

## Greek Philosophy, Term 1, 2001/2, Lecture 3

# PLATO'S MORAL MATHEMATICS

Republic iv. 443c-e (tr. Shorey): 'The truth of the matter was, as it seems, that justice is indeed something of this kind [doing one's own work], yet not in regard to the doing of one's own business externally, but with regard to that which is within and in the true sense concerns one's self, and the things of one's self. It means that a man must not suffer the principles in his soul to do each the work of some other and interfere and meddle with one another, but that he should dispose well of what in the true sense of the word is prop-erly his own, and having first attained to self-mastery and beautiful order within himself, and having harmo-nized these three principles, the notes or intervals of three terms quite literally the lower, the highest, and the mean, and all other there may be between them, and having linked and bound all three together and made of himself a unity, one man instead of many, self-controlled and in unison, he should then and then only turn to practice if he find aught to do either in the getting of wealth or the tendance of the body or it may be in political action or private business – in all such doings believing and naming the just and honor-able action to be that which preserves and helps to produce this condition of soul, and wisdom the science that presides over such conduct, and believing and naming the unjust action to be that which ever tends to overthrow this spiritual constitution, and brutish ignorance to be the opinion that in turn presides over this.'

v. 462ab: 'Do we know of any greater evil for a city than the thing that distracts it and makes it many instead of one, or a greater good than that which binds it together and makes it one?'

vi. 484cd: 'Do you think, then, that there is appreciable difference between the blind and those who are veritably deprived of the knowledge of the veritable being of things, those who have no vivid pattern in their souls and so cannot, as painters look to their models, fix their eyes on the absolute truth, and always with reference to that ideal and in the exactest possible contemplation of it establish in this world the laws of the beautiful, the just and the good, when that is needful, or guard and preserve those that are established?' [Burnyeat glosses, Smiley ed., 73: 'When they return to the cave, the philosophers will think of the mathe-matical structures they internalised on the way up as abstract schemata for applying their knowledge of the Good in the social world.' He also cites Laws xii. 967e-968a.]

500b-d: 'The man whose mind is truly fixed on eternal realities ... fixes his gaze upon the things of the eter-nal and unchanging order, and seeing that they neither wrong nor are wronged by one another, but all re-main in harmony as reason bids, he will endeavour to imitate them and, as far as may be, to fashion himself in their likeness and assimilate himself to them .. Then the lover of wisdom associating with the divine order will himself become orderly and divine in the measure permitted to man.' [Burnyeat, 70: 'For Plato, as-similation means that your soul takes on the structure of the abstract realm you study ... You submit your soul to be in-formed by the world as it is objectively speaking. A soul that assimilates the vast abstract sys-tem of the mathematics on the curriculum is in turn assimilated to it. You come to be like, akin to, of the same family as, the nature of what is.' He cites Timaeus 90cd: 'The motions akin to the divine part in us are the thoughts and revolutions of the universe. These, surely, are the ones which each of us should follow. We should correct the circuits in our head that were thrown off course at our birth, by learning to know the attunements and revolutions of the world, and so make our intelligent part

like the objects it knows, as it was in its original condition. And when the likeness is complete, we shall have achieved our goal: the best life offered to humankind by the gods, both now and forever.’]

505a: ‘For you have often heard that the greatest thing to learn is the idea of the good by reference to which just things and all the rest become useful and beneficial.’

506b-e: ‘Do you think it right to speak as having knowledge about things one does not know? ... Have you not observed that opinions divorced from knowledge are ugly things? The best of them are blind ... I fear that my powers may fail and that in my eagerness I may cut a sorry figure and become a laughing-stock. Nay, my beloved, let us dismiss for the time being the nature of the good in itself; for to attain to my present surmise of that seems a pitch above the impulse that wings my flight to-day.’

vii. 519e-520a: ‘You have again forgotten, my friend, that the law is not concerned with the special happiness of any class in the city, but is trying to produce this condition in the city as a whole, harmonizing and adapting the citizens to one another by persuasion and compulsion, and requiring them to impart to one another any benefit which they are severally able to bestow upon the community, and that it itself creates such men in the city, not that it may allow each to take what course pleases him, but with a view to using them for the binding together of the city.’

517bc: ‘My dream as it appears to me is that in the region of the known the last thing to be seen and hardly seen is the idea of the good, and that when seen it must needs point us to the conclusion that this is indeed the cause for all things of all that is right and beautiful ... and that anyone who is to act wisely in private or public must have caught sight of this.’

526de: ‘What we have to consider is whether the greater and more advanced part of it [geometry] tends to facilitate the apprehension of the idea of the good. That tendency, we affirm, is to be found in all studies that force the soul to turn its vision round to the region where dwells the most blessed part of reality, which it is imperative that it should behold.’

531cd: ‘If the study of the sciences we have gone through is carried far enough to bring out their community with each other and their affinity, and to demonstrate the ways they are akin, the practice will contribute to our desired end and the effort will not be wasted.’

533a: ‘If I could I would show you, no longer an image and symbol of my meaning, but the very truth, as it appears to me – though whether rightly or not I may not properly affirm.’

537c: ‘They will be required to gather the studies which they disconnectedly pursued as children in their former education into a comprehensive survey of their affinities with one another and with the nature of things.’ [Burnyeat glosses, 68: ‘Thus far we have a steady increase in complexity: from extensionless to extended magnitude, from two to three dimensions, from solid figures as such to spheres in motion. This goes some way to explain the choice of order. In various ways the more complex disciplines presuppose or build upon the simpler.’ Also 70: ‘Each [of the mathematical disciplines] has to be grasped as a unified

system and seen in the appropriate relation to the others. Someone who has achieved that integrated vision has not only assimilated a vast amount of mathematics. They have assimilated it as a structured whole.’]

Cf. ARISTOXENUS’ report of Plato’s lecture on the Good, *Elementa Harmonica* ii. 1 (tr. Burnyeat, 80): ‘Everyone came expecting they would acquire one of the sorts of thing people normally regard as good, on a par with wealth, good health, or strength. In sum, they came looking for some wonderful kind of happiness. But when the discussion turned out to be about mathematics, about numbers and geometry, and astronomy, and then, to cap it all, he claimed that Good is One, it seemed to them, I imagine, something utterly para-doxical. The result was that some of them sneered at the lecture, and others were full of reproaches.’

ARISTOTLE, *Eudemian Ethics* i. 8, 1218a15-24 (tr. Burnyeat, 78): ‘They ought in fact to demonstrate the Good itself in the opposite way to the way they do it now. At present, they begin with things that are not agreed to be goods. For example, starting from numbers they show that justice and health are goods, on the grounds that justice and health are types of order and numbers, while numbers and units possess goodness because unity is the Good itself. They ought rather to start from agreed goods like health, strength, temper-ance, and argue that the beautiful is present even more in unchanging things, which are all examples of or-der and stability. Then, if the former are goods, a fortiori the latter must be goods, because they have order and stability to a greater degree.’

*Metaphysics* xiii. 3, 1078a31-b2 (tr. Burnyeat, 79-80): ‘Now since the good and the beautiful are different (for the former is always found in action, whereas the beautiful is present also in unchanging things), those who assert that the mathematical sciences say nothing about the beautiful or the good are wrong. For these sciences say and demonstrate the most about them. Just because they do not speak of them by name, but demonstrate their effects and ratios, that does not mean they say nothing about them. The chief forms of beauty are order and proportion and definiteness, which the mathematical sciences demonstrate most of all.’