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THE METAPHYSICS OF POLITICS
IN THE
POLITEIA, POLITICOS AND *NOMOI* DIALOGUE GROUPS

SYMPOSIUM PLATONICUM

DIE BEDEUTUNG DER DIALOGE
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In the dialogues where Plato ex professo develops his Political Philosophy (*Πολιτεία, Πολιτικός, Νόμοι)* there is apparent difference of analysis for State-"fundamentals". Following the pattern of the Socratic – Platonic method of inquiry, questions relating to such "fundamentals" of social structure and political order can (indeed must) be grouped around the focal issues:

a) which is the ideal state;

and

b) what is the relationship of actual states to the ideal one.

Similarly, there is recurrent scholarly notice (with varying degrees of emphasis) of distinguishable forms in the Platonic "Theory of Reality" (under which rubric I subsume the convenient traditional terms *Physics* and *Metaphysics* neutrally employed). A later theory of ideas is set against a former one, a final phase of Platonic thinking separated from the middle period, questionable unwritten doctrines contrasted to the written expositions; on top of all this, a seemingly unstable Aristotelian testimony notoriously complicates matters. Problems again are made to revolve around two pivotal points:

A) What are the ideas;

and

 B) what is the relationship of particulars in this world to them.

Not only is the first set of questions (a, b) in itself a special case of the second (A, B); more than that, Plato explicitly associated his political analyses to accounts of reality through a system of identical themes and unmistakenly intentional exogenous pointers interspersed in the relevant dialogues. The way is thus opened to try, observing these interconnections, to gain an improved understanding of variational forms in Platonic *Politics* by a correct appreciation of the corresponding apparent differentiations in Platonic *Physics* and *Metaphysics*.

Thus this task must be tripartile, but will be executed very unevenly, in this paper: following Platonic precept, I shall chiefly treat of the first section with the eyes set on the second while in the end I shall quickly draw conclusions regarding the third. Following Platonic practice I shall handle questions of political philosophy by operating in the field of ontology.

- **I –**

The *Republic* contains (E, 471c-Z) its own theory of Reality and Knowledge (the latter being founded on the former as is the ancient order of things): I have argued elsewhere for the specific reason behind this inclusion. Reversely, the *Timaeus* is embedded in a political context (27a-b): it points backward and forward to discussions of political philosophy. The dialogue starts with a recapitulation of the first part of the *Republic* [1] where the basic structure of the best polity is described (B, 369a-e, 471b). What follows in the *Republic* (The Theory of Reality and Knowledge) in Books E to Z is explicitly cut off (*Timaeus* 19a-b), *evidently substituted at least partly by the main body of Physics which follows in the latter dialogue.* The forward reference is to promised, future narrations which will show Socrates' best Polity living and *in real action*, even in the intensest action of war (19c). Critias undertakes to relate the predeluvian saving war of Athens against the invading dark Power Atlantis: the Athenians of yonder time provide the exact realization (τὰληθές) of the best polity and its citizens, which were circumscribed (ἐν κεφαλαίοις) in thought (ἐν μύθῳ, οὓς διενοοῦ) by Socrates (26c-d) [2]. Hermocrates' role is not specified, but we may reasonably surmise that his task would concern experiences from novel foundations or re-foundations of cities in Great Hellas and Sicily or wars between them exhibiting markedly the true colours of their respective constitutional and legislative characters [3]: more flesh

would be added to the bones of the Socratic best Polity, and thus its *realisability* further supported. I postpone examination of the question whether any actual situation could possibly "fill" the structure of the *Republic* best state according to Plato.

A living, full-bodied animal is clearly meant to be the State-organism of the *Laws*, even if this, too, is constituted by reason (ἐν λόγῳ) and is not claimed to have existed as such (the animal is seen in picture or so to speak frozen, as it is put in *Timaeus*, 19b). The "legal" system articulated is a full blueprint, but blueprint nonetheless (νῦν δὲ σχήματος ἕνεκα καὶ ὑπογραφῆς, ἵνα περαίνηται, πρὸς τὴν νομοθεσίαν ὁ λόγος ἴτω, 737d), for an actual νομοθεσία, detailed yet not exhaustive. There is no pressing need to lay out immediately the complete system, as it is not a case of present legislation (857e10-858b; 859c: νομοθέται γὰρ γινόμεθα ἀλλ᾽ οὐκ ἐσμέν που, τάχα δὲ ἴσως ἂν γενοίμεθα). What is left out concerns in principle the many trifling details (πολλὰ καὶ σμικρά, 843e; 772a-b; μυρία καὶ σμικρὰ νόμιμα 846b; σμικρὰ καὶ ῥάδια νόμιμα εὑρίσκειν 957a), whose determination one way or the other does not confer a great benefit or harm to the city (οὐδ᾽ αὖ μετατιθέμενα ἔνθα ἢ ἔνθα μέγα τῇ πόλει κέρδος ἢ ζημίαν ἂν φέροι, 835b), and which are best suited to be arranged by subordinate functionaries (τοὺς δευτέρους 835b; τοῦ ἐπιτυχόντος νομοθέτου 843e, , οἱ νέοι sc. νομοθέται 845c; τοῖς νεωτέροις νομοθέταις 855d; τὸν νέον νομοθέτην 957a) rather than the primary political moderator (τῷ πρώτῳ νομοθέτῃ 835b; τὸν μείζω πόλεως κοσμητήν 844a; γέροντος νομοθέτου 846c; πρεσβύτου νομοθέτου 957a). In fact the supreme legislator knows very well that a lot of things should be left undertermined in the initial and constitutive νομοθεσία, things which must be checked in actual fact (ἀπὸ τῆς χρείας μανθάνοντας τάττεσθαι καὶ ἐπανορθουμένους κινεῖν) during a certain length of time (10 years) in the real working of the sociopolitical order instituted, before being settled definitively

(ἀκίνητα θεμένους) by subsequent legislation (769d; 770b; 779c-d; 920b-c; esp. 772b-d) [4].

The *Laws*, just as the *Republic*, partly contains its own Theory of Reality, but also points expressly and elaborately in its conclusion to an external supplement on wisdom and supreme reality. In Z, 817e-822c mathematical studies (in their triple aspect, Arithmetic as Theory of Numbers, Geometry as Theory of Magnitude and spatial measurement, and Astronomy as Theory of heavently entities and movements) constitute essential knowledge indispensable in the formation and functioning of the optimal state-constitutive legislation. Mathematical necessity is indeed divine necessity, θεία ἀνάγκη, to which Gods themselves succumb (818a-b: τὸ δὲ ἀναγκαῖον αὐτῶν οὐχ οἷόν τε ἀποβάλλειν, ἀλλ᾽ ἔοικεν ὁ τὸν θεὸν πρῶτον παροιμιασάμενος εἰς ταῦτα ἀποβλέψας εἰπεῖν ὡς οὐδὲ θεὸς ἀνάγκη μή ποτε φανῇ μαχόμενος, ὅσαι θεῖαί γε, οἶμαι, τῶν γε ἀναγκῶν εἰσίν. 818d: οὕτω γὰρ ἀνάγκη φύσει κατείληφεν, ᾗ φαμεν οὐδένα θεῶν οὔτε μάχεσθαι τὰ νῦν οὔτε μαχεῖσθαί ποτε). Mathematical knowledge is the prerequisite of all knowledge (818b: …ἐπὶ τἆλλα ἰόντα τούτων ἡγουμένων τῶν μαθημάτων μανθάνειν); it is this which enables man to exercise tenderance of the human flock like a god, a deamon or a hero (818b: which divine necessities if someone will not learn and apply οὐκ ἄν ποτε γένοιτο ἀνθρώποις θεὸς οὐδὲ δαίμων οὐδὲ ἥρως οἷος δυνατὸς ἀνθρώπων ἐπιμέλειαν σὺν σπουδῇ ποιεῖσθαι), a situation answering to the optimal political leadership according to *Politicus*. Crucially moreover, true *Astronomy is conceived as the real natural (astral) Theology* (820e-822c). This theological Physics and natural Theology is further developed in Book I. The Work is concluded (XII, 960b sqq.) by a general analysis of the *Saving Virtue* (ἀρετὴ σωτηρίας, 969c) required for the preservation of the optimally constituted state. This Saving Virtue, the Virtue in itself and common factor of all virtues (963c-964c), consists in a certain *single-mindedness*, a permanent focusing in all thinking and action of a unitary object; 962d: πᾶσαν ἀρετὴν ἔχειν· ἧς ἄρχει τὸ

μὴ πλανᾶσθαι πρὸς πολλὰ στοχαζόμενον, ἀλλ᾽ εἰς ἓν βλέποντα πρὸς τοῦτο ἀεὶ τὰ πάντα οἷον βέλη ἀφιέναι. 963a: πρὸς γὰρ ἓν ἔφαμεν δεῖν ἀεὶ πάνθ᾽ ἡμῖν τὰ τῶν νόμων βλέποντ᾽ εἶναι, τοῦτο δ᾽ ἀρετήν που συνεχωροῦμεν πάνυ ὀρθῶς λέγεσθαι. Such constant aim and object of reference is an *idea* (965c: ἆρ᾽ οὖν ἀκριβεστέρα σκέψις θέα τε ἂν περὶ ὁτουοῦν ὁτῳοῦν γίγνοιτο ἢ τὸ πρὸς μίαν ἰδέαν ἐκ τῶν πολλῶν καὶ ἀνομοίων δυνατὸν εἶναι βλέπειν;), which may be *complex* (965d: εἴπωμεν τί ποτ᾽ ἔστιν εἰς ὃ βλεπτέον, εἴτε ὡς ἓν εἴτε ὅλον εἴτε ἀμφότερα εἴτε ὅπως ποτὲ πέφυκεν). One such cardinal focal idea (ἓν ἐκ τῶν καλλίστων, 966c1) is the idea of divinity (966c). *Supreme, saving Virtue is unswerving concentration on supreme knowledge, knowledge of the divine*, and thus *true piety* (θεοσέβεια 967d) deposited, as it were, in the Nocturnal Council of the Law-Guardians. The idea of divinity involves two parameters: first, nature and preminence of the soul in cosmic existence; and second astral order (966e). Thus divine knowledge comprises two parts, the second being subdivided into three sections (967d-e) [5]: (a) analysis of the nature, immortality, precedence among things generated and dominance over bodily existence of the soul; (b_1) account of the intelligent order in astral being (τὸν ἐν τοῖς ἄστροις νοῦν τῶν ὄντων); (b_2) mathematical science as being necessarily presupposed by Astral Theology (τά τε πρὸ τούτων ἀναγκαῖα μαθήματα); (b_3) theory of the interconnection among mathematical realities (τά τε κατὰ τὴν μοῦσαν τούτοις τῆς κοινωνίας; Cf. 969b7). This complex knowledge is the *exacter learning* (ἀκριβεστέρα παιδεία τῆς ἔμπροσθεν, 965b1), which has been already alluded to before in the previous treatment of Mathematics (in Z, cf. 818a1; e7). Obviously, such knowledge has not been expounded in the *Laws*. In 818a what is promised is that at the end of the work it will be explained who must be the bearers of the exact knowledge (οὓς δέ, προϊόντες ἐπὶ τῷ τέλει φράσομεν) – just as it happens in the final section on the νυκτερινὸς σύλλογος. The forward reference in 818e is indefinite, εἰς ἄλλον, εἰ δοκεῖ, χρόνον ἀκριβέστερον ἂν νομοθετησαίμεθα [6]. At any rate there is in

969a a definite pointr to a treatment outside the corpus of the *Laws:* ἐγὼ δ᾽ ὑμῖν συγκινδυνεύσω τῷ φράζειν τε καὶ ἐξηγεῖσθαι τά γε δεδογμένα ἐμοὶ περὶ τῆς παιδείας τε καὶ τροφῆς τῆς νῦν αὖ κεκινημένης τοῖς λόγοις.

What we need in answer to a, b₁ and b₂ is a combination of, correspondingly, a theory of Cosmos, Astronomy (not merely the empirical account of celestial movements (cf. *Republic* 529d and 531a-c)) and, finally, Theory of Mathematics as prerequisite of rational Astronomy.

To complete the picture we need to determine the real meaning of (b₃) "what pertains to the communion among them": τούτοις in e2 is better taken to refer to the immediately preceding two first parts – b₁ and b₂ – of the second gnostic requirement of piety, but can be easily also construed as covering both a and b₁, b₂ since mathematicals pertain to everything (τῶν ἐπὶ πάντα τεινόντων, *Republic*, 522b9; τὸ κοινόν, 522c1). Now b₃ finds its exact analogue in *Republic Z*, where, moreover, looking for the communion and affiliation among mathematicals is the right way to search for the Idea of Goodness; 531c9: ἡ τούτων πάντων ὧν διεληλύθαμεν (various branches of Mathematics) μέθοδος ἐὰν μὲν ἐπὶ τὴν ἀλλήλων κοινωνίαν ἀφίκηται καὶ συγγένειαν, καὶ συλλογισθῇ ταῦτα ᾗ ἐστὶν ἀλλήλοις οἰκεῖα, φέρειν τι αὐτῶν εἰς ἃ βουλόμεθα τὴν πραγματείαν καὶ οὐκ ἀνόνητα πονεῖσθαι, εἰ δὲ μὴ ἀνόνητα. [7] That the mathematicals are common and extended over the entire scope of natural existence (or in other words that they essentially represent its structure and constitution) ensures that their nexus provides also the intergrating factor for all physical being. Thus, 537c: τά τε χύδην μαθήματα παισὶν ἐν τῇ παιδείᾳ γενόμενα τούτοις (the select ones above the twentieth year of age) συνακτέον εἰς σύνοψιν οἰκειότητός τε ἀλλήλων τῶν μαθημάτων καὶ τῆς τοῦ ὄντος φύσεως. This *bringing together under one view* is precisely the dialectic function, and the continual application of this principle till the highest possible view is reached (the ἀνυπόθετον) constitutes the *dialectical progression* (διαλεκτικὴ πορεία, *Republic* 532b4). In fact mathematical expertise in

itself will not suffice (οὐ γάϱ που δοκοῦσί γέ σοι οἱ ταῦτα δεινοὶ διαλεκτικοὶ εἶναι); what is needed for that ascent is to combine *mathematics with dialectics* (531d-532a) [8]. *The call is, in effect, for a blending of (mathematical) Pythagoreanism* [9] *with (logical) Eleatism* (both of the developed 5th century types). Herein lies the key to a correct understanding of the Platonic Problem [10].

For the *Republic*, therefore, the affiliative, communal nexus of mathematicals points to the supreme Idea, which is also their origin. Such dialectical treatment of mathematical sciences aims thus by its very nature to reach beyond hypotheses to the ἀνυπόθετον. *To search for communion and unity in mathematics is attuned to an inquiry concerning first principles*. The same must hold for the *Laws*, since the dialectical principle holds good in this dialogue, too (965c) [11].

The *Epinomis* (abstracting from the question of its authenticity) purports to, and does convincingly enough, answer to the call of the final section of *Laws* IB for some indication of the nature and content of supreme wisdom characterizing the members of the Nocturnal Council. In responding to this demand, the *Epinomis presents an analogue to the discourse on higher education in Republic Z, 518b6 sqq. The parallelism extends far and in detail.* The various special sciences and arts are excluded from true wisdom (*Epinomis* 974d3-976c6; *Republic* 521d4-522b7 referring back to the basic education described in Book B, 376e sqq., and to ΣΤ, 495D); arithmetic is the primary prima facie candidate for real knowledge (*Epinomis* 976c7-979e6; *Republic* 522b8 sqq.); mathematical studies are prerequisites and propaedeutic for such knowledge (*Epinomis* 990c5; 991b6-c1; *Republic* 536d). *The need of combining mathematics with dialectics is also expressly stated in the Epinomis* (991c2): πρὸς τούτοις δὲ τὸ καθ᾽ ἓν τῷ κατ᾽ εἴδη προσακτέον ἐν ἑκάσταις ταῖς συνουσίαις, ἐρωτῶντά τε καὶ ἐλέγχοντα τὰ μὴ καλῶς ϱηθέντα. V. also 991e5. Most important, common to both works is the emphasis on the fact that there is a particular way of pursuing mathematical inquiries which elevates the student to

wisdom; and this way is to search for the unity of, and communion among, the diverse kinds of mathematicals; *Epinomis* 991d8-992a3: ὁ δὲ τρόπος ὅδε - ἀνάγκη γὰρ τό γε τοσοῦτον φράζειν [12] – πᾶν διάγραμμα ἀριθμοῦ τε σύστημα καὶ ἁρμονίας σύστασιν ἅπασαν τῆς τε τῶν ἄστρων περιφορᾶς τὴν ὁμολογίαν οὖσαν μίαν ἁπάντων ἀναφανεῖναι δεῖ τῷ κατὰ τρόπον μανθάνοντι, φανήσεται δέ, ἄν, ὃ λέγομεν, ὀρθῶς τις εἰς ἓν βλέπων μανθάνῃ - δεσμὸς γὰρ πεφυκὼς πάντων τούτων εἷς ἀναφανήσεται διανοουμένοις – εἰ δ᾽ ἄλλως πως ταῦτα μεταχειριεῖταί τις, τύχην δεῖ καλεῖν, ὥσπερ καὶ λέγομεν. (τούτων in 992a1 is apparently *not* in mss AO. It is not needed. In fact, without it the style is more terse and the thought of universal application). This is exactly what is taught in the *Republic:* mathematics pursued with the dialectical method shows the communion and unity intramathematical and extramathematical which exists among its various parts and the whole of being. It is, of course, completely alien to the passage to interpret δεσμός as proportion [13]: it is a unifying bond; *it cannot but be, or proceed from, a common principle.*

That a theory of Principles is presupposed by the *Epinomis* is, further I think, indicated in 977d5 sqq. It is necessary, the Athenian Stranger concludes there, that number must be hypothesized; but the reason *for this necessity* is, we are told, the subject of a lengthy discourse. The fact that, should arithmetic be cancelled, no knowledge and no art would remain, *cannot* be *that* reason, for this fact is explicitly considered as a correct, but not the ultimate explanation. Evidently the real reason is an ontological datum; without number no being is possible; or rather it is an ontological derivation: being is constituted by, or from, number.

In conclusion, supreme knowledge postulated in *Laws* IB, 969d-e is articulated as follows, adding the late dialogues where its corresponding written, divided, version is meant to be supplied in its fundamentals. In the fourth column notice is given of those parts of the *Laws* where such branches of knowledge are

approached or handled. The same indication is provided in the last column with regard to *Republic:*

a	Theory of Cosmos	Timaeus	Laws I	Republic Z (Myth of the Cave); Republic ΣT (the Line)
b₁	Rational Astronomy = natural, Astral Theology	Epinomis	Laws I; Z, 817e-822c	Republic I (Myth of Er)
b₂	Theory of Mathematics	Epinomis	Laws Z, 817e-822c	Republic Z, 518b6-531c8
b₃	Theory of First Principles	Philebus [14]	-	Republic ΣT, 506d8-509c4; Republic ΣT (the Line) Republic Z, 531c9-535a1

The more complete account is provided for (a). The rest are markedly indicative, "introductory", protreptic, anagogic more or less.

It emerges that the Theory of Mathematics pursued with a view to first Principles (the desideratum of both the *Republic* and the *Laws*) *was precisely the subject matter of Περὶ τἀγαθοῦ and the fundamental content of the unwritten doctrines.*

Regarding the written and published accounts, a cluster of dialogues around the Laws expounds the later Theory of Reality. Much more flesh has been added to the bones of the *Republic*, not merely regarding political analyses alone.

The *Politicus* falls in between the *Republic* and the *Laws*. It also both involves internally, and points to an external treatment, of the Theory of Reality. Included are: the Myth (268d-274d), the nature of Example (277a-279a) and the true Art of Measurement (283b-287b). There is a backward reference to the *Sophist* (and, indirectly, to the *Theatetus* and *Parmenides*) and a forward to the unwritten *Philosopher*. The *Statesman* handles (relative) non-being by looking on the being.

The significance of the *Sophist* lies in the resolution (prepared by *Parmenides*) of the tangled web of questions regarding one-ness and non-being. Not only *is* each idea *not* any other, but it also *is* somehow many others. The former view would consolidate a sort of Ideal Atomism, a Monadology of Ideas:

many ideal units or "ones", each one like the absolute Parmenidean being but for the fact that it *is not* the *only* one (as Melissus suggested the many would be like if they existed). However this is not the case: ideas are not atoms; they are interrelated with one another, they exist in *intercommunion* among themselves. This κοινωνία τῶν εἰδῶν establishes the possibility of eidetic division into many, and collection into one (of ascent to genera and descent to species). The κοινωνία τῶν εἰδῶν renders possible the definition of being, and definition in general. The interweaving of Forms makes articulate expression of reality possible 259e4-6: τελεωτάτη πάντων λόγων ἐστιν ἀφάνισις τὸ διαλύειν ἕκαστον ἀπὸ πάντων. διὰ γὰρ τὴν ἀλλήλων τῶν εἰδῶν συμπλοκὴν ὁ λόγος γέγονεν ἡμῖν. In the *Politicus* it further provides the foundation for the dialectical use of *examples*.

Now any given system which is no mere set of unsociable entities but a field exhibiting a nexus of interrelationships (and this is what "communion" among the members means), does not simply stand by itself: *it can be "reduced" (ἀνάγεσθαι) to principle(s)*. In the *Republic* and the *Laws* we observed this implication (indeed dialectical necessity) of communion to be called for in the study of mathematics. In the *Sophist* there is an application of this operation in the establishment of the five μέγιστα γένη. The *Politicus* provides another example of it, by defining *example* in terms of it. To give an example is to discover a common element in two different things [15], as the example employed and illustrated of the same letters occurring in different syllables and words makes clear. (And elements are principles). Thus statesmanship is successfully defined as a sort of weaving.

Furthermore. Not only is the dialectical necessity expounded in the two major political dialogues also confirmed and concretely employed in (the *Sophist* and) the *Politicus*; the ultimate theory of principles finds its first statement in the seeming digression on Excess and Deficiency and the true Art of Measurement in the latter dialogue. This genuine Art of Measurement is concerned not with the

relativity of the more and less, but with the μέτριον (283c10) and the absolute distance, so to speak, from it. (To the μέτριον belongs also τὸ πρέπον, ὁ καιρός, τὸ δέον καὶ πάνθ᾽ ὁπόσα εἰς τὸ μέσον ἀπῳκίσθη τῶν ἐσχάτων, 284e). The μέτριον in each domain is defined by a certain, privileged determination of a given infinite determinability (of the underlying infinity or indeterminacy of a particular kind). Such determination *being stable* represents the focal point of absolute measurement. Its stability constitutes the "necessary substance of becoming" (283d8: κατὰ τὴν τῆς γενέσεως ἀναγκαίαν οὐσίαν); an expression exactly answering to the definition of the third *Philebean* nature, the μεικτὴ καὶ γεγενημένη οὐσία (27b), the ἔκγονον of the two former ones (πέρας and ἄπειρον) there being called γένεσις εἰς οὐσίαν (26d). The two kinds of measure, the relative and the normative, go together, and the one is not possible without the other (*Politicus*, 284d). The Pythagorean view that all physical things are subject to measurement is endorsed: ὁ γὰρ ἐνίοτε, ὦ Σώκρατες, οἰόμενοι δή τι *σοφὸν* φράζειν πολλοὶ τῶν κομψῶν λέγουσιν, ὡς ἄρα μετρητικὴ περὶ πάντ᾽ ἐστὶ τὰ γιγνόμενα, τοῦτ᾽ αὐτὸ τὸ νῦν λεχθὲν ὂν τυγχάνει (284e-285a). The Eleatic philosopher is speaking somewhat condenscendingly of the Pythagoreans, and he supplies their art with the anchor of fixedness and stability, to the extent possible in the world of becoming. But the mathematization of the Cosmos (and in particular of all arts and sciences) is maintained and enriched. The new dimension added (absolute measurement) is proclaimed to be indispensable in the future demonstration of true accuracy in dialectics: ὡς ποτε δεήσει τοῦ νῦν λεχθέντος πρὸς τὴν περὶ αὐτὸ τἀκριβὲς ἀπόδειξιν (284d). A forward reference no doubt to the projected *Philosopher*. Once again we meet with the necessity of blending Eleatism and Pythagoreanism.

The prefigurement of the *Philebus* doctrine is ostensibly introduced as a sort of apology for the preceding lengthy Myth and the extended account of the detailed definition of weaving. As it is insisted that, in the cases concerned, the

right length of time has been observed with regard to the purposes at hand, both the Myth and the example of weaving, being lengthy, are thus declared vitally important for the argument of the Dialogue. The former supplies a Theory of Cosmos in mythical vehicle, similarly to the Myth of Er in the *Republic*. As to the latter, the royal function of statesmanship consists in balancing within the state vigour and prudence, in weaving warp-like strength and welf-like caution together according to the right mixture, the μέτριον (310e).

To the table above then, one more column may be added, reflecting the intermediate position between *Republic* and *Laws:*

a	Myth of Cosmic periodization *(Politicus)*
b₁	–
b₂	Measurement *(Politicus)*
b₃	Definition of Example; Normative Measurement *(Politicus)* κοινωνία εἰδῶν and μέγιστα γένη *(Sophist); [Philosopher]*

A closely knit system of interconnections among Platonic dialogues emerges upon inquiry, based on doctrinal constants and definite pointers in various relationships. It figures out as a highly intentional and thorough overall design. Theory of Politics and Theory of Reality always appear in emphatically deliberate conjugation. Summarizing the main divisions of the integrated whole we have:

I. Purified, strengthened and expanded Socratism finds its expression in the *Republic:* Σωκράτους ἐστι καλοῦ καὶ νέου γεγονότος (*Second Epistle*, 314c) [16].

II. Transformed Eleatism of the Eleatic Stranger.

(Parmenides), (Theatetus) [17], Sophist, Politicus, [Philosopher]

III. Transformed Pythagoreanism of Timaeus.

(Republic B-E, 471b), Timaeus, [Critias] [18], [Hermocrates (?)]

IV. Approximate Plato – the Athenian Stranger [19], (Timaeus, Socrates).

Laws,(Timaeus), {Epinomis}, (Philebus) [20]

III andIV really coalesce. Plato abandoned the project announced in the *Timaeus* of carrying on the concretization of *Republic* B-E, 471b by *Critias* and *Hermocrates*, and substituted in its place the *Laws*. In effect, therefore, we have:

III′ Timaeus, Laws, {Epinomis}, Philebus.

- **II –**

The Theory of Reality involved in each one of the three dialogue-groups identified, involves both Mathematics and Dialectics, both mathematicals and Ideas.

The mathematical structure of the World (affirmed analytically in the *Laws*-group and indirectly in the *Politicus*-group) is already presupposed in the *Republic*. The continuity of the *Line*, and mathematicals as *intermediates*, make that clear. The entire development in Book Z confirms the assumption. True philosophy consists in the process of περιαγωγή, a turning round away from the darkness of becoming toward the light of real being (cf. 518d sqq.; 521c: τοῦτο δή, ὡς ἔοικεν, οὐκ ὀστράκου ἂν εἴη περιστροφή, ἀλλὰ ψυχῆς *περιαγωγὴ* ἐκ νυκτερινῆς τινος ἡμέρας εἰς ἀληθινὴν τοῦ ὄντος οὖσαν ἐπάνοδον, ἣν δὴ φιλοσοφίαν ἀληθῆ φήσομεν εἶναι). The search is for an inquiry drawing the soul from becoming to being; 521b: τί ἂν οὖν εἴη … μάθημα ψυχῆς ὁλκὸν ἀπὸ τοῦ γιγνομένου ἐπὶ τὸ

ὄν; The answer is given in the sequel. As has been analysed above, one starts with the distinct mathematical sciences, deepens then his insight by concentrating into their intercommunion, and, applying dialectical procedure to such thorough apprehension of their underlying mutual cognation, he finally reaches the principle(s) of being, the Idea of Goodness in particular. In this sense dialectics is the supreme lesson, lying as coping-stone on top of mathematics; 534e: ὥσπερ θριγκὸς τοῖς μαθήμασιν ἡ διαλεκτικὴ ἡμῖν ἐπάνω κεῖσθαι, καὶ οὐκέτ᾽ ἄλλο τούτου μάθημα ἀνωτέρω ὀρθῶς ἂν ἐπιτίθεσθαι, ἀλλ᾽ ἔχειν ἤδη τέλος τὰ τῶν μαθημάτων. *The ἀνυπόθετον has been envisioned*.

It has to do with a *dialectical treatment of mathematics*, especially of the inner communion among its branches. *Dialectics is foremost a process* (532a-b: οὐ διαλεκτικὴν ταύτην τὴν πορείαν καλεῖς;); *it is a method*, as most clearly disclosed in the *Laws* [21].

But a dialectical treatment of mathematics with a firm view of ascending to first principles was precisely the content of the renowned Platonic discourse(s) on Goodness [22].

Republic Z, therefore, outlines the general pattern of reasoning in the *Περὶ τἀγαθοῦ* [23]. As this lecture constitutes then the philosophical activity *in actu* (and not merely foreshadowed and methodologically circumscribed), it would answer to the projected dialogue *Philosopher*, should this have been meant as an execution of the *Republic* blueprint [24]. But as leader in the projected inquiry would be the *Eleatic* Stranger, we should rather expect an emphasis on the *dialectical*, and thus on the methodological aspect of the undertaking. At any rate the nonexistence of the *Philosopher* was felt in antiquity as a hiatus within the Platonic system of dialogues. One view, understandably yet impossibly, identified it with the *Epinomis* [25]: this work purportedly answers the call at the end of the *Laws* for a treatment of supreme wisdom.

Dialectics may be appropriately construed as a revised and methodological interpretation of Eleatism. In any case, it bears, however, (in common with that current of thought) heavy ontological committments. It has often been questioned whether the Theory of Ideas (as such metaphysical commitment) has survived under, and despite, the Pythagorean emphasis in late Plato. But as the mathematical interpretation of reality exists already in the *Republic*, so conversely Ideas are part of the final edifice.

The Aristotelian testimony is decisive. Aristotle, in his ex professo account of the Platonic Philosophy (*Metaphysics* A6), combines as a matter of course the Theory of Ideas with the revised Pythagoreanism of late Plato into one *coherent, organic whole*. There is no sign of fracture in this wholeness. Scattered also throughout his work are references and criticisms of the Theory of Ideas and of that severe and complete mathematization of philosophy which he ascribes to the Old Academy and strongly denounces. His published treatise Περὶ Ἰδεῶν is complemented by his account of the Platonic lecture(s) Περὶ τἀγαθοῦ. It is inconceivable that Aristotle did not report and criticize the latest form of the Platonic Philosophy [26], with which he was immediately familiar for a very long time. (Without A6 and Περὶ τἀγαθοῦ, Spensippus, Xenocrates and the Old Academy would further remain an incomprehensible development).

Moreover Aristotle's statement in A6 that the Forms are the (ideal) Numbers fits exactly with what should be anticipated given the methodological description of the genuine philosophical endeavour from the *Republic* onwards. The "communion" among the (intermediate) mathematicals consists precisely in their presupposing eidetic or ideal numbers, incomparable (ἀσύμβλητοι) to each other: twoness, threeness, etc. rather than two, three, etc. In this respect ordinary Arithmetic, with numbers consisting of comparable units or monads, is on a par with Geometry, Stereometry etc. There are many units, and twos and threes etc. [27]. Besides, e.g. a triangle stands to the Threeness in a relation similar to that

which the (many) threes bear to it [28]. *Thus the existence of the ideal, eidetic, "first" numbers is the ontological presupposition involved in the dialectical treatment of the mathematicals:* in the Republic-programme.

Theory of (hypostatical) Ideas on the one hand, and mathematical Theory of the World and First Principles on the other, go together, constituting *the twin aspects of a single vision of reality.*

The general form of reality is represented by the (middle) Theory of Ideas: by the side of a Cosmos in a continuous flux of becoming, there exist separately Ideas of the various "communions" embedded in that flux, Forms of what appears in common among different spatiotemporal segments of the flux identifying them as the same or similar. Such Ideas are ontological and cognitive reference points, in relationship to which the everchanging fabric of the World is woven and comprehended.

The form of reality is filled with mathematical objects and structures as with its true content. *Timaeus* explains how this is done in connection with the sensible World, while Περὶ τἀγαθοῦ would detail the constitution of mathematicals (ordinary and ideal) especially as disclosing the principles of being. *Thus middle and later phases of Plato's philosophy, written and unwritten doctrines, are in perfect harmony.* There is no need of artificial interpretations like assuming dramatic changes in Plato's mind, or wholesale athetization of late dialogues, or radical invalidation of the Aristotelian testimony. The true account is elicited by a close observation of what is going on in the written works of Plato and, primarily, by an accurate appreciation of what is the purpose (avowed or hinted) of that which is going on. Presumably, Plato obeyed his own sound dialectical maxim: in everything that you think or do set unswervingly your eye and intention on a fixed single object as end, and mould your every thought and action in terms of it.

Ideas are (ideal, incomparable, unitary) *Numbers* [29]. Their principles are the One and the *Great-and-Small*, μέγα καὶ μικρόν (also called the Indefinite Dyad).

The second principle is the participatory one (μεταληπτικόν) and, hence, matter (ὕλη) [30]; its very name (μέγα καὶ μικρόν) confirms its *dimensionality*. Eidetic Numbers therefore, involve the abstract determination of extendedness, without themselves being extended in the normal way which entails *repeatability* [31]. When eidetic Numbers are (on a second level) conjugated to the Second Principle, there is generated a multiplicity (= ordinary number) of shapes and movements which constitutes the sensible world existing in, or rather with, space and (consequently) time. *This is the mechanism of instantiation of the Ideas in this World* [32].

Now every twos in the sensible and mathematical world participate in, or imitate, Twoness in itself, the (ideal) Number. But there exists one specific kind of twos which exemplifies (manifests) the ideal Twoness in such a way that the latter *exhausts* the formal component of the former *in its specific character*. Such a specific kind of two(ness) is length. Apart from abstract Twoness and indeterminate extentionality, there exists nothing else in length. Any other kind of two(ness), say a couple of colours or seing and intellecting (critically bifurcated between a subjective and an objective pole and thus fundamentally dual), has *not* its total formal aspect *exhausted* by the (eidetic) Twoness, since this leaves out other factors in colour-dimension, sensing and conceiving correspondingly. Thus (ideal) Twoness is the *idea* of Length, but not of colour-couples, sensation or intellection. In the latter cases we need additional (ideal) Numbers to exhaust their *formal content*. We have here the Platonic equivalent of the Theory of *essence*. When X is the *idea* of x in the stricter sense defined, then x is an *image* of X. The shift from *μέθεξις – talk* to *ὁμοίωσις – talk* in Plato has, I suggest, to do with an emphasis on this stronger sense of instantiation which coheres with the recognition of the existence of relatively *stable centers in the flux of becoming*.

One can further pursue this line of thought to sharper precision. The kind of x imitating X is susceptible of more or less focusing. There is a point of *highest*

resonance (which the true Art of Measurement discerns), and also, on the other hand, various *approximations* to it [33]. E.g. the straight line of unit length may be held to constitute the optimal manifestation of the (Ideal) Twoness in space [34]. This is the *best* imitation of (eidetic) Twoness; we may speak of an ἀρίστη δυάς.

To answer then briefly the initial pivotal questions:

A) Ideas are the (eidetic) Numbers produced from the conjugation of the One with the Great-and-Small.

B) Particulars are produced from the conjugation of the (eidetic) Numbers with the Great-and-Small. Particulars imitate their (ideal) Numbers by copying the structure which these Numbers generate. There is an optimal likeness in each case; this is achieved when the structure realized best resembles that implicated in the (ideal) Number. In particular, with a given field of variation, optimal resonance has to be discovered experientally if the Number of the field is not known. Should it were known, the stable determination (the ἀναγκαία οὐσία, or the γένεσις εἰς οὐσίαν) could be established rationally [35].

The "infinite" multitude of x's under an idea X is organized in a Continuum of variability, an underlying field of indeterminacy. There exists an optimal determination for every such field: this gives the *best-x*, most adequate instantiation of X consistent with the structure of the actual World of Becoming. X is projected on the entire field of variation, indeterminacy reverberates to the tune of the projecting tonality, but focal resonance is achieved at the privileged poin, at best-x.

- III -

The polity of the *Republic* is emphatically held to be *realizable* in actual life. The anxiety *not* to be taken as a case of make-belief and wishful thinking (εὐχή) is uppermost in Plato's mind, esp. throught E (and the end of Z). What is designed is *possible* (δυνατά), it can be actualized [36]. In fact, if the design is laid in accordance with the nature of things, there can be no question of an utopia; 456b-c: οὐκ ἄρα ἀδυνατά γε οὐδὲ εὐχαῖς ὅμοια ἐνομοθετοῦμεν, ἐπείπερ κατὰ φύσιν ἐτίθεμεν τὸν νόμον· ἀλλὰ τὰ νῦν παρὰ ταῦτα γιγνόμενα παρὰ φύσιν μᾶλλον, ὡς ἔοικε, γίγνεται. If what is a deviation from nature can obtain, *a fortiori* this is possible for the thoroughly natural. It may be difficult, but it is not impossible [37]. Similarly in the conclusive conclusion of the middle body of books, at the end of Z (540d).

The call is to show the feasibility of the polity and even the manner of its realisability (ὡς δυνατὸν καὶ ᾗ δυνατόν, 471e). The way is to have power and wisdom coincide in the same person(s) [38]. The main point in the developments in the middle books of the *Republic* is exactly to provide an intimation of the nature of philosophical wisdom required to effect (if coupled with power) the actual institution of the right polity. *The necessary wisdom is philosophical (ultimately dialectical mathematics).* The paradeigms of the World of Ideas will direct the legislator possessing power and wisdom in the proper design for the polity (500d-e). Following what he sees there (ἃ ἐκεῖ ὁρᾷ 500d4), he will undertake to picture the polity [39], by first purifying the existing state of affairs in society (501a) and then delineate the new design (501a9: μετὰ ταῦτα ὑπογράψασθαι ἂν τὸ σχῆμα τῆς πολιτείας). The paradeigms he would be looking at during this vital process will be τὸ φύσει δίκαιον καὶ καλὸν καὶ σῶφρον καὶ πάντα τὰ τοιαῦτα, while his task would be to harmoniously blend the characters around the dominant tone of

true piety (501b-c). There is a clear distinction between the polity-design and the ideal exemplars. In fact we seem to have an explicit acknowledgement of the multiplicity of such designs: ὡς τοιοῦτός ἐστι πολιτειῶν ζωγράφος ὃν τότ᾽ ἐπηνοῦμεν (501c5-6) [40].

The necessary condition for the realization of a best polity is the same in the *Laws* as in *Republic:* greatest power and supreme wisdom must coincide. In fact, then the task is easy and quick moving [41].

The *Laws* (739a-e) recognize a first best polity (ἀρίστη πολιτεία) and then approximations to it (δευτέρα καὶ τρίτη). *The Laws* provide the substance for the second. It is an open option which one is to be followed, depending on the obtaining state of society [42].

The best polity is *not* the polity of the *Republic*. It is one in which the unity of the society is so overwhelming as to extend even to the thoughts and sentiments of each individual: they all share the same attitudes, patterns of behavior, norms of appreciation, ways of thinking. We have to do with an explicit intensification of what is laid down in the *Republic:* the ἴδιον is completely eradicated from the Polis, not only regarding women, children or external possessions, but even (so far as it is possible) from the natural ἴδια, the senses and hands of a man, from what naturally belongs to him, parts and faculties of his body and soul. For τὸ μὲν γὰρ κοινὸν συνδεῖ, τὸ δὲ ἴδιον διασπᾷ τὰς πόλεις (875a6-7). *Goodness is Oneness* [43].

This is a city of gods or children of gods (739d6). It corresponds to the Saturnian life (713b-e) [44], which has been described in the *Politicus* myth (268d-274d) in association with a Theory of Cosmic Periodization. This best polity is characterized by the sovereignty of the wise leader over laws (874e-875d): for ἐπιστήμης γὰρ οὔτε νόμος οὔτε τάξις οὐδεμία κρείττων, οὐδὲ θέμις ἐστὶν νοῦν οὐδενὸς ὑπήκοον οὐδὲ δοῦλον ἀλλὰ πάντων ἄρχοντα εἶναι, ἐάνπερ ἀληθινὸς ἐλεύθερός τε ὄντως ᾖ κατὰ φύσιν (875c6-d2) [45]. But this precondition is at best only *partly* attainable by human nature, and therefore, in general, τὸ δεύτερον

αἱρετέον, τάξιν τε καὶ νόμον, ἃ δὴ τὸ μὲν ὡς ἐπὶ τὸ πολὺ ὁρᾷ καὶ βλέπει, τὸ δ᾽ ἐπὶ πᾶν ἀδυνατεῖ (875d3-4). Such second best design is offered in the *Laws* [46]. The polity of the *Republic* approaches more to the Saturnian type and the best polity.

Any such type of polity, even the best one, is *not* the *Idea* of πόλις. Two senses of exemplariness (paradeigm) should be distinguished: one is ideal; the other consists in the optimal determination of the variational field into which the Idea is manifested. The Idea of Polis must be an (ideal) Number encompassing the harmony of society, just as the soul in *Timaeus* was so integrated into its structured system proceeding from an appropriate Number. If we do not know the social Number (and the system of relationships that it generates and encompasses), then we may identify the basic dimension(s) of variation in the social nexus and discover its (their) essential, i.e. optimal, determination. And this is exactly what Plato does (applying the *Philebean* processes) in the final section of the *Politicus:* the Statesman's function is to find the harmonious balance between *security* and *dynamism*, weaving the social fabric from serenity and vigour, from the welft of contentment and the warp of daring, from reasoned definiteness and impetuous openness – in fact, generalizing, the statesman will endeavour to grasp that combination of limiting Oneness and infinite Indeterminacy which constitutes the Number of Society [47]. Other aspects or dimensions beside the one noticed in *Politicus* may come into more or less prominent play as the history of human kind unfolds itself. The weaving has to be done anew in each case. The design may, and will, differ: but supreme wisdom and philosophical knowledge would for ever be required, irreplaceable by any subordinate art and science of the various necessary participants in the πόλις–life (287b-290e), even by any superior expertise of higher state-functionaries, politicians, military leaders, judicature (303d-305e). Statemanship is impossible without mathematics; not even divine stewardship of the human flock is possible without it; *Laws* Z, 818b9-c2: δοκῶ μέν, ἃς (sc. divine

necessities i.e. mathematical order) μή τις πράξας μηδὲ αὖ μαθὼν τὸ παράπαν οὐκ ἄν ποτε γένοιτο ἀνθρώποις θεὸς οὐδὲ δαίμων οὐδὲ ἥρως οἷος δυνατὸς ἀνθρώπων ἐπιμέλειαν σὺν σπουδῇ ποιεῖσθαι· πολλοῦ δ᾽ ἂν δεήσειεν ἄνθρωπός γε θεῖος γενέσθαι etc. Evidently *dialectical mathematics* is needed to elevate a *necessary condition* to the sufficient one. Just as the Demiurge cannot order the Κόσμος without mathematical structure emanating from Oneness-Goodnes.

To sum up:

a) The Idea of State is the Social (ideal) Number, i.e. the Number which involves the structure of the Harmony in Society or, in other words, the system of determinate proportions which define all social parts and functions in their interrelationship.

b) Depending on the state of the material principle (as reflected in a given historic human condition) that Number is expressed as various forms of social order, all converging and approximating to the optimal resonance of the Saturnian life. In effect these forms can be represented as a certain weaving of the social fabric from the two basic threads of many names underlying the variational field of human excellence: valorous spirit and ponderous weighting, fieriness and energy-accumulating reserve, strength and prudence, decisiveness and calculation, force and repose, drive and contentedness. One can easily discern the same fundamental elements into their manifold contemporary shapes. Carried through the entire complex mixture of actual dimensions of variation, that weaving always aims to create, by an appropriate system of checks and balances, a simultaneously *stable and dynamic* social order which maximizes man's potential and optimizes his activity.

NOTES

[1] Socrates was the leader in the exposition to which *Timaeus* refers back, and that discourse is mentioned as τὰ περὶ τῆς πολιτείας (20b). Aristotle's standing term of reference to the *Republic* is Πλάτων ἐν τῇ πολιτείᾳ or ἡ πολιτεία ἡ Πλάτωνος.

[2] Νῦν οὖν… λέγειν εἰμὶ ἕτοιμος, ὦ Σώκρατες, μὴ μόνον ἐν κεφαλαίοις ἀλλ᾽ ὥσπερ ἤκουσα καθ᾽ ἕκαστον· τοὺς δὲ πολίτας καὶ τὴν πόλιν ἣν χθὲς ἡμῖν ὡς ἐν μύθῳ διῄεισθα σύ, νῦν μετενεγκόντες ἐπὶ τ᾽ ἀληθὲς δεῦρο θήσομεν ὡς ἐκείνην τήνδε οὖσαν, καὶ τοὺς πολίτας οὓς διενοοῦ φήσομεν ἐκείνους τοὺς ἀληθινοὺς εἶναι προγόνους ἡμῶν… πάντως ἁρμόσουσι καὶ οὐκ ἀπᾳσόμεθα λέγοντες αὐτοὺς εἶναι τοὺς ἐν τῷ τότε ὄντας χρόνῳ.

[3] C. Ritter suggested specifically structures and relationships "Krotons oder einer anderen nach pythagoreischen Grundsaettzen aristokratisch eingerichteten Stadt Gross-Griechenlands"; or the constitutional developments of Hermocrates' fatherland, Syracuse, in relationship to its external political history and as causative factor of it. V. *Neue Untersuchungen ueber Platon*, pp. 178-9.

[4] The later passage runs thus: ἀναγκαῖον δέ, …, περὶ τὰ τοιαῦτα πάντα ὅσα σμικρὰ καὶ πολλὰ νομοθέτην μὲν ἐκλείπειν, τοὺς δὲ ἐμπείρους ἀεὶ κατ᾽ ἐνιαυτὸν γιγνομένους αὐτῶν, ἀπὸ τῆς χρείας μανθάνοντας, τάττεσθαι καὶ ἐπανορθουμένους κινεῖν κατ᾽ ἐνιαυτόν, ἕως ἂν ὅρος ἱκανὸς δόξῃ τῶν τοιούτων νομίμων καὶ ἐπιτηδευμάτων γεγονέναι. χρόνος μὲν οὖν μέτριος ἅμα καὶ ἱκανὸς γίγνοιτ᾽ ἂν τῆς ἐμπειρίας δεκαετηρὶς θυσιῶν τε καὶ χορειῶν, ἐπὶ πάντα καὶ ἕκαστα ταχθείς, ζῶντος μὲν τοῦ τάξαντος νομοθέτου κοινῇ, τέλος δὲ σχόντος, αὐτὰς ἑκάστας τὰς ἀρχὰς εἰς τοὺς νομοφύλακας εἰσφερούσας τὸ παραλειπόμενον τῆς αὐτῶν ἀρχῆς ἐπανορθοῦσθαι, μέχριπερ ἂν τέλος ἔχειν ἕκαστον δόξῃ τοῦ καλῶς ἐξειργάσθαι, τότε δὲ ἀκίνητα θεμένους, ἤδη χρῆσθαι μετὰ τῶν ἄλλων νόμων οὓς ἔταξε κατ᾽ ἀρχὰς ὁ θεὶς αὐτοῖς νομοθέτης· ὧν πέρι κινεῖν μὲν ἑκόντας μηδέποτε μηδέν, εἰ δέ τις ἀνάγκη δόξειέ ποτε καταλαβεῖν, πάσας μὲν τὰς ἀρχὰς χρὴ συμβούλους, πάντα δὲ τὸν δῆμον καὶ πάσας θεῶν μαντείας ἐπελθόντας, ἐὰν συμφωνῶσι πάντες, οὕτω κινεῖν, ἄλλως δὲ μηδέποτε μηδαμῶς, ἀλλὰ τὸν κωλύοντα ἀεὶ κατὰ νόμον κρατεῖν. (Absolute jus probibendi belonging to any dissenting voice against a proposed change).

[5] This fundamental passage reads thus: οὐκ ἔστιν ποτὲ γενέσθαι βεβαίως θεοσεβῆ θνητῶν ἀνθρώπων οὐδένα ὡς ἂν μὴ τὰ λεγόμενα ταῦτα νῦν δύο λάβῃ, (a) ψυχή τε ὡς ἔστιν πρεσβύτατον ἁπάντων ὅσα γονῆς μετείληφεν, ἀθάνατόν τε, ἄρχει τε δὴ σωμάτων πάντων, ἐπὶ δὲ τούτοισι δή, (b) τὸ νῦν εἰρημένον πολλάκις, (b1) τόν τε εἰρημένον ἐν τοῖς ἄστροις νοῦν τῶν ὄντων, (b2) τά τε πρὸ τούτων ἀναγκαῖα μαθήματα [λάβῃ], (b3) τά τε κατὰ τὴ μοῦσαν τούτοις τῆς κοινωνίας συνθεασάμενος etc. – The Μοῦσα in b3 is the supreme Muse of true Philosophy; v. ΣΤ, 499D: ὅταν αὕτη ἡ Μοῦσα πόλεως ἐγκρατὴς γένηται.

[6] The science in question is furthermore peculiar, difficult to be discovered and difficult to be taught (968d: ἃ δεῖ μανθάνειν οὔτε εὑρεῖν ῥᾴδιον οὔτε ηὑρηκότος ἄλλου μαθητὴν γενέσθαι), unexpectedly grasped (968e: οὐδὲ γὰρ αὐτοῖς τοῖς μανθάνουσι δῆλα γίγνοιτ᾽ ἂν ὅτι πρὸς καιρὸν μανθάνεται, πρὶν ἐντὸς τῆς ψυχῆς, ἑκάστῳ που μαθήματος ἐπιστήμην γεγονέναι), not really ineffable, yet unforetold (968e: ἀπόρρητα μὲν λεχθέντα οὐκ ἂν ὀρθῶς λέγοιτο, ἀπόρρητα δέ), a result of teaching accompanied by frequent intercourse (968c: διδαχῇ μετὰ συνουσίας πολλῆς). The correspondence with *Epistle* Z, 341c is striking: ῥητὸν γὰρ οὐδαμῶς ἐστιν ὡς ἄλλα μαθήματα, ἀλλ᾽ ἐκ πολλῆς συνουσίας γιγνομένης περὶ τὸ πρᾶγμα αὐτὸ καὶ τοῦ συζῆν ἐξαίφνης οἷον ἀπὸ πυρὸς πηδήσαντος

ἐξαφθὲν φῶς, ἐν τῇ ψυχῇ γενόμενον αὐτὸ ἑαυτὸ ἤδη τρέφει. The education in question is not really a proper object of legislation, but, once achieved, its starting condition (968c). *Plato is in possession of it:* (968b) διὰ τὴν περὶ τὰ τοιαῦτ᾽ ἐμπειρίαν τε καὶ σκέψιν γεγονυῖάν μοι καὶ μάλα συχνήν.

[7] "Where we want to lead the inquiry to" is the search for the good and beautiful (πρὸς τὴν τοῦ καλοῦ τε καὶ ἀγαθοῦ ζήτησιν, 531c6). Thorough and in depth treatment of mathematics must tend to the spiritual vision of the Idea of Goodness: τὸ δὲ πολὺ αὐτῆς καὶ πορρωτέρω προϊὸν σκοπεῖσθαι δεῖ εἴ τι πρὸς ἐκεῖνο τείνει, πρὸς τὸ ποιεῖν κατιδεῖν ῥᾷον τὴν τοῦ ἀγαθοῦ ἰδέαν.

[8] As Julius Tomin correctly pointed out in the discussion, the intimate connection of Mathematics with Dialectics (of such a nature that the latter draws the significant conclusions from the facts established by the former science in thus ascending to their principles) is already affirmed, in a rather matter of course way, in *Euthydemus* 290c: οἱ δ᾽ αὖ γεωμέτραι καὶ οἱ ἀστρονόμοι καὶ οἱ λογιστικοί - θηρευτικοὶ γάρ εἰσι καὶ οὗτοι· οὐ γὰρ ποιοῦσι τὰ διαγράμματα ἕκαστοι τούτων, ἀλλὰ τὰ ὄντα ἀνευρίσκουσιν - ἅτε οὖν χρῆσθαι αὐτοὶ αὐτοῖς οὐκ ἐπιστάμενοι, ἀλλὰ θηρεῦσαι μόνον, παραδιδόασι δήπου τοῖς διαλεκτικοῖς καταχρῆσθαι αὐτῶν τοῖς εὑρήμασιν, ὅσοι γε αὐτῶν μὴ παντάπασιν ἀνόητοί εἰσιν. In fact we seem to have here the postulate of the intermediate mathematicals: these are τὰ ὄντα which the mathematicians do not invent, but discover. Yet the Mathematicians, do not know what to do with the truths they reveal; it is to the Dialectician that they turn over their discoveries in order to trace their presuppositions and consequences – if they are not completely out of *mind*. For their expertise does not make them dialecticians; v. *Republic* Z, 531d9 sqq.: οὐ γάρ που δοκοῦσί γε οἱ ταῦτα δεινοὶ (i.e. accomplished mathematicians) διαλεκτικοὶ εἶναι. – Οὐ μὰ τὸν Δί᾽, ἔφη, εἰ μὴ μάλα γέ τινες ὀλίγοι ὧν ἐγὼ ἐντετύχηκα.

[9] Cf. 530d: κινδυνεύει, ἔφην, ὡς πρὸς ἀστρονομίαν ὄμματα πέπηγεν, ὡς πρὸς ἐναρμόνιον φορὰν ὦτα παγῆναι, καὶ αὗται ἀλλήλων ἀδελφαί τινες αἱ ἐπιστῆμαι εἶναι, ὡς οἵ τε Πυθαγόρειοί φασι καὶ ἡμεῖς, ὦ Γλαύκων, συγχωροῦμεν.

[10] It is usually held that the dialectical (stricto sensu) treatment of quantity is just a branch of the dialectics of nature, for middle Plato at least. But the mere fact that there is a single, continuous *Line* in *Republic* ΣΤ to represent the succession of orders of reality prefigures the final solution.

[11] Mathematics provides the *necessary knowledge* for the pursuit of the *beautifulest knowledge*; *Laws* Z, 818d1-3: ταῦτ᾽ οὖν δὴ πάντα ὡς μὲν οὐκ ἀναγκαῖά ἐστι μαθήματα τῷ μέλλοντι σχεδὸν ὁτιοῦν τῶν καλλίστων μαθημάτων εἴσεσθαι, πολλὴ καὶ μωρία τοῦ διανοήματος. Mathematics lies at the start and leads the way in that pursuit (818d7: ἐπὶ τἆλλα ἰόντα τούτων ἡγουμένων τῶν μαθημάτων μανθάνειν). The κάλλιστα μαθήματα concern divinity and the Theory of Principles; their summit consists in the μέγιστον μάθημα, the One-Goodness.

[12] There is obviously much more to be thought of.

[13] Theon Smyrnaeus, citing the passage in question from the *Epinomis* (which work he ascribes, as a matter of course, to Plato), thinks that the cohesive bond meant *seems to be* (ἔοικεν) proportionality; but then his text of the *Epinomis* passage has ἀναλογίαν in place of ὁμολογίαν and ἐμβλέπων instead of εἰς ἓν βλέπων (p. 84.7 sqq. Hiller). The view may go back to Eratosthenes' Πλατωνικός (cf. p. 82.22 sqq. Hiller; also p. 2. 3 sqq. Etc.).

[14] In *Philebus* we possess the nearest written approximation to Plato's Theory of Principles, albeit applied to the basic constitution of this World. The fact was recognized in antiquity. Porphyry proceeded to the articulation (διαρθροῦν αὐτὰ ἐπαγγελόμενος) of the Platonic Theory of Principles as expounded in the Περὶ τἀγαθοῦ (that the one and the indefinite dyad are principles of sensible-things, that the indefinite dyad is also found in the intelligible

world as the principle of infinity, that the principle of indeterminacy and infinity is the Great and Small) in his Commendary on *Philebus*. The reason for this procedure is, as Simplicius suggests, the consonance between the two works; *In Phys.* 453.25 – 454.19 = Aristotelis, *Fragmenta Selecta*, Ross, pp. 117-8; n.b. the conclusion: ταῦτα ὁ Πορφύριος εἶπεν αὐτῇ σχεδὸν τῇ λέξει (after a long quotation from Porphyry's Commentary), διαρθροῦν ἐπαγγειλάμενος τὰ ἐν τῇ περὶ τἀγαθοῦ συνουσίᾳ αἰνιγματωδῶς ῥηθέντα, καὶ ἴσως ὅτι σύμφωνα ἐκεῖνα ἦν τοῖς ἐν Φιλήβῳ γεγραμμένοις.

[15] 278c: παραδείγματος γ᾽ ἐστὶ τότε γένεσις, ὁπόταν ὂν ταυτὸν ἐν ἑτέρῳ διεσπασμένῳ δοξαζόμενον ὀρθῶς καὶ συναχθὲν περὶ ἑκάτερον καὶ (better than ὡς) συνάμφω μίαν ἀληθῆ δόξαν ἀποτελῇ.

[16] The leader in each dialogue is, no doubt, meant as a hint and clue.

[17] Parentheses indicate indirect or looser connection. Square brackets an unfulfilled promise. The inclusion sign for *Epinomis* draws attention to its (perhaps) doubtful authenticity.

[18] *Critias* is next to nonexistent for all meaningful purposes.

[19] Already in antiquity some held the Athenian stranger to be specifically Plato's literary persona; *Diogenes Laertius* II, 52: εἰσὶ δ᾽ οἱ ξένοι (sc. the Athenian and the Eleatic strangers) οὐχ, ὥς τινες ὑπέλαβον, Πλάτων καὶ Παρμενίδης etc.

[20] *Philebus'* inclusion in this final group need not be construed chronologically. It simply represents the most complete *written* account of the Platonic Theory of Principles. This dialogue's true timing is, famously, a real puzzle. Its most natural position seems to be after *Politicus*. It provides an illustration, drawn out in extenso, of how the Theory of Principles presupposed by the "true art of Measurement" can be applied in solving a characteristically Socratic problem: is phronesis or pleasure the ultimate human God? It corresponds to the *Politicus* handling of the question concerning the true nature of regal statesmanship: we have to do in this world with *harmonies in mixtures* as stabilizing factors in the universal flux.

[21] IB, 965c: ἆρ᾽ οὖν ἀκριβεστέρα σκέψις θέα τε ἂν περὶ ὁτουοῦν ὁτῳοῦν γίγνοιτο ἢ τὸ πρὸς μίαν ἰδέαν ἐκ τῶν πολλῶν καὶ ἀνομοίων δυνατὸν εἶναι βλέπειν; - Ἴσως. – Οὐκ ἴσως, ἀλλ᾽ ὄντως, ὦ δαιμόνιε, ταύτης οὐκ ἔστιν σαφεστέρα μέθοδος ἀνθρώπων οὐδενί.

[22] The anecdote related by Aristoxenus highlights the contrast between the common notion of goodness and Plato's analysis of it. Aristoxenus further testifies (according to the Aristotelian exposition of that lecture) that Plato started from a treatment of mathematics and ended up with a definition of Goodness as Oneness; *Elementa Harmonica* B, 31-2, pp. 39.4-40.4 da Rios, esp. p. 39.13 sqq.: φανείησαν οἱ λόγοι περὶ μαθημάτων καὶ ἀριθμῶν καὶ γεωμετρίας καὶ ἀστρολογίας (= astronomy) καὶ τὸ πέρας ὅτι ἀγαθόν ἐστιν ἕν. This is then the structure of the discourse: and it answers *exactly* to the general formulations for such procedure in the *Republic* and the *Laws*.

[23] To the careful student of Plato this must come as no great surprise. The theory that goodness and oneness or binding together (and so, correspondingly, badness and breaking up or segregation) are essentially connected pervades his work. For instance, notice, in the former part of *Republic* (E, 462a-b): ἔχομεν οὖν τι μεῖζον κακὸν πόλει ἢ ἐκεῖνο ὃ ἂν αὐτὴν διασπᾷ καὶ ποιῇ πολλὰς ἀντὶ μιᾶς; ἢ μεῖζον ἀγαθὸν τοῦ ὃ ἂν συνδῇ τε καὶ ποιῇ μίαν;

[24] It would be significant if, as it is perhaps possible, Aristotle's account of Περὶ τἀγαθοῦ formed the *second* book of his Περὶ Φιλοσοφίας (Cf. the passage from Syrianus in Arist. *Fragm. Selecta* p. 78 Ross). This would explain the Aristotelian reference in *de anima* 404b16-24, and the vacillating ancient tradition regarding the relationship between the two former works.

[25] The view goes back at least to Thrasyllus; *Diogenes Laertius* II, 61: Ἐπινομὶς ἢ νυκτερινὸς σύλλογος ἢ φιλόσοφος, πολιτικός. The best (and oldest) manuscripts of the dialogue (A and O) bear the title: Πλάτωνος Ἐπινομὶς ἢ Φιλόσοφος. Cf. Suda s.v. φιλόσοφος.

[26] In *Metaphysics*, M, 4, Aristotle treats of an initial form of the Theory of (separate) Ideas *unconnected* to the nature of number; 1078b9-12: περὶ δὲ τῶν ἰδεῶν πρῶτον αὐτὴν τὴν κατὰ τὴν ἰδέαν δόξαν ἐπισκεπτέον, μηθὲν συνάπτοντας πρὸς τὴν τῶν ἀριθμῶν φύσιν, ἀλλ᾽ ὡς ὑπέλαβον ἐξ ἀρχῆς οἱ πρῶτοι τὰς ἰδέας φήσαντες εἶναι. From the sequel (in comparison with A6) it follows that those first exponents of the initial Theory of Ideas must be Plato (and maybe others in the Socratic circle like Eucleides). *Phaedo* is probably considered to belong to this initial stage (1080a2 sqq.). The adherents are in all likelihood the εἰδῶν φίλοι of the *Sophist*. We have to do, it seems, with the logical (Eleatic) Atomism which I noticed above. We have then incontrovertible Aristotelian testimony for *two* phases of Platonic Philosophy. The specific differential between them is the non-existence or existence of (developed) Pythagoreanism as the foundation of the entire system.

[27] M, 1083a31 sqq.: εἰ δέ ἐστι τὸ ἓν ἀρχή, ἀνάγκη μᾶλλον ὥσπερ Πλάτων ἔλεγεν ἔχειν τὰ περὶ τοὺς ἀριθμούς, καὶ εἶναι δυάδα πρώτην καὶ τριάδα, *καὶ οὐ συμβλητοὺς εἶναι τοὺς ἀριθμοὺς πρὸς ἀλλήλους*. So, M, 1018a4-5: καὶ οὕτως δὴ ἀσυμβλήτους εἶναι τὰς ἐν ἑκάστῳ τῷ πρώτῳ ἀριθμῷ (sc. μονάδας) πρὸς ἀλλήλας. The First Dyad and First Triad are the ideal numbers, Dyad-in-itself and Triad-in-itself; M, 1080a25-30: εἰσὶ δὲ συμβληταὶ αἱ ἐν ἑκάστῳ ἀριθμῷ μονάδες (one possibility), οἷον αἱ ἐν τῇ δυάδι τῇ πρώτῃ αὐταῖς, καὶ αἱ ἐν τῇ τριάδι τῇ πρώτῃ αὐταῖς, καὶ οὕτω δὴ ἐπὶ τῶν ἄλλων ἀριθμῶν· αἱ δὲ αἱ ἐν τῇ δυάδι αὐτῇ πρὸς τὰς ἐν τῇ τριάδι αὐτῇ ἀσύμβλητοι, ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων τῶν ἐφεξῆς ἀριθμῶν. Cf. M, 1081b30-1; 1083a24-30 (here the Speusippean position is criticized in favour of the Platonic). The Platonic theory is evidently referred to in K, 1060b6-9: ἔτι δὲ τοῖς τὴν πρώτην ἀρχὴν τὸ ἓν λέγουσι καὶ τοῦτ᾽ οὐσίαν, ἐκ δὲ τοῦ ἑνὸς καὶ τῆς ὕλης *τὸν ἀριθμὸν γεννῶσι πρῶτον* (perhaps we should read: <τὸν> *πρῶτον)* καὶ τοῦτον *οὐσίαν* φάσκουσιν εἶναι etc. This use of πρῶτος to refer to the ideal numbers (cf. 1080b22: τὸν πρῶτον ἀριθμὸν τὸν τῶν εἰδῶν ἕνα εἶναι etc.) settles the meaning of ἔξω τῶν πρώτων (sc. ἀριθμῶν) in A6, 987b34. - Aristotle employs «πρῶτος» in general to signify a Platonic ideal entity; *Metaphysics*, Z, 1032a4-6: ὅτι μὲν οὖν ἐπὶ τῶν πρώτων καὶ καθ᾽ αὑτὰ λεγομένων τὸ ἑκάστῳ εἶναι καὶ ἕκαστον τὸ αὐτὸ καὶ ἕν ἐστι, δῆλον. Cf. *De lineis insecabilibus* 968a9: ἡ δ᾽ ἰδέα πρώτη τῶν συνωνύμων. Naturally, he also uses the term to refer to the (mathematical) number, as first in order among beings according to Speusippus (Cf. N, 1092a22; M, 1080b14-16; M 1083a21-24; Λ, 1075b37 sqq.); this cretes no blurring or confusion. On the other hand one must systematically distinguish between first x as the Idea (or ideal Number) X and best x as the optimal instantiation of X. V. *infra*.

[28] And here we have the answer why Plato was not troubled by any allerged necessity to hypostasize ideas of magnitudes as something different from both ideal numbers and mathematicals. (Aristotle worries about this; *Metaphysics* 992b13-18 and 1080b23-25. In the second passage the reference to Plato is certain given the following mention of the Speusippean and Xenocratean views. Aristotle holds that Plato is forced by the logic of his position to accept *quasi-ideal magnitudes*, τὰ μετὰ τὰς ἰδέας, 1080b25, distinct from the mathematicals. The bias may have been operative under the earlier form of the Theory of Ideas, (v. n. 26 *supra*), where for any x an αὐτο-x (αὐτοέκαστον) was mechanically posited and hypostasized. But with the mathematical Dialectics of the later Theory of Ideas the pressure disappears. Thus Aristotle is hesitant in N, 1900b24: ἀλλὰ ταῦτά γε (sc. τὰ μεγέθη as derived from their principles) πότερον ἰδέαι ἔσονται (since the formal principle of e.g. lines is ideal 2) ἢ τίς ὁ τρόπος αὐτῶν etc.). The idea of, e.g., surface (two-dimensional figures and their relationships) is for Plato the Ideal Number 3 and not an ideal surface. The *first* actual, concrete (i.e. repeatable) trinity is surface – not a purely numerical triad of comparable units. The progeny of the One is (ideal) Number. The offspring of (ideal) numbers is extension and extended being. In common with the Pythagorean tradition units

and (non-ideal) numbers have ex*tension*. Thus it is further understood why Plato was against a geometry of *points* (V. *Metaphysics* A, 992a20-22).

[29] The Idea of Living Organism (αὐτὸ τὸ ζῷον) consists of the One and the Ideas of Length, of Breadth and of Depth; Aristotle *De anima* 404b18-21: αὐτὸ μὲν τὸ ζῷον ἐξ αὐτῆς τῆς τοῦ ἑνὸς ἰδέας καὶ τοῦ πρώτου μήκους καὶ πλάτους καὶ βάθους, τὰ δ᾽ ἄλλα ὁμοιοτρόπως. The first length is the Idea of Length, i.e. the Number of Length, *namely* 2. Cf. *Metaphysics*, 1090b20-24: τοῖς δὲ τὰς ἰδέας τιθεμένοις (sc. Plato who posited ideas as well as mathematicals) τοῦτο μὲν ἐκφεύγει (sc. an aforementioned difficulty affecting Speusippus' theory of first principles) – ποιοῦσι γὰρ τὰ μεγέθη ἐκ τῆς ὕλης (which is the μεταληπτικόν as space according to *Timaeus*, v. Aristotle's definitive statement in *Physics* 209b11-16) καὶ ἀριθμοῦ, ἐκ μὲν τῆς δυάδος τὰ μήκη, ἐκ τριάδος δ᾽ ἴσως τὰ ἐπίπεδα, ἐκ δὲ τῆς τετράδος τὰ στερεὰ ἢ καὶ ἐξ ἄλλων ἀριθμῶν· διαφέρει γὰρ οὐθέν - etc. The relative nondefinitiveness (ἴσως, ἢ καὶ ἐξ ἄλλων ἀριθμῶν) is a generalization referring to any holder of the basic view in question and not only to Plato.

But Plato is the main target here, and this confirms the Platonic ascription of the view in the *De Anima* passage. Immediately preceding there, Plato's constitution of the soul from elements (στοιχεῖα) in the *Timaeus* is referred to; while the view in question is introduced by the sentence: ὁμοίως δὲ καὶ ἐν τοῖς περὶ φιλοσοφίας λεγομένοις διωρίσθη. The ancient interpretative tradition takes this mostly as a reference to *Περὶ τἀγαθοῦ*. Probably, indeed, Aristotle means the Platonic concept of *true Philosophy*, i.e. dialectical mathematics with a view to eliciting first principles – exactly what was done in *Περὶ τἀγαθοῦ*. (Once again the promised *Philosopher* seems in effect realized in the unwritten lecture(s)).

Cherniss (*Aristotle's Criticism of Plato and the Academy*, Appendix IX, esp. pp. 567-70) argued against a Platonic reference in the *De Anima* passage (and in favour of a Xenocratean one). His main reasons are: 1) *Metaphysics* N, 1090b20-32 (where the same view with that of *De Anima* 404b18-21 occurs) does *not* refer to Plato but to Xenocrates; and 2) In *Metaphysics* Z, 1036b13-15 Aristotle makes a distinction among those who assert the Theory of Ideas: some of them make the dyad αὐτογραμμή while others make the form of line (εἶδος τῆς γραμμῆς) αὐτογραμμή; since the latter position represents the "orthodox" theory of Ideas, the former one could not be Plato's.

Cherniss' foundations are untenable.

As to the *second:* Aristotle's point in Z, 1036a26-b20 is an aporematic treatment of the issue how much from the being-determination in any given entity is due to its form, and what the remainder is, which has to be accounted by its matter. Should flesh, bones and such "material" parts of a man be included in his definition as parts of his form and λόγος? Should extentionality and the continuum be considered as belonging to the form of lines and figures? (Cf. 1043a34: καὶ γραμμὴ πότερον δυὰς ἐν μήκει ἢ [ὅτι] δυάς;). Aristotle distinguishes the two logical alternative answers to this question about geometricals and draws unlikely (from a commonsensical outlook) consequences from the negative answer. The affirmative one belongs evidently to that original and simple form of the Theory of Ideas (v. *supra* n. 26), which roughly consisted in hypostatizing over and above any and every x the X as the αὐτο-x or the idea of x (Cf. *Metaphysics* Z, 1040b30-4: προστιθέντες τοῖς αἰσθητοῖς τὸ ῥῆμα τὸ «αὐτό». Cf. also B, 997b5-12 and the αὐτοέκαστον in *Nic. Eth.* 1096a35-b5). Cherniss' "orthodox theory of Ideas" is this initial, rude form of it.

As to the *first:* Cherniss holds that *Metaphysics* N, 1090b20-32 refers to Xenocrates, since in the sequel 1090b32-1091a12 Plato is certainly meant (1090b32: οἱ δὲ πρῶτοι δύο τοὺς ἀριθμοὺς ποιήσαντες, τόν τε τῶν εἰδῶν καὶ τὸν μαθηματικόν etc.). But in fact Aristotle (a) starts with Speusippus (1090b13-20), proceeds (b) to Platonic doctrine (1090b20-27), criticizes (c) the Xenocratean position identifying ideal and mathematical number [1090b27-32; there is no theorem about the ideal number, unless, by confounding ideal and mathematical

number, one gets the theory he needs but at the price of altering the proper mathematical foundations of Mathematics and assuming some peculiar positions: ἀλλὰ μὴν οὐδ᾽ ὑπάρχει γε κατ᾽ αὐτῶν οὐθὲν θεώρημα, ἐὰν μή τις βούληται κινεῖν τὰ μαθηματικὰ καὶ ποιεῖν ἰδίας τινὰς δόξας etc. – a characteristic Xenocratean feat according to Aristotle (cf. 1086a5-11; and for two characteristic unmathematical principles of Xenocratean mathematico-ideal realities v. 1080b28-30]; finally Aristotle (d) returns to Plato (1090b32 sqq.).

(In *De Anima* 404b21-4 the quadruple division of apprehension in νοῦς, ἐπιστήμη, δόξα, αἴσθησις can be easily reconciled to Platonic doctrine; still, the application here is more likely Xenocratean. In any case it does not affect the ascription of the view in b18-21 one way or another).

For Plato then the first Breadth = the Idea of surface = 3, and the first Depth = the Idea of volume = 4. So clearly Themistius, *Paraphrases Aristotelis*, vol. II pp. 20.22-21.9 Spengel: τοῦ μὲν οὖν αὐτοζῴου, τουτέστι τοῦ κόσμου τοῦ νοητοῦ, στοιχεῖα τὰ πρῶτα ἐποίουν τῶν εἰδητικῶν ἀριθμῶν, τὴν τοῦ ἑνὸς ἰδέαν καὶ τὴν τῆς *πρώτης δυάδος* καὶ τὴν τῆς *πρώτης τριάδος* καὶ τὴν τῆς *πρώτης τετράδος·* ἐπειδὴ γὰρ ἐν τῷ νοητῷ κόσμῳ δεῖ πάντως τὰς ἀρχὰς παρεμφαίνεσθαι τοῦ αἰσθητοῦ, ὁ δὲ αἰσθητὸς ἐκ μήκους ἤδη καὶ πλάτους καὶ βάθους, τοῦ μὲν μήκους ἰδέαν εἶναι τὴν πρώτην ἀπεφήναντο δυάδα· etc. (This was Xenocrate's explanation, as well, *ibid.*: ταῦτα δὲ ἅπαντα λαβεῖν ἔστιν ἐκ τῶν περὶ φύσεως Ξενοκράτους). Probably, therefore, the (ideal) number of the Animal-in-itself is *10* (= 1+2+3+4). The (eidetic) Decade is the Intelligible Paradeigm in creation, the idea of the World, of the cosmic animal. Ideas of particular animals must be construed in a similar manner (ὁμοιοτρόπως): probably as number of decades. Thus Philoponus commenting on the passage from *de anima* maintains (v. V. Rose, *Aristoteles Pseudepigraphus* p. 28): φάσκειν γὰρ αὐτοὺς ὅτι τὰ εἴδη ἀριθμοί εἰσιν, ἀριθμοὶ δὲ δεκαδικοί· ἕκαστον γὰρ τῶν εἰδῶν δεκάδα ἔλεγον.

Other examples of ideal numbers would be the Harmonic scale in the Timaean constitution of the soul; and the Number in the *Republic*. The former amounted (according to a tradition, going back probably at least to Crantor or Theodorus of Soloi, and explained in *Timaeus Locros* §§208-212 (pp. 124-130 M. Baltes), and when all terms of the scale have been normalized in the form of integers), to 114.695. For Proclus (*Comm. In Tim.* II p. 236 Diehl) the sum is 105.947 (he omits the ἀποτομαί – halftones from the series).

[30] Aristotle's locus classicus in *Physics* 209b11-16: διὸ καὶ Πλάτων τὴν ὕλην καὶ τὴν χώραν ταὐτό φησιν εἶναι ἐν τῷ Τιμαίῳ· τὸ γὰρ μεταληπτικὸν καὶ τὴν χώραν ἓν καὶ ταὐτόν (hence μεταληπτικὸν = ὕλη). ἄλλον δὲ τρόπον ἐκεῖ τε λέγων τὸ μεταληπτικὸν καὶ ἐν τοῖς λεγομένοις ἀγράφοις δόγμασιν, ὅμως τὸν τόπον καὶ τὴν χώραν τὸ αὐτὸ ἀπεφήνατο. In the unwritten doctrines the μεταληπτικόν is defined of course as τὸ μέγα καὶ τὸ μικρό (cf. *ibid*. b33-210a2).

[31] This answers the Aristotelian objection in *Physics* 209b33-210a2, why are not the Ideas themselves in space. *Ideas are unrepeatable, being unique*, and thus exempt from space (and time). Beings in the sensible world are *repeatable*, hence properly in space (and time). The deeper reason for this difference is that while the participative (receptive) principle is the same in the two cases, the formal cause in the former case is the One itself with its absolute unifying potency, whereas it is (eidetic) Number in the other, with inferior power of holding and bonding together, with less intense cohesive faculty.

The uniqueness of Ideas is emphasized by middle Plato; e.g. *Republic* I, 597b-d, esp. 597c: ὁ μὲν δὴ θεός, εἴτε οὐκ ἐβούλετο, εἴτε τις ἀνάγκη ἐπῆν μὴ πλέον ἢ μίαν ἐν τῇ φύσει ἀπεργάσασθαι αὐτὸν κλίνην, οὕτως ἐποίησεν μίαν μόνον αὐτὴν ἐκείνην ὃ ἔστιν κλίνη· δύο δὲ τοιαῦται ἢ πλείους οὔτε ἐφυτεύθησαν ὑπὸ τοῦ θεοῦ οὔτε μὴ φύωσιν.

[32] The reality of this mechanism of instantiation, and the underlying structure of *ideal, ordinary* and *material* mathematics, constitutes mathematical truth as *divine necessity, θεία ἀνάγκη,*

which gods themselves cannot deflect (*Laws* Z, 818b sqq.). This (mathematical) divine necessity *binds by nature*, 818d8: οὕτω γὰρ ἀνάγκη φύσει κατείληφεν, ἣ φαμεν οὐδένα θεῶν οὔτε μάχεσθαι τὰ νῦν οὔτε μαχεῖσθαί ποτε. Just as mathematical is the way through which the Demiurge orders the world in *Timaeus*, so similarly mathematical must be the way the social human world is ordered, and proper care taken of man, by god, other divine being or divine man (818b9 sqq.). The reason being that reality is throughout mathematical, including divine reality (as C. Ritter correctly discerned the later point, *Platos Gesetze-Kommentar* pp. 213-4; although he inconsistently hesitated to affirm the universal validity of the principle, *ibid.* note to p. 213).

[33] Here we meet the analysis in *Philebus* and the applications in *Politicus*.

[34] Can the Xenocratean *indivisible lines* find here their forceful motivation?

[35] Cf. the difference between empirical and rational Harmonics or Astronomy.

[36] Cf. E, 450c-d; 471c sqq.

[37] 502c: συμβαίνει ἡμῖν περὶ τῆς νομοθεσίας ἄριστα μὲν εἶναι ἃ λέγομεν, εἰ γένοιτο, χαλεπὰ δὲ γενέσθαι, οὐ μέντοι ἀδύνατά γε.

[38] 473c sqq. Cf. 502b: εἷς ἱκανὸς γενόμενος, πόλιν ἔχων πειθομένην, πάντ᾽ ἐπιτελέσαι τὰ νῦν ἀπιστούμενα. The definite statement occurs in ΣΤ, 499. Plato rebuffs the taunt of the unscientific "realists", in reality mere opportunists (cf. 500b), against his best polity: to represent it as exemplary wishful thinking and utopian phantasizing (εὐχή) one has to deny the *possibility* of either the powerful becoming philosophic, or the genuine philosophers assuming sovereign power in human society; but there is no *reason* in support of such dogmatic position. 499c: τούτων (sc. the two alternatives) δὲ πότερα γενέσθαι ἢ ἀμφότερα ὡς ἄρα ἐστὶν ἀδύνατον, ἐγὼ μὲν οὐδένα φημὶ ἔχειν λόγον. Οὕτω γὰρ ἂν ἡμεῖς δικαίως καταγελῴμεθα, ὡς ἄλλως εὐχαῖς ὅμοια λέγοντες. On the contrary it is certain that when Philosophy reigns and the philosophers rule the best polity is realized whether in the past, in the present at some unknown place, or in the future. (Notice the exquisite sophistication of the formulations in 499c-d. Moreover, at the conclusion of the long sentence «εἰ τοίνυν ἄκροις εἰς φιλοσοφίαν… ἐγκρατὴς γένηται», Plato uses a temporal clause in place of some normally expected combined form of conditional; the apodosis is also emphatic: ὅταν αὕτη ἡ Μοῦσα πόλεως ἐγκρατὴς γένηται, γέγονεν ἡ εἰρημένη πολιτεία *καὶ ἔςτιν καὶ γενήσεταί* γε. *Whenever* Philosophy gets the power, the best polity obtained *and* obtains *and* will obtain). We do not know such instantiation, but reason shows that it is possible, although difficult to obtain: οὐ γὰρ ἀδύνατος γενέσθαι, οὐδ᾽ ἡμεῖς ἀδύνατα λέγομεν· χαλεπὰ δὲ καὶ παρ᾽ ἡμῶν ὁμολογεῖται (499d).

Disbelief in this salutary and true view is caused not by the inability of the many to accept the superiority of philosophy, but by the worthlessness of the actual pretenders at philosophy (499e-500b). incapable leadership is the real trouble; it discredits genuine philosophic guidance to the eyes of the many.

[39] 500e: οὐκ ἄν ποτε ἄλλως εὐδαιμονήσειε πόλις, εἰ μὴ αὐτὴν διαγράψειαν οἱ τῷ θείῳ παραδείγματι χρώμενοι ζωγράφοι.

[40] At the end of Book Θ, the polity of the *Republic* is denied by Glauco to exist anywhere upon earth; it lies as a design of the philosopher's own (591E: τὴν ἐν αὑτῷ πολιτείαν; 592A: ἔν γε τῇ ἑαυτοῦ πόλει) in thought (τῇ ἐν λόγοις κειμένῃ, 592B) ἐπεὶ γῆς γε οὐδαμοῦ οἶμαι αὐτὴν εἶναι. Socrates seizes the opportunity for a nice jocular turn: ἀλλ᾽, ἦν δ᾽ ἐγώ, ἐν οὐρανῷ ἴσως παράδειγμα ἀνάκειται τῷ βουλομένῳ ὁρᾶν καὶ ὁρῶντι ἑαυτὸν κατοικίζειν. Socrates has been tired arguing again and again for the realisability of his best polity, which he does not deny here. He strikes a jocular tone with his «ἐν οὐρανῷ» in replying, and then adds: διαφέρει δὲ οὐδέν, εἴτε που ἔστιν εἴτε ἔσται· τὰ γὰρ ταύτης μόνης ἂν πράξειεν, ἄλλης δὲ οὐδεμιᾶς. For the philosopher it is irrelevant whether his best design exists or will exist in sensible actuality: his actions will be guided by the best paradeigm (= example) of a

state anyway. One inhabits it by behaving according to its tone and pattern, thereby realizing it so far as depends on him. Παράδειγμα here is *exemplary design.* "In heaven, as it does not exist on earth. Besides, it is a heavenly design. The use of παράδειγμα in 472c-d is also non-technical. *Strictly speaking it refers to the optimal realization of an idea rather than to the Idea itself.* The variation of the actual approximations to such privileged optima has been explained above: it is the Philebean doctrine of variational distancing from the μέτριον. The reservation voiced provisionally and preemptively in 472b-473a regarding the realisability of the best polity (which is going to be proven in the sequel) concerns the necessary enhanced precision and *truthfulness* of λόγος as against deed and worked effect; 473a: ἆρ᾿ οἷόν τέ τι πραχθῆναι ὡς λέγεται, ἢ φύσιν ἔχει πρᾶξιν λέξεως ἧττον ἀληθείας ἐφάπτεσθαι, κἂν εἰ μή τῳ δοκεῖ;… Τοῦτο μὲν δὴ μὴ ἀνάγκαζέ με, οἷα τῷ λόγῳ διήλθομεν, τοιαῦτα παντάπασι καὶ τῷ ἔργῳ δεῖν γιγνόμενα ἀποφαίνειν· ἀλλ᾿, ἐὰν οἷοί τε γενώμεθα εὑρεῖν ὡς ἂν ἐγγύτατα τῶν εἰρημένων πόλις οἰκήσειεν, φάναι ἡμᾶς ἐξηυρηκέναι ὡς δυνατὰ ταῦτα γίγνεσθαι, ἃ σὺ ἐπιτάττεις. (Cf. the principle enunciated in *Phaedo* 99d-100a; 99e: ἔδοξε δή μοι χρῆναι εἰς τοὺς *λόγους* καταφυγόντα ἐν ἐκείνοις σκοπεῖν τῶν *ὄντων* τὴν ἀλήθειαν. …οὐ γὰρ πάνυ συγχωρῶ τὸν ἐν [τοῖς] *λόγοις* σκοπούμενον τὰ ὄντα ἐν εἰκόσι μᾶλλον σκοπεῖν ἢ τὸν ἐν [τοῖς] *ἔργοις.* Thus Dialectics starts. Rational Harmonics and Astronomy are contrasted in the *Republic*, Z to the inferior empirical corresponding studies. And so the *intelligible* astral order (τὸν ἐν τοῖς ἄστροις νοῦν τῶν ὄντων) is emphasized in the *Laws*, 969e1).

The qualification therefore expressed in 472b-473a has nothing to do specifically with the best polity of the *Republic*; it equally affects any design ἐν λόγῳ of some appropriate constitution, say that of the second best in the *Laws*, or any other. Every sensible reality suffers from such unstable approximability to the norm, even the paradeigmatically divine celestial movements (*Republic* Z, 530a-b) or the relationships of audible harmony (*ibid.*, 531a-c). (Notice 530b1-4, with reference to astronomical entities, measures and relationships: οὐκ ἄτοπον, οἴει, ἡγήσεται τὸν νομίζοντα γίγνεσθαί τε ταῦτα ἀεὶ ὡσαύτως καὶ οὐδαμῇ οὐδὲν παραλλάττειν σῶμά τε ἔχοντα καὶ ὁρώμενα, καὶ ζητεῖν παντὶ τρόπῳ τὴν ἀλήθειαν αὐτῶν λαβεῖν;). Realisability has nothing to do with the *degree of detailedness* in the design in question, or to *its grade of approximation* to the best paradeigm-example (instantiation) of the Idea of State.

[41] 712a: ὡς ὅταν εἰς ταὐτὸν τῷ φρονεῖν τε καὶ σωφρονεῖν ἡ μεγίστη δύναμις ἐν ἀνθρώπῳ συμπέσῃ, τότε πολιτείας τῆς ἀρίστης καὶ νόμων τῶν τοιούτων φύεται γένεσις, ἄλλως δὲ οὐ μή ποτε γένηται. ταῦτα μὲν οὖν καθαπερεὶ μῦθός τις λεχθεὶς κεχρησμῳδήσθω, καὶ ἐπιδεδείχθω τῇ μὲν χαλεπὸν ὂν τὸ πόλιν εὔνομον γίνεσθαι, τῇ δ᾿ εἴπερ γένοιτο ὃ λέγομεν, πάντων τάχιστόν τε καὶ ῥᾷστον μακρῷ.

[42] The choice must depend on the human "matter" available. Thus the *Laws* enjoin private ownership of house and land, instead of communal agriculture, ἐπειδὴ τὸ τοιοῦτον μεῖζον ἢ κατὰ τὴν *νῦν* γένεσιν καὶ τροφὴν καὶ παίδευσιν εἴρηται (739e8-740a2).

[43] The identical understanding of what is "one's own" (namely, their own) among the guardians in the *Republic* extends over all of them a common (so far as this is possible) response in terms of each one's feelings of pleasure and pain; 464d: ἀλλ᾿ ἑνὶ δόγματι τοῦ οἰκείου πέρι ἐπὶ τὸ αὐτὸ τείνοντας πάντας εἰς τὸ δυνατὸν ὁμοπαθεῖς λύπης τε καὶ ἡδονῆς εἶναι. Still this (and the other attitudes and behavior) is conditioned by the residuum of privacy, one's own body (διὰ τὸ μηδὲν ἴδιον ἐκτῆσθαι πλὴν τὸ σῶμα, 464d), as well as by the existence of other classes in society where the communal organization of the guardians does not hold. In the best *(first)* polity of the *Laws*, such conditions are cancelled to the uttermost extent possible: one compares with the Saturnian life.

[44] In fact it may be differentiated from it, in that the members of this society are *men* under the immediate tutelage of divine beings (713d). In that case even the Saturnian society would be a second best.

[45] The same in *Politicus* 292a-300e.

[46] Cf. 807b.

[47] What strikes as *excessive* in Plato's sense of social harmony is the apparent overdose of bounding determinacy in his concrete weaving of the State-fabric. He seems to think in terms of a world-era close enough to the initial stages of the World's self-government according to the *Politicus* myth. In fact he shares what I have called the *"hybris of order"* which was committed in the classical age of antiquity. (Cf. A.L. Pierris, *Hellenistic Philosophy: Continuity and Reaction in an Oecumenical Age*, in K. Boudouris (ed.), *Hellenistic Philosophy* pp. 133-135, esp. Excursus I: *On the Hybris of Limitation and Order, ibid.* pp. 144-152). The second principle of the supreme bipolarity is conceived as evil.