COUNTING ON NUMBER:
PLATO ON THE GOODNESS OF *ARITHMOS*

It is a commonplace that as Plato matured mathematics played an increasingly prominent role in his thought. In a hypothetical version of what might be called "the standard story," the first text cited to document the influence of mathematics on the maturing Plato would be the "slave boy" passage in *Meno,* which would be taken to show the beginning of Plato's infatuation with geometry. This might then be followed by passages from *Euthydemus* (290b–d) and book 7 of the *Republic,* which would be called upon to evince the increasingly intimate relationship between mathematics, dialectic, and the theory of Forms. The next move would be to late dialogues such as *Sophist, Statesman,* and the highly formalized method of *diaeresis. Philebus* (especially 16c–18d) might then be cited as an explicit example of the conjunction of *diaeresis* and mathematics. A fitting conclusion to this story might well be *Timaeus,* where the five regular solids play such an important role.

If one adds to the survey of even these few passages the fact that mathematics, particularly geometry, was an important element in the curriculum of the Academy, and the extended discussion of Plato's (apparently) unwritten mathematical–ontological doctrine of "intermediate numbers" in Aristotle's *Metaphysics,* it is not surprising that for many scholars *the* salient feature of Plato's mature work is precisely its strongly mathematical bent.[1]

On the standard reading of Plato's development, the earlier dialogues are thought to stand in marked contrast to the mature works. The young Plato, we are told, was far more influenced by the historical Socrates and was yet to be touched by the enthusiasm for mathematics that would later enflame him. As a result, the contrast between these two sets of dialogues is a sharp one indeed. As Vlastos puts it, "In different segments of Plato's corpus two philosophers bear that name. The individual remains the same. But in different sets of dialogues he

---

[1] This version of the standard story is pieced together from some well-known commentaries, including Annas, *Aristotle's Metaphysics M and N* (esp. "Plato's Philosophy of Mathematics," 3–26, and 41–72); Klein, *Greek Mathematical Thought and the Origin of Algebra,* especially 3–116; Stenzel, *Zahl und Gestalt bei Platon und Aristoteles*; Vlastos, *Socrates: Ironist and Moral Philosopher,* esp. "Elenchus and Mathematics," 107–32; and Wedberg, *Plato's Philosophy of Mathematics.*

American Journal of Philology 115 (1994) 543–563 © 1994 by The Johns Hopkins University Press

pursues philosophies so different that they could not have been depicted as cohabiting the same brain throughout unless it had been the brain of a schizophrenic" (*Socrates* 46).

To avoid the diagnosis of schizophrenia, Vlastos offers the distinction between Socrates E, the character expressing the views of the early Plato, and Socrates M, the one who represents the decisively changed philosophical positions of the Plato working in the middle of his career. The two are distinguished by both the content and the form of their thought. Socrates E is "exclusively a moral philosopher" (48), whose sole method is the elenchus and who regularly denies the possession of knowledge. His concerns are so thoroughly moral that his thinking "maintains epistemological innocence, methodological naivety" ("The Socratic Elenchus" 63). By contrast, Socrates M is "a moral philosopher *and* metaphysician *and* epistemologist *and* philosopher of science" (etc.), who "seeks demonstrative knowledge and is confident that he finds it" (*Socrates* 48). Such a drastic change demands an explanation, and Vlastos locates this precisely in the mature Plato's study of advanced mathematics. Socrates M "has mastered the mathematical sciences of his time" (48) and by the time of the *Meno* is willing to "hold up geometry as paradigmatic science" (122). Socrates E, on the other hand, "professes no interest in these sciences and gives no evidence of expertise in any of them throughout the Elenctic dialogues" (48). Indeed, Vlastos is confident that it was *because* of his study of advanced mathematics that "Plato reached the metaphysical outlook that characterized his middle period" (108).

I would dispute one of Vlastos's most basic theses, namely that Plato fundamentally changed his views concerning mathematics as he developed. I do not argue against the biographical claim that the mature Plato studied advanced mathematics. Perhaps he did, and if so it is surely reasonable to assume that this had an impact on his philosophical work. As mentioned above, the role of mathematical ideas in *Timaeus*, of *diaeresis* in the late dialogues, and of geometry in the curriculum of the Academy, as well as Aristotle's testimony, make this assumption prima facie plausible. Nevertheless I do argue that in one very important respect Plato was extremely consistent in his thinking about, and evaluation of, mathematical science from the beginning to the end of his career.[2]

In *Euthyphro* (an early dialogue), Socrates examines Euthyphro's statement that "what the gods love is holy, and what they do not love is unholy" (7a).[3] A problem with this definition is that often the gods disagree about what they love, and then become angry with one another as a result. Socrates urges Euthyphro to specify about what the gods disagree and get angry:

> (T1) My good man, disagreement about what creates hostility and anger? Look at it this way: if you and I disagree about number (*arithmos*), which [of two numbers] is larger, would the disagreement about this make us hostile, and angry with one another, or would we settle it quickly by turning to calculation (*logismon*)? (*Euthphr.* 7b6–c1)

Socrates elaborates this point with additional examples. If we disagree about what is greater and what lesser, we can quickly put our dispute to rest by turning to "measurement" (*metrein*, 7c4); if our disagreement is about what is heavier and what lighter, we can easily decide by turning to "weighing" (*histanai*, 7c7). Since each of these areas of potential dispute can be studied, and thoroughly mastered, by a specific mathematical discipline that will clearly and authoritatively adjudicate any disagreements within that area, disputants need not get angry with one another.

By contrast, when disagreement occurs about what is "right and wrong, fine and shameful, and good and bad," that is, about moral issues, there is real trouble, since for these no straightforward and satisfactory solution (*hikanēn krisin*) seems forthcoming. Hostility between disputants is thus likely (7d1–5). As possible objects of inquiry, then, *arithmos* and morality are fundamentally different.[4]

---

[2] In what follows I employ Vlastos's method of both interpretation and presentation of evidence. The former might well be called "accretive"; Vlastos gradually constructs a philosophical story by analyzing a series of discrete passages. His method of presentation is simply to label each passage T1, T2, etc.

[3] My Greek text is Burnet's Oxford edition. Unless otherwise noted, translations are my own. In describing *Euthyphro, Ion, Charmides, Laches*, and *Gorgias* as "early," I am following convention.

[4] A related difference is noted in *Hippias Major*. If two men are each beautiful, then they are so both individually and collectively: that which makes them beautiful, namely *to kalon*, belongs to them both "in common and to each privately" (300a8–b2). By contrast, if two individuals are each one in number, which of course they are, they are each odd-numbered. Together, however, they are two, and hence even-numbered (392a). Thus "it is not altogether necessary . . . that what both are, each also is, and that what each is, also both are" (392b). The point seems to be that there is a fundamental difference between number and other qualities, such as *to kalon* or the just. As Klein puts it, "While in

The first question concerning this passage is, what exactly does *arithmos* mean? In ordinary Greek, it means both "number" and "counting," and the former is never severed from the latter. As Nussbaum explains, "The most general sense of *arithmos* in ordinary Greek of the fifth century would be that of an ordered plurality or its members, a countable system or its countable parts" ("Eleatic Conventionalism" 90). In Klein's words, a number is "a definite number of definite things" (*Greek Mathematical Thought* 46). For this reason, 0 and 1 are not *arithmoi.*[5]

T1 shows Plato to be following ordinary usage.[6] When Socrates offers the case of two people disagreeing *peri arithmou,* he must imagine them disagreeing about, for example, how many olive trees there are in a field. If you say fifty and I say forty, we need not get angry, for we can turn to "calculation": we can count the trees and then compare our respective results.[7]

There is another sense in which T1 shows Plato to be traditional in his understanding of *arithmos*: he appreciates that number is uniquely knowable. As Nussbaum puts it, "from the earliest texts (and fifth-century texts are fully consistent with these) we see the use of *arithmos* to mean that which is counted, and a close association between . . . numerability and knowability" ("Conventionalism" 91). What is noteworthy about T1 is the contrast drawn between the epistemic reliability of number and, presumably, the precariousness of morality.[8]

---

general a property which belongs to several things in common must be attributed also to each single one of them . . . there is also a *koinon* of such a kind that it does indeed belong to several things but not to each of these by itself" (*Greek Mathematical Thought* 79–80).

[5] "It appears that the Greeks, including Plato, were not infallibly consistent on this point" (Wedberg, *Plato's Philosophy of Mathematics* 23). He cites *Laws* 818c and *Hippias Major* 302a.

[6] As Annas puts it, "Plato is not, in fact, any further away from the ordinary Greek concept of number than Aristotle, though they are often sharply contrasted in this respect by scholars" (*Metaphysics M and N* 11). She refers to Plato's later treatment of number, but her point would apply to *Euthyphro* as well.

[7] I translate *logismon* as "calculation." As Heath puts it, it is often the case that *logismon* means "arithmetic in our sense," that is, it "comprised the ordinary arithmetical operations, addition, subtraction, multiplication" (*History of Greek Mathematics* 15). As both Klein and Annas have argued, it is not the case that *logistikē* is merely "practical calculation," because it has a theoretical branch as well.

[8] T1 shows Plato to be aware of the sort of distinction Aristotle later draws between ethics and mathematics. Because of its subject matter, Aristotle claims, the former can-

I should emphasize that by itself T1 does not tell much about Plato's view of exactly how the two poles comprising this contrast, *arithmos* and morality, relate to one another. In particular, T1 does not explicitly state that when properly understood by the philosopher, morality should become more like *arithmos,* although presumably it should. Obviously, then, it does not explain how, if at all, the transformation of morality, from a realm of violent disagreement to one of arithmetic harmony, would take place. This point should serve as a caveat for all that follows. Yes, Plato thinks *arithmos* is good. It does not necessarily follow, however, that he simply and straightforwardly thinks the good is like *arithmos* or should become an object of a subject that is strictly analogous to arithmetic.

Even with this caveat T1 can still serve to call into question Vlastos's assertion that the young Plato was thoroughly uninterested in mathematics and as a consequence was "epistemologically innocent." At the time he wrote *Euthyphro* Plato understood that the authoritative precision of mathematics results in extraordinary reliability: not only can we count with *arithmos,* we can also count on it. We are confident that eventually we will agree when it comes to the question "how many?"[9] By contrast, the questions of morality seem unable to be answered with a comparable degree of clarity and finality.

Consider *Ion,* another early dialogue. In examining Ion's claim to have the rhapsode's *technē* (530b3, 530c8) and to "expound" or "speak well" about Homer, Socrates asks whether he can speak equally well about other poets such as Hesiod and Archilochus. Ion answers no. This puzzles Socrates, since Homer and Hesiod often address the same subject. Why is it, then, that Ion can "expound" *only* Homer's poetry

---

not achieve as high a degree of precision (*to akribēs*) as the latter. Ethics cannot be rendered fully demonstrative, as of course mathematics can, because the human good is residually indeterminate. He puts it this way: "It is characteristic of an educated man to seek after just that degree of precision that the nature of the subject matter admits. For it seems to be equally [inappropriate] to accept merely persuasive talking from a mathematician and to demand a demonstration from a rhetor" (*EN* 1094b25–27). (The subject matter of rhetoric overlaps that of ethics.)

[9] See *Euthphr.* 12d for further evidence of the early Plato's appreciation of the clarity of number. About this passage, Vlastos states only that because of its nontechnical description of even numbers, it demonstrates that "Socrates is sadly deficient in the mathematical know–how his namesake proudly displays in the *Meno*" (*Socrates* 273).

and not Hesiod's? To illustrate the problem Socrates offers the counterexample of arithmetic:

> (T2) *Socrates*. So, my dear Ion, when many people are talking about number and one of them speaks best, I suppose there is some one who will be able to distinguish the man who speaks well?
>
> *Ion*. Yes, I'd say so.
>
> *Socrates*. And will this same man be able to identify those who speak badly, or will it be someone else?
>
> *Ion*. The same man, I suppose.
>
> *Socrates*. And this is the man who has the arithmetic *technē*, isn't it?
>
> (*Ion* 531d12–e4)

If someone possesses the arithmetic *technē* (531e3) he can identify those who speak well, that is, correctly, and those who speak badly, that is, incorrectly, about number. Socrates assumes that Ion's claim to the rhapsodic *technē* is analogous. As a result, Ion should be able to identify and discuss not only those who speak well within his field, like Homer, but also those, like Hesiod, who do not.

In this passage *arithmos* represents a field that can be mastered by a *technitēs* (an "expert") who can authoritatively distinguish between right and wrong answers, and in turn good and bad speakers who enter that field. As such, T2 suggests that arithmetic is paradigmatic of this feature of *technē*. This point is not made explicit (and Socrates also uses medicine to illustrate his point at 531e9), but Vlastos's assertion that it is not until *Meno* that Socrates identifies a mathematical *technē* such as geometry as paradigmatic of authoritative knowledge must at least be called into question.

Ion exemplifies what numerous commentators (notably Irwin in *Plato's Moral Theory*) have recognized as a prominent feature of the early dialogues, namely Socrates' frequent use of the "craft (*technē*) analogy" in arguments that either refute an interlocutor's claim to knowledge, or exhort him to pursue knowledge.[10] For the present purpose, what is most striking about these analogical arguments is their heavy reliance on mathematics to supply examples. Consider *Charmides*.

When examining Critias' definition of *sōphrosunē* as self-knowledge, Socrates states that since self-knowledge is a kind of knowing (*gignōskein ti*), it must be an *epistēmē* (a synonym for *technē* in the early dialogues). Furthermore, it must be an *epistēmē* of something particular; it must be *tinos* (165c4–6). As examples Socrates uses medicine, whose specific "product" (*ergon*) is health, and building, whose product is houses. What, asks Socrates, is the analogous product of *sōphrosunē*?

Critias objects that Socrates has falsely homogenized the *epistēmai/technai*. Some do not have a product at all. Critias marshals the *logistikē* and the *geometrikē technai* as counterexamples (165e3–6). Socrates rebuts:

> (T3) You're right. But I can show you this. Each of these *epistēmai* is an *epistēmē* of something, which happens to be other than the *epistēmē* itself. For example, calculation (*logistikē*) is about the odd and the even, how they hold in relation to each other. (*Chrm*. 166a3–7)

As in *Euthyphro*, Socrates also uses the example of weighing (*statikē*, 166b1) to make his point. Mathematics here supplies the critical examples of the subject/object structure of the *technai* in general: each is about some identifiable object other than the knowledge (the subject) itself.

A similar point is made in *Gorgias*. Gorgias initially states that his *technē*, rhetoric, is about "speeches" (*logous*, 449e1). According to Socrates, however, "speeches" is too vague adequately to identify the subject matter of rhetoric, since other *technai*, such as medicine and gymnastic, also make "speeches" (about the health of the body). Gorgias tries again: unlike the other *technai*, which involve some degree of manual work (*cheirourgia*) and activity (*praxis*), rhetoric is purely "logical"; it takes place "through *logos*" (450b9) alone. Socrates again objects:

> (T4) There are other *technai* which achieve their purpose entirely through *logos* and, one might say, either require no *ergon* or very little, like arithmetic, and calculation, and geometry, draught-playing, and many other *technai*. (*Grg*. 450d4–7)

Since the mathematical *technai* provide counterexamples to the assertion that only rhetoric is purely "logical," Gorgias has failed to identify what is unique about rhetoric.[11] Throughout the argument, Socrates continually pressures the famous rhetorician to say exactly what rhetoric is. For Socrates, however, the question "what is rhetoric?" amounts to "what is rhetoric about? what is its subject matter?" To help Gorgias answer this question, he offers examples:

---

[10] For a critique of Irwin see Roochnik, "Socrates' Use of the *Techne*-Analogy."

> (T5) Suppose someone asked me now about those *technai* that I was talking about: "Socrates, what is the arithmetic *technē*?" I would say to him, as you just now did to me, that it is one of those which have their effect through *logos*. And suppose he went on to ask, "with what is its *logos* concerned?" I should say: with the odd and even numbers, whatever may chance to be the amount of each. And if he asked again, "what *technē* is it that you call calculation?" I should say that this is also one of those who achieve their whole effect by *logos*. And if he proceeded also to ask, "with what is it concerned?" I should say in the manner of those who draft amendments in the Assembly, that in all calculation corresponds with arithmetic, for both are concerned with the same thing, the odd and the even; but that they differ to this extent, that calculation considers the numerical values of odd and even numbers not merely in themselves but in relationship to each other.[12] (*Grg.* 451ba7–c5)

Once again, mathematics provides the pivotal examples with which to illustrate two decisive and related features of the *technai* in general: (1) they have a basic subject/object structure in which the object, or subject matter, is different from the subject, and (2) this object is determinate, that is, it can be clearly delineated and thus distinguished from other such objects. (Socrates also uses the example of astronomy at 451c5–10). It follows that since *technē* plays so prominent a role in the early dialogues, and since mathematics is crucial in articulating what a *technē* is, mathematics too must (*pace* Vlastos) be acknowledged as significant in dialogues such as *Charmides* and *Gorgias*.

Vlastos is, of course, aware of T5 and other passages cited here. He grants that Socrates E was not a "mathematical illiterate" and that we "can safely assume that he had learned some mathematics before his concentration on ethical inquiry had become obsessive" (*Socrates* 272). What he denies is that Socrates E had studied *advanced* mathematics, which becomes a decisive characteristic of the maturing Plato. Again, I need not dispute the claim that Plato studied advanced mathematics, for my view is that his development as a mathematician did not cause him to revise his views concerning the fundamental value of the mathematical *technai* in relation to philosophy.

In T2, T3, T4, and T5, Socrates uses the "*technē* analogy" to refute his interlocutors (Critias' definition of *sōphrosunē* in T3, Ion's claim to the rhapsodic *technē* in T2, Gorgias' claim to rhetoric in T4 and T5). In these passages Socrates puts the analogy to good use because through it he is better able to demand that his interlocutor specify what exact epistemic claim he is making. A similar passage is found in *Laches*.

The question is, what is courage? Laches first answers that it is "staying at one's post." Socrates easily refutes this with the counterexample that a courageous retreat is possible (191c). Laches next offers "endurance of the soul" (192b). This definition proves to be too general: "endurance of the soul" would include foolish endurance, which the participants agree is not good. Since they agree that courage is always good, the definition must be revised again (192c).

Laches' third definition is "intelligent (*phronimos*) endurance" (192e). The problem with this definition is that it is unclear what "intelligent" means. To demand clarification Socrates questions Laches via the *technē* analogy. He asks, "If someone shows intelligent endurance in the spending of money, knowing (*eidōs*) that if he spends more he will possess more, would you call this man courageous?" (192e). In other words, if a man has the money–making *technē* and can calculate correctly that a certain investment will be profitable, it takes no courage to make that investment. Similarly;

> (T6) If a man endures in war and is willing to fight, and because he has calculated wisely (*phronimōs logizomenon*) and knows (*eidota*) that others will help him, and that he is doing battle against fewer and inferior troops than those with him, and further that he has the superior position, would you call such a man who is enduring with this kind of intelligence and preparation more courageous than one who is in the opposite camp and is willing to stand fast and endure? (*La.* 193a3–9)

---

[11] About draught–playing, Dodds (*Gorgias* 197) says that "it appears again in a list of *technai* at *Phdr.* 274d, and is cited as an example of a skilled activity at *Charm.* 174b, *Rep.* 333b, and *Alc.* i 110e." The "logos element" of this game was "planning the moves."

[12] My translation here largely follows that of Lamb in the Loeb Classical Library Series.

Like the financial expert, the general who can calculate (*logizomenon,* 193a4) correctly that he has more and better troops than his enemy does not require courage to press the attack. Both examples concern persons who possess a *technē* (193b10, 193c10) and can thereby *calculate* well enough to reduce significantly the risk of the actions they are performing. Thus, even though Socrates does not explicitly cite a mathematical discipline here, the pattern of *Laches* 192d–193d is similar to that found in *Ion, Charmides,* and *Gorgias*. Socrates uses the calculative *technai* of money–making and generalship in order to provide clear examples of intelligence. They offer models of determinacy against which Laches' vague, that is, indeterminate, statement, "courage is intelligent endurance," can be measured and ultimately rejected.

It is just this feature of "determinacy" that is most significant in the early Plato's interest in and appreciation of mathematics. When Socrates appeals to the *technai* in his analogical arguments, he looks towards their clarity and authority, both of which follow from the fact that their subject matters are determinate and thus can be mastered. Mathematics is thus paradigmatic of *technē* in two senses: it is most clear and authoritative (hence its use in T1), and its subject matter is the epitome of determinacy. This point is made most explicit in a statement by Socrates in the *Republic*:

> (T7) The trivial (*phaulon*) business of distinguishing the one, the two, and the three. In sum, I mean counting (*arithmos*) and calculation. Or isn't it the case concerning these that every *technē* and *epistēmē* is forced to participate in them? (*Rep.* 522c5–9)

Socrates does not explain in what exact sense every *technē* must participate in *arithmos*.[13] Does he mean that every *technē* is some version of applied mathematics? Perhaps. But this statement could be also taken in a more general, almost metaphorical sense. On this reading, a *technē* must have a determinate subject matter, some *one* area of expertise. And *arithmos* is the paradigm case, and indeed the principle, of determinacy.

To explain, I digress for a moment and discuss two fragments by Philolaus. I justify doing so, first, on the basis of convenience: Philolaus succinctly treats what I take to be the relevant points in Plato. Second, it is at least possible that he may actually have had some influence on Plato (although in no way does my argument hinge on that being the case).[14]

Philolaus says this:

> (B3) For there will not even be an object of apprehension at all if everything is indeterminate.
>
> (B4) And indeed all objects of apprehension have *arithmos,* for it is not possible for us to think of or apprehend anything without this.[15]

Even allowing for the ambiguity in these statements, they seem to imply two propositions: (1) determinacy is the necessary condition of intelligibility (and thus knowledge), and (2) *arithmos* is either equivalent to or the necessary condition of determinacy. It is not clear exactly how *arithmos* functions in either of these capacities. Nussbaum understands Philolaus to be making a kind of transcendental argument. The world is intelligible to us; we can apprehend or recognize (*gignōskein*) things. And the condition for the possibility of such apprehension is our ability to distinguish "this" from "that." Making such distinctions necessarily requires delimiting the bounds of "this" and thus treating it as a countable unit separate from "that" ("Eleatic Conventionalism" 92).

Huffman argues somewhat similarly (although he disagrees sharply in that he believes that *gignōskein* actually refers to secure knowledge, and not merely "apprehension" or "recognition"): "Philolaus accepts Parmenides' claim that the object of knowledge must be a determinate state of affairs but wants to preserve a plurality. The bold step he takes is to argue that numerical relationships and mathematical relationships in general solve the problem" ("The Role of Number" 22). In turn, what this means is that "we only really understand something when we understand the structure of and relationship between its various parts" (28).

For our purpose, it is not necessary to determine exactly the meaning of Philolaus' fragments, but simply to use them to illuminate

---

[13] At *Rep.* 522c1–2 Socrates states all *technai, dianoiai,* and *epistēmai* must be "supplemented" by arithmetic, which must be learned first. See also *Phlb.* 55e1–3 for a later, and more elaborate, description of this relationship.

[14] Timon reports that Plato once paid forty minae for Philolaus' book (fr. 54; DK 44 A8). See Nussbaum, "Eleatic Conventionalism" 64.

[15] I use Nussbaum's translation, substituting only "indeterminate" for her "unbounded." Huffman, "Number in Philolaus' Philosophy," offers both a different translation and interpretation of these fragments.

Plato's T7, about which it seems safe to say only this much: even if he does not explain it in precise conceptual terms, Socrates explicitly states that there is an intimate, perhaps even a foundational, relationship between *arithmos* and *technē*. Because of its mastery of a determinate subject matter, the latter is a good, perhaps the best, example of sustained intelligibility (or knowledge). At the very least, the former is a good, perhaps the best, example, of the latter (a point made clear in T3, T4, and T5). Because *technē* plays a central role in the early dialogues, a similar claim can be made about mathematics as well.

This thesis, even stated with maximum caution and with the somewhat circuitous assistance of Philolaus, should be enough to challenge Vlastos's contention that the *Republic* is so drastically different from the earlier dialogues that a "new" author must be postulated. As early as *Euthyphro* Plato is fully aware of the distinctive and impressive epistemic features that make *arithmos,* to which he contrasts moral judgment, so reliable. He uses mathematical examples to illustrate the decisive epistemic features of *technē* in *Ion, Charmides,* and *Gorgias.* Since *technē* is critical in the early dialogues, at least insofar as it appears as an element in Socrates' many analogical arguments, it follows that mathematics plays an important, even if somewhat muted, role in them as well.

There is another angle from which to approach this issue. The early Plato, like the middle and late, believes that *arithmos* in particular, and mathematics in general, is good.[16] *Arithmos* is the principle of determinacy; it is clear, stable, and epistemically reliable. We can count on it, and it represents a realm in which agreement is prior to hostility. It is (in some unspecified way) the basis of *technē,* which is a good example of authoritative knowledge. Nowhere does this sense of the goodness of mathematics emerge more powerfully than in Socrates' extended discussion with Callicles in *Gorgias.*

Callicles is the favored interlocutor of this dialogue. Socrates says that he possesses three characteristics that make him so: knowledge, goodwill, and frankness (487a2–3). Callicles, in turn, even goes so far as to suggest that in some way he and Socrates are like brothers (see the citation from Euripides' *Antiope* at 484e4–7). Like Socrates, Callicles is a lover: Socrates loves Alcibiades and philosophy, Callicles loves the son of Pyrilampes, Demos, and the people or Athenian *dēmos* itself (481d1–5). Like the philosopher's, Callicles' desires are strong, his intelligence is acute, and his firmness real. Like Socrates, he conceives of a sharp distinction between *nomos* and *phusis* and, in a parallel fashion, between the many and the few (483aff.).[17] For these reasons, I suggest, Socrates says to him, "Know well that if you agree with me concerning the things my soul opines, then these things themselves are true" (486e5–6).

Callicles differs from Gorgias and Polus, the previous two interlocutors who were easily defeated by Socrates, in one obvious but critical way: he practices what they teach, namely rhetoric. Because they are professional teachers, Gorgias and Polus claim, either implicitly or explicitly, to possess a *technē,* a determinate body of knowledge for which they can reasonably charge tuition.[18] As a consequence, the scope of their expertise is intrinsically, even if implicitly, limited: they profess to teach rhetoric, not music or mathematics. By contrast, Callicles suffers no such limitation, for he professes no *technē.* Indeed, he seems to despise *technē.* This is brought out quite clearly in the following exchange that he has with Socrates.

Callicles has asserted his principle of *pleonexia* (483c3–4), namely that "the superior should take by force what belongs to the inferior, that the better should rule the worse, and the more worthy have a greater share than the less worthy" (488b). Socrates demands that the critical terms in this assertion—"superior," "better," "more worthy"—be clarified. Callicles obliges with "more intelligent" (*phronimōterous,* 489e8). Socrates, however, remains unsatisfied and demands again that "more intelligent" be clarified. In order to press Callicles to do so, he foists upon him the *technē* analogy.

When it comes to food and drink, doctors are more intelligent than laypersons, and so should have more. When it comes to clothes, the weaver is more intelligent, and so should have more; to shoes, the cobbler; to land, the farmer. The question towards which Socrates attempts to direct Callicles is, with respect to what particular, that is, determinate, field is your "intelligent man," the one who should have more, more intelligent? (490b–e).

---

[16] For a modern exposition of a view similar to that I attribute to Plato see Whitehead, "Mathematics and the Good."

[17] Of course, this is not to imply that Callicles' view of either *nomos* or *phusis* is similar to Socrates', only that like the philosopher he sharply distinguishes them.

[18] On the role of teachability as an essential characteristic of a *technē,* see Heinimann, "Eine vorplatonische Theorie der *Technē.*"

Callicles, however, does not allow Socrates to lead him. Unlike Laches, whose definition of courage ("intelligent endurance") uses the same term as Callicles does here and who is also faced with a similar line of Socratic questioning (see T6), Callicles refuses to allow Socrates to wield the *technē* analogy against him:

> (T8) By the gods, you simply (*atechnōs*) never cease from speaking of cobblers, fullers, cooks, and doctors, as though our discussion had something to do with them.[19] (*Grg*. 491a1–3)

This is quite right: Socrates, in his many analogical arguments, does continually talk about men who possess a *technē*. Unlike other interlocutors, however, Callicles decries such talk as "nonsense" (490e4); he refuses to accord to *technē* the kind of goodness implied by Socrates' frequent use of the analogy. For example, when Socrates likens Callicles to an "engineer" (*mēchanopoios*), one who makes devices with which life can be preserved, Callicles objects. He is contemptuous of "the *technē* of that man" and would refuse to allow his child to marry into the family of a *technitēs* (512c1–7). Such objections can of course be attributed to "the contempt generally felt by the Greeks for 'banausic' occupations" (Dodds, *Gorgias* 349). I suggest, however, that Plato's depiction of Callicles' attitude towards *technē* tokens something deeper.

Callicles' ambition is grand, and so he is driven beyond the limitations implied by a *technē*. He is a *pleonektēs*, a man who continually demands to have more than his fair share and is willing to take advantage of others to get what he wants (483c3). Unlike Gorgias and Polus he does not limit himself even to the profession of rhetoric. He wants instead to exploit rhetoric, use it for his own advantage. Callicles rejects limits, wants nothing bounded, and contemptuously describes Socrates' mode of argumentation as "small" and "narrow" (497c1). Again, in one sense Callicles is quite right: Socrates repeatedly uses the *technē* analogy, and a *technē* is narrow in that its subject matter is determinate.

Socrates criticizes Callicles precisely for this rejection of limits and his inability to restrain himself; he does not have the virtue of *sōphrosunē*. Callicles agrees. For him, a *sōphrōn* man is a "simpleton" (491e2). He insists that the "man living correctly should allow his desires to be as great as possible and not restrain them" (491e8–492a3). In short, Callicles' desires are those of a potential tyrant. His love of political power, his brutal honesty about the weakness of the many, and his disregard for convention have transformed him into a genuinely dangerous character, exactly the sort Socrates feels obligated to combat. But how is such a man to be combated?

Without rehearsing the many details of their battle, I simply assert here that Socrates attempts to reform Callicles by offering him a vision of an orderly and knowable whole. In other words, Socrates follows the advice that Aristotle later will give: the only effective cure for the man of tyrannical desires is philosophy (*Pol*. 1267a10–16). What this means is that the truly tyrannical personality, the one who strives always for more than his share and is willing to trample those beneath him to meet his indefinitely expanding desires, can only be reformed by having his sights shifted away from the political realm to the "largest" of all possible objects, the whole itself. Only the love of wisdom can adequately replace the tyrant's desire for unlimited power, for only it can satisfy at the same level.

Regardless of whether Aristotle's advice is sound, Socrates seems to be following some version of it:

> (T9) The wise men tell us, Callicles, that heaven and earth and the gods and men are held together in community and friendship, orderliness, moderation, and justice; and, my friend, for these reasons they call the whole a cosmos rather than a chaos or a realm of unrestraint. You, it seems to me, do not pay attention to these things, even though you are wise, but the fact that geometrical equality has great power among both the gods and men has eluded you. You hold that taking-more (*pleonexia*) is what one ought to practice, for you disregard geometry. (*Grg*. 507e6–508a8)

Here Socrates urges Callicles to partake in a fundamental moral revision of himself, namely, to replace his chaotic strivings after political power with a vision of a cosmos, an orderly, "geometric" world that can be known. What is most striking about this passage is Socrates' assertion that there is a causal relationship (note the *gar* at 508a8) between Callicles' moral failing, that is, his advocacy of *pleonexia*, and his neglect of geometry. Mathematics, it seems, can be therapeutic, instrumental in the shaping of character and perhaps even in the reform of a potential tyrant.

---

[19] There is no doubt that Plato puns with *atechnōs* here. See Roochnik, "Plato's Use of *Atechnōs*." Also, compare this line with Alcibiades' description of Socrates at *Smp*. 221e.

As Irwin rightly notes, Socrates' "mere reference to geometrical equality leaves many unanswered questions" (*Gorgias* 226), for Socrates does not explain how geometry can effect positive moral changes in its students. Nevertheless T9 secures one point: the early Plato, like the middle and late, believes that mathematics is good, and in a specifically moral sense.[20] What this sense might be is made more clear in a passage from the *Republic*. After having offered the image of the cave, Socrates asks Glaucon,

> (T10) Do you want us now to consider in what way such men [philosophers] will come into being and how one will lead them up to the light, just as some men are said to have gone from Hades up to the gods? . . . Then, as it seems, this wouldn't be the twirling of a shell, but the turning (*periagōgē*) of a soul around from a day that is like night to the true day; it is that ascent to what is, which we shall truly affirm to be philosophy.[21]
> (*Rep.* 521c1–8)

Socrates then asks, what study can facilitate this turning of the soul away from becoming and towards being? The answer: calculation and counting (*arithmein*, 522e2).[22]

This passage is important to Vlastos, for he takes it to supply evidence of a new Plato, one who got his start in *Meno* with a praise of geometry, and who then rejected the moral and elenctic philosophizing of the historical Socrates. By the time of the *Meno* and *Republic*, says Vlastos, "Plato himself has taken that deep, long plunge into mathematical studies he will be requiring of all philosophers when he comes to write book VII of the *Republic* and the effect is proving as transformative of his own outlook as he believes it would be of theirs" (*Socrates* 118).

What Vlastos has in mind here is Plato's "discovery," via his study

of mathematics, of the separate, eternal Forms that come to be the core of his later theories. But does T10 really represent a view so totally new that it requires postulating a dramatic transformation on the part of its author? I suggest it does not.

Consider in what sense counting is able to turn the soul around. Socrates explains by discussing sensation. Some sensations appear to be self–contradictory. When looking at three fingers on a single hand, it may seem that the middle of the three is both larger and smaller. Reflection on this appearance discloses that this is because the middle is larger than the smallest finger, and smaller than the largest: the intellect has been "summoned" in order to stabilize a seeming contradiction (523b–524e).

The most obvious way the intellect is summoned to do its work is by measuring and counting. If I can first separate the three fingers and conceive of them as discrete individuals, and then determine that they are respectively, two, three, and four inches long, and then recombine the three individuals into an ordered triad, that the middle finger appears both larger and smaller no longer seems contradictory in the least.

It is in this very *ordinary* act of counting that the soul is invited to turn around. *Arithmein* is always a counting of items, of units. If I count the three fingers on my hand, each finger functions as just such a unit. But the number, three, can also be used to count three toes on my foot. The same number is invoked to count different sensible items: a toe is not a finger; indeed, even each of the three fingers is different from the other two. In the act of counting, however, the number, the count, treats each finger as an equal unit. As Klein puts it, "whenever we are engaged in counting, we substitute—as a matter of course, even if we are not aware of what we are doing—for the varied and always 'unequal' visible things to be counted 'pure' invisible units which in no way differ from each other" (*Meno* 117).

In other words, even in the "vulgar" count of ordinary people (see *Phlb.* 56d5), we invoke, and thereby implicitly gain access to, a purely intelligible, formal, stable entity: the number. Simply to count, then, is fundamentally informative: it tells us that noetic stability can and does intervene into human experience, that there is something, even amidst the "barbaric bog" (*Rep.* 533d1) of human life, on which we can count. In this sense, *arithmos* can turn the soul around, away from becoming to being, for it can become a compelling invitation to shift one's sights, away from the sensible towards the noetic. Counting, the most ordinary of intellectual acts, "leads the soul powerfully upward" (525d6); in other words, it can inspire us to think, supply us with both the material to think about and some ideal at which to aim.[23]

---

[20] On geometrical equality see *Laws* 757b; Arist. *EN* 1131b13 and *Pol.* 1301b29.

[21] Here I follow Allan Bloom's literal translation.

[22] I move from geometry in *Gorgias* to arithmetic in the *Republic* without offering comment on the differences between the two because my basic point holds for both: as mathematical *technai*, both have determinate subject matters that can be apprehended clearly and methodically. In general, Plato seems more interested in geometry, perhaps because both its methodology and its results were more prominent during his lifetime.

Again, does T10 require us to postulate a dramatic shift on the part of the author of the earlier dialogues? No. The goodness of *arithmos* expressed here in T10 is not simply a theoretical matter for Plato. It must be remembered that since the pedagogical role of mathematics in book 7 of the *Republic* is propaedeutic, its value is instrumental. The study of mathematics is good for turning around the souls of the future philosopher–kings. Even if by the time he wrote the *Republic* Plato was on the verge of developing a complex theory of mathematics, and even if the guardians' mathematical curriculum as described in book 7 is surely not ordinary or common, it remains the case that in earlier dialogues, notably *Gorgias*, mathematics is evaluated in almost identical terms. In T9, for example, Callicles' failure as a moral being is attributed to a flaw in his education: he did not study geometry. Geometry is good, not as a theoretical end in itself, but in turning the soul away from *pleonexia* to *sōphrosunē*. A person who has been informed by the goodness of equality or of number is, in practical and political terms, a better person.

Because of the *Republic*'s emphasis on equal and nonsensible units it is frequently taken to allude to "parts of the theory of Mathematical Numbers" that Aristotle discusses in the *Metaphysics* (Wedberg, *Plato's Philosophy of Mathematics* 124). Perhaps it does. Even if so, however, this would not jeopardize the thesis that when it comes to the goodness of *arithmos* Plato has maintained a consistent set of views since his earliest works. To hearken back to T7 and *Rep.* 522c5, it should be noted that Socrates there mentions the "trivial" (*phaulon*) act of counting. He does so because counting is indeed so very ordinary. Nonetheless, at the same time it is fundamentally informative, for it can inform the counter of a stable and intelligible entity, the *arithmos*, and thus supply him with a possible conceptual ideal. Whether there is a theory of numbers to buttress this ideal is another question entirely. In other words, one need not invoke an extraordinary theory of numbers

---

[23] As Whitehead puts it, "Our existence is invigorated by conceptual ideals, transforming vague perceptions. . . . Here we find the essential clue which relates mathematics to the study of the good" ("Mathematics and the Good" 674).

in order to realize the goodness of counting. Indeed it is precisely this realization that informs T1, the passage from *Euthyphro*.

In sum, the thesis I hold does not necessarily lead to any specific position on the question of the separability and ontological status of number or of the Forms. Thus it is possible for me to gloss over the question whether T10 and passages like it, from the *Republic* and elsewhere, allude to Plato's unwritten mathematical–ontological theory or contribute to his theory of the Forms. Indeed, it is unnecessary here to raise the many difficult questions concerning this putatively late stage of Plato's thought. In what sense did Plato attribute separate and independent reality to numbers and Forms? Did he divide numbers into various kinds, such as form numbers, intermediates, combinable and uncombinable numbers? How did they interact? What roles did the "one" and the "indeterminate dyad" play in his theory of the foundations of arithmetic?[24]

These are, of course, all important questions in their own right, but they do not bear on what I take to be Plato's enduring position towards *arithmos*. If I am right, then, *pace* Vlastos, T10 does not testify to a radically new understanding or appreciation of *arithmos* for Plato. Indeed in virtually all the passages studied above, from *Euthyphro* to the *Republic*, a remarkable level of consistency in Plato's attitude towards mathematics has emerged. Specifically, he thinks that *arithmos* (and, of course, geometry) is good. To render such a judgment means to locate *arithmos* in a practical context and to invoke a standard that is not itself arithmetical. *Arithmos* is good because it turns souls around, leads them to *sōphrosunē*, makes them care about something beyond the senses. It gives them an ideal and an inkling of formal perfection. All of these are practical considerations and have to do, finally, with leading a good life.[25]

---

[24] Annas is a good guide to these questions.

[25] Even in the late *Philebus* this theme is prominent. The dialogue is a debate on what kind of life to lead, that of pleasure or that of mind? Eventually, through an enormously complex route in which so many of the issues discussed in this paper are treated at the highest level of abstraction, the life of mind triumphs over that of pleasure. Note that Socrates classifies pleasure within the category of the indeterminate (27e–28a), and that this becomes the basis of its eventually being judged inferior to mind. In other words, indeterminacy is worse than determinacy. Also consider that *arithmos* is what introduces determinacy into the indeterminate (25e). Finally, Socrates also states that *technē* requires *arithmos* (55e1–3). All of these theoretical arguments are summoned for the sake of deciding what is ultimately a practical question.

Even if he was right about much, Vlastos was thus wrong in postulating a drastic shift between Socrates E and Socrates M when it comes to mathematics. While it may well be true that Plato studied advanced mathematics in the middle of his career, and that this influenced him, it does not follow that he went through a drastic "turn" in his thinking. On my reading, a basic intuition unifies all of the dialogues: *arithmos,* with its beautiful and gentle stability, its *akribeia,* its critical role in making *technē* possible, is good.[26]

David Roochnik

Iowa State University

BIBLIOGRAPHY

Annas, Julia. *Aristotle's Metaphysics M and N.* Oxford: Oxford University Press, 1976.

Dodds, E. R. *Plato's Gorgias.* Oxford: Oxford University Press, 1959.

Heath, T. L. *Greek Mathematics.* Vol. I. New York: Dover, 1981.

Heinimann, Felix. "Eine vorplatonische Theorie der *Technē.*" *Museum Helveticum* 18 (1961) 105–30.

Huffman, Carl. "The Role of Number in Philolaus' Philosophy." *Phronesis* 33 (1988) 1–29.

Irwin, Terence. *Plato's Gorgias.* Oxford: Clarendon Press, 1979.

———. *Plato's Moral Theory.* Oxford: Clarendon Press, 1979.

Klein, Jacob. *A Commentary on Plato's Meno.* Chapel Hill: University of North Carolina Press, 1967.

———. *Greek Mathematical Thought and the Origin of Algebra.* Cambridge: MIT Press, 1968.

Nussbaum, Martha. "Eleatic Conventionalism and Philolaus on the Conditions of Thought." *HSCP* 83 (1979) 63–108.

Roochnik, David. "Plato's Use of *Atechnōs.*" *Phoenix* 4 (1987) 255–63.

———. "Socrates' Use of the *Techne*-Analogy." In *Essays On the Philosophy of Socrates,* edited by Hugh Benson. Oxford: Oxford University Press, 1992.

Stenzel, Julius. *Zahl und Gestalt bei Platon und Aristoteles.* Leipzig: Teubner, 1933.

---

[26] Carl Huffman read an earlier version of this essay and made several helpful comments. I am also grateful to an anonymous referee whose insightful criticisms were quite valuable.

Vlastos, Gregory. *Socrates: Ironist and Moral Philosopher.* Ithaca: Cornell University Press, 1991.

———. "The Socratic Elenchus." *Oxford Studies in Ancient Philosophy* 1 (1983) 63–108.

Wedberg, Anders. *Plato's Philosophy of Mathematics.* Stockholm: Almquist and Wiskell, 1955.

Whitehead, A. N. "Mathematics and the Good." In *The Philosophy of A. N. Whitehead,* 666–81. La Salle, Ill.: Open Court, 1971.

APOLOGY 40c4–41e7: IS DEATH REALLY A GAIN?

After being found guilty by the Athenian jury Socrates received the death penalty. In the closing statement of the *Apology* (38c1–42a5) he responds to this apparently grim state of affairs.[1] First, he confronts those voting against him. As has been his custom throughout his defense, he addresses them merely as "Athenian men," (38c1) and not as "men of the jury." He severely takes them to task for being persuaded by the speeches of his accusers who, he says, have been "seized by evil" (39b3–4). Those voting for condemnation are themselves condemned to suffer for their depravity and injustice (39b5–6). Socrates predicts that they will receive a bitter penalty after his death in the form of men younger and more exacting than he who will examine and force them to give an account of their lives (39c4–d3).

After this rather disquieting harangue Socrates turns to the 220 men who voted for his acquittal.[2] These, and only these, he addresses as "men of the jury," (40a2) a title he believes they genuinely deserve. He has a few minutes to converse with them before the end of the trial's proceedings and wishes to explain that something wonderful has happened to him: his accustomed "daimonic" sign, which he has always relied upon to turn him away from doing or saying anything wrong, has not appeared to him throughout the entire day. Therefore, he concludes, what has occurred, namely receiving the death penalty, is probably something good (40b7). It is of this fact, that death may indeed be something good, that he wishes to persuade his 220 "friends" (40a1), and his attempt to do so, as I shall show, is both peculiar and noteworthy.[3]

Contrary to what most of us believe, says Socrates, death is not something bad. The absence of his daimonic sign is the first piece of evidence for this. However, since no one else is privy to its messages, Socrates invites his friends to think through the situation logically with him. "Let us reflect in this way also that there is much hope that it (death) is good (40c4–5)." Just as we would expect, Socrates has an argument which he apparently believes will

persuade the 220 men (and whoever else might be listening) that what he has said is true. Being dead is one of two things. Either it is a condition of "being nothing" *(mēden einai)* and is like a dreamless sleep which is utterly without "consciousness" *(aisthēsis:* 40c6), or, as the "traditional sayings" (*ta legomena:* 40c7) have it, it is a migration of the soul to another place. If it is the former, then death would be a wonderful gain (*thaumasion kerdos:* 40d2). After all, who has not experienced the pleasure of a perfectly undisturbed night's sleep? Even the "great king" would be hard pressed to discover a night more pleasant than the one of flawless sleep. If death is like this, it must be counted a gain, for all eternity would seem no more than a single night. Concomitantly, if death is the migration of the soul, then it is also a great good, for it would bring with it the opportunity to meet in Hades the outstanding men of the past. Socrates would be able to converse with the great judges, Minos, Rhadamanthys, Aeacus, and Triptolemus; the great singers, Orpheus, Musaeus, Hesiod, and Homer; other men who died unjustly such as Palamedes and Ajax; and such heroes as Agamemnon, Odysseus, and Sisyphus.[4] What is best of all is that Socrates would be able to question these men in Hades and discover which of them is wise and which merely believes he is wise but actually is not. In other words, if *ta legomena* are true, then Socrates will be able to continue his philosophic mission in Hades, a thoroughly delightful prospect.

Socrates' argument takes the form of a "constructive dilemma." Let A stand for "death is a dreamless sleep," B for "death is the migration of the soul," and P for "death is a gain." The argument then runs:

(1) If A, then P.
(2) If B, then P.
(3) Either A or B.
(4) Therefore, P.

Unfortunately, the formal validity this argument attains is really very superficial, for immediate problems with it arise. First, Socrates gives the impression that the statement, "Either A or B," exhausts the possible descriptions of death. (The use of the dual in the phrase *duoin thateron* at 40c5 helps do this.) However, there could be other descriptions, and Hades may well be a vastly less pleasant place than he makes it out to be. A careful reader surely must protest and ask, might there not be a "C," death is being chained to a cliff and having one's liver daily eaten, or "D," death is eternally rolling a boulder to the top of a mountain only to have it roll back down again? The list of possible representations of death extends as far as one's imagination allows it to, and this immediately becomes a good reason to declare Socrates' argument unsound: although it gives the appearance of being a constructive dilemma, it is in fact a false dilemma, one that falsely limits the range of options under consideration to two.[5]

---

[1] All my citations are from John Burnet, ed., *Platonis Opera* (Oxford: Clarendon Press, 1900–1907) 5 vols. Translations are my own. I should mention here that I am concerned *only* with the dramatic, and not the historical, Socrates in this essay. Any time I use the name "Socrates" I intend it to mean, Socrates as he was portrayed by Plato. This will explain my apparent conflation of Socrates and Plato in the body of the essay and why in describing the audience of the *Apology* I use the terms "listeners" and "readers."

I would like to thank my colleague, Joseph Kupfer, and an anonymous reader of this paper for their many helpful comments.

[2] This is the standard count of the votes, computed on the basis of Socrates' comments at 36a5.

[3] There is a shift here. Initially Socrates seems only to mean that his death may indeed be a gain; as the argument progresses, he attempts to show that death itself may be a gain for any of us.

[4] For a thorough discussion of Socrates' list of names here, see "Human Being and Citizen," by George Anastaplo, in *Ancients and Moderns* edited by J. Cropsey (Chicago: University of Chicago Press, 1972) 16–49.

[5] As Emily Vermeule, in *Aspects of Death in Early Greek Art and Poetry* (Berkeley: University of California Press, 1979), puts it, "death is as protean as life or love" (p. 1). Her book gives more

A second objection is that Socrates' claim to know that death is not something fearful appears to violate his earlier stricture against believing one is wise when one is not, i.e., against dogmatism. "For indeed fearing death, gentlemen, is nothing other than believing oneself to be wise and not really being so. For it is to think one knows what one does not know" (29a4–6). No one, he says, really knows whether death bodes well or ill for human beings. Fearing it implies the belief that one knows it is the greatest evil. Thus, to fear death is to believe oneself wise, when one is not. Socrates claims he is like all men in that he does not sufficiently know about the things in Hades; however, unlike other men he does not believe he does know them. He knows that he does not know. (See 29b5–6.) But surely this same reasoning must also apply to the belief that death is not to be feared since it brings with it a gain. The statement declaring that there is much hope that death is a good thing thus seems to contradict directly his earlier claim.

A third objection, one that really is a variation of the first, concerns "B"—how does Socrates know that even if there is a migration of the soul it will terminate in the kind of loquacious community of shades that he envisions? Perhaps Hades is a gloomy and silent place, filled only with the "thoughtless dead" (*Odyssey* XI.476). To paraphrase Achilles, perhaps the dead Socrates will discover that he would rather be a simpleton on noisy earth than a philosopher king in dim Hades.

A fourth objection concerns "A." It is nonsensical to believe that an eternal and dreamless sleep would be pleasant. In order to establish the premise, "if A, then P," Socrates uses the analogy of a peaceful night's sleep. However, the only reason that a night's dreamless sleep is pleasant is because one wakes from it in the morning refreshed and vitalized. Only then can one look back gratefully to the night. The notion that an eternal night could be analogously pleasant is therefore absurd. Even worse, a dreamless sleep, one altogether without *aisthēsis*, can by definition not be pleasant: *aisthēsis* is a necessary condition for the awareness of pleasure. An eternally dreamless sleep would not at all be like a single flawless night. It would not be like anything at all: it would be like nothing and could not be pleasant. As such, it cannot be counted as a gain of any kind, much less a "wonderful" one.

It is of course possible that in certain circumstances, when life is utterly miserable and not worth living, the nothingness of death may become attractive. However, the proposition, "if A, then P," would hold as a general rule only if life were always miserable, and this Socrates denies. For example, at 36d9–37e1 he states that in contrast to the Olympic champion, who only makes the Athenians apparently happy *(eudaimonas)*, he makes them truly happy. Philosophical examination is the "greatest good" (38a2) for human beings, and a life devoted to it is worthwhile.

Not only is "if A, then P," intrinsically nonsensical, it is even more bizarre when it comes from the mouth of Socrates. After all, he has just described himself as the "gadfly" who awakens and arouses the torpid thoroughbred that is Athens (30e4–7). How could a man who spent his life awakening his fellow citizens from the sleep that is thoughtlessness coherently advocate a state totally without *aisthēsis?* As his behavior at the end of the *Symposium* and during the long night that is the *Republic* demonstrates, Socrates is a man who does not appear to value or even to need sleep. Why, then, would he include such a statement as "if death is a dreamless sleep, it is a gain" in the closing argument of the *Apology*?

These four objections should cast grave doubts on the strength and soundness of Socrates' argument. It is not persuasive, for it provides no foundation upon which one can reasonably base a belief that death is a good gain and not a frightful loss. But the next question that must be asked is, why did Socrates, who (we must assume) was aware of what he was saying, end his defense in such a fallacious, even deceptive, manner? Is it conceivable that he unintentionally committed errors that college sophomores can readily identify? I think not and shall now attempt to show why.

Socrates' statement, "if A, then P," cannot be accepted as one he sincerely or seriously entertains, for it is intrinsically senseless and contradicts one of his basic tenets. Therefore, it should be discarded and the only way to reach the desired conclusion "P," death is a gain, is through "B."[6] However, we saw in the third objection that "B" as stated is incomplete. In order to become truly persuasive, at least to Socrates, it must be modified to read, "death is the migration of the soul to a community of shades in which there is philosophical interchange." Let us assume "B" is so modified. Now we can see that the force of this argument is actually quite univocal, and that it is not really a dilemma at all. There is one, and only one, way in which death can be considered a gain for Socrates: if he can continue his vocation as a philosopher in the afterworld. As objection one showed, there is no reason to believe that "A" and "B" exhaust the possible descriptions of death. Obviously, there is even less reason to be certain that "B" is the sole option. The only statement of which we can be certain is the conditional, "if death implies the continuation of philosophy, then it can be counted a wonderful gain." This is the only statement that can be elicited from the argument and be considered genuinely and coherently Socratic.

Since there is no legitimate reason to be confident of "B" we should question it and the entire argument of which it is a part. We should ask, "what

---

than ample testimony to this fact.

An objection might here be raised that the two descriptions, "C" and "D," I have sketched are punishments meted out only to "sinners." Since Socrates does not believe he is a sinner he does not believe they apply to him, and so does not need to mention them. Even if this is true, the fact remains that for non-sinners "A" and "B" still do not comprise a reasonable list of options. As will be shown, a conception of the underworld as the home of the "stupid dead," of shades with diminished powers of intelligence and speech, needs to be considered by Socrates. For a description of this conception, see Vermeule, *Aspects of Death*, 23–27.

[6] Paul Armleder, in "Death in Plato's Apologia," *Classical Bulletin* 42 (1966), makes some of the same observations as I have concerning the patent invalidity of this argument. However, he draws a different conclusion, namely that the purpose of the fallacy is to give credence to "A." He states, "What better way would there be to impart to materialistic minded readers his (Plato's) belief that bodily influence on the higher element within man should be restrained as far as possible than to liken death to a profound sleep" (p. 46). This is erroneous because it ignores all the objections concerning sleep that I have just listed.

is death?"; "what is philosophy?"; "why is it that only the prospect of philosophical activity can make death (or life) an attractive possibility?" In other words, the most coherent approach to Socrates' final argument, the one most consistent with what he has said in the rest of the *Apology,* is not a passive acceptance of its conclusion, but a philosophical examination of its premises. When the reader does ask these questions a transformation in the appearance of the argument takes place. Initially *Apology* 40c4–41c7 had the look of a constructive dilemma, a formally valid argument leading to a welcome conclusion. However, on strictly Socratic grounds the first premise, "if death is a dreamless sleep, it is a gain," should be discarded. The second premise, "if death is the migration of the soul to a philosophical community, it is a gain," should provoke questions. As a result, the argument is far less dogmatic than it initially appeared. Far from securing wisdom in the form of a conclusive statement, "death is a gain," it leaves the more careful reader in a state of perplexity, facing a series of difficult questions.

The second objection considered above was that Socrates violated his own injunction against claiming to be wise about matters of the afterworld. He had stated at 29b that when a man fears death he does so because he believes he knows death is terribly bad. This hardly seems to be an accurate analysis of why human beings are frightened by their finitude. Death is for us a great unknown. Fearing it is not a falsely and arrogantly held knowledge claim, but a response to the possible loss of all that is familiar. Death, for the ancient Greeks and for us, is pure possibility: it could be anything at all. The condition that it inspires in us while we are alive is thus that of *aporia.* Socrates does not fear death, not because he knows it is a gain, but because unlike most of us he is able to withstand and even to flourish in the midst of such *aporia.*[7] Despite what appeared to be an argument which contradicted this essential aspect of the Socratic persona, the *Apology* does not end in an anomalous fashion. The only possible way in which death can be a gain is if Socrates is able to philosophize in the "other place." The only way for the reader to discover whether this is a reasonable proposition is to begin philosophizing. The argument, therefore, only appears to resolve the *aporia* concerning death: what it actually does, and what I claim it intends to do, is to provoke reflection on the relationship between death and philosophy.

To summarize: there are four objections that render Socrates' final argument wholly suspicious. It is difficult to believe that he would unintentionally commit such errors or be so inconsistent with earlier statements. I suggest he was not erring at all. The argument is designed in such a manner that, in contrast to its superficial appearance, it actually fulfills the terms of what Socrates claimed was his "divine mission" : to arouse us to thought. The attentive reader will do exactly what he would have urged us to do: question his claim to be knowledgeable about death. Socrates deliberately limited the

---

[7] Drew A. Hyland, in *The Virtue of Philosophy* (Athens: Ohio University Press, 1981), makes this the central theme of his discussion of Platonic philosophy. See especially pp. 13–17. It should be noted that at the very end of the *Apology* Socrates returns to his stance of *aporia* concerning death. (See 42a2–5.)

possible descriptions of death to two (objection one). He then constructed one of the two, "A," such that it has to be dismissed by the reader who responds critically to it (objection four). When "A" is discarded we are left only with "B"—death permits the continuation of philosophy. At the very best, this is only possibly true. However, to question it is to philosophize. Thus, Socrates has not violated his earlier injunction against dogmatism (objection two); instead, he has plunged his listeners into a state of *aporia,* one that should give rise to active reflection.[8]

To approach this from a slightly different angle, when one criticizes the altogether questionable construction of this argument, one actually "verifies" the premise, "if B, then P." Obviously, no one can literally demonstrate the truth of this statement. However, if members of the audience engage in the act of examining Socrates' argument after he dies, as we readers are now doing, then the project of philosophy has indeed been continued. In this sense, the audience can "make true" the antecedent ("B") of the conditional statement: they can see to it that death, or at least Socrates' death, permits the continuation of philosophy. Once they have done this, the consequent ("P") will follow by *modus ponens* and Socrates' death will have become a gain. Again, it is not a gain in the literal sense, for there is no guarantee that Socrates is even now conversing with fellow shades in Hades. However, through his death Socrates has passed on the torch of philosophy to those who listened carefully to and scrutinized his final public statement. His death may have been the consequence of his philosophizing, but the consequence of Socrates' death is the furtherance of philosophy and, in this sense, it is a gain.[9]

None of this, even if correct, sufficiently answers the question, why did Socrates end his *Apology* with this particular argument? For this, let us put ourselves into the sandals of the 220 men who voted for his acquittal and to whom lines 40c4–41c7 are specifically addressed. Few of them were philosophers. Most likely, they were ordinary citizens who had been persuaded that Socrates did not corrupt or seriously harm the city of Athens. They had been persuaded that philosophical speech was commensurate with the Athenian affirmation of "freespokenness," *(parrēsia)* and was not a subversive activity. Whoever they were, whether devoted "Socratics," casual acquaintances, or men who had been convinced only on the basis of his defense speech, they would have experienced feelings, perhaps deep, of loss, sadness, or shame at the behavior of Athens. More extreme reactions might have included either the despair that seems to threaten Apollodorus and Phaedo in the *Phaedo* (117d), or the bitter anger at the city and a consequent willingness to flout its laws that is characteristic of Crito's reaction. (See *Crito* 45c.) The listeners might also have felt fear at the prospect of exercising their own "right" of *parrēsia* in the future. For all of us death is a potential "hobgoblin," (see *ta mormolukeia: Phaedo* 77e7) and fear of it can cloud our better judgement and impede our power of activity. For the 220 friends of Socrates this fear could have had effects that were harmful, both to Athens and to themselves as individuals. I suggest this is the explanation why the final argument is deliberately fallacious. It is designed, not to certify a rigid conclusion, but to provide the inattentive and non-philosophical supporters of Socrates with good "hope," the word that both prefaces and concludes the argument (40c4 and 41c8). For the men (and the readers) who do not critically examine his argument, but who are convinced that Socrates and philosophy do no harm, it offers consolation and comfort. By taking the form of a constructive dilemma it gives the appearance of comprehensiveness and logical validity. Its conclusion, that death ought not to be feared, will encourage his friends to continue to affirm *parrēsia*, to remain loyal citizens of Athens, and to persist in their tolerance and support of philosophical activity even if they themselves are not philosophers.

---

[8] Objection three has already been accounted for in my alteration of "B" above. The belief that logical fallacies are often deliberately and consciously used by Plato is hardly peculiar to this paper. See, for example, Rosamond Kent Sprague, *Plato's Use of Fallacy* (London: Routledge, 1962), and Maurice Cohen, "The Aporias in Plato's Early Dialogues," *Journal of the History of Ideas* 23 (1962) 163–74.

[9] Several questions are raised here. First, we are faced with the same ambiguity discussed in note 3. Second, why should the practice of philosophy be considered a gain at all? Third, shouldn't the question of the relationship of Plato and Socrates be raised here? This essay is a modest one, and so only in notes 1 and 13 do I touch on the last question. Posing the second question simply accomplishes what has been suggested all along, namely it urges the reader to ask essential philosophical questions. The first question forces us to wonder about the relationship between our own impending deaths and Socrates'. Will we too be able to leave behind any exhortation to philosophy?

In its entirety, therefore, the argument has two levels, each with its unique purpose and audience. As has been shown, for the more attentive reader it is designed to stimulate thought and arouse us into thinking through the statement, "only if death permits the continuation of philosophy can it be counted a gain." In other words, it is a confirmation of *aporia* and an invitation to enter into philosophy. It is a challenge to make the antecedent of this statement true by seriously questioning it, and thereby to bring about the desired consequent. For the reader who is less attentive, but who is nevertheless sympathetic to Socrates, it is designed to defuse the potentially crippling terror that is inspired by the inevitability of death.

Socrates begins his address to his 220 friends by saying that since the archons are busy there is nothing to prevent them from "conversing" (*diamuthologēsai:* 39e5) with one another. Exactly how to translate this word is a matter of some controversy. Burnet insisted that it meant "*confabulari,* 'to have a talk with one another.' There is no suggestion of 'myth' in the word . . . (it) means little more than *dialechthenai.*"[10] No doubt this is true of the basic meaning of the word and most commentators follow Burnet. However, he is surely wrong to assert so confidently that there is no hint of *muthos* in *diamuthologēsai*. It is true that a translator such as West goes too far in his "etymologizing" when he renders this sentence, "nothing prevents our telling

tales to one another."[11] However, it is impossible to discount the possibility that Plato is punning on the word *muthos*. As West points out, the phrase *ta legomena* is repeated three times in this short section (40c7, 40e6, 41c7). The theme under consideration is that of the afterworld, a traditional subject for myth. The notion that death is the migration of the soul clearly echoes with mythic overtones. In addition, Socrates had earlier claimed that he was about to begin "prophesying" (39c1). In other words, given the context of its appearance, there is a very strong suggestion of "myth" in Socrates' choice of the word *diamuthologēsai* at 39e5.

The important point here is that 40c4–41e7 may indeed represent a Socratic version of a *muthos*. If this is so, then this passage is an important instance, even a test case, of how Socrates responds to *ta legomena* in general. In the *Phaedrus* Socrates resists Phaedrus' invitation to "de-mythologize" the legend of Boreas and Oreithyia and replace it with a scientific account. He describes himself as "being persuaded by what is customarily thought about these things" (230a1). Socrates seems to think there is value in letting myths, or popular religious teachings, stand as they are. Perhaps this section of the *Apology* explains why. Myths can have dual functions. For the inattentive they provide comfort and hope. They exorcise the fear of death and thus are liberating. Since myths are not demonstrably true, they will be criticized by the more attentive audience. Such criticism requires, or simply is, philosophy. However, not everyone can or should be a philosopher. This is a notion alluded to several times in the *Apology*.[12] I suggest that myths, at least as Socrates presents them, function as a kind of sieve for making this distinction. There will be a few who seek consistency, soundness, and truth in all speeches, be they mythic or logical. There will be many who will simply be comforted by the appearance of conclusiveness. This is not necessarily a fact to be deplored, especially if the many can be persuaded to be tolerant of and sympathetic with the few. Rather, it is a fact to be taken into account when an address must be made to a large audience. Without doubt Socrates prefers to speak to individuals. When, however, he is forced to address the assembled jury of Athenian men, he must employ a form of rhetoric that is both philosophically provocative and yet has some means of touching those in the audience who are not terribly thoughtful. I suggest this is precisely the purpose of the short speech under consideration here.[13]

---

[10] John Burnet, ed. *Plato's Euthyphro, Apology of Socrates, and Crito* (Oxford: Clarendon Press, 1924) 164–65.

[11] Thomas G. West, *Plato's Apology of Socrates* (Ithaca: Cornell University Press, 1979) 46.

[12] I think in particular of Socrates' dialogue with Callias (20a–c) and with Meletus (25a–b). Both employ the following analogy: as the horse trainer is to the *arete* of the horse, so X is to the *arete* of human beings. Callias is eager to replace X with the sophist from Paros, Evenus (20b8). Socrates does not here directly disprove Evenus' claim to fulfill that role. Instead, with consummate irony he states that he himself would become proud and haughty if he had such knowledge. In other words, few if any have the knowledge of how to train human beings in *arete*.

The identical analogy is found in the cross-examination of Meletus. Meletus believes that all Athenians, with the sole exception of Socrates, can better the young (25a9–10). Socrates points out that if this were true it would be in direct contrast with how things work with other animals. In the case of horses, only "a very few" (*panu oligoi:* 25b3) can actually improve the state of horses. The implication is that some "expert" must stand in relation to human beings as the horse-trainer stands to horses. Once again, no such expert is named by Socrates, but at least this point is clear: it is ludicrous to expect the "many" (*hoi polloi:* 25b4) to be knowledgeable about the betterment of mankind. This task is reserved for the few.

The purpose of this essay has been a modest one. I drew attention to the altogether suspicious argument found in *Apology* 40c4–41c7. I assumed that Socrates understood its obvious deficiencies as well as we, and I then sought possible explanations for his use of it. I concluded with two suggestions. First, the argument has, and is intended to have, two distinct functions and audiences: to provoke those who are philosophical and assuage those who are not. Second, and more generally, I asked, might this not be a typical instance of Socrates' treatment of *ta legomena*? If so, and of course this hypothesis needs further testing, then the short argument which concludes the *Apology* is noteworthy indeed and can provide a model for interpreting other instances of Socrates' use of mythic speech.

DAVID L. ROOCHNIK

Iowa State University

---

[13] The criticism of writing that Socrates formulates in the *Phaedrus* includes the objection that when a speech is written it always says the same thing to all who read it. Written speeches are incapable of distinguishing among the various members of the reading public. (See 275e). Since this is a problem with which Plato was obviously concerned, it is reasonable to conclude that he aimed to overcome it in his own writings. The thesis of this essay can thus be generalized: perhaps Platonic writing itself is designed after the pattern of *Apology* 40c4–41c7, namely as a speech which has two levels and which can both distinguish and address the different kinds of human beings who may read it.