand that by "if solutions X and Y are mixed and shaken vigorously, Z ought to happen" nothing moral or quasi-moral is intended by "ought." Similarly, a conditional statement such as "If A is like C in the same way that B is like C, then A should be like B" is neither a moral nor a quasi-moral one but an epistemic
one; its consequent may plausibly be rendered "then it makes sense for A and B to be alike," or even, more strongly, "then A and B must be alike too." Such utterances do not aim to approve of anything but rather to declare what is reasonable, in the latter case, and what is reasonable to expect, or what is likely to be the case, in the former one. The main task I have set myself in the pages that follow, then, is to argue that prep- and prosēk- have an epistemic sense; a subsidiary task is to suggest a more clearly cognitive, intellectual, or rational interpretation of this language in some cases in which a generally normative or quasi-moral interpretation does not produce decidedly unintelligible or even highly implausible results. An explicitly epistemic construal, it is to be expected, will in appropriate cases serve to sharpen our understanding of the sense of the particular text under consideration a good deal.

I am pleased to acknowledge that on occasion -- and not only in recent times -- some scholars in my estimation have correctly rendered a given text in epistemic terms. Obviously they took their interpretive cues from the context in which the words actually occurred rather than from among the choices offered by LSJ. That they were not consistent in so doing, however, shows that they followed no clear policy but were groping for a more satisfying way to handle the text than LSJ's options permitted. This dissertation, in arguing that the epistemic sense of prep- and of prosēk- is already in Sophocles a live option which must be explicitly considered in each case before being discarded in favor of a competitor, enables one to confirm or disconfirm such interpretive intuitions on the part of translators.
Antigone 92. Antigone is angry with Ismene, who refuses to help her bury their dead brother because to do so would be to disobey the royal prohibition in effect. Ismene tries to persuade Antigone by arguing that (1) her proposed action is doomed to fail and that (2) "It's not/it doesn't ___ to attempt what from the start can't be done" (archên ... thēran ou prepei τ' amēchana). In this context amēchana clearly signifies not simply extreme difficulty but rather practical impossibility, as is commonly recognized among translators. Now it seems reasonable to expect that if Antigone herself thought her proposed course of action hopeless she would not undertake it. Thus she and her sister evidently disagree over whether it is practically speaking impossible, i.e. futile. If so, it seems unlikely that Ismene has any reasonable hope of advancing her cause by telling Antigone, who is prepared to violate a royal prohibition at considerable risk to her personal well-being in order to bury her brother, that doing so violates some social or moral norm as well (which is not likely to involve such risks to her personal safety). But this is just what one line of interpretation seems to suggest: "But to begin with it is wrong to hunt for what is impossible."\footnote{H. Lloyd-Jones (tr.), \textit{Sophocles II: Antigone, The Women of Trachis, Philoctetes, Oedipus at Colonus} (Cambridge, MA: Harvard University Press, 1994). Cf. E. Wykoff (tr.), \textit{Antigone}, in \textit{Sophocles I}, edd. D. Grene and R. Lattimore (Chicago: University of Chicago Press, 1954): "Wrong from the start, to chase what cannot be." For further instances of this line of interpretation see R. Fagles (tr.), \textit{Sophocles: Three Theban Plays} (London: Allen Lane, 1982) and R.E. Braun (tr.), \textit{Sophocles: Antigone} (New York: Oxford University Press, 1973).} Compared with such a strong interpretation, a gentler, more generally normative one has the advantage of being obviously true, and yields a translation of the principle involved, in consequence, with which Antigone (and indeed anyone else) would agree: "A quest for the impossible \textbf{should not} even..."
be begun;"\textsuperscript{44} and "It is better not to hunt the impossible at all"\textsuperscript{45} illustrate this approach. But anyone including Antigone would agree with this principle not because they held the same moral or quasi-moral code (which they need not) but because they think the same way. Anyone, that is to say, who understands what "impossible" means and thinks that X is impossible to attain will not bother to try to attain X, for the simple reason that it makes no sense to think that what is impossible to attain might somehow or other be attainable. A third line of interpretation perceives that this much must be involved in Ismene’s words: "It’s madness to chase what you will never catch"\textsuperscript{46} and "Why pursue the impossible at all?"\textsuperscript{47} and "Even to attempt the impossible is folly."\textsuperscript{48} Now we are dealing here not simply with a thought but rather a plan for practical action, and a wholly epistemic construal might seem to be less than completely satisfying, even if it is undoubtedly part of what is going on. At a general level of analysis, we may distinguish the narrower, specifically cognitive (= covertly behavioral?) domain from the wider overtly behavioral one by saying that thoughts and

\textsuperscript{44} J.C. Kamerbeek, The Plays of Sophocles: Commentaries, Part III: Antigone (Leiden: E.J. Brill, 1978). Kamerbeek provides a good example of a translator who restricts himself to Aeschylean categories even though, as is clear from his note to this text, he correctly divines the sense of the text: "It is, of course, the very reasonableness of these sententious words which elicits from Antigone her most violent outburst" (51).


reasoning do or do not make sense, on one hand, and that plans for practical action as well as practical actions themselves are or are not sensible, on the other, depending on whether or not the reasoning upon which those plans for practical action or practical actions themselves are based is sound or rational. In everyday speech, however, such a distinction is rarely encountered; these locutions are used more or less interchangeably. Watling’s "No sense in starting on a hopeless task"\(^{49}\) conveys this unanalyzed sense well, and thus makes both points -- the epistemic one and the behavioral one -- simultaneously. Whether or not Antigone sees that she is attempting the impossible, if she insists on proceeding it is to be expected that Ismene would think her mad. And that is just what transpires. For Ismene, realizing that Antigone’s resolve is firm, tells her, in a parting shot (98-99): "But don’t you see? What you’re doing is crazy!" (\textit{tuto d’ isith’ hoti anous men erchēi}).

\textit{Electra} 639. Clytemnestra prays in some sort of code to Apollo because she is worried about being overheard by Electra, who, she thinks, might very well broadcast it around town:

Listen, Phoebus our protector, to my secret words; for I do not speak among friends, nor is it proper for me to unfold all to the light while she stands near me (\textit{oude pan anaptuxai prepei pros phōs parousēs tēsde plēsias emoi}), in case in her hatred and with her shouting of much verbiage she should spread vain rumours through the whole city. No, listen in this fashion, for this is how I shall speak!\(^{50}\)

It is evident that Clytemnestra thinks it is not a good idea for her to speak clearly and


intelligibly at this time. The question I am interested in is how best to construe the goodness of that "good idea". There is, among the translators, a wide range of normative interpretations:51 "I speak not among friends, nor is it meet to unfold my whole thought to the light, while she stands near me;"52 "I must veil their meaning, for I speak / with no friends near"53 and "nor may I unfold the whole / to the light while this girl stands beside me."54 The feeling of imminent danger required by the context, however, is better conveyed by the following translations: "I dare not / Unveil my thoughts while she is here.; My enemy, standing beside me. / A malicious tongue, / Eager as ever / For gossip to scatter in the town" (McLeish); "it is not safe to speak / Freely and openly when she is by."55 Now ou prepei may amount, in context, to "I dare not" or "it is not safe", but it surely doesn't mean the first, and without some argument or even parallel cases to judge by, there is little reason to accept the second. In this case the plan conceived is not so much internally inconsistent as one which, if successful, would produce what Clytemnestra would take to be undesirable consequences. Thus, from her point of view, it would be poor judgment to speak clearly, as the following translation, again combining epistemic and generally normative aspects, shows:

51 Kitto translates prepei as "should" (in the sense of 'if'): "There is one present who has little love / For me. Should I speak openly, her sour / And clamorous tongue would spread malicious rumour / Throughout the city."


"No sense revealing everything while she is near."

_Electra_ 1213. Electra, at Agamemnon's tomb, is mourning Orestes, who she presumes, is dead. Orestes, unrecognized by her, stands before her and says that she can now stop crying:

"You have no reason to lament!"
"How can I have no reason to lament my dead brother?"
"It is not right for you to call him that!"

(ou _soi prosêkei tênde prospônein phatin_) [Lloyd-Jones].

Evidently there is no need for Electra to believe that Orestes is dead. The question I am interested in is what kind of need this is. Now Orestes is not undermining Electra's impression that it is appropriate to mourn those who are dead but rather her impression that he is in fact dead. It is not then a matter of moral entitlement or duty, as many interpreters suppose, but a matter of factual correctness, as McLeish rightly intuits: "That's not the way to think of him now," that is to say, that's not the _right_ way to think of him now.

Particularly in light of Orestes' immediately preceding remark ("You have no reason to lament!")), it would seem unlikely that he is saying anything other than that she has no reason to think of him as dead, as the following epistemic translation indicates: "You have no good grounds for calling him 'dead'!"

_Philoctetes_ 111. Odysseus wants Neoptolemus to trick Philoctetes into giving up his

56 "[You have] no right to speak of him as you have" (Banks); "You have no right to call him by that name" (Grene); "It is not meet for thee to speak of him thus" (Jebb); and "you have no right to speak of him thus" (J.C. Kamerbeek, _The Plays of Sophocles: Commentaries Part V: The Electra_ [Leiden: E.J. Brill, 1974]).
bow and arrow. Neoptolemus, as opposed to Odysseus, has moral qualms about telling lies. Odysseus then says, "When you stand to gain, it's not/it doesn't ____ to hold back" (hotan ti drais eis kerdos, ouk oknein prepei). It is evident enough that Odysseus regards someone who holds back under such conditions as inferior to one who does not; this shows that prepei is at least partly normative. But such superiority and inferiority, in the utility-minded calculus of a man famous for wiliness, are inseparable from cleverness, as this paraphrase conveys nicely: "He who hesitates is lost." Since, as at Electra 639 above, there is nothing incoherent about holding back when not doing so might produce gain, on one hand, and since this policy does not guarantee success, on the other, as it would if there were some necessary connection between not holding back and gaining, it seems best to take Odysseus as simultaneously saying something epistemic and, in this case, moral: "No sense holding back when you stand to gain."

Euripides

Orestes 1071. Pylades says that if Orestes dies, he will not die alone, since Pylades cannot imagine wanting to live on without him. Orestes then asks him, "ti gar prosêkei

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"katthanein s' emou meta;" Now since Pylades has already given Orestes his reason for preferring death to life in this circumstance, it seems to me less likely that Orestes is asking Pylades about some real or imagined need, duty, or obligation bearing upon the situation than that he is criticizing Pylades' sentimental proposal. Arrowsmith seems to think that Orestes is questioning Pylades' moral inference (viz. I ought, therefore, to kill myself too): "Why should my dying mean that you should die?" Orestes is here trying to bring Pylades back to his sober senses, and his question is the more likely to do that the more unambiguously it is construed in an epistemic manner: "What sense does it make for you to die with me?" This translation highlights the faulty or irrational basis of Pylades' proposed course of action.

**Herodotus**

*History* 2.120.4. Herodotus accepts the Egyptian version of the story concerning Helen, namely that she was not in Troy but rather in Egypt when the Greeks demanded her return from the Trojans. He offers a number of reasons in support of his view. First, Priam would not have risked losing so much just in order that Paris could have Helen as his wife. Second, Hector, Paris' older and braver brother, was in fact heir to the throne, not Paris.

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Third. "it was not likely that Hector would put up with his brother's lawless behavior (ton ou prosēke adikeonti tōi adelpheōi epitrepein), especially as it was the cause of much distress both to himself and to every other Trojan besides."61 This is the most plausible way to interpret this line. How and Wells have remarked long ago that "the whole chapter is an instance of Greek rationalizing criticism,"62 and more recently Lloyd63 has made an observation concerning what he calls Herodotus' argument by eikos which is worth quoting extensively:

Argument by eikos is not uncommon. It would be surprising if the case were different. Not only had Hecataeus used it but in Herodotus' own lifetime rhetorical teachers had built up an elaborate theory of eikos as a device in forensic oratory.... Its influence dominates the oratory of Antiphon and it is all pervasive in the writings of Thucydides, both in speech and in narrative. It is also common in the works of the Hippocratic Corpus. A man so closely attuned to the thought of his age as Herodotus could not fail to assimilate something of this and examples of argument by eikos are not difficult to find in Book II....64 II, 45 provides us with an example of an important group-of eikota, viz., the pistis kato to ēthos which is of great importance in forensic oratory, particularly in Lysias. It is argued that the Egyptians could not have dealt with Herakles in the way the Greeks suggest because the Egyptians simply do not do that sort of thing.... [Another example occurs at] II, 120 where Herodotus corroborates the Egyptian version of the fate of Helen by pointing out the sheer improbability that a man would not give up the woman in the circumstances in which Priam found himself.


64 Lloyd at this point cites as cases of argument by eikos the following passages in book II: 22, 25.2, 27, 43.2-3, 45, 49.2-3, 56, 93, 120, and 134.
It is not necessary to know whether or not Herodotus has the historical facts right in order to tell what he means by ou prosèke. The context clearly shows that he does not mean "it was not fitting for Hector to give in to his outlaw brother." Any such interpretation seems wrongly to assume that Hector did approve of Paris’ misdeed. Herodotus, however, implies exactly the opposite: Paris’ behavior caused enormous trouble -- which would not have been incurred if they had had Helen with them, whether Priam or Hector was king -- both for Hector and for his city. Hector was not different from but similar to Priam. Herodotus comes to his own conclusion as follows: There’s no good reason to think that Priam would have permitted his city to sustain the kind of damage it did just so Paris could keep Helen, nor would it have made sense for Hector to do so. Hence it’s unlikely that Hector did so, and hence Helen most likely was not in fact in Troy at the time.

Xenophon

Memorabilia 1.4.4. Aristodemus says that living things which are intelligent and active (e.g. human beings) deserve greater admiration than do stationary and senseless artefacts (e.g. statues), provided only that they are the products of design and not simply of chance. Socrates asks him which of these two kinds is due to chance and which is due to design, supposing that one of them has no discernible purpose and the other of them does have some usefulness. Aristodemus responds, "Prepei men ta ep’ òphleiai gignomena


66 Perhaps this is the force of Grene’s "Hector it would certainly not have suited to comply with his erring brother"? (D. Grene [tr.], The History, Herodotus [Chicago: University of Chicago Press, 1987]).
gnômêseinai erga." Marchant in my estimation rightly ascertains what Aristodemus is saying here: "Presumably the creature that serves some useful end is the work of design." Tredennick translates less clearly, but nonetheless not clearly wrongly, "Those which are useful should be the products of design." Socrates is here asking Aristodemus which of two possibilities is more likely to be the case, not which of them ought to be case, i.e. which of them it would be somehow better if it were the case; but as I showed in chapter one, "should be" and "ought to be" are in fact also commonly used in a value-neutral manner to convey nothing more than likelihoods. The text may be rendered, accordingly, either as "The creature which serves some useful end is likely to be the work of design" or as "It makes sense for the creature which serves some useful end to be the work of design." The correctness of the epistemic interpretation, in this case, is confirmed by the variety of examples Socrates subsequently provides, which he evidently takes to illustrate "the results of forethought." This part of their conversation concludes as follows:

S: Are you in real doubt whether such provident arrangements are the result of chance or of design?
A: No, indeed.... Looked at this way, they seem very much like the contrivances of some wise and benevolent craftsman [tr. Tredennick].

Anabasis 3.2.15-17. Xenophon here tries to encourage his men for battle. He does not threaten them, nor does he remind them of their duties and obligations as defenders of

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their society; rather, he argues that they have good reason to be hopeful for a good outcome in the current battle. His argument may be helpfully analyzed as follows:

(1) The gods are likely to be on our side, because we (but not our enemies) were faithful to our oaths taken in the name of the gods;

(2) Your forefathers were themselves exceptionally brave men who, with the help of the gods, fought Xerxes’ army very well;

(3) Just a few days ago, in order to help Cyrus in his bid for the throne, you yourselves fought the descendants of Xerxes’ army bravely;

(4) Now you are fighting for your own safety;

[Therefore]

(5) Surely it’s _____ for you to be much more brave and enthusiastic [now than then] (polu dépou humas prosēkei kai ameínonas kai prothumotérous einai).

[Moreover,]

(6) It’s _____ for you to be even more confident against the enemy now (kai tharraléotérōs nun prepei einai pros tous polemious),

[and hence, finally -- in light of your demonstrated superior bravery, enthusiasm, and confidence —]

(7) Is it at all _____ for you to still be afraid of them? (ti eti humin prosēkei toutous phobeisthai:)

(7) is in fact a question, however, whose clearly implied answer is "no." We may thus reconfigure (7) to the inference:

(7a) It’s not at all _____ for you to still be afraid of them (ouk eti humin prosēkei toutous phobeisthai).

The best way to begin in this case is to consider the most likely sense of the argument’s conclusion. (7a). Now as premises (1) - (4) show, both by their content and by
their implicitly answering any important objections, that is to say by giving them all the reasons they need. Xenophon is trying to bring the men to their senses, in much the same way that Orestes tried to bring Pylades to his senses in the passage from Euripides above. There is no question of any obligation to be afraid; if anything there is no need for fear. But this need once again is not a moral or quasi-moral need but a cognitive one. Warner clearly and in my view correctly perceives this: "What reason do you have to be afraid of them any longer?" Xenophon, thinking perhaps that if they agree with him they will be able to -- or perhaps will thereby already have -- put their fears behind them, is hoping the men will see that according to this argument it makes no sense for them to be afraid, as this translation, essentially similar to Warner's, indicates: "Does it still make any sense for you to be afraid of them?" The rhetorical answer is clearly No, and the crucial point is the positive effect that answer is likely to have on the fighting prowess of the men.

Since (7a) is most plausibly taken epistemically, it would be very surprising if sub-conclusion (5) did not bear an epistemic sense as well. It is not the only way to take it, as Rouse's more clearly normative translation shows: "I take it you ought to be much better and much more resolute." Still, in context, i.e. given that Xenophon has argued to this conclusion from a number of facts without invoking a specifically moral premise (e.g. "Whenever X, it is good to Y"), Rouse's translation seems less satisfying than does Warner's: "I am sure it is right to expect from you much greater courage and a much greater will to victory," where "it

is right" must mean "it is correct" rather than "it is my right" or anything equivalent. Again I can only provide a variant of Warner's: "Of course it makes sense for you to be much braver and more enthusiastic [now than then]."^70

These considerations strongly suggest that it would be a mistake to construe (6) morally, as Rouse and (perhaps) Warner take it, although, considered out of context, a purely moral construal of it might seem plausible enough. Rouse renders (6) as follows: "You must be more confident against your enemy." It is not clear to me whether Warner intends something moral or something epistemic by "ought": "You ought to feel much greater confidence against the enemy."^71 If Xenophon were simply ordering them to be brave no persuasion would be needed. Thus, in consideration of the context, particularly the overall exhortatory nature of the speech, "it makes sense for you [or: you are likely] to be even more confident against the enemy" recommends itself.^72

_Cyropaedia_ 2.1.15. King Cyrus here tells the commoners that he has a plan for reorganization of the territory. By way of preface to his proposal he says this:

Fellow-citizens of Persia, you were born and bred upon the same soil as we;

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^70 Alternatively, "Naturally you are likely to be much braver and more enthusiastic [now than then]."

^71 He may, as far as I can tell, intend something like "you are justified" in a rational sense. J.S. Watson (tr.), _The Anabasis or Expedition of Cyrus and the Memorabilia of Socrates_ (London: George Bell and Sons, 1878) took it this way: "At present, too, you may justly feel greater confidence against your adversaries." Such a use of "justly" seems to be equivalent to "with sufficient (epistemic) warrant."

^72 As Cooper et al. saw long ago: "You have also reason now to entertain a greater confidence in your own strength than before" (A. Cooper, et al. [trr.], _The Whole Works of Xenophon_ [Philadelphia: Thomas Wardle, 1836]).
the bodies you have are no whit inferior to ours, and it is not likely that you have hearts in the least less brave than our own \((\text{psuchas te ouden kakionas humin prosêkei hēmôn echien})\).\(^{73}\)

Miller himself correctly felt that the context requires an epistemic interpretation of \(\text{prosêkei}\). For simply by addressing them as fellow-citizens Cyrus emphasizes a commonality between them. This commonality is asserted in respect both of body and of soul -- the 'outer' man and the 'inner' man, we might say. Now equivalence in terms of the body would be patent, presumably, to ordinary physical observation; but equivalence in terms of the soul is not. Thus their quality of soul can only be (and would seem naturally to be) inferred, i.e. "seen" in a mental way, from their quality of body. Since the isomorphism invoked is obviously less than certain -- who has not now and then found a mismatch between quality of body and quality of soul? -- but nonetheless would seem generally to hold, it is a good bet on the part of Cyrus that, being for all relevant purposes alike in respect of body, they are also alike in respect of soul. The improvements upon Miller's translation I would suggest are not major ones: "your bodies are in no way inferior to our own, and [so] it's likely that your souls are not in the least worse than ours [either]."

they thus operate with different motives. Socrates then says:

Furthermore, the favourite who realizes that he who lavishes physical charms will be the lover's sovereign will in all likelihood be loose in his general conduct (*eikos auton i' alla rhaidiourgein*); but the one who feels that he cannot keep his lover faithful without nobility of character will more probably give heed to virtue (*prosēkei mallon aretēs epimeleisthai*).\(^{74}\)

Given my recommendation that we dispense with the language of probability in this material, Bartlett's translation is preferable to Todd's: "But the beloved who recognizes that he will not retain the friendship unless he is a gentleman is likely to care more for virtue."\(^{75}\) Socrates is here evidently estimating behavioral likelihoods on the basis of an initial hypothesis or assumption. Further, *prosēkei* is clearly correlative with *eikos*, and is therefore to be interpreted similarly, i.e. epistemically.\(^{76}\)

*Apology* 24. Socrates claims that he has told the truth at his trial, and that therefore those who have testified against him have not:

But, men, those who instructed the witnesses that they ought to break their oaths by giving false testimony against me, and those who obeyed them -- they must necessarily be aware of their own great impiety and injustice. But *why should* I be humbler than before I was condemned (*emoi de ti prosēkei nun meion phronein è prin katakritēnai*), since I was in no way proved to have done any of the things for which they have indicted me?\(^{77}\)

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\(^{74}\) O.J. Todd (tr.), *Symposium*, in Marchant, *Xenophon VI*.


\(^{76}\) Waterfield translates in terms of what is natural for such a person; this may to amount simply to its being reasonable to expect B of C, i.e. that C will likely exhibit B. But if by "B is natural for C" he really means "B belongs to C", then the predictive force is considerably stronger, and more than this context seems to me to call for.

\(^{77}\) A. Patch (tr.), *Apology of Socrates to the Jury*, in Bartlett, *Xenophon*. 
The usual construal of *prosēkei* in this case seems to be quasi-moral. This is an interesting case because, while it seems clear enough that *prosēkei* connotes something about proper behavior, in Socrates' case in particular it simultaneously connotes something more.

According to the portrayals we have of him both in Xenophon and in Plato, he does not determine what he will and will not do by consulting popular opinion but rather thinks for himself, consistently using rational criteria. (One might say the moral imperative for Socrates was to be rational.) For instance, at *Apology* 28, after Socrates has been condemned, Xenophon reports this episode:

A man named Apollodorus, who was there with him, a very ardent disciple of Socrates, but otherwise simple, exclaimed, "But, Socrates, what I find it hardest to bear is that I see you being put to death unjustly!" The other, stroking Apollodorus' head, is said to have replied, "My beloved Apollodorus, was it your preference to see me put to death justly?" and smiled as he asked the question [Todd].

And then there is Plato's portrayal of Socrates in his *Crito*, where the decision to stay in or to escape from prison is apparently governed by nothing other than the cogency of arguments one way or the other. To the extent that these portrayals are accurate representations of Socrates, when Socrates asks why he should think differently now that he has been found, i.e. declared, guilty, he is thus also -- and more profoundly -- asking, "And what sense does it make for me to think any less of myself now than before I was condemned?"

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78 They may not actually be so, however: e.g. "Why should I have a lower opinion of myself now than before the guilty verdict?" (Waterfield); "Why should my spirit be any less exalted now than before my condemnation ...?" (Todd).
Isocrates

Panathenaicus 206. Isocrates explains, at section 200 ff., that he is not ending his discourse at the point where most people would have expected it to end. The reason, he says, is that one of his former pupils, from whom he had requested editorial assistance, had expressed disagreement with what Isocrates had written about the Spartans. This former pupil claimed on the contrary that the Spartans were to be thanked for having discovered the best way to live, a view Isocrates describes as "unsound", "impious", "false", and "full of many contradictions" (203). Assuming that this former pupil's view were true, then, since the Spartans are relative newcomers to the Peloponnesus, "it must follow that those who lived many generations before the Spartans settled there had no part in them" (205) -- including those who fought against Troy and those who lived during the time of Heracles. In other words, says Isocrates, it must follow

that all of them have in this respect a reputation which is false. But if, on the other hand, you are speaking nonsense, and it is fitting that men who were descended from gods should have cultivated these virtues more than all others (prosēkei de tous apo theon gegenonas kai chrēsthai tautais mallon tôn allon) and transmitted them to their successors as well, then you cannot escape being thought mad by all who hear you for being so reckless and unjust and undiscriminating in your praise [Norlin].

In this text "it is fitting" translates prosēkei less well than does "it is likely" or "it stands to reason" (and "should" should accordingly be changed to "would"). For the strength of Isocrates' argument, such as it is, depends upon his claim that the men of long ago were descendants of the gods, his implication being either that the Spartans are not descendants of

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the gods or that the Spartans are not descendants of the gods in the same manner as were those ancient men, i.e. that the Spartans are at best less directly descended from the gods than the ancients were. Consequently, given the close association of virtue and reverence of the gods indicated in (204), Isocrates is not to be taken as arguing that it was in some way better for the ancients at that time than it is for Spartans at this time to do so -- it's unlikely that anybody in these circumstances would dispute the claim that it's as good for one man as for another to cultivate these virtues -- but rather simply that it's more likely that the ancients in fact did so than that the Spartans did and still do so. But even if it were somehow better for the ancients than for the Spartans to do so, this by itself hardly rules out the Spartans' doing so now, and so would not give Isocrates' argument the support it needs. A preferable translation, I conclude, is this: "and it stands to reason [or: it's likely] that men who were descended from gods would have cultivated these virtues more than all others."

Areopagiticus 2. At the beginning of this discourse Isocrates acknowledges that his listeners are probably wondering why he wishes to speak concerning the public safety, as though Athens were in danger. Their puzzlement would be reasonable, he says, since Athens has more than 200 warships, is at peace, rules the sea, and has plenty of allies:

With these resources, one might argue that we have every reason to be secure, as being far removed from danger, while our enemies may well be anxious and take thought for their own safety (hōn huparchontōn hēmas men an tis phēseien eikos einai tharrein hōs porrō tōn kindunōn ontas, tois d'echthrois tois hēmertōs prosēkein dedienai kai bouleusthai peri tēs hautōn sōtērias) [Norlin].

80 Namely, "the practice of reverence in relation to the gods and of justice in relation to mankind and of wisdom in relation to all activities in general."
Eikos einai and prosēkein are in this case evidently parallel, as the men ... de construction shows, creating a presumption of synonymy unless the context clearly indicates otherwise, which it does not. Norlin's translation of eikos einai as "we have every reason to be secure" conveys the basis of their security nicely, and is equivalent to "we are in all likelihood secure." But since the same facts which warrant their own confidence justify the anxiety of their enemies, the probability of the former is matched by the equiprobability of the latter, as Norlin's "while our enemies may well be anxious and take thought for their own safety" seems to indicate. Still, the parallel involved justifies a stronger translation than Norlin's "may well", for it is not a matter of what their enemies might feel, but what they likely in fact do feel (though it remains only a good bet on Isocrates' part): "while our enemies are likely to feel anxious."

Antidosis 230. Isocrates disputes the commonly held view that clever speakers (such as he is) are bad men who are not to be trusted:

If it be true that cleverness in speech results in plotting against other people's property, we should expect all able speakers to be intriguers and sycophants (prosēken hapantas tous dunamenous eipein polupragmonas kai sukophantas einai): for the same cause produces in every instance the same effect. In fact, however, you will find that among our public men who are living to-day or who have but lately passed away those who give most study to the art of words are the best of the statesmen who come before you on the rostrum, and, furthermore, that among the ancients it was the greatest and the most illustrious orators who brought the city most of her blessings.

The argument here is that if A is truly the cause of B then A should never not cause B (or A should never cause not-B). This is another case in which "should" is better rendered by "would." Since neither version of the consequent is in fact the case, Isocrates claims, the
principle assumed to imply it should be rejected, i.e. it ought to be rejected on rational (not moral) grounds. It should be noted that no more than a high degree of likelihood is required for Isocrates to make his point, which seems to be to undermine without discarding the general principle. In this way he will be in a position to educate his audience so that they no longer unreflectively believe that "all able speakers are likely to be intriguers and sycophants."

Callimachus 57. Isocrates argues (55 ff.) that Callimachus has in another case falsely testified that a living woman was actually dead. On this ground, he continues, Callimachus' testimony in the current case is not to be trusted. In order to prepare the jury for the eventuality that Callimachus will say that his prosecutors are lying, Isocrates asks them to think about this: "Who is more likely to present witnesses of events which have not occurred than my antagonist here (tina de prosêkei tòn mē genomenōn paraschesthai marturas mallon ē touton), who himself has the hardihood to testify falsely for others?" 81 Van Hook’s epistemic interpretation is in my estimation not to be improved upon.

Isaeus

Philoctemon 11. Androcles claims that his client’s father is Philoctemon’s brother; Isaeus disputes this, saying that all of the legitimate members of the family are well-known to each other, and none of them has ever heard of Androcles’ client. "Yet it is only natural that these [people] should be most trustworthy witnesses" (kaitoi toutous eikos pistotatous einai

nomizein marturas), he continues, "for relatives ought to know about such matters" (tous gar oikeious eidenai prosēkei ta toiauta). Isaeus here cannot reasonably be taken to mean that relatives are under anything like an obligation to know these things because meaning this would not serve his purpose, which is to undermine the credibility of his opponent's claim. But even if some such thing were involved, it is to no purpose, forensically, unless it increases the odds that they are credible witnesses regarding the question of who is and who is not a relative; for this the best candidates are other relatives, as everyone would think perfectly obvious. Forster's "it is only natural" as a rendering of eikos can in this context be reasonably taken to mean only "it's likely" (again, "should" may and should be changed to "would"). Since prosēkei is clearly parallel with eikos, the text is consequently best translated: "for relatives are likely to know such things."

Hagnias 6. Hagnias' estate was inherited by his cousin. This cousin is now being sued by his own nephew, for half the estate. Isaeus demands that this nephew explain exactly how he is related to Hagnias in order to show that his suit is groundless. The nephew must have been squirming, given Isaeus' next comment to the jury:

You observe that he cannot define the relationship, but gives any sort of answer rather than the information which you require. Yet one who is acting in good faith ought not to be embarrassed, but ought to be able to answer immediately (kaitoi ton ge prattonta ti dikaion ou prosēken aporein all' euthus legein), and not only so but also swear an oath and produce witnesses about the degree of relationship, so that you might have attached greater credence to what he said [Forster].

Forster's "ought" is fine provided it is construed epistemically. Euthus legein seems to me to

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82 E.S. Forster (tr.), Isaeus (Cambridge, MA: Harvard University Press, 1927, 1943).
argue in favor of rendering aporein as "tongue-tied" rather than "embarrassed." but in any case there is no question of appropriate behavior in the sense of duties or obligations, but rather of the sort of behavior an observer would ordinarily expect to observe in such a situation, under the hypothesis that the witness is telling the truth. On the basis of normal and well-recognized social behavior, then, it would be unlikely that one who is acting in good faith, i.e. one who thinks his claim is valid, behaves this way: the chances are thus good -- but not of course certain -- that the witness is not acting in good faith. An epistemic interpretation is thus called for: "Yet one who is acting in good faith is not likely to be tongue-tied but to answer straight off ...."

_Euphiletus_ 9. Euphiletus' older brother presents a variety of arguments in support of Euphiletus' claim to Athenian citizenship; if he is successful, Euphiletus will not be sold into slavery after having his property confiscated. His first argument is that their father had no financial motive -- indeed Euphiletus was as much a financial burden as was any other of his children -- for fraudulently adopting Euphiletus, and thus "it is unlikely" (ouk estin eikos) that he did so. The second argument is that Euphiletus' advocate and brother would have to be "completely insane" if he pleaded Euphiletus' cause when success would entail having to share the patrimony more than would otherwise be necessary, i.e. he is not likely to be lying to them (this is not stated but it is clearly implied). What follows from this? "The probabilities are in favour of (eikos esti) my having given the true evidence." He then claims the same credibility for his relatives, one of whom is his -- and of course Euphiletus' -- own mother:
And in addition to the depositions, judges, ... the mother of Euphiletus ...
expressed before the arbitrators her willingness to swear an oath in the
sanctuary of Delphian Apollo that Euphiletus here was the issue of herself
and our father; and who had better means of knowing than she? (kaitoi tina
prosēke mallon autēs ekeinēs touto eidenai;) [Forster].

What Euphiletus' advocate needs is an argument which has a good chance of being accepted
as (probably) being true. Forster seems to sense the only plausible kind of interpretation of
prosēke required by the context: an epistemic one. It is far from clear that tina prosēke
means "who had better means", however, although this is clearly implied by what it does
mean, namely: "who was more likely." The text is thus to be rendered: "And who was more
likely to know than she?" Answer: No one.

Demosthenes

_Aphobus I 59_. On his own behalf, Demosthenes, having recently become old enough
to be legally entitled to his inheritance, is suing Aphobus, one of three rogue guardians of his
father's estate. Arguing from precedent by referring to a similar case, Demosthenes says that
in six years Antidorus' original value of three talents and three thousand drachmae had grown
to more than six talents. On this ground Demosthenes now argues that the approximately
seventy minae he has been given by his guardians is insufficient: "in my case, fourteen talents
in ten years, when consideration is given to the time and terms of his [i.e. Aphobus'] lease,
ought to have been more than trebled" (pleon ē triplasia kata to eikos prosēkon genesthai).[^83]

Rann-Kennedy had earlier translated similarly, as did Pearson later. Such a rendering is plausible, it seems to me, only if it is taken epistemically. For Demosthenes is forecasting normally expected returns under ordinary circumstances, and using that information in order to make his statement of claim, not arguing that on some moral or quasi-moral grounds the rate of return ought to have been X rather than Y. One way of rendering the implicit semantic relationship between prosēkon and kata to eikos is as follows: "Judging by likelihoods, it's reasonable to expect fourteen talents to have more than tripled in ten years."

Eubulides 34. Euxitheus is trying to reinstate his Athenian citizenship; Eubulides is trying to prevent him from doing so. Euxitheus argues that both of his parents were full

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84 C. Rann-Kennedy (tr.), The Orations of Demosthenes, Volume 4 (London: George Bell and Sons, 1875): "I therefore, who had fourteen talents, calculating by the time and terms of his lease, ought in ten years to have my estate more than trebled"; L. Pearson (tr., comm.), Demosthenes: Six Private Speeches (Norman, OK: University of Oklahoma Press, 1972): "prosēkon genesthai, accusative absolute, 'though the result ought to have been, reasonably, (kata to eikos), a tripling of the capital" (141).

85 Rann-Kennedy seems to see an intensifying function of prosēkon in this text. He comments:

Suppose the estate of Antidorus to have been doubled in six years, it was capable at Athens of being more than trebled in ten years. But the fact shows that it was not quite doubled in six years. We may take it therefore that it might have been about trebled in ten years. Then Demosthenes argues that his own estate might have been more than trebled. Is there any overstatement in this? I do not see that there is: for very likely a greater profit might be made out of a greater estate [108, emphasis mine].
citizens (and not just his father) on the grounds that if his mother were not in fact a citizen, plenty of people would be able to testify to it. Eubulides himself agrees that everyone knows her. "Well then," Euxitheus says. "there ought to be many to testify from knowledge who she is, and not from hearsay only" (prosēken dēpouthen eidotas autēn pollous hētis esti marturein, kai mē monon akoën) (Murray). Once again, it is not a question of someone's being morally obliged to give witness from knowledge rather than hearsay, but rather of the likelihood, under these circumstances, that it would not be difficult to find someone who is able to give such testimony. But since Eubulides has found no one able or willing to give such evidence, there is a strong likelihood that his "evidence" is in fact hearsay; and since Athenian law specifically disallowed such testimony, the only reasonable recourse, Euxitheus argues, is to throw the case out. The text is accordingly best rendered as follows: "Well then, many people could likely have testified to the 'fact' from knowledge, and not only from hearsay."

These cases constitute sufficient evidence upon which one may justifiably claim that prep- and prosēk- had epistemic uses in non-Platonic authors. In some cases there can be no reasonable doubt that the correct sense of the word is epistemic, rendered variously as "it makes sense," "it stands to reason," "it is plausible," or "it is likely." In other cases, an

86 A.T. Murray (tr.), Demosthenes VI (Cambridge, MA: Harvard University Press, 1939, 1956) notes that "Attic law recognized as citizens only those who were of pure Attic descent on both sides" (230).
epistemic sense is not clearly the dominant sense although it seems clearly to be part of the word's composite meaning. We may conclude, then, that an epistemic sense of these words was available to Plato. In the next chapter I argue that Plato himself used these words this way.
3: Platonic Evidence for an Epistemic Use of prep- and prosēk-

It has been shown in chapter two that prep- and prosēk- bore epistemic meanings in a wide range of non-Platonic authors. In this chapter I present a number of Platonic texts which are most plausibly construed in an epistemic manner. By this I intend such interpretations as "it makes sense," "it is plausible," "it stands to reason." "it is likely," and their equivalents. This evidence shows that when Plato used this language in the cosmological portion of the Timaeus he may well have done so, at least in part, in an epistemic manner. "In part" may mean either (a) of the totality of occasions some portion are intended epistemically and not otherwise or (b) on a specific occasion part of the totality of meaning is epistemic (in conjunction, say, with a generally normative or moral sense).

Charmides 154e. Socrates is not quite ready to pronounce Charmides utterly irresistible; first he wants to see whether Charmides has one small thing in addition to his astonishing body, namely a good soul. Immediately he comments. "prepei de pou, ò Kritia, toiouton auton einai tês ge humeteras onta oikias." West and West portray Socrates as approving of the fact: "Surely it is fitting, Critias, for him to be such, since he is of your family."67 But this is implausible, for Socrates has just indicated that he is not sure whether this is true of Charmides; something more tentative or hypothetical is called for on Socrates' part. Sprague avoids this problem: "It would be appropriate if he did, Critias, since he comes


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from your family. Here the indicative prepei is less than completely satisfyingly rendered as though it were optative. Watt gets the tone right: "He should, of course, have such a soul, since he does belong to your family, Critias." This "should", however, must be construed epistemically, not quasi-morally, if, as seems certain, it is good for all without exception to have a good soul, whether or not they are part of Critias' family. Rather, Socrates is telling Critias here (whether he himself believes it is questionable) that Charmides' being part of Critias' family increases the odds that Charmides has a good soul. But that is all it does, and this uncertainty is highlighted by pou which signals either doubt or, ironically, confidence, both of which are just what one would expect in epistemic contexts. Accordingly the text is best rendered along these lines: "But, Critias, it stands to reason that he's like that, doesn't it? After all, he's a member of your household."

Ion 539e. Ion has just contradicted his earlier admission concerning the range of Homeric passages that he was, qua rhapsode, expert in. "Oh no, you don't maintain it's everything, Ion," Socrates replies. "Or are you as forgetful as that? "Yet it would hardly do for someone who's a rhapsode to be so forgetful!" (kaitoi ouk an prepoi ge epilēsmona einai rhapsōidon andra). Saunders here emphasizes the aspect of the social expectations of a

88 R.K. Sprague (tr.), Charmides in Cooper and Hutchinson, Complete Works.


91 T.J. Saunders (tr.), Ion, in Saunders, Early Socratic Dialogues.
rhapsode. I have no doubt that a forgetful rhapsode could not give the excellent performances people paid significant sums to experience, but I do doubt that this is the most salient aspect of Socrates' meaning. Just as in the *Charmides* passage, where being a member of Critias' household increases the odds -- so Socrates says, at least -- of Charmides' having a good soul, so here Ion's being a rhapsode decreases the likelihood that he is as forgetful as he appears to be. Still, it seems unlikely that Ion is deliberately contradicting himself; the probability is rather that he *has* in fact forgotten what he earlier said. This is not surprising; he is neither the first nor the last to do so at Socrates' hands. But this does not show that Socrates is primarily interested in scolding Ion; it shows rather that the text is to be construed ironically. The rebuke, which must not simply be ignored, is packaged within Socrates' larger epistemic point: "But of course *it wouldn't be* at all likely that someone who's a rhapsode would be so forgetful!" This kind of interpretation is confirmed by the larger context: in fact Ion is not this forgetful, for he won first prize at the festival of Asclepius and had good hopes for the Panathenaic festival as well (530a); he is therefore clearly not the inferior rhapsode he would surely be if he were in fact as forgetful as he appears to be.

92 A similar interpretation is made by L. Cooper (tr.) *Ion*, in E. Huntington and H. Cairns (edd.), *Plato: Collected Dialogues* (Princeton: Princeton University Press, 1961, 1989): "Indeed, *it would ill become* a man who is a rhapsode to forget" and by P. Woodruff (tr.), *Ion*, in Cooper and Hutchinson, *Complete Works*: "But no, *it would not befit* a *rhapsode* to be forgetful."

93 Alternatively, "But of course *it wouldn't make* any *sense* for someone who's a rhapsode to be so forgetful!"
Lysis 221b. At 218d Lysis accepts the theory that desire has two distinct causes, on one hand that it is due to the presence of something negative, on the other that it is for the sake of something positive. Presently Socrates asks Lysis the following question:

S: If bad things are destroyed, is there any reason why things which are not in fact bad should be destroyed along with the bad things?" (oukoun ean apolluētai ta kaka, ha ge mē iunchanei onta kaka, ti prosēkei tois kakois sunapollusthai;)
L: None at all.94

This passage is recognized by Watt to be epistemic in sense, and indeed there seems no other equally plausible way to take it, not even if one renders ti prosēkei as "is there any need". For in the context of this thought-experiment, the "need" imagined will be a logical (i.e. a predictive) one and not a moral or quasi-moral one. Wright helpfully avoids any normative and predictive ambiguity in the word "should" altogether by translating, "Well, if evil is being extinguished, is there any reason in the world for things that are not evil to be extinguished with it?"95 Since Socrates is asking Lysis to estimate likelihoods with respect to some objective state of affairs, it seems best to render the text: "Well, if bad things were to be abolished, and there were with them some things that weren't bad, is it likely that any of those things that aren't bad would be abolished along with the bad things?"

94 D. Watt (tr.), Lysis, in Saunders, Early Socratic Dialogues.

95 J. Wright (tr.), Lysis, in Huntington and Cairns, Collected Dialogues. Lombardo also evidently feels that a normative reading leaves something to be desired: "And if bad things are abolished, does this have anything to do with things that aren't bad being abolished along with them?" (S. Lombardo [tr.], Lysis, in Cooper and Hutchinson, Complete Works).
Menexenus 238a. Socrates recounts a funeral oration he once heard from Aspasia. In the course of praising her country, Aspasia cites the fact that it produces grain for its inhabitants as being a good reason for thinking of it as their mother: "And it's more ___ to accept such proofs in the case of a land than of a woman: for it's not land which imitates a woman in conception and in birth, but a woman the land" (mallon de huper gês ê gunaikos prosêkei dechesthai toiauta tekmêria: ou gar gê gunaika memimêtaí kuësei kai gennêsei, alla gunê gên). Aspasia is not here recommending some course of action but a way of thinking about something. This strongly suggests that the text is to be interpreted epistemically.

Jowett, who seems to sense this, interprets the goodness of the proof in terms of truth: "And these are truer proofs of motherhood in a country than in a woman." But his rendering raises a difficulty concerning degrees of truth which does not arise if the text is translated as I suggest it be, since it is not exactly unusual for one argument to be slightly more convincing -- i.e. to make slightly more sense, or to be slightly more plausible -- than another: "and it makes more sense to accept such proofs for a land than for a woman: for it is not land which imitates a woman in conception and in birth, but a woman the land." This translation would explain why, as Ryan puts it, "such testimonies are to be taken more seriously on earth's behalf than a woman's...."

96 B. Jowett (tr.), Menexenus, in Huntington and Cairns, Collected Dialogues. Cf. R.E. Allen (tr.), The Dialogues of Plato, Vol. 1 (New Haven, CT: Yale University Press, 1984): "Such proofs as these are more readily to be accepted in behalf of a land than of a woman." Bury's translation might or might not be epistemic: "And proofs such as this one ought to accept more readily on behalf of a country than on behalf of a woman" (J.B. Bury, [tr.], Plato IX [Cambridge, MA: Harvard University Press, 1929, 1989]). He would be correct if and only if it is.

97 P. Ryan (tr.), Menexenus, in Cooper and Hutchinson, Complete Works.
Republic 2.362c. Glaucon has challenged Socrates to prove that the life of a man who is in fact unjust but is considered by all to be just is less desirable than the life of a man who is considered by all to be unjust but is in reality just. Such an unjust man is to be imagined as being wealthy, he continues, and as making much better sacrifices to the gods than the poor but just man can make. Glaucon then draws the inference made by the majority of people: "Hence it's more likely that the gods, in turn, will take better care of him than of a just person" (hôste kai theophilesteron auton einai mallon prosêkein ek tôn eikotôn è ton dikaion). A large number of other translators agree that the text is to be taken epistemically: "and one can reasonably expect he'll be more loved by the gods;" "So they say it would not be surprising if the gods were kinder to him too;" "he may therefore reasonably expect that heaven will bestow its favors on him rather than on the just;" and "so that it is reasonable to suppose that the gods care more for him than for the just man." Prosêkein is clearly to be construed with ek tôn eikotôn. and a good way to do that, as in the case of Demosthenes, Aphobus I 59, above, seems to be: "Judging by likelihoods, it's reasonable to expect the gods to favor the unjust over the just man."

98 G.M.A. Grube (tr.), Republic, rev. C.D.C. Reeve, in Cooper and Hutchinson, Complete Works. Grube's original translation reads "with the result that he is likely to be dearer to the gods."


Compared with this predictive interpretation, one which connotes approval of divine bribability on the part of people at large is less credible, supposing that those most able to bribe the gods did not constitute the largest and least wealthy segment of society. Given the popular belief (unchanged as of today) that the wicked often in fact go unpunished, it is a reasonable inference -- i.e. it makes sense, and so seems likely --, consequently, on the supposition that there are gods at all, that these gods can be "bought."

Theaetetus 150a. Here Socrates, having compared himself to a midwife, argues that midwives know how to produce the most desirable offspring. Theaetetus accepts Socrates' analogy between midwifery and skilled farmers: both, that is, are presumed to have a knack for improving the stock they oversee. Socrates explains that midwives, unlike farmers, don't practice eugenics because it would seem to onlookers too much like prostitution, but then adds: "epi iais ge ontōs maiais monais pou prosēkei kai promēsathai orthōs." A number of translators either simply overlook\textsuperscript{104} pou or take it to express non-ironic confidence;\textsuperscript{105}

\textsuperscript{103} \begin{flushright}
R. Waterfield (tr.), \textit{Plato: Republic} (Oxford: Oxford University Press, 1993): "and consequently it is more \textit{appropriate} for the gods to smile on him rather than on a moral person, and more likely that they will;" A. Bloom (tr.), \textit{Plato: Republic} (New York: Basic Books, 1991): "So in all likelihood, it is also more \textit{appropriate} for him to be dearer to the gods than is the just man." Such translations are mechanical and show a lack of sensitivity to the context.
\end{flushright}

\textsuperscript{104} \begin{flushright}
F.M. Comford (tr.), \textit{Theaetetus}, in Huntington and Cairns, \textit{Collected Dialogues}: "Yet the genuine midwife is the only successful matchmaker."
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\textsuperscript{105} \begin{flushright}
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in either case they seem to me to render the text too strongly, as though Socrates is actually claiming to know something. It is not impossible, of course, that this is what Socrates is doing, particularly if he is making a logical comment, as he seems to be doing: for who else besides a genuine matchmaker would do it right? Socrates does not disavow all knowledge, after all (e.g. Apology 29b6-9). On the other hand, we have seen above that, according to Denniston, pou generally signifies restraint (or, when used ironically, confidence). Now this obviously does not by itself imply that pou does not or may not express straight-faced assuredness, but without argument or parallels cited in support of something which clearly constitutes an addition to Denniston, I see no good reason to take it as expressing non-ironic confidence, especially since, as Levett shows, a perfectly fine rendering is possible by construing pou as expressing reservation ("I suppose"). Unfortunately she interprets prosēkei in terms of belonging, concern, or perhaps prerogative: "And yet, I suppose reliable matchmaking is a matter for no one but the true midwife." This interpretation seems ruled out, strictly speaking, since Socrates has said that, for the reason given, in fact there are no such people, even though it would be a good idea if there were; but if so, the naturalness or fitness of A with respect to B is so far something perceptible in the imagination, not in concrete social life. For this there is no more appropriate interpretation, it seems to me, than an epistemic one: "although it makes sense, I suppose, that only genuine midwives would make correct matches."


107 M.J. Levett (tr.), Theaeiteus (rev. M. Burnyeat), in Cooper and Hutchinson, Complete Works.
Sophist 230e. The Stranger says that the goal of cross-examination is to prepare the soul for instruction, something which is of lasting benefit (230c); one is ready to learn when one no longer believes that one knows more than one actually does (230d). Whoever has not been cross-examined, he continues, even if he is the Great King himself, is contaminated, and "apaideuton te kai aischron gegonenai tauta ha katharóttaton kai kalliston eprepe ton ontós esomenon eudaimona einai" (230e1-3). In this case Socrates seems to be laying down a relationship between X and Y such that if A wants X then A must first do Y. There is no suggestion that Y is one way among others for securing X; hence Y is not the best way to secure X (for which a moral or quasi-moral rendering of eprepe would be natural) but rather the only way to secure X. That is to say, the relationship between X and Y is a causal (and thus inferential one), as White's translation demonstrates well: "anyone who is going to be really happy has to be completely clear and beautiful."  

Statesman 309c. The Stranger has compared more and less stable characters to the warp and woof, respectively, of a woven cloth. The King, in terms of this metaphor, weaves together these characters so as to produce the best state, first binding together the eternal part of their souls with divine bonds and then binding together their bodies with human bonds. Not surprisingly, Young Socrates again (au) does not understand. After the Stranger

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108 N.P. White (tr.), Sophist, in Cooper and Hutchinson, Complete Works.

109 This is far from the first time the Young Socrates has expressed the fact that he did not understand what the Stranger meant. As early as 262c the Stranger recognizes that, owing to Young Socrates' youthfulness, he will need to make a special effort to speak intelligibly. Young Socrates indicates his lack of understanding at 263e, 265d,
explains what he means, that true opinion is divine and occurs in a superhuman race. Young
Socrates replies, "Prepei goun houtô." One line of interpretation construes prepei
normatively: "It could not be more suitably described." But on the basis of Young
Socrates' typical pattern of response we may presume that when his puzzlement has been
removed, his understanding has been clarified. The inference to be drawn from this is that by
prepei goun houtôs Young Socrates intends something epistemic, as Waterfield rightly sees:
"Yes, that sounds plausible." This can be slightly improved, it seems to me, by making
ge clearly emphasize "that", in contrast to what has gone before: "Yes, that at least sounds
plausible."

Phaedrus 259b. Socrates alludes to an apparently well-known tale about the cicadas
in the tree above them. Phaedrus says he seems not to have heard of the tale, and asks
Socrates to tell him about it. Socrates responds, "Ou men dê prepei ge philomouson andra

109(...continued)
266a, 267d, 267e, 277d, 279c, 281a, 281d, 283d, 288d, 294d, 296b, 297c, 302c, 306b,
306c, and 307c prior to the text currently under consideration. In each case the
Stranger makes an effort (not always immediately successful) to convey his meaning.
Most importantly, in each case when he has understood Young Socrates is able to
answer the question, i.e. he has come to understand something he did not understand
before.

110 J.B. Skemp (tr.), Statesman, in Huntington and Cairns, Collected Dialogues; cf. A.E.
Taylor (tr.), Plato: The Sophist and the Statesman (Folkestone and London: Dawsons
of Pall Mall, 1971): "As 'tis meet it should" and C.J. Rowe (tr.), Statesman, in Cooper
and Hutchinson, Complete Works: "That's certainly a fitting view to take."

111 R. Waterfield (tr.), Plato: Statesman, ed. J. Annas and R. Waterfield (Cambridge:
Cambridge University Press, 1995).

112 Alternatively, "Now that at least makes sense."
"rôn toioutô̱n anê̱koon einai." The best interpretation of this text would seem to depend upon whether or not Socrates believes Phaedrus' profession of ignorance. A quasi-moral interpretation like Hamilton's seems most plausible if he does: "It is most unfitting that a lover of the Muses should be ignorant of such a matter."

On the other hand, an epistemic interpretation seems preferable if he does not. A strong reason to think that he does not believe Phaedrus is that this remark figures in the first part of a men ... de construction, which shows that the two clauses are to be taken together, as related in some way. But a quasi-moral construal of prepei consistently drives a wedge between the related clauses. The "rebuke" as a result just stands there, disconnected from what ensues, since it is clear that there is no sign whatsoever of irritation or disapproval in what follows:

The story is that once, before the birth of the Muses, cicadas were human beings. When the Muses were born and song came into the world, some of the men of that age were so ravished by its sweetness that in their devotion to singing they took no thought to eat and drink, and actually died before they knew what was happening to them [Hamilton].

An epistemic construal, by contrast, naturally keeps the men and the de clauses together, as they should be. Phaedrus seems enchanted by Socrates and wants him simply to go on talking; the subject-matter seems of secondary interest. If so, then here Socrates is humoring Phaedrus, but not without first letting him know that he realizes Phaedrus is toying with him:

\[\text{\footnotesize 113 W. Hamilton (tr.), } \textit{Plato: Phaedrus and Letters VII and VIII} \text{ (Harmondsworth: Penguin, 1973, 1983). Similarly C.J. Rowe (tr.), } \textit{Plato: Phaedrus} \text{ (Warminster: Aris and Phillips, 1986): "It certainly isn't appropriate for a man who loves the Muses not to have heard of things like this;" A. Nehemas and P. Woodruff (tr.), } \textit{Phaedrus} \text{, in Cooper and Hutchinson, } \textit{Complete Works}: "Everyone who loves the Muses should have heard of this;" and R. Hackforth (tr.), } \textit{Plato's Phaedrus} \text{ (Cambridge: Cambridge University Press, 1952): "Surely it is unbecoming in a devotee of the Muses not to have heard of a thing like that!" G.J. DeVries (A Commentary on the Phaedrus of Plato [Amsterdam: A.M. Hakkert, 1969]) does not comment on the passage.}\]
"Surely it’s unlikely that a man who is a devotee of the Muses has not heard of a thing like that! Anyway, according to the story, once, before the birth of the Muses, cicadas were human beings...."

*Laws* 3.678c. Book 3 begins with a theory about the origin of civilized life. The logical origin of a city can be discovered, says the Athenian Stranger, by supposing a natural disaster to have utterly wiped out a city and asking how anyone from the country, premised as being ignorant of things like constitutions, might begin to build one. In a word, the survivors would have to invent one, and some such cause probably explains the variety of constitutions — both good and bad — currently existent. Cleinias does not understand:

*Athenian:* My dear sir, can we really suppose that the men of that period, who had had no experience of city life in all its splendour and squalor, ever became totally wicked or totally virtuous?

*Cleinias:* A good point. We see what you mean.

*Athenian:* So it was only as time went on, and the numbers of the human race increased, that civilization advanced and reached its present stage of development?

*Cleinias:* Exactly.

*Athenian:* The process was probably (hōs eikos) not sudden, but gradual, and took a considerable time.

*Cleinias:* Yes, that’s perfectly plausible (*Kai mala prepei touth’ houtōs*).¹¹⁴

In this text *eikos* constrains the interpretation of *prepei*, as everyone recognizes, and shows that they are to be construed similarly.¹¹⁵ Pangle mechanically and unconvincingly renders

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¹¹⁴ T.J. Saunders (tr.), *Laws*, in Cooper and Hutchinson, *Complete Works*,

it: "This seems most appropriate."\textsuperscript{16} For the issue is not about the appropriateness of things having gone in the way suggested, but about the appropriateness of thinking that the Athenian is right in his hypothesis. But this suffices to show that the sense of the word is in fact epistemic and not quasi-moral. An alternative to Saunders' excellent translation would be: "Yes, that makes a lot of sense."

\textit{Laws} 11.931d. In a section concerning respect for parents, the Athenian claims that there is a close connection between worship of the gods and respect for parents. He cites a number of examples from the poets,

which all go to show that the gods take the parents' side against the children: no man, you'll find, can curse anyone as effectively as a parent can curse his child; and that's absolutely right. So if it is true (mē ... hégeisthō) that the gods listen to the prayers of fathers or mothers who have been wantonly insulted by their children, isn't it reasonable to suppose (ouk ... hēgēsometha;) that when by contrast the respect we show our parents delights them so much that they pray hard to heaven for a blessing on their children, the gods will be just as ready to listen as before, and grant us it? If not, they'd be conferring blessings unjustly -- which we maintain is a peculiarly inappropriate thing for a god to do (ho dē phamen hēkista theois einai prepon) [Saunders].

It is usual to render \textit{prepon} quasi-morally.\textsuperscript{17} This interpretation has a certain \textit{prima facie} plausibility, but I do not find it convincing. In the first place, the Athenian's argument cannot be presumed to work unless hēkista ... \textit{prepon} effectively makes the entertained hypothesis unlikely. This dialectical aim would be performed immediately if \textit{einai prepon}

\begin{footnotesize}
\begin{enumerate}
\item[17] Cf. Taylor: "a thought most unworthy of it"; Pangle: "something we claim is least fitting for gods to be" Bury: "that, as we assert, would be most unbecoming in gods" (J.B. Bury [tr.], \textit{Plato XI: Laws II}, Books 7-12 [Cambridge, MA: Harvard University Press, 1926, 1984]).
\end{enumerate}
\end{footnotesize}
actually means "to be likely" but only indirectly if it means "to be appropriate"; for we would still require the premise that whatever is inappropriate is also unlikely, in the case of a god. This argument is under either interpretation missing a premise, but considerations of economy seem to me to favor taking it epistemically rather than quasi-morally. In the second place, suppose that conferring blessings unjustly is bad. If so, what makes it bad is clearly the injustice of doing so. But that is a moral matter, not simply a more generally normative one. It is puzzling why the translators do not say, as one might reasonably expect them to, that it is wrong for the gods to behave thus but only that it's undesirable for them to do so. Finally, a rendering in terms of appropriateness implies that it is more unacceptable, that is to say worse, for a god than it is for a human being to behave unjustly. But it seems to me highly unlikely that Plato would leave this glaring implication open; rather than suggesting that it is in any degree good or acceptable for a human being to be unjust, it seems far more plausible that he would have conceded its likelihood in the human case without being willing to appear either to condone or even to excuse it. For these reasons an epistemic interpretation seems best. Now since the gods have, in Laws 10, been defined as being good (and omniscient and omnipotent), it would be unlikely in the extreme that they would be unjust; for nothing epistemically incoherent makes sense and it makes no sense that something might be simultaneously specifically unjust and generally good. The hypothesis can thus be dismissed because there is no reason whatever to believe it, as this translation shows: "If not, they'd be granting blessings unjustly -- but this, according to us [= our larger argument?], makes sense least of all [or: is least likely of all] in the case of gods."
Laws 12.950c. The Athenian says that in most cities the rulers exhort the citizens to value a good reputation in the eyes of other states, and that this is a good thing. But it is even more desirable to pursue such a reputation while being truly good. "And so it will be entirely right and proper (prepon an eīē) if the state we are now founding in Crete wins among men a brilliant reputation for virtue." It is usual to construe prepon an eīē normatively.118 But that it would be good for the city to have such a reputation is hardly in question; whether it is likely or not is. The Athenian's answer is that, given the excellent laws which have through the course of these 12 books been framed, it is likely. This seems guaranteed by the next clause: "if things go according to plan there is every reason to expect (pasa d'elpis autēn ek tōn eikōtōn) that, out of all the states and countries which look upon the Sun and the other gods, Magnesia will be one of the few that are well administered" (Saunders). Thus this text seems to me to be most satisfactorily rendered as follows: "And so it would be likely that the state we are presently founding will win a brilliant reputation among humanity for its excellence."

The passages in this chapter seem to me to demonstrate beyond any reasonable doubt that prep- and prosēk- were used by Plato in an epistemic sense to mean "it makes sense," "it is plausible," "it stands to reason," or "it is likely." We may now proceed to an exegesis of

118 Cf. Pangle: "it would be fitting;" Taylor: "it will only be proper;" Bury: "it would well become it."
those texts in the cosmological passages of the *Timaeus* in which this language occurs and in which an awareness of the epistemic sense of these verbs makes a significant difference to our understanding of what Plato is saying.
4: Construing *prep*- and *prosēk*- in the Cosmology of Plato’s *Timaeus*

In chapter one I discussed a small sample of cosmological passages from Plato’s *Timaeus* in which a quasi-moral interpretation of *prep*- and *prosēk*- in terms of appropriateness, fittingness, or their equivalents raised rather puzzling questions. I claimed, on trust at the time, that an epistemic construal of these verbs would help to solve these difficulties. I then argued, in chapter two, that a wide range of non-Platonic authors including playwrights, historians, and orators used these verbs impersonally in a distinctively epistemic manner to mean "it makes sense," "it is plausible," "it stands to reason," or "it is likely." Thus this sense was available to Plato. In chapter three we saw that Plato himself used this language in this sense in a variety of dialogues outside of the *Timaeus*. I now discuss how an awareness of the epistemic sense of *prep*- and *prosēk*- illuminates Plato’s meaning in those passages of this dialogue which are pertinent to methodological, meta-cosmological, and cosmological discourse.

The *Timaeus* purports to give a rational account of the construction of the universe.\textsuperscript{119} This account, as is well-known, is a teleological one; the universe as well as its contents are thought of as being aim-seeking, goal-directed, or purpose-driven. That is to say, according to Diogenes Laertius, *Timaeus* speaks for Plato, as do Socrates, the Athenian Stranger of the *Laws* and the Eleatic Stranger of the *Sophist* (R.D. Hicks [tr.], *Diogenes Laertius: Lives of Eminent Philosophers* Vol. 1 [Cambridge, MA: Harvard University Press 1925, 1991] 3.52). The hypothesis that *Timaeus* does not speak for Plato was defended by A.E. Taylor, *A Commentary on Plato’s Timaeus* (Oxford: Clarendon Press, 1928) and in my estimation convincingly undermined by Comford in the preface to his *Plato’s Cosmology*.\textsuperscript{119}
a given thing is taken to be inadequately explained as long as one limits oneself to physical causes and effects; in order to properly understand it, one has to appeal also to non-physical explanations for physical things. To illustrate, at *Phaedo* 99a Socrates says that the fact that his legs are bent does not adequately explain why he is sitting in prison, about to die. His bent legs explain what it takes to sit, or what is necessarily involved given that he is sitting, but not why he is sitting there in the first place. The real reason, he claims, is that he judges it the *best* thing for him to do under the circumstances. It is, in other words, only his purposeful choice which really and finally explains why he is sitting there. This distinction between first or primary cause on one hand and auxiliary or secondary cause on the other reappears at *Laws* 10.896c ff., where primary causality is restricted to the self-moving soul, which alone is said to be capable of initiating anything; everything else, being therefore something initiated by and in this sense dependent upon soul, is a matter of secondary causality.

Now with regard to the *Timaeus*, natural objects and nature as a whole are taken to be less than completely explained until one includes, in addition to a description of the physical entities involved, an explanation of what these physical entities are *for*, i.e. what functions they serve, or why they exist and the manner in which they do so. Take, for instance, Timaeus' account of the location of the human liver (69e ff.). It is, he says, located two removes from the head: for it is not only below the barrier of the neck, but it is also below the barrier of the diaphragm. The liver is located here, he says, for a number of reasons: (1) the head houses the best part of the soul, namely its rational part; (2) the liver houses the worst part of the soul, appetite; and (3) the gods who made human beings "shrank from
polluting the divine element with these mortal feelings more than was absolutely necessary" (tr. Lee). For another example of teleological explanation, take Timaeus' account of the shape and location of the head of a human being versus that of a grazing animal. The human head is spherical, whereas that of a horse, for instance, is elongated. The human head is spherical both (1) because the visible gods who made it imitated the Demiurge, who had previously made the universe divine and spherical and (2) because the human head contains the rational and most divine part of the soul; hence it only makes sense for the human head to be spherical as well (69c ff.). ("It only makes sense" may mean, in effect, not much more than that no explanation is felt to be needed; a non-spherical head in the case of a rational human being, on the other hand, would certainly call for explanation, in light of the presupposed connection between rationality and sphericity.) By contrast, the horse's head is elongated not only because it has no rational part of the soul with which it might understand the heavens but also because it pretty well exhausts its function simply by grazing:

Land animals came from men who had no use for philosophy and never considered the nature of the heavens because they had ceased to use the circles in their head and followed the leadership of the parts of the soul in the breast. Because of these practices their fore-limbs and heads were drawn by natural

120 "Firstly, pleasure, a most mighty lure to evil; next, pains, which put good to rout; and besides these, rashness and fear, foolish counsellors both; and anger, hard to dissuade; and hope, ready to seduce" (69d, tr. Bury).

121 The association between rationality and circularity is strong in Plato's mind. According to Skemp, Plato took over from Parmenides the idea that there was a connection between thought and sphericity (83), from Empedocles the ideas that the universe was spherical and that there was no void anywhere (62), and from Alcmaeon the idea that planetary orbits were circular (139). The human soul is, in sum, analogous to the world-soul in terms of possessing these rational and divine circles. See J. B. Skemp, The Theory of Motion in Plato's Later Dialogues, Enlarged Edition (Amsterdam: A.M. Hakkert, 1967).
affinity to the earth, and their fore-limbs supported on it, while their skulls were elongated into various shapes as a result of the crushing of their circles through lack of use [91e ff., tr. Lee].

It is this teleological explanatory background which must constantly be kept in mind as one reads this dialogue. The Demiurge is on each occasion trying to achieve something: the best possible result given what he has to work with. Observable natural facts, which are, I take it, to be construed as choices made by the Demiurge or his agents, the visible gods, are thus intelligible only in relation to that goal. Hence, for example, the human skull is fragile, not because it is inherently good for a human being to be short-lived but because a thick skull and much flesh cannot be combined with quickness of perception, i.e. a rational life, on one hand, and because a shorter but rational life is better than a longer but irrational one (75a-c). The nature of the human skull thus reflects the best, that is to say the most reasonable, compromise, and it is only when one sees this that one has understood why it is the way it is, according to Timaeus. If so, then a natural fact, if it can be seen to serve some purpose, or to be useful for something, expresses a rational choice made by the Demiurge or his agents, by which I mean that he selected the option which made the most sense under the circumstances constraining those options, and he or they did this whether or not he or they also acted in accordance with extra-cosmic normative standards of appropriateness or morality.

Timaeus' discourse itself follows an introductory conversation (17a-27b) in which a trilogy of speeches is projected, of which Timaeus' is the first. His speech has been usefully analyzed by Comford into four main sections: (1) a prelude to the discourse proper (27c-29d); (2) the contribution of Reason (29d-47e); (3) the contribution of Necessity (47e-69a); and (4)
the co-operation of Reason and Necessity (69a-92c). In section (1) Timaeus lays down the
metaphysically grounded methodological principles governing the rest of the discourse. The
main feature of section (2) is the construction of soul, both that of the world and those of
human beings; this is prefaced by a preliminary discussion of the world's body, and this is
prefaced in turn by an explanation of the Demiurge's motive in making the world, the model
he referred to in making it, and why he made only one. Section (3) contains an account of
that in which body is located -- Timaeus calls this both "the receptacle of becoming" and
place (or space) -- and the four primary natural bodies themselves (fire, air, water, and earth).
This is followed by explanations, with regular reference to these natural bodies, of both (a)
ordinary experience of what happens in the natural world and (b) ordinary experience of
human sensation and perception. In section (4) Timaeus describes in detail the human body,
and how to bring both it and the soul out of a condition of disease into one of health.

The texts in the *Timaeus* in which I am interested and in which an awareness of the
epistemic sense of *to prepon* and *to prosēkon* enhances our understanding of them and the
wider dialogue are contained in the first three of these four sections of Timaeus' speech.\(^{122}\)
As I indicated in chapter one, these passages fall into three general contexts and are treated
accordingly in this chapter. In part 1 I discuss those texts dealing with matters of
methodology (29b and 29d); in part 2, those dealing with meta-cosmological discourse (38a,
38b, 48b, 50d, and 62d); and in part 3, those dealing directly with cosmological speculation

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\(^{122}\) The texts are: 29b, 29d, 32b, 33b, 35b, 38a, 38b, 38e, 39b, 41c, 41e, 42b, 46d, 48b,
50d, 51a, 52c, 54c, 55d and 62d.
Part 1: Methodological Discourse

Prep- and prosēk- are used twice by Timaeus in his cosmological discourse to perform a specifically methodological function:

(a) in the speech’s prelude, in a summary statement of what the preceding argument enables them to do (29d), and

(b) in a premise of the argument itself (29b).

Similar use of such language can be observed in the Critias and in the Phaedo.

(1a)

Timaeus begins his discourse by cautioning Socrates, Critias, and Hermocrates against demanding too much from him. While he will give them as accurate an account of the universe as is possible, because the universe is physical the best one can hope for is likelihood or plausibility: an eikōs logos.\(^{124}\) Certainty is strictly speaking impossible.\(^{125}\)

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123 The following passages do not seem usefully illuminated by the epistemic sense of these two verbs: 32b, 38e, 39b, 41c, 41e, 42b, 46d, and 48b. Prosēk- occurs at 48b1 and 48b8; for the purpose of this dissertation I am interested in the second of these only.

124 For a recent account of eikōs logos see A.F. Ashbaugh, Plato’s Theory of Explanation (Albany: State University of New York Press, 1988). Ashbaugh is interested in verisimilitude and does not consider the relationships between prepei, prosēkei, and eikos estin.

125 According to Comford,
The argument he uses to support this claim is imported from the analogy of the divided line

Earlier cosmogonies had been of the evolutionary type, suggesting a birth and growth of the world, due to some spontaneous force of life in nature, or, as in Atomism, to the blind and undesigned collision of lifeless atoms. Such a story was, to Plato, very far from being like the truth. So he introduced, for the first time in Greek philosophy, the alternative scheme of creation by a divine artificer, according to which the world is like a work of art designed with a purpose. The Demiurge is a necessary part of the machinery, if the rational ordering of the universe is to be pictured as a process of creation in time. But the important point is that, no matter whether you prefer to analyze the world or to construct it piece by piece, the account can never be more than 'likely', because of the changing nature of its object; it can never be revised and amended into exact truth [Plato's Cosmology 31].

In this he disagrees, in part, with Taylor:

it will be a rule of method that 'discourses' ... about the model must be final: discourses about the mutable copy cannot have this finality, and are therefore not 'exact' ..., and we must be satisfied by an approximation to finality and exactitude which is as close as we can make it [Commentary 73].

The reason, according to Taylor, is that truth in physics would require infinitely acute senses (which we do not have) in order to make absolutely correct observations.

Both views, not surprisingly, have something to be said for them. Take, for example, the relatively simple case of determining exactly the height of a particular golden statue of an athlete about to launch a javelin. Suppose that the tip of the javelin constitutes the highest point of the statue, that at the tip is a single atom of gold, and that this single atom has in its outermost orbital shell a single atom. Now contemporary physics tells us that the size of the gold atom is equal to the size of the orbital shell of its outermost electron. But the outermost shell's size is in fact not constant but changing; it is a measure of probability of the electron's being within that shell, and thus the shell itself varies in size over discrete periods of time. Any assertions about the absolute height of the statue can accordingly only be probabilistic (Cornford). But even if we were able to stop the motion of the outermost electron at its zenith, relative to the ground, it would be impossible to specify the height precisely, since there is no determinable limit to the number of decimal places (Taylor).
presented in *Republic* 6.509d ff. Now if the world cannot be known because it is not an intelligible object, in what sense is it *good* (Zeyl: "it behooves us") to seek for nothing more than opinion, almost as if one had better not exercise this option (29c-d)? Recall Timaeus’ concluding methodological remark:

Don’t be surprised then, Socrates, if it turns out repeatedly that we won’t be able to produce accounts on a great many subjects -- on gods or the coming to be of the universe -- that are completely and perfectly consistent and accurate. Instead, if we can come up with accounts no less likely than any, we ought to be content, keeping in mind that both I, the speaker, and you, the judges, are only human. So we should accept the likely tale on these matters. *It behooves us* not to look for anything beyond this (hōste peri toutón ton eikota muthon apodechomenous prepei toutou mēden eti pera zētein).  

In fact the whole preceding argument has gone to show why one does not have such an option; the world is physical, *ergo* it can be opined about but not known. This does not indicate a human limitation to which gods are not subject but on the contrary holds for gods and human beings alike: not even the Demiurge himself could *know* a physical object *qua* physical.

Now if, as seems to me likely, hōste in the last sentence does not introduce the argument’s conclusion but introduces rather a summary statement of what that argument preceding has established, then prepei does not amount to a recommendation to seek no

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126 According to the Divided Line Analogy, any visible thing (*horaton*) is an object either of belief (*pistis*), if it is physical, or of illusion (*eikasia*), if it is a shadow or image of a physical thing, and yields opinion (*doxa*) only. Anything which is intelligible (*noēton*), by contrast, is either an object of discursive reasoning (*dianoia*), or of direct intuition (*noēsis*), and in either case yields knowledge (*epistēmē*).

127 As in chapter one, all translations of the *Timaeus* are Zeyl’s, unless otherwise indicated. I remind the reader of my practice of indicating emphasis by means of *italics* only; I reserve *underlines* to point out words without implying any emphasis.
further, closely parallel to *chrē* in the penultimate sentence -- which *does seem* to function as the argument’s conclusion, in which case Timaeus does not in fact repeat himself, since he is making two points, not one -- but rather to a justification for not making the attempt in the first place: i.e. it is *acceptable* for them not to look further. But what kind of acceptability is this? Not, surely, moral acceptability, since there is no reason to think that anyone in the audience would be *morally offended* if Timaeus strained for certainty in cosmology -- at most they would tire out; the same consideration undermines the plausibility of interpreting *prepei* in terms of a more general normativity. Nor is it likely to be a matter of, say, religious acceptability, as though the Demiurge might be offended by Timaeus’ attempt to gain physical knowledge, being jealous of his own knowledge of nature, not only because, being good, he is no scrooge, but also because *ex hypothesi* it is impossible for intellect -- the point is perfectly general -- to have knowledge of such things. The justification for not pressing on beyond what is metaphysically possible seems, on the contrary, to be logical and therefore pragmatic in kind. If the epistemological situation really is as Timaeus says it is, it is pointless and futile in the highest degree to ask for more than one can possibly hope for, i.e. to know what is inherently unknowable. Given the metaphysical and correlative epistemological commitments of Timaeus, then, either of the following translations seem plausible: "*It makes sense* for us to seek no more than this: the likely story" or "*it’s*..."
reasonable for us to seek no more than this: the likely story." Both clearly indicate that the acceptability of being content with plausibility in cosmological speculation is specifically rational in kind.

Critias makes a similar remark in the prelude to his own speech (Critias 107a). He asks for even greater indulgence with respect to his ensuing discourse than Timaeus got when he gave his account of the universe, reasoning that it was easier for Timaeus to be persuasive before than Critias thinks it will be for him now, since the audience is much more knowledgeable about mortal things than about immortal ones. An artist who paints the world at large, he continues, has good hopes for escaping sharp criticism because few if any are as familiar with the world at large as such criticism, if valid, presupposes (107d-e):

We should recognize that the same is true of verbal descriptions. We are content with faint likenesses when their subjects are celestial and divine, but we criticize narrowly when they are mortal and human. So in what immediately follows, you should make allowances if my narrative is not always entirely appropriate (ek dê iou pararchēma nun legomena, to prepon an mē dunōmetha pantós apodidonai, suggignôskein chreôn); for you must understand that it is far from easy to give satisfactory accounts of human affairs. It is to remind you of this and to ask for a still greater indulgence for what I am going to say, Socrates, that I have started with this long introduction [tr. Lee].

Critias here clearly implies that any mistakes Timaeus has made in his account of celestial affairs will be relatively undetectable compared to those he himself may make in his account of human ones. What kind of mistake, then, is Critias worried about, if not a distortion of historical facts? This he would do either by overglorifying or by underglorifying the Athenians of long ago. Given his particular audience, however, he seems to me more likely to encounter a moral or quasi-moral objection from them if he short-changes these Greeks of long ago and an epistemic one if he embellishes them, and given the character of this
particular occasion -- a celebration -- he seems to me more likely to embellish than to short-change them. For these reasons to prepon on this occasion seems less satisfactorily rendered quasi-morally or generally normatively\(^{130}\) than epistemically, for instance as follows: "you should make allowances if we are not able to produce something in every way plausible."

At Phaedo 114d Socrates uses prep- in a similar manner to comment on the theory he has just advanced concerning the shape, location, and inner workings of the earth, on one hand, and the destiny of the soul, on the other. He concludes that it is a good idea to become as good and wise as possible, since the prize is fine and the hope is great, and then comments:

Of course, no reasonable man ought (ou prepei noun echonti andri) to insist that the facts are exactly as I have described them. But that either this or something very like it is a true account of our souls and their future habitations -- since we have clear evidence that the soul is immortal -- this, I think, is both a reasonable contention (toto kai prepei moi dokei) and a belief worth risking, for the risk is a noble one.\(^{131}\)

Tredennick here in my view rightly perceives that the only credible construal of prepein is an epistemic one. For not only were none of the individual arguments advanced in this dialogue and taken to support this belief absolutely decisive, although collectively they seem to Socrates and his interlocutors to increase considerably the odds of its being true, but not one of those individually probabilistic arguments were based on normative or quasi-normative

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\(^{130}\) e.g. T. Taylor (tr.), *Plato: The Timaeus and The Critias or Atlanticus* (Washington, DC: Pantheon Books, 1944) 231: "it is requisite to pardon whatever in the ensuing discourse may be delivered in an unbecoming manner"; A.E. Taylor (tr.), *Plato: Timaeus and Critias* (London: Methuen, 1929) 108: "if we do not succeed in reproducing the proper touches perfectly, allowances should be made."

premises -- they were based rather on considerations of nature, logic, and metaphysics. This strongly suggests that *prepei* is also at least partly epistemic in sense, since Socrates acknowledges that he has been theorizing well beyond what he or anyone else is in a position to claim with confidence. Still, if, as seems likely, *prepei* involves a normative criterion for (admittedly intellectual) behavior, then it may not be wholly epistemic in sense, although it does seem to be predominantly so. Accordingly, it seems best to render the text as follows: "However, it’s not reasonable for a sensible man to insist that the facts are exactly as I have described them."

(1b)

An important premise in Timaeus’ argument that likelihood is the maximum possible in cosmology concerns the relationship between an account and what the account is an account of (29b-c):

Now in every subject it is of utmost importance to begin at the natural beginning, and so, on the subject of an image and its model, we must make the following specification: the accounts we give of things have the same character as the subjects they set forth. So accounts of what is stable and fixed and transparent to understanding are themselves stable and unshifting. We must do our very best to make these accounts as irrefutable and invincible as any account may be (*kath’* hoson hoion te kai anelenktois *prosêkei logos* éinai kai anikêtois, toutou dei mëden elleipein). On the other hand, accounts we give of that which has been formed to be like that reality, since they are accounts of what is a likeness, are themselves likely, and stand in proportion to the previous accounts, i.e., what being is to becoming, truth is to conviction.

As I noted in chapter one, my sample of translators is not agreed as to whether or not
prosēkei is to be construed normatively (Zekl, Taylor) or non-normatively (Lee, Cornford). Zeyl seems to leave it unconstrued altogether. All these translations have some plausibility, but all seem problematic as well. An awareness of the epistemic sense of prosēkei, on the other hand, makes it possible to interpret Timaeus' words without collapsing hoion te [estin] and prosēkei (Lee, Zeyl) -- a move on their part which in effect makes one of the verbs redundant. It also avoids suggesting, as Comford seems to (but Timaeus does not), that it's natural for (all) accounts of changeless things to be irrefutable and invincible -- if, that is, some such accounts of them are taken to be superior to others. It further avoids the problem of who or what it is that permits (or makes it appropriate for) accounts to be irrefutable and invincible, and why it might do so to a certain extent only (Zekl, Brisson, Taylor). Now I do not wish to claim that Timaeus is not doing one or another of these things, but merely that he need not be. For he may be saying that at

132 "soweit das überhaupt geht und Reden unwiderlegbar sein dürfen und unbesiegbar, dürfen sie es da an nichts fehlen lassen."

133 "pour autant qu'il est possible et qu'il convient à un discours d'être irréfutable et invincible."

134 "so far as it is possible and proper for discourses to be irrefutable and final, there must be no falling short of that" (Commentary 74). He does not comment on Timaeus' use of prosēkei.

135 "[this description] will be ... as irrefutable and incontrovertible as a description in words can be."

136 "so far as it is possible and it lies in the nature of an account to be incontrovertible and irrefutable, there must be no falling short of that."

137 Unless Timaeus, like Xenophanes, believes that some such accounts are better than others, he would seem to have no non-arbitrary justification for criticizing Empedocles, who gave a materialist account of reality physical.
least two features are necessary in good accounts of eternal or changeless things: on one hand they must be irrefutable and invincible; but they must do so, on the other hand, while being reasonable or plausible. Now a necessary condition of reasonability and plausibility is intelligibility.138 what is being entertained as possibly true must at least make sense. Unless the hypothesis is intelligible to the audience, it would be irrational for that audience either to agree or to disagree with it; the most reasonable thing to do, in such a case, would be simply to withhold assent. If this suggestion is correct, then according to Timaeus the ideal explanatory aim, in dealing with what is beyond verification, and so is probable at best, is to secure the maximum on at least these two fronts. If so, he may here be complaining that it is possible for an account of eternal things to be irrefutable and invincible without its thereby constituting a good account. Perhaps he means that its irrefutability is an extrinsic and not an intrinsic feature of it, i.e. it is irrefutable for the simple but not rationally respectable reason that no one knows how to dispute it and not because everyone actually understands and agrees with it. Timaeus may, in that case, be saying something like: "To the extent that it's possible and reasonable for accounts to be irrefutable and invincible, nothing must be left out." Another, similar possibility is that, since the best arguments are literally irrefutable but not literally invincible, Timaeus is expressing the metaphorical invincibility of what is to follow, for which the language of making sense is well-suited: "To the extent that it’s possible and makes sense for accounts to be irrefutable and invincible (or: to the extent that it’s possible for accounts to be irrefutable and to the extent that it makes sense for them to be

invincible], nothing must be left out."

**Part 2: Meta-cosmological Discourse**

Timaeus uses *prep-* and *prosēk-* to comment upon cosmological discourse, in particular to say something about the appropriate language for, or manner of thinking about,

(a) time and eternity (38a and 38b),

(b) the primary natural bodies and the receptacle (48b and 50d), and

(c) cosmometry, i.e. cosmic geometry (62d).

(2a)

How should one speak about time and eternity? Timaeus asks. For they are not the same, even if popular speech gives the impression that they are. Now although, according to Timaeus, utter changelessness is intrinsically desirable, and so would have been nice in the case of the physical world, unfortunately it was impossible. So the Demiurge did the next best thing: he made it revolve in the same place according to number and so to be "a moving image of eternity" (37d-e), the imitation of eternity (by regular rotational motion) being just what time is. Given, then, that time and eternity are different kinds of duration, how can speech more accurately reflect the truth?

For before the heavens came into being, there were no days or nights, no months or years. But now, at the same time as he framed the heavens, he devised their coming into being. These are all parts of time, and *was* and *will be* are forms of time that have come into being. Such notions we unthinkingly but incorrectly apply to everlasting being. For we say that it *was* and *is* and *will be*, but according to the true account only *is* is appropriately said of it. *Was* and *will be* are properly said about the becoming that passes in time, for these two are motions. But that which is always changeless and motionless
cannot become either older or younger in the course of time (legomen gar dē hōs ēn estin te kai estai. tēi de to estin monon kata ton alēthē logon prosēkei. to de ēn to t' estai peri tēn en chronōi genesin ousan prepei legesthai -- kineis gar estion, to de aei kata t' auta echon akištos ousa presbuteron ousa neótēron prosēkei gignesthai dia chronou) -- it neither ever became so, nor is it now such that it has become so, nor will it ever be so in the future. And all in all, none of the characteristics that becoming has bestowed upon the things that are borne about in the realm of perception are appropriate to it. These, rather, are forms of time that have come into being -- time that imitates eternity and circles according to number. And what is more, we also say things like these: that what has come to be is what has come to be, that what is coming to be is what is coming to be, and also that what is not is what is not. None of these expressions of ours is accurate. [37e-38b].

We saw in Timaeus' statement of methodology that perceptible things yield only likelihood whereas intelligible things yield certainty. Similarly here the single correct referent of the timeless is is something which naturally undergoes no change whatsoever over the course of time; it does not even get older. Eternity is relevantly different from time in the sense that the latter is dynamic whereas the former is altogether static. Time, in other words, is in its own nature like the perceptible objects which, qua temporal objects, come to be at one time and pass away at another; things in the world of space-time are never, so to speak, at rest at any particular present moment or "now" but are instead continuously in transit from "not yet" to "no longer." Eternity, by contrast, is in its own nature like those intelligible objects, the Forms, which, qua eternal, are forever and unchangingly whatever they are.

Timaeus' argument in this passage may usefully be analyzed as follows:

(1) It's _____ to predicate "was" and "will be" of the becoming that passes in time, for these two are motions;139

139 "was" and "shall be" are properly used of becoming which proceeds in time, for they are motions" (Cornford); "we should ... [reserve] was and shall be for the process of change in time: for both are motions" (Lee); "En revanche, les expressions «il était» et (continued...)
(2) It's ____ for anything which is always changeless and motionless to become neither older nor younger in the course of time:  

[therefore]

(3) According to the true account it's ____ to predicate only "is" of it, even though we do predicate "was" and "will be" of it as well.  

On this analysis, in premise (1) Timaeus draws an analogy between the nature of the speech and the nature of its object: the language of motion is the best language for things that change, clearly implying that the language of stability is the best language for things which don't change. Now what makes motion-language the best language for moving things, and motionless-language the best language for motionless things? "Best" must in such a case, it seems to me, mean something like "most like what it denotes," that is to say, "most analogous." At a general level, analogies are only ever useful from a cognitive point of view.  

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139(...continued)

"Il sera", c'est à ce qui devient en progressant dans le temps qu'il sied de les appliquer, car ces deux expressions désignent des mouvements" (Brisson); "dagegen war und wird sein soll nur man nur über das in der Zeit fortschreitende Werden aussagen, das sind nämlich Vorgänge" (Zekl).  

140 "But that which is ever in the same state immovably cannot be becoming older or younger by lapse of time" (Comford); "but that which is eternally the same and unmoved can neither be becoming older or younger owing to the lapse of time" (Lee); "Mais ce que reste toujours dans le même état sans changer, il ne vieux avec le temps" (Brisson); "auf das immer sich unveränderlich genauso Verhaltende aber trifft es nicht zu, im Laufe der Zeit älter zu werden oder jünger" (Zekl).  

141 "We say that it was and is and shall be; but "is" alone really belongs to it and describes it truly" (Comford); "For we say of it that it was and shall be, but on a true reckoning we should only say is" (Lee); "Certes, nous disons qu'il était, qu'il est et qu'il sera, mais, à parler vrai, seule l'expression «il est» s'applique à l'être qui est éternel" (Brisson); "Wir sagen ja von ihm, daß es war, ist und sein wird, doch ihm kommt allein das »ist« in wahrer Rede zu" (Zekl).
and then only to the degree that they make sense in relation to, i.e. to the extent that they rationally illuminate or help one to think well and correctly about. the things held to be alike. Since there is here no hint of any non-rational consequence of getting the language wrong, it seems most likely that "right" or "appropriate" is to be construed as "correct," and "wrong" or "inappropriate" as "incorrect." Thus the first premise may, and on this argument should, be translated as follows: "It makes sense to predicate was and will be of the becoming that passes in time, for these two are motions." It makes sense, or feels right, for the relatively simple reason that they match; language that doesn’t match its object might easily feel correspondingly odd, in the same way that, given the association between rationality and sphericity, an elongated head on a rational being would call for special explanation just in case it is felt to be contrary to what one might reasonably expect.

Premise (2) seems to be self-evidently true, provided one translates prosékei epistemically. In a philosopher this may by itself constitute a good reason to take it thus. If X does not change -- at all, it is implied -- then X does not change in respect of age either, and to think otherwise (i.e. that it is completely changeless but does get older) makes no sense. If the relationship between sense-making and likelihood is as I have in chapter one suggested it is, this would explain why my entire sample of translators can easily and plausibly render Timaeus’ words as expressing such a high degree of self-assurance. But if, as seems clear enough, the reason justifying their confidence is in fact just that, since the premise expresses a something very like a logical truth, its contradictory makes no sense, we may reasonably render the second premise more directly as follows: "But it makes no sense for anything which is always changeless and motionless to become either older or younger in
the course of time."

Since the conclusion is an inference from just these two premises, if they are epistemic in sense there can, it seems to me, be no reasonable doubt that the conclusion is epistemic in sense as well. What positively shows that the conclusion of this argument is to be taken in this way, however, is that it makes reference to "the true account" (*ton alēthe logon*), and the truth, accessible only to the intellect, is apprehensible only cognitively (cf. 28a). The sense in which it is appropriate to predicate *is* of what is changeless, then, is just that nothing else makes sense. By this argument the conclusion is to be translated as follows: "According to the true account it makes sense to predicate only "is" of it, even though we do predicate "was" and "will be" of it as well." It makes sense, that is, assuming Timaeus’ metaphysical and epistemological commitments. It should be noted that "appropriate" is not exactly incorrect as an interpretation of prep- or prosēk- in cases like this; rather, such language is appropriate or fitting in a specifically intellectual sense. It seems clear that social acceptability on the other hand has nothing to do with it, for Timaeus criticizes social practice in this regard.

(2b)

Two similar cases of meta-cosmological discourse can be found at 48b and 50d. In the former Timaeus criticizes an analogy evidently commonly accepted in relation to the primary natural bodies; in the latter he suggests an analogy of his own to illuminate the nature of the receptacle.
The analogy Timaeus finds inadequate is one which compares the four primary natural bodies to the letters of a language. According to this analogy these natural bodies and letters are the simplest constituents out of which nature and language respectively are built. Timaeus objects that not only are the natural bodies not like the letters of a language, they are not even like its syllables:

So far no one has as yet revealed how fire, water, air, and earth came into being. We tend to posit them as the elemental "letters" of the universe and tell people they are its "principles" on the assumption that they know what fire and the other three are. In fact, however, they shouldn't even be compared to syllables. Only a very unenlightened person might be expected to make such a comparison (prosékon autois oud' an hós en sullabés eidesin monon eikotós hupo tou kai brachu phronountos apeikasthēnai).

Timaeus is evidently saying that anyone who compares the primary natural bodies to syllables is making a mistake. That he means such a person is making a cognitive error seems clear; if so, prosékon is to be construed in a manner consistent with eikotós. Since it is an unenlightened person who "might be expected" (Zeyl) to make such a comparison, i.e. who would do so, an enlightened one would not. But the enlightened one would avoid doing so because it would violate a rational canon to do so, and therefore would violate a moral or quasi-moral criterion to do so. The morally right thing to do, for a rationally enlightened human being, is identical with the reasonable and sensible thing to do. This point is clearly

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142 Cf. Comford: "one who has ever so little intelligence should not rank them even so low as syllables;" Zeyl: "es ihnen doch nicht einmal zukommt, auch nur von einem mit schmaler Einsicht Begabten;" Lee: "they ought not really to be compared even to syllables;" Brisson: "la vraisemblance demande qu'on ne les assimile même pas seulement à des syllabes."
brought out in the following translation: "But it doesn’t make sense to compare them even to syllables."\(^{143}\) That unenlightened people do make the comparison in spite of this just goes to show that they either do not realize or do not mind that they are accepting things which do not make sense.

But if such a comparison is erroneous, what, one might well wonder, is the truth of the matter? Taylor argues that the mistake consists in likening the "corpuscles" to syllables, when in fact, he says, as Timaeus' later analysis shows, they are to be likened to words:

in the theory of Timaeus most of what passes for ‘fire’, ‘air’, &c. is not pure but compound, and even the corpuscles of ‘pure’ fire, &c. are not formed directly from his ‘letters’, the two primary triangles, but only indirectly, by first forming their ‘faces’ out of combinations of the two primary triangles. Thus it is the ‘faces’ of the solid corpuscles which, on Timaeus’ theory, are the ‘syllables’; the corpuscles themselves would be words, and the bodies formed of a number of corpuscles the sentences, paragraphs, &c. of nature’s book.\(^{144}\)

The mistake, then, according to Taylor, consists in a misalignment in levels of analysis of the two terms of the analogy, not in a fundamental incommensurability between them. Cornford

\(^{143}\) Recall 48d, where, before actually beginning the more complete account, Timaeus says:

I shall keep to what I stated at the beginning, the virtue of likely accounts, and so shall try right from the start to say about these things, both individually and collectively, what is no less likely than any, more likely, in fact, than what I have said before. Let us therefore at the outset of this discourse call upon the god to be our savior this time, too, to give us safe passage through a strange and unusual exposition, and lead us to a view of what is likely [emphasis mine].

This implies that in Timaeus’ view the alternative theory, holding that "elements" are like syllables or letters, is unlikely. We can now see why Timaeus thinks it unlikely: it makes less sense than the theory he himself will presently advance.

\(^{144}\) Taylor, Commentary 308.
suggests that Timaeus’ warning that his ensuing analysis will not reach to the first principle(s) of all things

may mean that the elementary triangles themselves are reducible to numbers, and number perhaps to be derived from unity .... or it may mean that no one can ever really know the ultimate constitution of body, because there can be no such thing as physical science, but only a ‘probable account’.\textsuperscript{145}

An epistemic construal of \textit{prosēkon} argues in favor of Comford’s second possibility, namely that physical nature is inherently at best translucent to reason. The mistake in the analogy consists not in a mismatch of levels of analysis but in thinking that body is like language at all. For if the ‘corpuscles’ were really like words, then, like words, the ‘corpuscles’ would be inherently intelligible. But if anything the mathematical ‘syllables’ into which these natural ‘words’ are analyzed are more, not less, intelligible than the original ‘words’ were; and in the case of language, on the other hand, letters, syllables, words, and sentences constitute an increasing, not decreasing, order of intelligibility. The mathematical analysis of natural bodies does not make them, \textit{qua} physical objects, intelligible for the simple reason that only intelligible objects are intelligible. Plato may perhaps be demonstrating this with a "seemingly arbitrary feature [of Timaeus’ mathematical analysis], which has never been satisfactorily explained,"\textsuperscript{146} namely the obvious over-analysis of primary bodies into constituent triangles. For what is the point of analyzing the equilateral triangle constituting each of the four faces of the pyramid of fire into six fundamental 30-60-90° scalene triangles when two would have sufficed, if not to show that these six are themselves precisely not

\textsuperscript{145} Comford, \textit{Plato’s Cosmology} 162.

\textsuperscript{146} Comford, \textit{Plato’s Cosmology} 217.
fundamental, since naturally each one of them is similarly analyzable into three smaller ones of the same type, and so on *ad infinitum*, if not actually *ad infinitum*? But if so, then since anything which is indefinitely analyzable would seem in the final analysis -- which cannot be achieved, under this hypothesis -- to be inherently incomprehensible, it would make sense for Timaeus to hold that physical entities, *unlike words*, are literally unintelligible. That would explain why it makes no sense to compare them to letters, syllables, or words.

At 50d Timaeus advances an analogy of his own for the receptacle of becoming. He introduces his more adequate three-factor theory (Form/Original, Image/Copy, Receptacle/Place) at 48e by saying that a full account of the cosmos must also account for that which the Demiurge had worked *on* in order to produce the cosmos, i.e. his "materials." The mathematical analysis of the four primary natural bodies into triangles, to be performed shortly (53c-55c), does not negate the fact that they remain bodies having bulk. It would seem obvious that such things as bodies, unlike the immaterial Forms, cannot be nowhere but must rather be somewhere. So an account of that "somewhere," the receptacle or "wetnurse" of all becoming, soon recast more geometrically as place (or space), which provides the necessary -- conceived logically and/or metaphysically, not morally or quasi-morally -- location for all that is bodily, is called for. Timaeus, it must be remembered, is probably trying to "save the phenomena,"\(^{147}\) and is thus rationally entitled to infer what is minimally

\(^{147}\) Vlastos reports that the precise phrase does not occur either in Plato or in Aristotle, but variants do (e.g. "save a hypothesis") in both. Such usage, he observes, occurs in contexts where "to save" is to preserve the credibility of a statement (continued...)
required in order to account for our actual experience of the world. That experience undeniably includes acquaintance with things that take up room. The receptacle, then, is taken to be implied by the bulkiness of physical objects, although neither its existence nor its nature are determinable by means of perception.

Whether the receptacle is implied by physical objects is one thing; whether it's being implied is grasped by his audience is another. Plato clearly expects his readers to find it hard to grasp, and so he has Timaeus argue for its actual existence on the following grounds. The observed phenomenon of 'elemental' transformation makes it extremely unlikely that any given 'element' is inherently stable (49c-50a). Whatever stability a volume of water, for

\[147\]...continued

by demonstrating its consistency with apparently recalcitrant logical or empirical considerations. The phrase "saving the phenomena" must have been coined to express the same credibility-salving operation in a case where phenomena, not a theory or an argument, are being put on the defensive and have to be rehabilitated by a rational account which resolves the \textit{prima facie} contradictions besetting their uncritical acceptance. This is a characteristically Platonic view of phenomena.... For Plato, then, the phenomena must be held suspect unless they can be proved innocent ("saved") by rational judgment. So it would not be surprising if the phrase "saving the phenomena" -- showing that certain perceptual data \textit{are} intelligible after all -- had originated in the Academy, though we have no means of proving that it did. The phrase would have described aptly, for example, what Plato does for the optical data which are accounted for by his theory of vision (\textit{Ti.} 42A2-C6; \textit{Sph.} 266B6-C4): the phenomena of the reversal of left and right in ordinary mirrors and of the reversal of up and down in cylindrical mirrors of vertical curvature would be intellectually disturbing if taken at face value for they would then clash with our normal perceptual beliefs; Plato's theory puts him in a position to show that such appearances must, nonetheless, "of necessity" be what they are ...; he could thus have said with perfect justice that his theory "saves" those phenomena [G. Vlastos, \textit{Plato's Universe} (Seattle: University of Washington Press, 1975) 111-12].
instance, appears to have is in fact just that -- an apparent and deceptive stability: for right before one's eyes water evaporates, if heated, which Timaeus understands as its turning into air. Metaphysically, of course, this is impossible, since if something has a stable identity to begin with, that is to say if something is really a *thing*, then it cannot shed its own identity and assume that of something else, since to do so would entail the paradoxical conclusion that something has shed itself. Therefore it would be reasonable for Timaeus to infer, on the basis of this sort of consideration and on the supposition that elemental transformation occurs (as it appears to, at least), that the 'elements' cannot possibly have stable identities to begin with. His way of saying this is that water, for instance, is not a definite something (*touts*) but a sort-of something (*to toiouton*), a quality. That which is characterized as fiery, airy, watery, and earthy, and which retains its identity through change, is the receptacle; fire, air, water, and earth are, in other words, different and transitory configurations of various parts of the receptacle.

Now because Timaeus is not yet satisfied with his explanation, he provides a number of analogies. The first is from the physical world. The receptacle, he suggests, is like the gold which is capable of being continuously reshaped from one form into another; the gold material is the constant which survives the change of shape (50a-c). He puts off discussing how it is that the receptacle is imprinted with visible likenesses of certain Forms (i.e. the Forms of Fire, Air, Water, and Earth) because it is very hard to say. He then offers an analogy for the receptacle from the biological world:

For the moment, we need to keep in mind three types of things: (i) *that which comes to be*, (ii) *that in which it comes to be*, and (iii) *that after which the thing coming to be is modeled, and which is its source*. In fact it is appropriate to compare (ii) the receiving thing to a mother, (iii) the source to a father, and
(i) the nature between them to their offspring (kai δὲ kai proseikasai prepei to men dechomenon métri, to d' hothen patri, tēn de metaxu toutōn phusi ekgonōi).

Timaeus gives no explanation of what it is that makes the analogy appropriate. As soon as one raises the question of what kind of value accrues to such things as analogies, however, it becomes clear that it must be explanatory value. For analogies, if they are good ones, perform first and foremost a cognitive function of making the things said to be analogous more intelligible than they were before. An appropriate, good, or acceptable analogy, if one insists upon the word,\textsuperscript{148} is nonetheless precisely one which increases comprehensibility by rationally illuminating something. Thus it seems better to understand Timaeus as saying, "In fact to compare the receiving thing to a mother, the source to a father, and the nature between them to their offspring makes sense."

(2c)

The last meta-cosmological text in which this language bears an epistemic sense involves cosmic geometry, or, as I have called it, cosmometry (62d). Timaeus has long before argued that the universe is spherical (33b; see part 3 below). After he 'constructs' the primary natural bodies (53c-55c), he discusses the varieties within each basic kind of natural

\textsuperscript{148} Cf. Zekl: "So scheint denn auch ein Vergleich angemessen: Das Aufnehmende mit einer Mutter, das »nach dem...« mit einem Vater, das Naturding in ihrer Mitte mit einem Spröbling;" Cornford: "Indeed we may fittingly compare the Recipient to a mother, the model to a father, and the nature that arises between them to their offspring;" Brisson: "Et tout naturellement il convient de comparer le réceptacle à une mère, le modèle à un père, et la nature qui tient le milieu entre les deux à un enfant;" Lee: "We may indeed use the metaphor of birth and compare the receptacle to the mother, the model to the father, and what they produce between them to their offspring."
stuff as being due to their different shapes, combinations, and transformations (55d-61c). He then considers their perceptible qualities in the aggregate (61c ff.). After dealing with the topic of temperature, he turns to that of weight, i.e. ‘heavy’ and ‘light.’ The clearest way of explaining weight, he says, is to consider it in relation to place, i.e. to ‘above’ and ‘below.’ This raises a question about whether or not there is an absolute ‘up’ (or top) and another absolute ‘down’ (or bottom) in the universe. He answers, Not in a spherical one (62d-63a):

For given that the whole heaven is spherical, all the points that are situated as extremes at an equal distance from the center must by their nature be extremes of just the same sort, and we must take it that the center, being equidistant from the extremes, is situated at the point that is the opposite to all the extremes. Now if this is the universe’s natural constitution, which of the points just mentioned could you posit as ‘above’ or ‘below’ without justly giving the appearance of using totally inappropriate language? (tou dē kosmou tautēi pephukotos, ti tōn eitēmenōn anō tis ē katō tithemenos ouk en dikēi ðoxei to mēden prosēkon onoma legein;) There is no justification for describing (ou ... legesthai dikaios) the universe’s central region either as a natural ‘above’ or a natural ‘below’, but just as ‘at the center’. For the whole universe, as we have just said, is spherical, and to say that some region of it is its ‘above’, and another its ‘below’, makes no sense (echein ouk emphronos).

This case is not significantly different from that concerning the appropriate language for things transitory and eternal (38a above). It seems obviously not incorrect to construe the text in a generally normative manner, as my entire sample of translators does, but such an interpretation does not go as far as the passage seems to warrant. For once we ask what it is that makes a particular use of language appropriate or inappropriate in a context like this, we see that the "right" language is right only if it is consistent with the thing it describes, i.e. is accurate. Now for a spherical object which provides the natural context for every other

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149 The language of up and down is "quite unsuitable" (Cornford), "inappropriate" (Lee), "unpassende" (Zekl), "ne convient en rien" (Brisson), for something that has only extremities and center and is not further contextualized.
physical object but is not itself in some greater context, say of void -- recall that Timaeus has taken over from Empedocles the denial of the existence of void, in consequence of which the universe would have to be held to be literally everywhere there is, since there is no empty space 'outside' of it -- for such an object an absolute top or bottom, left or right, front or back are all epistemologically indeterminable because literally inapplicable. But what about the celestial poles around which the so-called sphere of fixed stars appears to rotate? Isn't the north celestial pole, for instance, either at the universe's top or bottom, depending on whether the universe rotates east to west or west to east? All such talk, however, is question-begging, insofar as north, south, east, west, top, bottom, left, right, horizontal, and vertical are all strictly relative terms. Given Timaeus' assumption that there is nothing 'outside' of the universe (33c), there is no reason to think that the universe would rotate "standing up," so to speak, rather than "lying down," i.e. "vertically" rather than "horizontally," not only because, as Timaeus puts it, it has no legs (on which it might stand) or arms (which might interfere with its rotating smoothly on some surface), but also because that very thing which makes horizontal rotation difficult in the human case -- the surface upon which one is forced to try to do so, mostly -- is precisely that which is denied to exist by Timaeus. Since there is nothing beyond the universe, there is clearly no surface upon which its pole might pivot. This explains why, on the supposition that the universe is spherical and everywhere, such language makes no sense in relation to it.

It might be objected that prosēkon should be construed in a generally normative manner because of dikēi. But if one asks what "justly giving an appearance of X" means, it soon becomes evident that this has nothing to do with justice morally or politically conceived
but rather with cognitive accuracy: such a person will correctly seem to use senseless language. Further, in Timaeus’ next sentence dikaios is naturally and credibly construed non-morally. Zeyl translates, "There is no justification for describing the universe’s central region either as a natural ‘above’ or a natural ‘below’, but just as ‘at the center’," but the sort of "justification" involved is specifically rational in kind. Taylor’s comment on the wider passage, which seems to me sure to be correct, indicates what "ought" (his own rendering of prosēkon) actually amounts to on this occasion:

strictly we ought not to use the words up and down at all, but simply to speak of the contrasted senses of movement along any radius as ‘to the centre’ and ‘away from the centre’.... The only point you can intelligibly describe as ‘opposite’ a point on the circumference is the centre, and this ‘faces’ all points on the circumference alike, and may be said to be ‘opposite’ any one with as much reason as it can be called ‘opposite’ any other.\footnote{Taylor, Commentary 436-37.}

There is, then, no justification of an epistemic sort for the use of such language in relation to a spherical universe. It is this larger point which provides the context within which any directive for how one ought to talk appears, as Timaeus’ concluding statement in this passage clearly shows: he thinks it makes no sense to talk this way -- and he would be right, if his presupposition that the universe is everywhere there is were true. It seems best, in light of these considerations, to translate the text accordingly: "Now if this is the way the universe really is, who, supposing any of the points just mentioned to denote ‘above’ or ‘below’, will not correctly seem to use language which doesn’t make any sense?" It is not that the language makes no sense at all, but rather that it does not make sense on Timaeus’ assumptions. If one were to suppose that beyond the physical universe there extended infinite
void, as the Stoics did,\textsuperscript{151} 'top', 'bottom', and the rest might conceivably seem at least to make some sense.

\textbf{Part 3: Cosmological Discourse}

Timaeus uses \textit{prep-} and \textit{prosēk-} to describe the universe itself, in particular to say something about

(a) the shapes of the universe and the primary natural bodies (33b and 54c),
(b) the number of planetary orbits (35b).
(c) the existence and nature of the receptacle (51a and 52c), and
(d) the number of worlds (55d).

Although in parts 1 and 2 above the teleological nature of Timaeus' cosmological theory naturally remained largely in the background, in this section we will see it much more prominently. That should not be surprising, however, since it is only at this point that we follow Timaeus into direct cosmological speculation.

Plato portrays the Demiurge as being determined to bring about the best result possible -- cosmos, order -- out of chaos, given certain unavoidable constraints upon that aim; each choice made by the world-maker is thus to be understood as having been made in the light of that overall goal. This point can also be expressed by saying that the goal explains the choices made (= what the natural facts happen to be), or that the natural facts make sense in relation to the goal, or are such as one might reasonably expect, or are such as a reasonable

\textsuperscript{151} For the main evidence, see A.A. Long and D.N. Sedley, \textit{The Hellenistic Philosophers, Volume I: Translations of the Principal Sources, with Philosophical Commentary} (Cambridge: Cambridge University Press, 1987, 1990) 294-297.
and intelligent man would be willing to bet on, given the goal. But how that goal is more particularly to be conceived does not seem very clear.\textsuperscript{152} The character of the pre-cosmic chaos, however, seems quite general; perhaps all one can safely say, in light of this, is that whatever it was it was fundamentally dysfunctional. If so, then one might reasonably infer that the Demiurge took it upon himself to make it work, and to do so by introducing order, the exact opposite of chaos, into it. It might well follow from this, aesthetically, that it became more beautiful, and rationally, that it became more intelligible. In any case, this solution to the problem of the nature of the overall goal in the Demiurge’s world-making activity is suggested by his deeming it better for the cosmos to be self-sufficient than not (33d) -- I take it that self-sufficiency is a paradigm case of working well -- and by a general

\textsuperscript{152} Taylor seems to construe the world’s being kalon morally/religiously: "So just because God is good, He does not keep His blessedness selfishly to himself. He seeks to make something else as much like Himself in goodness. It is of the very nature of goodness and love to ‘overflow’. This is why there is a world, and why, with all its defects, it is ‘very good’" (Commentary 78). Mohr construes it in epistemic terms: "the Demiurge’s project is directed to an epistemological end rather than an aesthetic one" (R.D. Mohr, "Plato’s Theology Reconsidered: What the Demiurge Does," Essays in Ancient Greek Philosophy III [Albany: SUNY Press, 1972] 294; see also his The Platonic Cosmology [Leiden: E.J. Brill, 1985] 22). The language of an aesthetic interpretation, at least, was used by T.M. Robinson ("The World as Art-Object: Science and the Real in Plato’s Timaeus" Illinois Classical Studies 18 [1993] 110): "[for Plato] the world is not just alive but a living art-object .... Plato’s version of the theory is peculiar in that, as a believer in a mimetic theory of art, he needs a paradigm as well as an artificer to account for this as for any other art-object ...." and by Comford before him (Plato’s Cosmology 31: "according to ... [Plato] the world is like a work of art designed with a purpose"). However, in these cases "work of art" does not mean "pretty object" but rather "consequence of rational activity;" the cosmos is beautiful in the sense that it exhibits order. The contrast, then, is between plan, purpose, and intention on one hand and luck, spontaneity, and chance on the other.
association between teleology and functionality.  

This raises an interesting and fundamental question: when the universe works, what does it do? It is not, it seems clear enough, simply a matter of everlasting going-on-ness that exhausts its function, but more significantly what that going-on-ness suggests. The universe, in other words, being characterized by time, "a moving image of eternity," points beyond itself to its cause, just like any other image or artefact does. As Taylor puts it, "What Plato wishes to insist on is that the 'world' is not self-subsisting; it is something dependent and derivative, as contrasted with its uncaused and self-subsisting author, God." As my interpretation of the texts below suggest, the existence of the cosmos might indicate to Timaeus the existence of an extra-cosmic cause, but the character of the cosmos, i.e. the rational order in nature -- and it is this that Timaeus seems primarily interested in -- in the very act of being discerned might well inform sensitive investigators of the cosmos who they really are and where they stand in the scheme of things: they are rational entities who are related via rationality to the rational world-maker. This may be taken to express an ultimate commitment, for which Plato is well-known, particularly from Laws 10, to the belief that there is a point of view, in principle if not in practice accessible to human reason, according to which everything that has happened, happens, and will happen can be understood, i.e. seen to make sense or to be reasonable, given the sum of constraining factors involved in any given case. Let us now turn to a detailed examination of some cosmological texts in the Timaeus.

153 At Republic 1.352e a thing's function -- what it is for -- is defined as whatever it is that it does either uniquely or best. Cf. H. Rackham (tr.) Aristotle: Nicomachean Ethics (Cambridge, MA: Harvard University Press, 1934, 1990), 1.1097b21 ff.

Recall that Timaeus' discussion of the contribution of Reason to the generation of the universe was prefaced by a preliminary discussion of the world's body (which in turn was prefaced by an explanation as to why there is a world, what model the Demiurge used in making the world, and why there is only one world and not more than one). In this preliminary discussion of the world's body, Timaeus deals with the question of what shape the universe has, and justifies his answer, as follows:

And he [i.e. the Demiurge] gave it a shape appropriate to the kind of thing it was (σχῆμα δε ἑδόκεν αὐτοῖς τὸ πρῶτον καὶ τὸ συγγένειον). The appropriate shape for that living being that is to contain within itself all the living beings would be the one which embraces within itself all the shapes there are (τοῖς de ta panta en hautoi zōia periechein mellontai zōiōi prepon an eiē schêma to periēlêphos en hautoi panta hoposa schêmata). Hence he gave it a round shape, the form of a sphere, with its center equidistant from its extremes in all directions. This of all shapes is the most complete and most like itself, which he gave to it because he believed that likeness is incalculably more excellent (καλλίον) than unlikeness [33b].

Skemp, we saw, says that Plato takes over from Empedocles (who thus appears to have interpreted Parmenides' epithet "like the bulk of a well-rounded sphere" [fr. 8.43, tr. Gallop] materialistically) the idea that the cosmos is spherical. Taylor comments that "the shape of the heaven is that which is best, i.e. most appropriate to the creature which is to contain all other creatures within itself."155 He explains that its appropriateness consists in the fact that all five Platonic figures can be inscribed within the sphere, and adds that "there is further appropriateness which T. does not here anticipate, due to the fact that [the five Platonic

155 Taylor, Commentary 101. A similar interpretation is given by the other translators consulted: "suitable" (Lee), "convenait" (Brisson), "passende," "angemessen" (Zekl), and "fitting" (Cornford).
figures] have each its special part to play in the detailed system of his physics.\textsuperscript{156} Mortley has argued that this may explain why the sphere is the most complete (\textit{teleōtaton}) of shapes, but it does not explain why it is the most "like itself" (\textit{homoioiōtaton}). The reason for attributing "self-similarity" (tr. Mortley) to the sphere, he says, is that circular motion is in some sense better than locomotion:

> axial rotation is only possible for a body with equal radii, and this is the implication of the stated preference for similarity over dissimilarity. The self-similar body is the only one that can be rotated in a circular fashion. Circular motion is superior to locomotion; therefore similarity is better than dissimilarity of shape.\textsuperscript{157}

While I see no reason to doubt that Plato considers the sphere the best shape for the universe, it is not clear what "best" means in such a case. The usual line of interpretation, as indicated above, seems to take its cue from Timaeus' comment that the sphere is a shape which "contains" every other shape, just as the universe is a living creature which "contains" every other species of living creature. Indeed this idea of completeness recurs often in Timaeus' account of the cosmos. The account itself, like the work of the Demiurge, is complete, finished, or, in an older idiom, perfect, only when the universe is shown to be complete, finished, or perfect (92c). It is not at all hard to imagine that this concept of perfection in later times came to be interpreted in moral terms. But there does not seem to me to be any more need to regard perfection morally in this case than there is to construe the perfect tense of \textit{kosmein} or indeed any other verb morally. Moreover, why should something complete in

\textsuperscript{156} Taylor, \textit{Commentary} 101.

one way be complete in a different way? After all, the universe contains all the natural bodies, each of which has some weight, but the universe itself, which ought to "contain" all the weight there is, does not seem to weigh anything at all. And if, as seems to be the case, the difference between the human and the cosmic body consists not in the range of natural bodies "contained" but rather in the amounts of those natural bodies "contained" -- some of each of the full range versus all of each of the full range, respectively -- why is the human body not spherical, like that of the universe?

The epistemic interpretation of prep- provides us with another way to understand what Timaeus means. Let us begin by considering what the connection between completeness and goodness might be. In the case of an account, at least, the more things are left unexplained the less rationally compelling that account is, i.e. the less sense it will make of the data to be accounted for. So there is some connection between the concepts of completeness and rationality. That there is also a cognitive relationship between completeness and circularity has been seen above. Next, circularity and rationality are themselves associated at 34a, 40a-b, 44b, 89a, 90d, and by implication at 43b. Rationality, further, seems clearly to be portrayed as intrinsically valuable, for the Demiurge, we are told, discovered that among visible entities rational ones are preferable (kallion), as a class, to irrational ones (30b). Interestingly, it is just because it is in accordance with themis (30a) as Timaeus puts it, that the Demiurge, who is (axiomatically) taken to be good (agathos, 29e), always selects the

158 W.K.C. Guthrie (A History of Greek Philosophy V: The Later Plato and the Academy [Cambridge: Cambridge University Press, 1978, 1989] 297) remarks only that this association may well strike us as "the strangest feature of Plato's psychology."
more desirable (*ameinon*, 30a; *kallion*, 30b) of the options available to him.\(^{159}\) This is taken to explain why he made the world in the first place, which model he consulted in making it, and why he made only one world rather than more than one of them: it was in each case the *better* option. It is not surprising, then, that in consequence of such a policy, the world would turn out to be not just something good (*kalon*) but something excellent (*kalliston* and *ariston*, 30b). What I gather from this is that the goodness of the world's shape may in large measure be interpreted in terms of rationality. But this needs further analysis.

At 32c-33a the Demiurge is said to use up all of the available material in order to prevent external assaults upon the cosmos which could conceivably bring about its demise. By thus ensuring that no more than a single act of world-making would be necessary, i.e. that no repairs would ever be needed, the Demiurge might reasonably be thought to have acted in an exemplary and clever manner. But there is some reason to suppose that by *kalos* (and, by association, *agathos*) in this case Plato may have in mind something like "sensible" or "reasonable." For the Demiurge, as we have seen, is said to prefer the rational to the irrational, and thus selects it. Now since he wanted to make the pre-cosmic chaos as much like himself as possible (*hoi malista eboulêthê genesthai paraplēsia heautôi, 29e3*), and since he deemed likeness to be much better than unlikeness (*nomisas muriôi kallion homoion anomoiou, 33b7*),\(^{160}\) the implication seems unavoidable: the Demiurge is himself a rational


\(^{160}\) The principle is generally valid, even though it is uttered in the context of the shape of the universe.
entity, in addition to whatever other features he might have. That he would have made the world in a sensible, rational, and clever manner would hardly be surprising, then. But what, it might reasonably be demanded, is so sensible or likely about the universe's being spherical?

If we make what seems to be a reasonable supposition that Timaeus is not only accounting for the completeness of the universe but also "saving the phenomena," and ask which phenomena he is saving, we must surely include the apparent rotation of the heavens. That is, it could have been apparent to anyone who made a careful observation of it that the so-called "fixed stars" (on the not unreasonable assumption of a stable earth -- for who can feel it rotate on its axis or revolve round the sun?) moved en bloc to and fro, northwards and southwards, every year while simultaneously describing unvarying circular paths centered around the celestial poles approximately every 24 hours. This in turn suggests (on the not unreasonable assumption that the fixed stars were all equidistant from the earth -- for a star's brightness does not in fact entail anything about its distance from us), that they were at the limit of the universe. Finally, when one asks Mortley's question concerning what sort of shape could rotate then it might well seem reasonable to suppose, that is to say it would seem likely, that the universe is itself spherical. In fact, however, another assumption is needed, namely that the visible universe is literally everywhere there is, for nothing prevents a cube (or any other non-spherical shape) from rotating. But given the denial of empty space beyond the universe, only a sphere will work. For the opposite angles of a cube are further distended than its opposite sides are, and so, supposing the universe to be a rotating cube, either its surrounding context would have to contract and expand as it did so, in order to prevent the
admission of void -- but the universe would then be in something else, and the same problem recurs relative to that further context; or there is no further context, in which case there would be void where the corner of the universe had previously been and where its side later was. But since void is inadmissible, on Timaeus' view, only a sphere will do. By this argument, it looks like the Demiurge selected for the universe the only shape which would work, i.e. the only one which made sense in this context: a sphere. I conclude that, if the shape of the universe is an appropriate one for it, any concern on the part of the Demiurge to make its shape reflect its function is at best part of Timaeus' meaning, which may be more fully expressed as follows: "He gave it a shape which makes sense and is natural for it." It makes sense not only in light of the general teleological model of explanation in Platonic cosmology, but also in light of the key physical assumption of there being no void, the appearances in need of saving, and whatever aesthetic standards might have been attributed to the Demiurge.

A similar analysis applies to the shapes of the four primary natural bodies at 54c, a passage in which Timaeus describes 'elemental' transformation. What is directly relevant for my purpose is that each of these bodies has a shape described as prosêkon. Timaeus evidently disagrees with Empedocles' view that the 'roots' do not change but only mix (fr. 8), a view which seems to be Empedocles' way of preserving the appearance of change while respecting Parmenides' prohibition on actual change, thus preserving the phenomena as most people understood them. If this presumption is correct, Timaeus also disagreed with the

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161 I take it that Aristotle expresses the lay view, at least in outline, in book 2 of On coming-to-be and Passing-away. Further, in criticism of Plato's view of 'elemental' (continued...)
lay view, according to which all four elements were thought to be capable of transformation:

Not all of them have the capacity of breaking up and turning into one another, with a large number of small bodies turning into a small number of large bodies and vice versa. There are three that can do this. For all three are made up of a single type of triangle, so that when once the larger bodies are broken up, the same triangles can go to make up a large number of small bodies, assuming their appropriate shapes (*dechomena ta prosēkonta heautois schēmata*). And likewise, when numerous small bodies are fragmented into their triangles, these triangles may well combine to make up some single massive body belonging to another kind.

In this case it seems obvious that part of the complex meaning of *prosēkonta* is relational: the shapes are "related to" or "go with" or "pertain to" the various bodies. However, perhaps because these shapes are also described as *kallista* and *arista* (53b5-6) and as being as superb as possible (*hēi dunaton hōs kallista*, 53b5), my entire sample of translators, not implausibly, goes beyond this purely descriptive notion of relationship. But the true situation may be more complex still.

As in the case of the universe as a whole, whose spherical shape made the most sense and was most likely, given a number of constraining considerations, it is easy to imagine the shapes of these natural bodies as having been thought of by Timaeus as being both the best and the most likely ones, not only because they are *kallistos* but also because they "save the phenomena." We may begin by noting that at 53d5-6 Timaeus repeats and thus clearly

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161 (...continued)

transformation, he appeals to ordinary experience: "But for one element alone to have no part in the change is neither logical nor apparent to sense: all should change into each other without discrimination" (W.K.C. Guthrie [tr.], Aristotle: *On the Heavens* [Cambridge, MA: Harvard University Press, 1939, 1986] 303a3 ff., emphasis mine).

162 They translate as follows: Cornford, "proper;" Lee, like Zeyl, "appropriate;" Brisson, "convient;" Zekl, "zukommenden."
underscores the approximative or plausibilistic nature of the immediately ensuing remarks about the shapes of these natural bodies. This, in conjunction with the claim that these natural bodies were made by the best of craftsmen, strongly suggests that the most likely shapes were the best ones and vice versa,\textsuperscript{163} where "best" again seems to involve reference to the general teleological model of explanation in cosmology, the denial of void, the appearances in need of saving, and perhaps the Demiurge's aesthetic standards. In addition, as I indicated in the beginning of this chapter, Timaeus describes our normal experience both of the natural world and of human perception itself ultimately in terms of the shapes of these natural bodies (56c-69a). Those shapes, he says, are \textit{likely to be} ultimately reducible to scalene and isosceles triangles.\textsuperscript{164} The reason for this reduction, in general, is evidently to preserve the phenomenon of 'elemental' transformation. Timaeus' conjecture is ill-founded, however, unless at a minimum it does not conflict with the actual observed behavior of fire, air, water, and earth. Here, according to Timaeus, the lay experience and interpretation of those appearances is incorrect: fire, air, and water are capable of transformation, the reason being that they are comprised of different numbers of the same sort of scalene triangles (30-

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\textsuperscript{163} There follows an extensive description, obscure in many particulars, of the five Platonic figures (53e-57d). For useful discussions of this part of the dialogue see Comford, \textit{Plato's Cosmology} 210-239 and Vlastos, \textit{Plato's Universe} 66-97.

\textsuperscript{164} Timaeus explicitly admits that this mathematical analysis of his is (naturally) no more than likely:

Of the many [scalene right-angled] triangles, then, we posit as the one most excellent (\textit{kalliston}), surpassing the others, that one from [a pair of] which the equilateral triangle is constructed as a third figure. Why this is so is too long a story to tell now. \textit{But if anyone puts this claim to the test and discovers that it isn't so, his be the prize, with our congratulations} [54a-b, emphasis mine].
60-90°) -- thus Empedocles is wrong, too --, but earth is not, the reason being that it is comprised of a number of isosceles triangles (45-45-90°).

One wonders, naturally enough, why Timaeus might sensibly have thought that his hypothesis "saved the phenomena" better than either Empedocles' or the lay view did. Since he does not tell us how it would, we are forced to speculate. We might fashion an argument on his behalf along the following lines: on one hand, if water becomes hot enough it might well seem to turn into air, and if warm air is cooled it might well seem to become water; it would be reasonable to expect, then, that if warm air were to be heated still further, it would eventually turn into fire (which does not feel unlike extremely hot air -- think of steam). On the other hand, extremely cold water, contrary to what one might expect given the role of temperature in 'elemental' transformation so far, turns into ice (not earth) and very hot earth does not turn into water. Without denying that another hypothesis might be able to account for "the facts" in a reasonable manner, Timaeus can, it seems, with some plausibility claim that his hypothesis at least does not contradict those "facts." In addition, the denial of void inside the cosmos might well have seemed to him to require that the primary physical bodies capable of transformation have precisely interchangeable parts. Although it is highly obscure how he envisaged transformation actually occurring, some such teleological arrangement would be needed for the system of nature to "work" in this mechanical sense, provided one rejects -- but on what grounds, it is not clear to me -- the Empedoclean view of ultimate unchanging 'roots'. Finally, their mathematical perfection might well attest to the aesthetic tastes of the Demiurge. Given all these background considerations, it seems best to understand Timaeus as saying a number of things here about the shapes of the primary natural
bodies: not only are they the ones which pertain to them, they are also the best ones, the ones which, under the totality of relevant circumstances, make the most sense for them to have. The text may, I conclude, plausibly be rendered as follows: "the same triangles can go to make up a large number of small bodies, assuming the shapes which it makes sense for them to have."

(3b)

The planetary orbits are made from the same "stuff," a complex mixture of Being and Becoming, as the world-soul itself is. What is immediately relevant to my present purpose is what the Demiurge did with the resulting mixture (35b):

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 (palin holon touto moiras hosas proséken dieneimen), each part remaining a mixture of the Same, the Different, and of Being.

Timaeus then describes the number and sizes of the "parts" the Demiurge made from the whole mixture, i.e. the orbit of the sphere of fixed stars and those of the seven planets (35b-165)

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165 That "stuff" is described as follows:

In between the Being that is indivisible and always changeless, and the one that is divisible and comes into being 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 indivisible and their corporeal, divisible 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 [34b].
Again my entire sample of translators neither surprisingly nor implausibly take this passage in a generally normative manner. But what is the task which can be satisfied either only or best by means of making just this number of orbits? Why is eight a better number than seven, nine, or especially ten, the complete number, in this context? Indeed, Aëtius says that Philolaus held that there were ten planets, including the sun, revolving around a central fire. At *Metaphysics* 1.5, 986a2-12, Aristotle complains thus about Pythagorean astronomy:

They supposed ... the entire heaven to be a *harmonia* and a number. And all the characteristics of numbers and *harmoniai* ... they found corresponding to the attributes and parts of the heaven and to the entire ordering, they collected and made them fit. If anything was missing anywhere they eagerly filled in the gaps to make their entire system coherent. For example, since they think the number ten is something perfect and encompasses the entire nature of numbers, they declare that the bodies that move in the heaven are also ten. But since only nine are visible, they invent the counter-earth as the tenth.

An epistemic interpretation of the language, such as "he distributed the whole mixture into as many parts as one might reasonably expect," seems to cast at least a little light on this puzzle.

The Pythagoreans, as Aristotle says, were very interested in number and harmony, and

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166 D.R. Dicks, *Early Greek Astronomy to Aristotle* (London: Thames and Hudson, 1970) 10: "For naked-eye astronomy the significant objects observable are sun, moon, five planets only (Mercury, Venus, Mars, Jupiter, and Saturn)." Sun and moon are regarded by Timaeus as planets.

167 Cornford: "again he divided this whole into as many parts as was fitting;" Lee: "he went on to make appropriate subdivisions;" Brisson: "*il le distribua en autant de parties qu*il *convenait;" Zeki: "*teilte er wieder dies Ganze ein in Teile, so viel da sein sollten.""

168 For the perfection of the number ten, see Ivor Thomas (tr.), *Selections Illustrating the History of Greek Mathematics I: From Thales to Euclid* (Cambridge, MA: Harvard University Press, 1939, 1991) 75 ff.

169 Tr. McKirahan 105.
Timaeus does not seem to be an exception. The completeness the Demiurge is taken to be aiming for could well have been achieved in the case of celestial orbits by making eight rather than ten, on the supposition that the Demiurge understood that the harmonic period in music is defined by the octave. The plausibility of this supposition is suggested by the astronomical model presented in *Republic* 10.617b, where upon the rims of eight celestial bowls stand Sirens "uttering one sound, one note, and from all the eight there was the concord of a single harmony." If this is the right context for Timaeus' statement, then in the case of celestial orbits no other number than eight would make more sense, or be more appropriate, or be more right, and so on. What seems important here is that some background consideration or considerations, whether rational or moral or both, make certain claims more plausible and worthy of acceptance than others. I conclude that an epistemic interpretation of *prosēk-* seems somewhat preferable to a vaguely normative one in this instance, not only because whatever reasons might be advanced in support of a vaguely normative one in this particular case support an epistemic one as well -- the normative interpretation, we might say, rests upon a more basic epistemic one, since normative considerations are *what one might reasonably expect* in the case of a normatively good world-maker -- but also because the planets have number-teaching function (39b), because number and mathematics generally in Plato have a paradigmatically rational character, and because Timaeus' cosmological project, he repeatedly reminds his audience, has a plausibilistic

Since physics, or natural philosophy, is an *eikós logos*, Timaeus cannot be certain that there is actually such a thing as a receptacle of becoming, although given the empirical data (i.e. unstable ‘elements’) and a few metaphysical principles governing identity and change it might easily seem reasonable to believe that there is, or even that there *must* be. His argument may be analyzed thus: if there are images and if there are originals of images then there *must* be a receptacle. But this raises the crucial question: are there really images and originals of them? His answer is: Probably (51b-52d), assuming that image and original correspond to opinion and knowledge respectively.¹⁷¹ Thus if there is knowledge and it is

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¹⁷¹ In brief, image and original are correlative to copy and Form, respectively; Forms are apprehended by intellect (*nous*), copies of them by opinion (*doxa*); and intellect and opinion are not the same thing. Against the objection that *nous* and *doxa* in fact are the same thing -- one implication being that there are no such things as Forms, and if not then no such things as copies of them either, another implication being that there is in fact no such thing as *knowledge*, Platonically conceived -- Timaeus argues that intellect and opinion are distinct on the grounds that (1) one can have a true opinion without having knowledge, which couldn’t be the case unless they were different, and (2) they have different features, and hence cannot be identical: (a) the former is brought about by persuasion, the latter by instruction, (b) the former "lacks any account", the latter "always involves a true account", (c) the former is susceptible to persuasion, the latter is not, and (d) the former is widespread among humanity, the latter is not (51e). Feature (b) is particularly noteworthy, since it involves an infinite regress. For X cannot be known, that is to say known to be true, unless Y, the reason for believing X to be true, is itself not just true but *known* to be true; the same condition applies to Y as applies to X, *ad infinitum*. Thus, while it may be unthinkable that condition (b) is *not* a condition of knowledge, it is in principle unverifiable. This may explain why the Forms, which provide the ultimate grounding of knowledge, for Plato, remain to the end a hypothesis; and that may explain why it is necessary for Timaeus to resort, finally, to casting his vote in favor of the hypothesis (51d).
not the same as opinion. and if the object of knowledge is not identical with that of opinion, then, according to Timaeus, in addition to being constrained to acknowledge the existence of both Forms and images of them, one is compelled to agree (homologeōneon, 52a1) that there is some third thing, namely the receptacle, which he now calls space or place (hē chōra). It is indestructible, provides the location for sensory likenesses of the Forms to play out their meagre existence (which is in any case the maximum possible for them), and is itself apprehended by a kind of bastard reasoning that does not involve sense perception, and it is hardly even an object of conviction.... We look at it as in a dream when we say that everything that exists must of necessity be somewhere, in some place and occupying some space, and that that which doesn't exist somewhere, whether on earth or in heaven, doesn't exist at all [52b].

He then explains why he thinks his audience might have difficulty believing that space or place exists as something independent of the things which occupy it (52b-d):

We prove unable to draw all these distinctions and others related to them -- even in the case of that unsleeping, truly existing reality -- because our dreaming state renders us incapable of waking up and stating the truth, which is this: Since that for which an image has come into being is not at all intrinsic to the image, which is invariably borne along to picture something else, it stands to reason that the image should therefore come into being in something else (dia tauta en heteroi proσēkei ti ini gignesthai), somehow clinging to being, or else be nothing at all. But that which really is receives support from the accurate, true account, which is that as long as the one is distinct from the other, neither ever comes to be in the other in such a way that they at the same time become one and the same, and also two.

Zeyl, in my view, grasps the correct sense of proσēkei in this passage. For Timaeus is here arguing that (1) an image or likeness can be understood only in relation to that which it is an

\[172\] pheresthai aei. For a defense of this translation and an estimate of its negative consequences for the hypothesis that the physical world is really held by Timaeus (and Plato) to be eternal, see T.M. Robinson, *Plato's Psychology*, 2nd ed. (Toronto: University of Toronto Press, 1995) xxii-xxiv.
image of (an image is always an image-of-X, where "X" is not "imagehood" but something else which can be represented or imitated), and (2) an image is always borne but neither by itself nor by its original. Therefore (3) whatever images there happen to be are borne by some other, third thing, call it what you will: receptacle, wetnurse, place, space, etc. The argument is thus framed in terms of what does and what does not make sense. For on one hand, every image inherently refers beyond itself to something else which it represents, i.e. its original, Y. Now it seems quite unimaginable either that there could be an image of nothing or that there could be an image of nothing other than further images, i.e. an image which is never finally an image of something other than an image, namely the original. On the other hand, it also seems undeniable that every perceptible image or representation is in fact borne by something other than either the thing represented or the representation itself. This is suggested by the considerations (1) that an image-of-X and X are not identical and (2) that nothing which is borne (assuming, of course, that images are "borne" at all) can be borne by itself but rather requires an extrinsic supporting medium. The point must not be forgotten, however, that even if Timaeus thinks his three-factor theory is the one which makes the most sense of all the possibilities, this does not by itself ensure that it describes the natural case correctly. In fact he does seem to be clearly aware of this, since he acknowledges that he is making a judgment on the basis, not of legitimate reasoning (whatever that might finally amount to), but of its contrary, "bastard reasoning," which is exercised in relation to something which is extraordinarily difficult to discern, and, as we saw, he resorts in the end to vote-casting (51d). An epistemic interpretation of the text seems naturally to suggest itself, once one realizes that such an interpretation is available. For the sake of clarity, I would
suggest either replacing Zeyl's "should" with "would" or dropping it altogether. In the former case, we get "it stands to reason that the image would therefore come to be in something else, somehow clinging to being, or else be nothing at all;" in the latter, "it makes sense for the image to come to be in something else, somehow clinging to being, or else be nothing at all."

Perhaps by "need" Lee intends something epistemic as well, though naturally it is hard to be sure.173 Brisson appears to attribute to Timaeus a higher degree of confidence than Timaeus is entitled to.174 By contrast with Zeyl's epistemic interpretation of the text, the generally normative ones of Zekl and Comford are simply not convincing.175

If it is likely (but not verifiably certain) that there is a receptacle, what can be said of its nature? It would be reasonable to expect Timaeus to answer: Nothing, of course, which is any more than likely. The receptacle, he says, has no inherent perceptible qualities, just like the oil used by a fragrance maker (which performs its function better the less fragrant it is

173 "an image, the terms of whose existence are outside its control in that it is always a moving shadow of something else, needs to come into existence in something else if it is to claim some degree of reality, or else be nothing at all."

174 "Une image, en effet, du moment que ne lui appartient pas cela même dont elle est l'image, et qu'elle est le fantôme toujours fugitif de quelque chose d'autre, ne peut pour ces raisons que venir à l'être en quelque chose d'autre et acquérir ainsi une existence quelconque, sous peine de n'être rien du tout."

175 "Da bei einem Bild auch das, nach dem es gebildet ist, nicht aus ihm selbst kommt, sondern es immer die Erscheinung eines von ihm Verschiedenen trägt, deshalb kommt ihm zu, in einem davon Verschiedenen zu entstehen, wobei es sich, wer weiß wie, ans Sein hält--oder es ist ganz und gar nichts" (Zekl); "an image, since not even the very principle on which it has come into being belongs to the image itself, but it is the ever moving semblance of something else, it is proper that it should come to be in something else, clinging in some sort to existence on pain of being nothing at all" (Comford).
itself), and the (sc. writing) surface upon which characters are to be impressed (which performs its function better the less it obtrudes any interfering shapes of its own):

In the same way, then, if the thing that is to receive repeatedly throughout its whole self the likenesses of the intelligible objects, the things which always are -- if it is to do so successfully, then it ought to be devoid of any inherent characteristics of its own (t' auton oun kai tōi ta tōn pantōn aei te ontōn kata pan heautou pollakis aphonoiomata kalōs mellonti dechesthai pantōn ektos autōi prosēkei pephukenai tōn eido̱n) [51a].

It is important to realize the limitations of the analogies Timaeus offers. In particular, it seems unlikely that the Demiurge might prepare the receptacle in such a way that it will reflect something accurately after it has been prepared but not beforehand, since the receptacle has its inherent nature from eternity, whatever that nature is (52d). It is therefore unlike the (writing) surface and the fragrance base in this respect. What remains, it seems to me, is the present and ongoing (not the future) capacity for accurate representation of things.177 How Timaeus could possibly know that the receptacle actually reflects images of Forms accurately is highly mysterious if he is not even sure that there is such a thing as a receptacle.178 Nonetheless, his ignorance on the factual point does not imply ignorance on the inferential one "If X, then Y" (where X = "the receptacle accurately reflects images of Forms" and Y = "the receptacle is free of inherent characteristics which might interfere with

176 Clearly it is not utterly characterless: it moves and reflects things. Besides, I for one cannot imagine how a thing without any character at all might actually be something rather than nothing.

177 For this sense of mellein see LSJ mellō 1.1.

178 At 51b Timaeus seems to acknowledge the fact that he is less than certain: "And insofar as it is possible (kath' hoson ... dunaton) to arrive at its nature on the basis of what we've said so far, the most correct way to speak of it may well be this: that part of it that gets ignited appears on each occasion as fire, the dampened part as water, and parts as earth or air insofar as it received the imitations of these" (emphasis mine).
its reflecting images of Forms accurately"). This inference would be, in Aristotle’s phrase, a "respectable" one. It is usual to take the text in a normative manner. \(^{179}\) Lee seems to provide the only possible exception: "[the receptacle] must itself be void of all character." \(^{180}\) Given that we are dealing here with indemonstrable presuppositions on Timaeus’ part, both that the receptacle performs the function he says it does and especially that it does so well, then, the following clearly epistemic interpretation of the text seems most plausible: "it makes sense for that which is to receive the likenesses of the intelligible objects -- the things which exist eternally -- both successfully and repeatedly throughout its whole self to-be devoid of any inherent characteristics of its own." \(^{181}\)

(3d)

At 55c-d Timaeus puzzlingly raises the question about the number of universes again; he had already argued at 30c-d that there is only one universe. Taylor says about this puzzle that "if only we knew more about fifth-century Pythagoreanism we should probably find that

\(^{179}\) Cf. Comford: "[it] ought in its own nature to be free of all the characters;" Brisson: "il convient qu’elle soit par nature dépouvrue de toute forme;" Zekl: "Fernab jeder Art von Gestaltung kommt es ihm zu zu sein."

\(^{180}\) This way of putting it suggests that Timaeus has something like Aristotle’s hypothetical necessity in mind, for which see Physics 2.9. This interpretation seems incorrect, however, for while hypothetical necessity is clearly relevant to preparing surfaces for writing and making bases for fragrances, it is just at this point, it seems to me, that the analogy between them and the receptacle breaks down. The improvements made by the Demiurge upon the pre-cosmic chaos seem to have to do with the ill-formed contents of the receptacle and its disorderly motion rather than with its reflective capacity as such, which it appears to have from eternity.

\(^{181}\) Alternatively, "it’s likely that that which is to receive the likenesses of the intelligible objects -- the things which exist eternally -- both successfully and repeatedly throughout its whole self is devoid of any inherent characteristics of its own."
there is an allusion to some division of opinion in the school itself which accounts for this sudden return to a question already disposed of." Cornford finds the text perplexing as well: "either our passage must be given up as inexplicable, or we must see in it a veiled allusion to the possibility of a fifth form of body [made explicit only in the Epinomis]." What Timaeus says is that, while he thinks there is likely only one universe, someone else considered the whole matter differently might well hold that there are five:

Anyone following this whole line of reasoning might very well be puzzled about whether we should say that there are infinitely many worlds or a finite number of them. If so, he would have to conclude that to answer, "infinitely many," is to take the view of one who is really "unfinished" in things he ought to be "finished" in. He would do better to stop with the question whether we should say that there's really just one world or five and be puzzled about that (poteron de hena è pente autous alētheiai pephukotas legin pote prosēkei, mallon an tautēi stas eikotōs diaporēsai). Well, our "probable account" answer declares there to be but one world, a god -- though someone else, taking other things into consideration, will come to a different opinion.

An epistemic construal of the text is helpful here. It suggests that it makes sense, or is reasonable, as Taylor puts it, for someone to suppose that there are five, but not that there are an infinite number of them. What makes it reasonable? Taylor's suggestion seems like a good one. For although we are not told clearly why it would be more reasonable to wonder about the one question than about the other, it may be that no reason can be given for there being an infinite number but some reason can be given for there being five worlds, for

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182 Taylor, Commentary 378.
183 Comford, Plato's Cosmology 221.
184 "It is very loose thinking to suppose that there can be an indefinite number ..., but the discovery that there are five regular solids and no more makes it a more reasonable question whether there might not be five kosmoi (Commentary 378, emphasis mine).
instance that there are five regular solids. It must be admitted, though, that this is not much of a reason. In any case, the same reason which undermines a definite plurality of cosmoi -- the void which would seem to be necessary to keep these cosmoi apart, but which is denied by Timaeus to exist -- undermines an infinite plurality of them.

But, it might be objected, is it not likely that prosēkei picks up chrē, as my sample of translators seem to agree on?\(^\text{185}\) Even if it does, however, the kind of propriety involved in a hypothesis about the number of worlds is much less patently a matter of either moral or quasi-moral rightness than it is of cognitive rightness, i.e. correctness. For someone who considers the matter in a different way, we read, will come to a different opinion, not a morally wrong or inappropriate one. If so, the implication for chrē may well be that it has a rational use in addition to its moral one. Timaeus’ view that at least some different cosmological opinions would also be reasonable ones is well conveyed by the following translation: "But it would be more reasonable for him to stop with the question whether it’s plausible [or: makes sense] to say that there’s in fact just one world or whether there are five of them."

This concludes my exegesis of those cosmological passages of the Timaeus in which prep- and prosēk- appear and which seem to be usefully illuminated by an awareness of the epistemic sense of these verbs. In some cases, particularly those concerning matters of

\(^{185}\) Zekl: "ob es wohl die Wahrheit trifft zu sagen, es sei nur eine oder aber es seien deren fünf;" Lee: "whether one ought to say that there is really one world or five;" Brisson: "que convient-il alors de déclarer: est-il vrai de dire qu’un seul monde est né ou qu’il y en a cinq?" Cornford: "whether it is proper to speak of them as being really one or five."
methodology and meta-cosmological discourse, an epistemic interpretation of prep- or prosēk-seems virtually to recommend itself. With respect to cosmological discourse, an epistemic construal seems on some occasions best taken as part of Plato's overall meaning, and on others, particularly given the teleological and functional explanatory framework involved, to be preferable to a non-epistemic one.

We may now take a step back from the detailed work which has constituted the bulk of this dissertation in order to estimate the impact of this study upon our general interpretation of the cosmology of the *Timaeus*. The interpretive results of this chapter suggest that the worldview expressed in this dialogue is not just a moral one, but also, and it seems to me more deeply, a rational one. We have on a number of occasions seen that a consideration of the teleological and functional explanatory background seems to tilt the balance in favor of a rational rather than a moral interpretation of the text. This way of putting it may be slightly misleading, however, since rationality and morality are very closely related in both Socrates and Plato. Whereas in Socrates they seem to be actually identical, in Plato the attainment of moral goodness serves a higher and more important end, namely the exercise of rationality. Justice in the human soul and city alike, as he puts it in the *Republic*, consists in the rational part's governing the whole. Aristotle articulates the same general thesis concerning the relationship between rationality and morality in great detail in his *Nicomachean Ethics*. And so, to say that the balance seems tilted in favor of a rational rather than a moral interpretation may in fact amount to saying that rationality provides the context within which morality is best understood. In other words, it is, according to Plato, when a human being is rational that he or she *works best*, i.e. fulfils his or her true function which
alone can provide a legitimate moral imperative for him or her. Part of what it means to be rational surely is to do what makes sense given some goal. Now in the case of the universe, we saw, the Demiurge always selects the better option, which I suggested means that it will better attain the goal that the universe work: "better" seems in such a case to be equivalent to "more sensible" or "more reasonable." The Demiurge's pronoia (30c1), if this interpretation is correct, seems to have more to do with rational calculation than with moral superintendence or providence as it later came to be understood. The rational order of the universe, then, seems to be both a sign of the rationality of its organizer, and, by virtue of human reason's being able to intuit the rational nature of the world-making god via that cosmic order, at the same time a model for human living and so the cure for its ills -- just as the introduction of cosmic order is the cure, so to speak, for pre-cosmic chaos. "Becoming as good as possible," "becoming as rational as possible," and "becoming as godlike as possible" do not seem to differ to any appreciable degree. The transition from chaos to cosmos recounted by Timaeus, under this interpretation, marks a gain in rationality in the total scheme of things.

Plato was not the first to use this sort of language to speculate about matters strictly speaking beyond verification. Parmenides and Xenophanes, we saw in chapter one, both used eikos to perform just such a task. It has emerged, during the course of this investigation, that eikos estin shares semantic ground with both prepei and prosēkei. This fact suggests new possibilities of interpretation for epiprep- in Xenophanes B26 and for prosēk- in Anaximander A26. In the next and final chapter of this dissertation I re-interpret this related material in the light of my preceding results.
5: Construing Xenophanes B26 and Anaximander A26

Plato, as we saw in passing in chapter one, was not the first to use the kind of language investigated here to comment upon things strictly speaking beyond his reach. Recall that Xenophanes used it in B26 to attribute motionlessness to his one, greatest god. Specifically Plato's and Xenophanes' respective subject-matter differs, but generically it does not. In chapter one I indicated two solutions which have been proposed for the problem of how Xenophanes conceived of the nature of the divine body: according to one, the god has no body; according to the other, the god's body is of a particular kind, radically different from that of mortals. I noted that construing *epiprepei* as "it is fitting" or "it is appropriate" presented difficulties for both of these solutions. I said, in relation to the first, that

the reason that the gods are neither snub of nose nor red of hair is that gods do not have bodies at all. This would explain why, if it is the god who "shakes all things," he must do so with his mind. It would also go some way toward explaining why the god sees, thinks, and hears "whole;" for the language of part and whole seems to make more sense when applied to a body than to a mind, because the latter does not obviously have parts. But it must be conceded that it does not explain very well why it would not be "fitting" for the god to travel from one place to another, as though it were better for him to stay in one spot; for if the god has no body, how can he either move or stay in one place?

According to the second solution, that Xenophanes' god has a special sort of body, I remarked that "why it would be inappropriate for the god's body to travel from here to there is not clear, particularly in light of opinion 7, which seems to imply that there is no need for it to do so."

It seems useful to cite Lesher's translation of the fragment complete with its Simplician context:
[So also when (Xenophanes) says that it remains in the same place and does not move:]

... always he abides in the same place, not moving at all. nor is it seemly for him to travel to different places at different times

(aiei d' en tautôi mimnei kinoumenon ouden, oude metarchesthai min epiprepei allotê allêi)

[he does not mean that it remains at rest as the state of being opposite to movement, but only that it is deprived of motion and rest.]

Epiprepei is here rendered normatively in terms of seemliness: the sense is not significantly different than if it had been rendered in terms of fittingness or appropriateness. Lesher has the company of a good many scholars in taking it thus.]

Jaeger says that "[in Xenophanes] the concept of the appropriate ... appears for the first time in the Greek tradition." Jaeger’s argument appeals to frs. 11 and 12, in which, as we saw in chapter one, Xenophanes implicitly criticizes the immoral behavior attributed to the gods by Homer and Hesiod. It is not hard, then, for Jaeger to conclude that "[Xenophanes had] an immediate sense of awe at the sublimity of the Divine. It is a feeling of reverence that leads Xenophanes to deny all the finite shortcomings and limitations laid upon the gods by

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186 Lesher 110-11. The fragment is preserved by Simplicius in his Commentary on Aristotle’s Physics, 23.10.

traditional religion.\footnote{188}

The fact that LSJ cite this as its only illustrative text in which *epiprepe* means "it is fitting" or "it is appropriate" does not shed a good deal of light on what Xenophanes had in mind in using it, even if they are correct. For talk of appropriateness with reference to the god's being motionless suggests that Xenophanes thought it somehow or other wrong or bad, perhaps degrading, for the god to move, which surely seems to imply that it's preferable for him to stay in one place. But the results of chapters two, three, and four show that he need not be interpreted this way, since he might very well have meant:

the god always abides in the same place, not moving at all, nor does it make any sense for him to be travelling to different places at different times.\footnote{189}

By contrast with the usual normative translation of this fragment, the epistemic one I propose here seems more likely to be something Xenophanes would have been comfortable saying, given that, as he himself says, opinion is allotted to all in such things. So let us ask why Xenophanes might have thought that it doesn't make any sense for the god to move. The specific answer, to repeat, seems to depend on how he conceived the nature of the divine body. Simplicius, we saw, says that the god is neither at rest nor in motion, an interpretation

\footnote{188}{Jaeger 49.}

\footnote{189}{According to LSJ, *epi-* sometimes denotes something about surfaces, a possibility depending on its radical sense of "upon," and sometimes, like *ari-*-, it intensifies the verb it modifies. Their example of the former is Homer, *Odyssey* 24.252 (*oude ti toi douleion epiprepei eisoraasthai eidos kai megethos*: "you do not on the surface look like a slave, judging by your form and stature"). Pindar, *Pythian Ode* 8.44 may be an example of the latter (*phuai to gennaion epiprepei ek pateron paisi lema*: "The nobility of fathers shines brightly in the actions of their sons"). The first of these two possibilities of interpretation seems rather unlikely in the case of Xenophanes B26, since no mortal has ever seen or will ever see the surface of the god's body, on the supposition that that body is to be identified with the universe.}
which naturally goes with the view that the god is just bodiless. Under such an interpretation, if it is correct, clearly neither motion nor rest makes any sense in relation to it for the simple reason that neither are possible conditions for this body -- *ex hypothesi* non-existent -- to be in. But it cannot be ruled out that Simplicius has misunderstood Xenophanes. If, then, the rival interpretation is correct, i.e. that the god has a body, Xenophanes might well have understood the universe to be the god’s body. This hypothesis would help to account for the tradition, going back to Aristotle, that Xenophanes’ god and the universe were the same (*Metaphysics* 986b10 ff.). It would also explain how it is that the god is able to shake all things *qua* mind without having to go anywhere to do so, since he is already *qua* body (and thus also *qua* mind?) everywhere there is to be. Finally, it explains why he doesn’t move from here to there, say, four feet to the left; for *qua* physical universe -- recall the literally contextless universe implied by the denial of extra-cosmic void in the *Timaeus* -- there is nowhere else he could possibly go to. On some such supposition the idea that the god might move, *qua* body, at least, makes no sense at all; for the objection that this body appears to rotate is easily met by noting that rotatory motion in a single place is not in fact motion from ‘here’ to ‘there.’ An epistemic interpretation of the fragment seems most likely even if both of these suppositions are incorrect; for whatever Xenophanes’ reason actually was, given that reason it wouldn’t have made sense for the god to travel, not would it be likely that he would. The very generality of the interpretation seems to recommend it.

Anaximander (A26) may or may not have used similar language even before Xenophanes, but he does appear to have had it or something like it in mind, to judge from
Aristotle's report. According to Aristotle, Anaximander believed that the earth was stationary in the middle of the heavens. An argument for this view is preserved in *On the Heavens* 2.295b11-16:

Some, like Anaximander ... declare that the earth is at rest on account of its similarity. For it is no more fitting for what is established at the center and equally related to the extremes to move up rather than down or sideways (*mallon men gar outhen anō ē katō ē eis ta plagia pherethai prosēkei to epi tou mesou hidrumenon kai homoiōs pros ta eschata echon*). And it is impossible for it to make a move simultaneously in opposite directions. Therefore, it is at rest of necessity.\footnote{McKirahan 40.}

A major constraint upon our understanding of this text as an expression of Anaximander's thought is that it does not purport to be a quotation from Anaximander's book. It represents rather Aristotle's interpretation of Anaximander's thought and would naturally have been recounted by Aristotle in language intelligible to his own audience. Let us then cautiously suppose that Aristotle has grasped Anaximander's meaning more or less accurately, including the notions of impossibility and necessity involved in the argument. Then it does seem warranted for McKirahan to claim that this is "the first known application of the Principle of Sufficient Reason."\footnote{McKirahan 40.} But as it stands Aristotle's testimonial raises a number of puzzles, perhaps the oddest of which is that "fittingness" (or "appropriateness") along with "similarity" together constitute the Reasons which are Sufficient to ensure that the earth stays put in the center of everything. They are such different kinds of reasons. Anaximander's geometrical
leap from the mythical mindset, for which he has become famous,\(^{192}\) seems seriously undermined by an appeal to something as ordinary as appropriateness. Some questions which naturally arise, supposing that he is actually appealing both to geometrical and to generally normative considerations in explaining his view are: How might he have understood the relationship between geometry and this quasi-morality? Why would it be inappropriate, or somehow or other wrong or bad, for something at the center to move off-center? In what sense is it better to be at the center of a circle, as opposed to one of the foci of an ellipse, for instance? In general, how might something such as a geometrical position produce anything remotely like a non-geometrical obligation? And why does Aristotle accept the fact of earth’s central location in the scheme of things but not refute Anaximander’s appeal to fittingness, instead appealing to his own doctrine of natural places?

In fact, however, no such relation between geometrical position and non-geometrical pressure need be supposed. For as we have seen, Plato himself used prosēk- in an epistemic manner, which shows that such a construal was available to Aristotle. That Aristotle used these words this way is strongly suggested in the following passages: *On the Soul* 411b16, *Parts of Animals* 642b10, *Politics* 1323a18, and *Meteorology* 340a26. In the first of these, Aristotle raises a doubt about the theory that the soul holds the body together:

> For, if the entire soul holds together the whole body, then each of its parts ought properly to hold together some part of the body (*ei gar hē holē psuchē pan to sōma sunechei, prosēkēi kai tôn moriōn hekaston sunechein ti tou sōmatos*). But this seems impossible. For it is difficult even to conjecture

what part the intellect will hold together or how it can hold any part together.\textsuperscript{193}

Smith more clearly (and correctly, in my view) construes the text in epistemic terms: "For, if the whole soul holds together the whole body, we should expect each part of the soul to hold together a part of the body."\textsuperscript{194} The relevant question for my purpose is not whether Aristotle's argument is a good one but only what the nature of his claim is. That much seems clear enough: on the hypothesis that A has a given relation to B, the parts of A ought reasonably to have a similar relation to the parts of B, as the following translation makes explicit: "For, if the entire soul holds together the entire body, then it makes sense that each part of the soul would hold together some part of the body." The consequent of this conditional is clearly taken to be absurd, on the grounds of which the antecedent may reasonably be rejected.

At \textit{Parts of Animals} 642b10, in a criticism of the method of division, Aristotle says:

"Further, one ought not to break up a genus (\textit{eti de prosékei mé diaspan hekaston genos}), e.g. of birds, in such a way that some come under water animals but others under some other genus, as is done in some published dichotomies."\textsuperscript{195} Some of those dichotomies, we see,

\textsuperscript{193} R.D. Hicks (tr.), \textit{Aristotle: De Anima} (Cambridge: Cambridge University Press, 1907).


\textsuperscript{195} H.G. Apostle and L.P. Gerson (trr.), \textit{Aristotle: Selected Works} (Grinnell, IA: The Peripatetic Press, 1982). Ogle translates similarly: "Again it is not permissible to break up a natural group, Birds for instance, by putting its members under different bifurcations, as is done in the published dichotomies, where some birds are ranked with animals of the water, and others are placed in a different class" (Wm. Ogle [tr.], \textit{Parts of Animals}, in Barnes, \textit{Aristotle}).
go so far as to assign some birds to the group of *water*-creatures! There can be little doubt that Aristotle thought this was erroneous, as Peck sees: "Again, it is a mistake to break up a group, as for instance the group Birds, by putting some birds in one division and some in another, as has been done in the divisions made by certain writers: in these some birds are put in with the water-creatures, and others in another class." In this case it seems that the group "birds" has, in Aristotle's view, been over-analyzed: it's common sense, he implies, that birds go with air and fish go with water. To put this point more formally, an analysis of a natural group which abolishes the very criterion on the basis of which that natural group was initially established makes no sense. In light of this, the following translation recommends itself: "Further, it doesn't make sense to break up a natural group, for instance

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196 A.L. Peck (tr.) *Aristotle: Parts of Animals* (Cambridge, MA: Harvard University Press, 1937, 1983). I expect that if Peck had been aware of the epistemic sense I am talking about, he would have rendered 687a 12ff. differently than he did. In this passage, which clearly expresses a teleological conception of nature, Aristotle criticizes Anaxagoras' hypothesis that it is because human beings possess hands that they are the most intelligent:

but surely the reasonable point of view [= Aristotle's point of view] is that it is because he is the most intelligent animal that he has got hands. Hands are an instrument; and Nature, like a sensible human being, always assigns an organ to the animal that can use it (as it is more in keeping to give flutes to a man who is already a flute-player than to provide a man who possesses flutes with the skill to play them) *(prosēkei gar τοί onti aulētēi dounai mallon aulous è tó aulous echonti prostheinai aulētikēn)*; thus Nature has provided that which is less as an addition to that which is greater and superior; not *vice versa*.

The immediate context clearly shows, however, that, whatever "it" is, it is to be "more in keeping" with sensibility and rationality: the text is consequently and by a wide margin more satisfyingly translated: "for it makes more sense to give flutes to a man who is in fact capable of playing them than it does to teach any man who happens to have flutes how to play them." The reason, presumably, is that it takes some native ability to become a good flute-player.
Birds, by assigning some to one class, other to another."

At the beginning of book 7 of the *Politics* Aristotle argues that the best political constitution is not determinable until the best mode of life is:

> If we wish to investigate the best constitution appropriately, we must first decide what is the most desirable life; for if we do not know that, the best constitution is also bound to elude us. For those who live under the best-ordered constitution (so far as their circumstances allow) may be expected, barring accidents, to be those whose affairs proceed best (*arista gar prattein prosēkei tous arista politeuomenous ek tôn huparchontôn autois, ean mê ti gignētai paralogon*).\(^{197}\)

Aristotle here reasons that there is a close relation between quality of life and quality of political constitution, and that the appropriate (i.e. reasonable, I am inclined to say) inference is from the former to the latter rather than vice versa. Why? Not because those who live in the best constitutions always in fact have the best lives but because they are most likely to, as his remark about accidents -- by definition that which is out of the ordinary -- shows. Thus one may plausibly render the text: "For it's likely that those who live under the best constitutions available to them fare the best, accidents notwithstanding."

Finally, at *Meteorology* 340a19 ff. Aristotle discusses two meteorological problems, the first of which concerns the locations respectively of air and fire relative to the primary element. He begins by raising the question why there are no clouds in the celestial region:

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\(^{197}\) T.A. Sinclair and T.J. Saunders (trr.), *Politics*, in J.L. Ackrill (ed.), *A New Aristotle Reader* (Princeton, NJ: Princeton University Press, 1987). Similarly B. Jowett (in Barnes, *Aristotle*): "for, in the natural order of things, those may be expected to lead the best life who are governed in the best manner of which their circumstances admit" and H. Rackham: "since it is to be expected that the people that have the best form of government available under their given conditions will fare the best, exceptional circumstances apart" (H. Rackham [tr.], *Aristotle: The Politics* [London: Heinemann, 1932, 1950]).
If water is produced from air and air from water, why are no clouds formed in the celestial region? The farther the region from the earth and the lower its temperature the more readily should clouds form there *(prosēke gar mallon hosōi porrōteron ho topos tēs gēs kai psychroteros)* and its temperature should be low because it is not so very near to the heat of the stars nor to the rays reflected from the earth, which by their heat break up cloud-formations and so prevent clouds gathering near the earth -- for clouds gather where the rays begin to lose their force by dispersion in the void [340a26-27].

Webster translates similarly: "They ought to form there the more, the further from the earth and the colder that region is." Now there is clearly no question of morality or quasi-morality here but rather of what one would ordinarily and reasonably expect to be the case in the light of normal experience of the natural world. This much is clearly and precisely conveyed by the following: "Clouds would be more likely to form in the place which is further from the earth and colder." And that is just why it constitutes a problem requiring solution.

On the basis of this sample of four texts, it seems clear that Aristotle used *prosēk-* in an epistemic manner at least sometimes. If so, it is possible that in his testimonium on Anaximander he intended the word epistemically. That he in fact did so seems beyond reasonable doubt in light of his final criticism of the theory (296a4 ff., tr. Guthrie):

Finally, what they say is not even true. Thus much happens accidentally to be true, that everything must remain at the centre which has no reason to move in one or another particular direction *(kata sumbebēkos mentoi tout' alēthes, hōs anankaion menein epi tou mesou pan hōi mēthen mallon deuro è deuro kineisthai prosēkei)*; but so far as their argument goes, a body need not remain there but can move -- not, however, as a whole, but scattering in different directions.

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199 E.W. Webster (tr.), *Meteorology*, in Barnes, *Aristotle*. 
In our target passage, A26, Guthrie interprets the having of a reason, in the text just cited, as the having of a (natural) impulse: "that which is situated at the centre and is equably related to the extremes has no impulse to move in one direction -- either upwards or downwards or sideways -- rather than in another." Others construe it in a quasi-normative manner.200

Kahn, on the other hand, says this about Anaximander:

That this cosmological application of a geometric idea was Anaximander’s personal achievement, is fortunately beyond doubt. One of the rare items of information which Aristotle gives us concerning the thought of Thales is the latter’s teaching that the earth does not fall because it floats on water. The Egyptian and Oriental affinities of this doctrine have been remarked both by ancient and by modern commentators. It may be considered philosophical only in that it recognizes a problem to be solved. Anaximander dismisses all such pseudo-solutions at a single stroke and gives the question its decisive form: Why, after all, should the earth fall? If the universe is symmetrical, there is no more reason for the earth to move down than up. By this implicit rejection of the familiar idea of ‘down’ as the direction in which all bodies tend, Anaximander is well ahead of his time. The use of such speculative reasons in radical contrast with the evidence of common sense did not satisfy his successors, who resorted to more solid considerations to keep the earth in its place.201

These considerations lead him to translate A26 as follows: "for a thing established in the middle, with a similar relationship to the extremes, has no reason to move up rather than

200 See McKirahan above; cf. S. Leggatt (tr.), Aristotle: On the Heavens I and II (Warminster: Aris and Phillips, 1995): "for what is situated at the centre and stands in a similar relation to the extremes is no more fit to move upwards than downwards or towards the sides" and J.L. Stocks (tr.), On the Heaven, in Barnes, Aristotle: "Motion upward and downward and sideways were all, they thought, equally inappropriate to that which is set at the centre and indifferently related to every extreme point."

201 C.H. Kahn, Anaximander and the Origins of Greek Cosmology (New York: Columbia University Press, 1960) 78. Dicks claims that Kahn paints a "vastly distorted picture of ... [Anaximander which] implies a familiarity with the concept of the celestial sphere and its main circles which is entirely anachronistic for his time, and for which there is no good evidence before the latter part of the fifth and the beginning of the fourth century B.C." (45).
down or laterally" (76). Now Aristotle says of this argument that it is a clever one, but not true (toute de legetai kompσs, ouk alēthōs de; cf. Metaphysics 1010a4: "While they speak plausibly [eikotōs], they do not say what is true [alēthē]"). Let us ask, then, what is so clever about Anaximander’s reconstructed argument, for if anything a supposed connection between quasi-morality and geometry seems mystifying rather than clever. On the other hand, a connection between rationality and geometry does seem clever, even natural, i.e. what one might reasonably expect of a philosopher, rather than mystifying. On these grounds, and in light of the results of this thesis, we have good reason to translate as follows:

Some, like Anaximander ... say that the earth is at rest due to ‘similarity.’ For it makes no sense for what is established at the center and similarly related to the limits to move up rather than down or sideways, and it’s impossible for it to move simultaneously in opposite directions. Hence it’s necessarily at rest.

By contrast with the normal interpretation of Anaximander’s thought in this matter, the interpretation I propose here seems to have at least two philosophically significant things to be said on its behalf: first, it seems clearly consistent with and related to -- we might even say it complements -- the other, geometrical reason for the earth’s resting at the center of everything; second, it is a fine and interesting example of not-utterly-erroneous archaic philosophical reflection upon the universe, as Aristotle implies by his endorsement of its geocentric result (though not its rationale). If this interpretation of Aristotle’s report is correct, and if Aristotle reports Anaximander’s thought accurately, then we may reasonably conclude, with Kahn, that Anaximander’s famous leap from the mindset of myth is not only not undermined, it is in fact enhanced.
References

NOTE: Wherever possible, the Greek text used in this dissertation is that of the Oxford Classical series. The exceptions, for which the Loeb series was used, are: Isocrates; Isaeus; and Aristotle, *Parts of Animals* and *Meteorology*.


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