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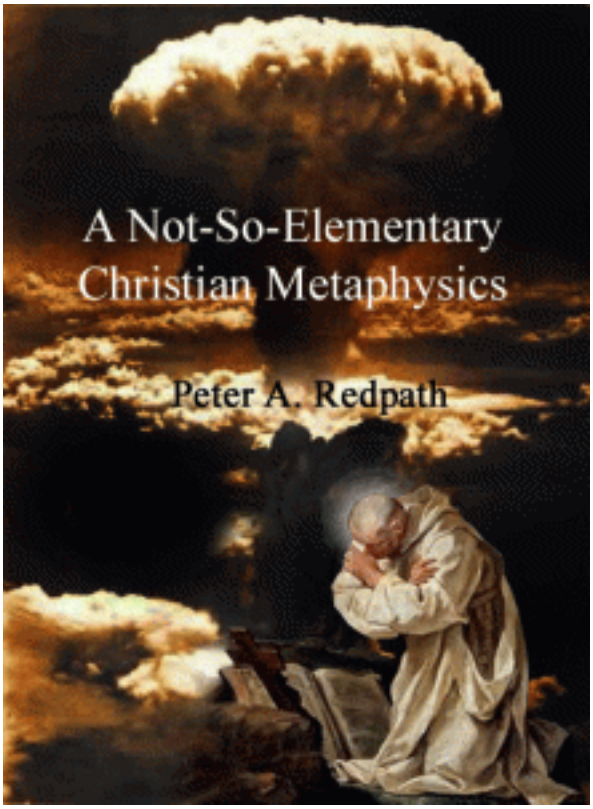

PLATO'S ADVICE ABOUT HOW TO AVOID BECOMING A PHILOSOPHICAL BASTARD: MOVING THE PROBLEM OF THE ONE AND THE MANY TO THE PROBLEM OF UNIVERSALS

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Hence, Socrates maintained that counting and the scientific pursuit of mathematics are philosophically useful to us for arousing wonder in us. Philosophers are not interested in knowing about counting to buy and sell merchandise. We are interested in it because it is an area of human perception that often leads to provocative thought, which inclines us to wonder about causes and first principles.

Some mathematical knowledge is a necessary, but not sufficient, condition for experiencing the wonder that generates philosophy. As Socrates said, the philosophical soul finds interest in numbering when such consideration:

> strongly compels the soul upward, and compels it to discourse about pure numbers never acquiescing if anyone proffers to it in the discussion of numbers attached to visible and tangible bodies. For you are doubtless aware that experts in this study, if anyone attempts to cut up the "one" in argument, laugh at him and refuse to allow it, but if you mince it up, *they* multiply, always on guard lest the one should appear not to be one but a multiplicity of parts.

Clearly, the numbering about which Socrates was talking as philosophically provocative is abstract, universal. The numbers that concerned him philosophically were those that involve "unity equal to every other without the slightest difference and admitting no division into parts." People who talk in such a way, he said, "are speaking of units which can only be conceived by thought, and which it is not possible to deal with in any other way."

Such abstract study of universals, Socrates maintained, appears to be "indispensable" for philosophical purposes because "it plainly compels the soul to employ pure thought with a view to truth itself" (that is, it forces us to think abstractly and generally, universally, about first causes and principles of provocative experiences, or our awareness of experienced opposition).

Socrates then described how, beyond simple counting and the science of arithmetic, such *liberal arts* as plane and solid geometry are related to astronomy and music, and how all these investigations encourage wonder in us and lead us toward first philosophy, or metaphysics.

Socrates had noticed that people who demonstrate a facility at calculation tend to be quick learners and that slow learners trained in calculation start to become better learners. Assuming he had established the worth of numbering and the study of mathematics for becoming philosophical, he proceeded to examine the specific worth of geometry, politically and in other respects.

Given the nature of his interest in education for producing good rulers, whom he also assumes to be soldiers, Plato had Socrates immediately indicate some military benefits of geometry, like constructing encampments and devising military formations in battle and on march. Socrates asserted that these will not require much geometrical skill, but will make a military officer a much different officer than he would have been otherwise.

Socrates' concern, however, was with intensive and extensive, not rudimentary, geometrical skill. He wanted to consider "whether the greater and more advanced part of it tends to facilitate the apprehension of the idea of the good." Will advanced study of geometry (that is, the *liberal art*, or *science*, of geometry) likely lead us to become more philosophical, more metaphysical? Will it change the way we look at, and tend to pursue, happiness altogether?, which is the sort of thing Socrates thought happens when we experience subjects of study that encourage philosophical reflection. Will it tend to change the way we look at everything by turning our eyes around, by turning our souls and bodies around, by forcing us to think in a totally different way than we had formerly done? Will it, in short, make us generally consider things more abstractly and reflectively related to our life as a whole?

Hence, Socrates immediately added, "That tendency" to make us better able to apprehend the idea of the good "is to be found where dwells the most blessed part of reality, which it is imperative that it," the human soul, "behold."

He mentioned that anyone with the slightest familiarity with geometricians will see how strange, how filled with opposition to the proper object of geometry, is their speech, the way they talk about what they do: "Their language is most ludicrous, though they cannot help it, for they speak as if they were doing something and as if all their words were directed toward action. For all their talk is of squaring and applying and adding and the like, whereas in fact the real object of the entire study is pure knowledge," that is, theoretical, or contemplative, study.

Strictly speaking, the object of the science of geometry is abstract, theoretical, general consideration of the principles and causes that constitute the makeup of figured bodies. This science is not chiefly concerned about how to construct individual, figured bodies. It is concerned about the principles and causes that make such construction possible. Hence, the proper, or *per se*, object that the geometrician chiefly has in view is the abstractly-and-theoretically considered triangle, not the side of this pyramid, or how to construct this A-frame house.

For this reason Socrates said that the science of geometry studies "that which always is" (the abstractly-considered, nonmoving, unchanging triangle), not "something which at sometime comes into being and passes away" (like a person's increasingly-becoming-less-slender figure).

So, because the science of geometry inclines us to think abstractly and theoretically about sensible objects, Socrates concluded, "it

would tend to draw the soul to truth, and would be productive of a philosophical attitude of mind, directing upward the faculties that now wrongly are turned earthward." In short, wittingly or not, it inclines us to become more philosophical and metaphysical about the way we consider the things around us.

Next, Socrates suggested that Glaucon and he consider whether the liberal art of astronomy might be of benefit for their political and philosophical education. Glaucon immediately recognized its worth for agriculture, navigation, and, more so, "to the military art."

Glaucon's reaction bemused Socrates, who commented that, apparently, Glaucon had responded the way he did, emphasizing astronomy's practical, not theoretical, benefit, out of fear of what "the many" might suppose were he to recommend "useless studies." Socrates commented that, after we have been blinded by our "ordinary," (that is, daily practical) pursuits, we have a difficult task realizing that every soul has an intellectual faculty that theoretical study purifies and refreshes, "a faculty whose preservation outweighs ten thousand eyes, for by it only is reality beheld. Those who share this faith will think your words superlatively true. But those who have and have had no inkling of it will naturally think them all moonshine."[20]

After Glaucon admitted that he spoke, asked, and answered, questions for his, not anyone else's, sake, Socrates told him they needed to back track a bit because they had made a mistake in their order of investigation. The natural order of scientific investigation, and philosophical learning, requires that we first study solid geometry, or as Socrates called it, "the dimension of cubes and of everything that has depth" (a deep body, as opposed to a surface body) after we study plane geometry (which studies the surface body).

The reason for this, Socrates said, is that, properly considered, astronomy studies "solids in revolutions," not "plane surfaces."[21] Consequently, even though Socrates maintained that the thinkers of his time only "languidly pursued" such studies "owing to their difficulties," the proper order of investigation requires that we understand the principles and causes of solid bodies and the way they behave before we attempt to study the principles and causes of movement of solid bodies, as does the science of astronomy.

At this point in their conversation Glaucon attempted to move Socrates along to investigate other sciences to include in the city by agreeing with Socrates that they should incorporate "geometric astronomy" among those disciplines that he would now praise on Socrates' principles. By this Glaucon meant he would not praise theoretical astronomy on the basis of the *practical way the many*

praise it, or, as Glaucon more precisely put it, not on the basis of its "vulgar utilitarian commendation," because, "it is obvious to everybody . . . that this study certainly compels the soul to look upward and leads it away from things here to those higher things."

Socrates, however, immediately replied that this appears to be evident to everyone but Socrates. "As it is now handled by those who are trying to lead us up to philosophy, I think that it turns the soul's gaze very much downwards."

Socrates said he responded in this negative fashion because he thought Glaucon had "put a most liberal interpretation on the 'study of higher things.'" Apparently, Glaucon would incorrectly call someone a "contemplative using higher reason" (not higher vision) anyone whose head were thrown back to learn something about decorations on a ceiling. Strictly speaking, Socrates said, the only sort of study that "turns the soul's gaze upward" is "that which deals with being and the invisible." Strictly speaking, he claimed that any person who studies a subject whose matter (that is, its generic subject) concerns sensible reality (that is, sensible qualities), "whether gaping up or blinking down . . . never learns—for nothing of the kind admits of true knowledge—nor would I say that his soul looks up, but down, even though he study floating on his back on sea or land."

While, Socrates said, we have to regard heavenly bodies, "these sparks that paint the sky, . . . decorations on a visible surface, . . . as the fairest and most exact of material things," we have to recognize that such realities "fall far short of the truth," by which he meant, in this instance, "the movements . . . of real speed and real slowness in true number and in all true figures both in relation to one another and as vehicles for the things they carry and contain," Socrates maintained that we apprehend such realities "only by reason and thought, . . . not by sight."

That is, while all species of heavenly mobile body (heavenly mobile body being the astronomer's generic subject) are worthwhile subjects of consideration inasmuch as a species of such a generic subject are of a more immaterial kind than an earthly body, and their motion is closer to the divine [because it is perpetual]), precisely considered, the philosopher's job is abstractly (and, therefore, exactly) to consider (reason about) the principles and causes (or, as Socrates said, "the truth") of the properties, the necessary and essential accidents, of such species of body as they move across the visible surface of the sky, including the effects these specific bodies produce through their properties (like acting on each other in relation to time [speed], or twinkling, going through retrograde motion), as these specific bodies act through principles and causes they effect through the power of their generic subject (that is, inasmuch as they

are species of heavenly body involved in circular movement). The philosopher, in short, considers proximate, *per se* effects in light of their proximate, *per se* causes.

Socrates maintained, further, that, while astronomy has to use such complicated, visible, surface decorations as models to help us study the principles and causes of the motion of heavenly bodies, we should not expect that mapping the heavens in this sort of architectural fashion will give us the absolute truth, the exact conclusion, about the mathematical ratio of their movements. The astronomer is in the same sort of situation as would be any geometrician who happened upon the blueprints or diagrams of a craftsman or painter like Socrates' ancestor Daedelus. While he might admit such a person's workmanship to be beautiful, he would not expect that the mathematical ratios would exactly match those that exist in the physical world.

Socrates thought that, when astronomers reflect upon the motions of the stars, they will likely agree with him that heaven's architect fashioned the heavens and everything in them in the most beautiful and best possible way for the nature of the whole. And when they consider the order of heavenly motions, the regularity of the relation between night and day, month to month, to year, of the motion of star to star, they will have to consider absurd the belief that heavenly realities, bodily and visible things, exist "forever without change or the least deviation" and that the astronomer's "unremitting quest is the realities of these things."

That is, they would have to admit that astronomers will never find the principles and causes (the permanent realities) of the motions of heavenly bodies through bodily vision in what these bodies reveal to human sight. They will only get at these principles and causes through abstract, intellectual consideration and reasoning from visible effects in abstractly-considered specific bodies to invisible causes in abstractly-considered generic bodies.

Socrates explained that, if we want to transform astronomy and the soul's natural power of intelligence from being useless to being *truly useful* (that is, abstract and theoretical study), we will have to attack problems in astronomy the way we do in geometry, "and leave the starry heavens alone." That is, we cannot expect to find principles and causes with our external vision. We have to reason to these, abstractly, by turning our minds away from the visible effect to seek the invisible cause.

We have to do the same sort of thing with our ears in one of astronomy's mathematically-related sciences: music. Just as our eyes are fashioned for astronomy, the orderly motion of whose sensible object fixes their movement and attention and limits our gaze, Socra-

tes maintained our ears are fashioned for music, because harmonic movements of audible sounds fix and limit what we musically hear. He added he agreed with Pythagoras that many other mathematically-subalternated sciences like astronomy and music can exist, suited for other sense faculties.

As in the case of astronomy, Socrates claimed that, in his time, musicians made the same mistake as astronomers. Instead of looking for inaudible causes (in this case, numbers) of the harmony of audible sounds that account for their mathematical proportion, a harmony, some students of musical theory tried to hear these inaudible causes (numbers, the causes of the harmonies) with their ears as if they were sensible, minima notes that exist between notes, while others maintained the strings are the cause.

> They talk of something they call minims and, laying their ears alongside, as if trying to catch a voice from next door, some affirm that they can hear a note between and that this is the least interval and the unit of measurement, while others insist that the strings now render identical sounds, both preferring their ears to their minds.

"Their method," Socrates said, "exactly corresponds to that of the astronomer, for the numbers they seek are those found in these heard concords, but they do not ascend to generalized problems and the consideration (of) which numbers are inherently concordant and which not and why in each case."[22]

Socrates realized that the task of reforming the methods of human investigations and arts to transform them into sciences is daunting. He knew that experts in practical pursuits are not experts in philosophical reasoning, or what he called "dialectic." At the very least, he had hoped that the study Glaucon and he had been conducting had gone far enough to show "the community and kinship" of these studies and to allow them "to infer their affinities." If, at least, he had been able to show how they are alike, their work had helped come closer to achieving his goal and has not been in vain.

Socrates maintained that people who cannot give explanations, who cannot give or follow an argument in discussion, will never be able to know anything about the things he said "must be known," that is, philosophy's real subject and generic method. They resemble people still held prisoner within Plato's mythical cave.

For this reason, at this point in the dialogue, Socrates returned to the cave analogy to elucidate the way we have to proceed to do philosophy, dialectic. He asserted that the human mind has an ability to achieve progress in learning by following the "law of dialectic,"

which he thought is a law regulating the operation of the human mind that we see imitated in the faculty of sight. He reported he had already described this likeness in Glaucon's and his attempt to use the faculty of sight to find first principles and causes, or, as he said, "to look at living things themselves and the stars themselves and finally the very sun."

Dialectic's law, however, "belongs to the intelligible" realm, in human reason's power of abstract and contemplative consideration that results from the wonder caused in us by sensibly-perceived-and-reported provocative communications. We see this law at work, in short, "when anyone by dialectic attempts through discourse of reason and apart from all perceptions of sense to find his way to the very essence of each thing and does not desist till he apprehends by thought itself the nature of the good itself, he arrives at the limit of the intelligible, as the other in our parable came to the goal of the visible."[23]

This "limit" of the intelligible about which Socrates spoke immediately above is what Plato called "the Good." This was clearly Socrates' meaning because he identified this limit with the Sun, or the Sun's light, that was the goal in his Myth of the Cave, to which he directly referred here. He called "the Good" a limit of the intelligible because an intelligible limit, as a limit, is that beyond which we cannot intellectually go. As such, it is an indivisible, or, as Plato often called it, "the One." For this reason, also, while Plato did not say so here, the highest, or maximum, as a limit, is an indivisible, one, and a measure, because we always measure everything, even things we know, in terms of a one. Hence, we measure our knowledge in terms of intelligible indivisibles, or intellectual, but not necessarily mathematical, ones, units, first principles, or *per se nota* starting points.

When Plato said that "dialectic attempts through discourse of reason and apart from all perceptions of sense to find his way to the very essence of each thing" he was not thinking like dissatisfied young Descartes, fresh out of school at La Flèche, hoping entirely to escape from sensory input, clean out all the intellectual junk he has stored for years in his spiritual attic to follow the whispering voice of conscience (in addition to whatever handy dreams or divine signs might reinforce this voice) calling him to get in contact with his pure reason in the hidden recesses of his mind.

Plato's understanding of dialectical progress involved initially receiving conflicting communications from sensible being trustworthy enough to start us on, and reinforce along the way, our abstract, philosophical quest for invisible first principles and causes of a *per se* effect that relates to a proximate and *per se* subject. Plato did

not entirely distrust the human senses. He thought that their formal object, the world of becoming, as he would often call it, has some reality, but is incomplete and imprecise in nature. He thought it "exists," but is somewhat false, because he identified truth and reality with precision, exactness, permanence, unity, and completeness. And he maintained sensible reality lacks the level of reality (unity) that he would call "true being," the "really real," or "beingly-being" (which level of reality entities in the World of Forms possess), and the Good has, to which he refers as "beingly-beingly-being" or the "really, really, real" (or, sometimes, as beyond being, or not-being).[24]

To explain dialectic's nature and method more precisely, Socrates started a short, but detailed, exegesis of part of the Myth of the Cave at the point where a prisoner had broken free from his subterranean world and had ascended to the world above. When he first exited the cave, this escaped inmate had a "persisting inability to look directly at animals and plants and the light of the Sun." He was only able to see divine-like reflections in the water and shadows of real beings cast by the Sun, similar to the shadows he had seen in the cave cast by a light that, compared to the Sun's light, is as unreal as shadows. Socrates maintained that the practice of the arts and sciences as Glaucon and he had been describing them shows their power to stir the human soul upward to contemplate the best realities, just as, in the fable he had told, the best sense organ, sight, "was turned to the contemplation of what is brightest in the corporeal and visible region."

Such being the case, Glaucon urged Socrates to show him (1) the nature of dialectic's power, (2) its divisions, and (3) its methods, so that they can come to the end of their journey and rest.

In reply, Socrates told Glaucon he would show Glaucon these things, not their image, if he could; but, unhappily, he was unable to show Glaucon the real truth as it appears to Socrates, whether it appears rightly to Socrates or not. Still, Socrates had to affirm that the real truth must be something like what they had affirmed. And they may properly state that only dialectic's power could show it, and only to a person experienced in studies they have described (that is, like theoretical geometry, astronomy, and music).

Still, Socrates maintained that no one will be able to refute their claim that no other method of investigation exists that tries progressively and universally to determine what each thing really is (that is, the principles and causes of the behavior of things). Mostly all the other arts have human opinions and wants as their object, are totally concerned with generation and composition, care and cultivating "things that grow and are put together." Those few arts, like

geometry and its subalternate studies, astronomy and music, dream about being, but never reach it, because their method of investigation always starts with assumption, belief, not with absolutely, or assumptionless, first principles of knowing, *per se nota* truths.

Evidently, Socrates did not use the Latin. Instead, translated into English, he said: "The clear waking vision of it (reality or real being) is impossible for them as long as they leave the assumptions which they employ undisturbed and cannot give any account of them. For where the starting point is something that the reasoner does not know, and the conclusion and all that intervenes is a tissue of things not really known, what possibility is there that assent in such cases can ever be converted into true knowledge or science?"

Socrates claimed that dialectic is the only method of inquiry that eliminates assumptions, hypotheses, to advance "up to the first principle itself to find confirmation there." Only philosophy, as he had described it, utilizes a starting point of scientific investigation that is entirely assumption-less, is not based upon any hypothesis. *Philosophy uses no assumptions because it finds confirmation*, *not in a system or systematic logic, but in awareness of the first principle of knowing considered in itself*. It does not take its first principles from the conclusions of another, higher science. Philosophy is the science that, with dialectic's help, knows the first principles that all the other sciences assume. Clearly, what Socrates had in mind as philosophy, science, is not philosophy, science, generically considered, science as a genus. It is the specific philosophy, science of metaphysics, first philosophy.

NOTES

20. Id., 527C–528E.

21. Id., 528B.

22. Id., 528E–531C. I add the "of" in parenthesis to clarify the translation.

23. Id., 531C–532B.

24. Id., 532B–534E.

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