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"T H E   I N T E R P R E T A T I O N

O F

P L A T O ' S   ' T I M A E U S ' . "

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## PREFACE.

It is a healthy feature of the best modern Platonic exegesis that it seeks to obtain a really historical and objective understanding of Plato's thought by reference to the early tradition, so far as this can be recovered from the critique of Aristotle and from the explanatory commentaries of antiquity. The object of this thesis is to try, following the same plan, to supplement the original text of what is perhaps Plato's most difficult dialogue, the "Timaeus", by means of an examination in particular of Proclus' Commentary and of the "de Anima Procreatione in Platonis Timaeo" and the "Quaestiones Platonicae" of Plutarch. The true value of the Commentary of Proclus has been in the past obscured by his unfortunate *idée fixe* that the "Timaeus" is to be read and interpreted in the light of the "Chaldaic Oracles" and the "Orphic Poems", by which the Neo-Platonists attempted to secure divine authority for their teaching. Apart from mystical extravagances, however, Proclus' Commentary and his own exposition contain much that is both suggestive and instructive, and, though I do not profess to offer a new interpretation of the "Timaeus", I hope to be able to bring out something of the real worth of Proclus' more or less neglected work.

The plan I propose to follow is to select

for separate comment and discussion the most important general topics and problems arising out of the "Timaeus" and determining its interpretation. For this purpose I thought it best to reserve a special chapter for a fairly detailed outline of the general argument of the discourse of Timaeus, and to add bracketed notes in confirmation and elucidation.

The text followed in Proclus is that of Diehl, and references are to the three books of his edition, and not to the five books of the actual Commentary. In Plutarch, I have used the Teubner Edition of the "Moralia" by G.N. Bernardakis. I was permitted by Professor Taylor to read some of the proofs of his Commentary on the "Timaeus", and, though I do not know whether this work has yet been published or not, I have taken the liberty of referring to it frequently.

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## CHAPTER I.

### The Interpretation of the "Timaeus".

The "Timaeus" is for many reasons a singular Platonic "dialogue". Apart from its introduction, in form it is really not a dialogue at all, but a monologue or continuous discourse delivered by one man, and it is the only Platonic work which is taken up with the advancement of a detailed cosmological scheme. In addition to physical doctrines, it embraces within its scope speculations also on metaphysics and ethics, physiology and therapeutics, pathology and psychophysics. The whole dialogue is a curious mixture of imagination and reason, and bristles with debatable points. So far from professing to be an accurate treatment of its subject, it claims to be nothing more than a "tale" (*μῦθος*), although a "likely" (*εἰκῶς*) one. It contains much that is a priori and fanciful, so that it is difficult to determine beyond dispute what is merely "Dichtung" and what is meant as "Wahrheit", to distinguish between pictorial embellishment and serious philosophy.

There are thus two fundamental questions which suggest themselves and on which any interpretation of the dialogue must turn, viz., (1) How much of the exposition is doctrine? How much is put forward *διὰ μυθολογίας*, and how much *διὰ δίδαχῆς*? (2) Is it Plato's doctrine? If not, whose is it, and to what extent, if any, may we suppose Plato himself to be in agreement with it?

At this stage I must more or less content myself with simply stating the two problems, but it will be convenient to make some general observations about the Platonic dialogues and their interpretation.

Now it is plain that the dialogues of Plato can only be rightly read in the light of the purpose for which they were written. This is the *ἀεξι* from which any proper estimation of the dialogues must start, and in this connexion I may be permitted to summarize under **four** heads the outstanding arguments of Professors Burnet and Taylor. (1) The dialogues of Plato are remarkable in that their "dramatis personae" are not fictitious figures, like those for instance in the dialogues of Hume, but are generally well-known named historical persons of whom accounts have come down to us, men whom we know to have figured in the political and intellectual life of Athens during the generation of Socrates and that of Plato - e.g. the two famous Sophists Gorgias and Protagoras, the Eristics Euthydemus and Dionysodorus, the young mathematician Theaetetus, above all, Socrates himself. Timaeus, the eponym of our own dialogue was, despite M. Rivaud's denial, a fifth-century Pythagorean - a fact which is not only testified by a unanimous tradition but is corroborated by the whole character of the cosmology put into his mouth. Is it

then likely that Plato made the various interlocutors of his dialogues speak, not in a manner demanded by their historical characters, but as he himself wanted them to speak? Are we to suppose that he deliberately outraged historical truth and took unpardonable liberties by fathering on two of his characters in particular, Socrates and Timaeus, views and theories of his own? A significant fact is that there are only two anonymous speakers in the dialogues - the "visitor from Elea" in the "Sophist" and the "Politician", and the Athenian legislator of the "Laws", and it is reasonable to infer that Plato purposely made use of this literary device to allow himself perfect freedom in the expression of the specifically logical and juristic matter with which the two speakers respectively deal. In short, we must not lose sight of the fact that Plato was a consummate dramatist, and that his productions are in a real sense philosophical dramas. (2) It seems clear that Plato did not intend his dialogues to serve as a systematic body of knowledge from the fact that Aristotle, his most famous disciple, speaks at "Physics" 203<sup>a</sup> 6, 209<sup>b</sup> 25, of certain *ἀγγραφα δόγματα* or "unwritten teaching" in a manner which implies that these enunciations embodied Plato's own crystallized thought. These *ἀγγραφα δόγματα* probably mean in particular Plato's famous lectures *Περὶ Τάγαθοῦ*, of which notes were taken and published by Aristotle and at least four other auditors- Speusippus,

Xenocrates, Histiaeus, and Heraclides of Pontus (cf. Aristotle's Fragments, Rose p.41). Plato was evidently a lecturer before he was an author, and a director of research before he was a lecturer. The Academy, and not the dialogues, constituted his life-work. He took care, as his master did before him, never to confuse "education" with "information"; for him "learning" meant not the passive absorption of ascertained facts, but active engagement in original research. The Seventh Epistle (341<sup>d</sup>) gives us his flat disavowal of any intention or even ability to articulate his thought into a definite written "system". That Plato could never have composed an educational compendium is just the most cogent argument against the authenticity of "Alcibiades I" as a work written by Plato himself. (3) Probably using as his authority the *ἀγραφα δόγματα* referred to, Aristotle at "Metaphysics" A.6 gives an account of an esoteric Platonic "doctrine" (*πραγματεία*) which is much more definite and indeed different from anything we can extract from the dialogues. The doctrines which this account summarizes must have been taught by Plato at least as early as 367, the date of Aristotle's admission to the Academy, twenty years before Plato's death, since Aristotle knows nothing of any volte-face in Plato's teaching. (4) Philological and stylometric enquiries conducted during the last fifty years make it reasonably certain that a broad line of demarcation is to be drawn in

Plato's literary activity between an earlier series of dialogues culminating in the "Republic" and a later series composed between 367 and 347 and consisting of the "Theaetetus", "Parmenides", "Sophist", "Politicus", "Timaeus", "Philebus", and "Laws". The first series reflect a more or less homogeneous and consistent body of thought; they present real conversations and it is plain from the central place given to Socrates that Plato, like other "viri Socratici" such as Xenophon and Antisthenes, is here seeking to furnish a faithful portrait of his master. The later dialogues, however, are characterized by a tendency to continuous and philosophical exposition; the dialogue ceases to be a colloquy and becomes a disquisition. In keeping with this tendency is Plato's avoidance of the earlier dramatic method of indirectly reported narrative for that of directly enacted dialogue. As the earlier dialogues were intended to serve as aide-memoires or memoranda of the Socratic "conversations", so, it would appear, these later dialogues were primarily intended to interest the intelligentsia of cultivated readers and to initiate them into philosophy. They certainly do not reproduce Plato's teaching to his personal associates in the Academy, since we cannot elicit from them those points of doctrine which Aristotle in the "Metaphysics" represents as ἴδια Πλάτωνος.

In view of these considerations, I think we can hardly fail to agree with the position of Professors

Burnet and Taylor, that it is quite impossible to construct from the dialogues of Plato any coherent and systematic "Vade Mecum" of the Platonic "philosophy". It is wrong in principle to suppose that all the various parts of the Platonic corpus can be connected organically into a clearly articulated "catalogue raisonné". In interpreting the "Timaeus", therefore, it follows (1) that it would be quite illegitimate to regard Timaeus simply as Plato's *προφήτης*, and (2) that it would be equally inadmissible to try to quadrate the thought of this dialogue with that of others, as Archer-Hind does, so as to exhibit the "Timaeus" as "a master-key, whereby alone we may enter into Plato's secret chambers" (Archer-Hind's Edition, Introduction, p.2). The "Timaeus" is no "Open Sesame" to Platonism, and is not intended to convey any of the distinctively Platonic doctrines of which Aristotle tells us.

Does this, then, warrant the assumption that the "Timaeus" is simply a reproduction of doctrine to which Plato himself was indifferent? I do not think it does. It is hardly conceivable that Plato ever contented himself, even in the earlier works, with the bare task of simply recording the thought of others, and that he did not interblend in some degree at least observations of his own with earlier speculations with which he felt sympathetic and which may have influenced the direction which his own distinctive doctrine took. Plato's relation to the "Timaeus"

can hardly be that of impassive reporter and no more.

The earliest tradition, with the possible exception of Aristotle, seems to have assumed without question that

the "Timaeus" embodies Platonic thought. Crantor,

ὁ πρῶτος τοῦ Πλάτωνος ἐξηγητής (Proclus, Diehl I.76.1)

and a pupil of Xenocrates, evidently thought that it was

Plato he was expounding when he wrote his *Ἐπομνήματα*

or Commentaries on the dialogue. Xenocrates himself seems

to have based a treatise on part of the dialogue, viz., the

*Περὶ Ψυχῆς* mentioned by Diogenes Laertius IV.13. Even

Aristotle frequently refers to the dialogue by means of the

expression "Plato in the Timaeus" or by the word "Plato"

alone - e.g. "Met." 1071<sup>b</sup>32, 1072<sup>a</sup>2. "de Anima" 404<sup>b</sup>16. "de

Gen." 325<sup>b</sup>24, 332<sup>a</sup>29. Later tradition appears to have

regarded the dialogue as the very centre of Platonism.

Proclus (Diehl I.13.14) records approvingly the statement

of Iamblichus that between them the "Parmenides" and the

"Timaeus" embody the whole Platonic philosophy about the

"omne scibile", the former laying more stress on intelligible,

the latter on concrete existences. Plutarch devotes more

than one *ἔγγραφο* to the problems arising from the dialogue,

and wrote a complete essay *Περὶ τῆς ἐν Τιμαίῳ ψυχογονίας*.

Cicero translated the work into Latin, while much of Plotinus'

"Enneads", the fourth "Ennead" in particular, is largely a

recension or *réchauffé* of the "Timaeus". In his references

to the dialogue, Plotinus continually names Plato - e.g.

Ennead II.1.5, 1.7, III.6.11-12, 7.13, 9.2. IV.3.22, 4.22.

V.1.8, 9.9. VI.2.1. Such unanimity amongst the writers of antiquity as to the character of the dialogue and its importance in Plato's thought, while from the considerations already adduced it should not lead us to look upon the "Timaeus" as a sort of "passe-partout" to "Platonism", at least justifies our keeping an open mind on the question of Plato's agreement with the main position and general spirit of the dialogue.

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CHAPTER II.

The Introduction of the Dialogue.

I. The Personnel and Dramatic Situation. The personnel of the "Timaeus" consists of Socrates, Timaeus, Critias, and Hermocrates. Proclus assumes without question throughout that Timaeus was a Pythagorean (cf. Diehl I.71.19, 204.3, 237.5, III.168.8), so that this was clearly the accepted tradition. He records the "universal agreement" (*δμολογεῖται παρὰ πάντων*) that Plato had at hand the treatise of the Pythagorean Timaeus (I.7.17), implying at I. 13.12. that this is the Timaeus of our dialogue. At I.223.5 he comments on the sustained and didactic character of Timaeus' discourse in contrast with Socrates' method of eliciting the truth by dialectical examination of the opinions of others, and this, he says, proves of itself that "Timaeus is a Pythagorean and that he is keeping to the form used by the Pythagoreans in their discussions". The tradition is shown to be right by Plato's own description of Timaeus at 20<sup>a</sup> as one who had distinguished himself both in office and in philosophy at the "Italian Locris" and by the further description of him at 27<sup>a</sup> as expert in astronomy and natural science; while the character of his "Naturphilosophie" enables us, as Professor Taylor has conclusively shown in his Commentary, to specify still further that he was a fifth-century Pythagorean of the same type as Philolaus (cf. Burnet, "Early Greek Philosophy" III. 278.9). That Plato does not explicitly describe him as a Pythagorean is in keeping with the habitual care he

elsewhere takes to refer to Pythagoras or the Pythagoreans only in veiled and covert language. Thus it is to the Pythagorean order that Plato alludes at "Gorgias" 507.8 when he mentions "the sages" who hold that "reciprocity" (*κοινωνία*) is the basis of all moral and physical order; and again when at 493-4 he mentions some "Sicilian or Italian wise man", it is probably to Philolaus or some such Pythagorean rather than to Empedocles that he is referring (this passage is also worthy of notice for its significant coupling of "Sicilian" and "Italian", since the amalgamation of Pythagorean mathematics and the views of the Sicilian Medical School was just what Philolaus sought to do). The *εἰδῶν φίλοι* whose absolute dualistic severance of real "being" and illusory "becoming" is discussed and criticized at "Sophist" 245. ef. probably mean certain Pythagoreans, as Professor Campbell first supposed; and it is certainly Pythagoras who corresponds to the "Prometheus" spoken of at "Philebus" 14c as having revealed to mankind the distinction between *πέρας* and *ἀπειρία*.

Critias, as Professor Burnet proves, cannot be the Critias who played a prominent part in the oligarchical usurpation of 404-3, but is the grandfather of this Critias and Plato's own maternal great-grandfather. The detested Critias *ὁ τῶν τριάκοντα* was no "persona grata" to Athenian memory and to name a dialogue after him would certainly have been a serious "faux pas" on Plato's part. Similarly we cannot **but** agree that Hermocrates is the man

who was general of the Syracusan forces during the Athenian Sicilian Expedition, 415-413. For it is clearly implied in the introduction that, while Timaeus and Critias are both old men of learning and experience, Hermocrates is a young man of promise with his career still before him. This no doubt is the reason why he remains more or less a *κωφὸν πρόσωπον* throughout. A fourth person, we learn (17<sup>a</sup>), had been prevented by illness from appearing at the meeting. Who is meant it is impossible to say and Proclus, who mentions various conjectures made by *οἱ παλαιότεροι* (as, e.g. that it was Theaetetus or even Plato), is probably right in agreeing with the suggestion of Atticus that the absentee was, like Timaeus, a stranger to Socrates, which explains Timaeus' apology for his absence (Proclus I.19 30f. cf. I.15.)

The situation at the opening of the dialogue is this. On the previous day Socrates had repeated to Timaeus, Critias, Hermocrates and the fourth person the conversation recorded in the "Republic," and to requite his hospitality the others had agreed to regale Socrates with a return "feast of reason" by "supplying the sequel" (20b). Socrates would like to hear theory converted into practice, but distrusts his own ability to give his picture the touch of life. The three friends by their happy combination of philosophy and statesmanship are alone qualified to make good the deficiencies of the doctrinaire. It is proposed, therefore, that Timaeus should give an account of the creation

of the world and thus bring to birth in theory the men whom Socrates had trained, while Critias is to depict them as living and active in practice by narrating what is claimed to be an ancient legend preserving details of the constitution and achievements of pre-historic Athens and by directing attention to the similarity of its institutions to those of Socrates' *καλλίπολις*. Thus the three dialogues "Republic", "Timaeus" and "Critias" are expressly connected together, though logically, of course, the order should be "Timaeus", "Republic", "Critias". Proclus remarks upon this anomalous position of the "Timaeus" in the trilogy at I.200.4f. Why, he asks, does not the "Timaeus" precede the "Republic", since its theme is the *γένεσις* or beginning of mankind and *γένεσις* is prior to *τροφή*? Proclus' own answer is that it is with the analysis of moral and not of physical values that Socrates is concerned and that in treating of man's training and education he is considering the universal, so that in rational (*λόγῳ*), though not in natural order (*κατὰ φύσιν*), the "Republic" rightly takes first place. For though the "Republic" may be inferior to the "Timaeus" in that its theme is more partial, yet in point of treatment of the universal it is superior. For the same conditions give us equally justice (*δικαιοσύνη*) in a soul, a constitution (*πολιτεία*) in a city, and skill or workmanship (*δημιουργία*) in a world (201.10). Indeed, in the "Republic" itself the citizens are first duly trained and educated in the various preliminary pursuits of learning

before they are allowed to study τὰ ὄντα, from which again they descend to take their part in active life.

II. The Recapitulation of Republic I -V. At the request of Timaeus, Socrates first of all refreshes the memories of his companions by again recounting in brief ( ἐν κεφαλαίοις πάλιν ἐπανελθεῖν, 19<sup>a</sup>) the conversation held at the house of Polemarchus. He gives a short résumé of the political and sociological institutions which form the matter of the first five books of the "Republic" - the division of society into artisans and guardians according to the economic formula "one man, one trade", the development of the psychological elements of Spirit and Love of Knowledge in the guardians by means of gymnastic, music and such studies, the abolition of private interests, the admission of women to the employments of men, and the control of marriage on eugenic lines. No mention is made by Socrates of the metaphysical teaching of the "Republic" and it is sometimes supposed, therefore, that the "Timaeus" is intended to reflect an ontological doctrine improving on or replacing that of the "Republic". But the true explanation is clearly the simple one that in recapitulating the conversation Socrates' object is not to expound metaphysics but only to describe the constitution of the perfect commonwealth; what he wants particularly, as he himself says (19 b,c.), is a representation of his ideal city acting in accordance with its structure, and its structure is therefore all he has occasion to describe.

The same consideration explains the fact that, in describing the *τροφή* of the *φύλακες* at 18a, Socrates makes no reference to their training in "geometrical investigations and the kindred arts" (*αἱ γεωμετεῖαι τε καὶ αἱ ταύτης ἀδελφαὶ τέχναι* Rep. VI.511) - Arithmetic, Plane and Solid Geometry, Astronomy, Harmonics - and in Dialectic, the *θρυγκός* or "coping-stone" of the sciences. For, as Professor Taylor remarks, the scientific education prescribed for the *φύλακες* in the "Republic" would hardly have been feasible in the pre-historic Athens in which Critias finds the concrete embodiment of Socrates' political ideals. Gomperz ("Greek Thinkers", Eng. Trans. p.203) interprets Socrates' silence in a similar manner. That Plato had not abandoned his conception of the importance of the various special *μαθήματα* as a training for statesmanship and of their comprehension under the all-controlling science of Dialectic is clear from "Laws" XII, where in discussing the education of the supreme "nocturnal council", the Athenian legislator insists that the members must be thoroughly scientific mathematicians and astronomers (966 f.). The "Epinomis" also is devoted to the discussion of the *σοφία* of the true statesman and in a similar spirit lays stress on the importance of astronomy based on a scientific arithmetic and crowned by a synoptic insight into the fundamental unity pervading and connecting the whole sphere of knowledge.

Proclus discusses this *ἐπάνοδος τῆς*

*Πολιτείας* at length (Diehl I. 29.31 - 75.26). One party of interpreters, he tells us, gives to this part of the dialogue an especially ethical significance, understanding it to mean that before engaging in physical speculation one must first learn regulation of character. Another party regards the résumé and the tale of Atlantis which follows as a preliminary picture, by means of images (*εἰκονικῶς*) and symbols (*συμβολικῶς*), of the creation and structure of the universe, in accordance with the Pythagorean custom of prefacing scientific exposition with relevant similes and illustrations (30.4, 33.8). Here the reference is clearly to Porphyry and his disciple Iamblichus respectively, for (a) at 19.24 we are told that at almost every point Porphyry interprets the introduction in a more social vein (*πολιτικώτερον*), Iamblichus in a more physical (*φυσικώτερον*), and an illustration of their different points of view is given at 116.27-117.20, and (b) at 202.3 the first way of looking at the résumé is expressly ascribed to Porphyry. It is Iamblichus' interpretation that Proclus favours. The whole dialogue, he says, is physical in character throughout, though the form varies in different places, and the recapitulation of the "Republic" gives us as it were a bird's-eye view of the arrangement (*διακόσμησις*) of the universe (54.27). It is simply a panoramic adumbration of *ἡ τοῦ κόσμου δημιουργία* (72.19), and Proclus is therefore at considerable pains to draw attention to various fantastic



points of analogy between the ἑπάνοδος (ἑπανάλυψις, ἀνακεφαλαίωσις) and the rest of the dialogue - cf., e.g., I.33.23, 36.7, 44.6, 48.26, 49.21, 52.15, 53.24.

III. The Tale of Atlantis. Socrates would now like to hear of the state's relations and wars with other cities and to see her generally acquitting herself in a manner worthy of her education and training (19C). In reply Critias briefly relates what purports to be a "vera historia" preserved by the Egyptians about the subjugation of a vast island called Atlantis by an antediluvian Athens and the island's subsequent destruction and submersion in a day and night. This is, of course, somewhat miraculous geology, but, like the similar destruction of Athens by means of a flood, it serves as a convenient though transparent device for getting rid of Atlantis and wiping the fiction off the map. For here we can safely say of Plato "il a inventé l'histoire". Yet the amount of speculation that has been occasioned by such a manifest piece of the imagination is remarkable. Proclus is so firmly convinced of the philosophical importance of δ περὶ τῆς Ἀτλαντίδος μύθος that he devotes 150 pages to its discussion (I. 75.30 -204), and he gives us a detailed record of the various opinions regarding the authenticity and purpose of the narrative. (1) Grantor considered the tale to be simply a bare chronicle of facts (ψυχρὴ ἱστορία, 76.1). Plato had been ridiculed for "Egypticizing" in his "Republic" and was so affected by the gibe that, by means of this tale



(the truth of which is testified by records still preserved by the Egyptian seers), he shows that the Egyptians themselves acknowledge that there had existed such an Athenian πόλις as Socrates describes in the "Republic".(2) Others regarded the account as a "fable and fabrication" (μῦθος καὶ πλάσμα, 76.10), but as at the same time an illustration of the factors operating in the universe at large. These, objects Proclus, ignore Plato's explicit avowal that the tale, though extraordinary, is "absolutely true", and the expression "absolutely" (παντᾶ πασι), he urges, is surely significant. (3) Others again, without repudiating the literal truth of the narrative, believed that its real purpose is to symbolize the "diversities" (ἐναντιώσεις, 76.19) pre-existing in the universe, as, e.g., the "opposition" of fixed stars and planets (Amelius) and of good and bad daemons or "spirits" (Origenes). Of the same nature was the interpretation favoured by Iamblichus and Syrianus and approved by Proclus himself, viz., that while the tale must be regarded as true and authentic, it has a meaning applicable to the universe at large and has to be taken in conjunction with the summary given of the Republic. The πολιτεία described corresponds to union and sameness in the κοσμοποιία, the πόλεμος to disruption and difference (78.15). (4) Longinus (c.213-273 A.D), believed that the sole object of the tale is to interest and win over the hearer (ψυχαγωγεῖν, 83.23) in preparation for the severe scientific exposition ^

which is to follow. Whether Longinus regarded the tale as an historical account or not Proclus does not say, but we may gather from 129.10-21 that he did.

Proclus reverts again to the various interpretations of the narrative at I.129.9. There seem to have been two mutually opposed sets of interpreters: (1) those who conceived it to be simply a straightforward historical record ( *ἱστορία ψιλὴ* ), intended primarily for the *φυλαγωγία* or capture of the hearers (i.e. Crantor and Longinus), and (2) those who regarded the narrative as a romance or story (*μῦθος*), but as a story with a meaning, just as the fable of Phaeton at 22c of the "Timaeus" signalizes a natural event, and who accordingly gave a physical interpretation to the tale. These were the two camps of the opposition (130.8 - *ταῦτα μὲν οὖν ἑκάτεροι λέγουσιν*). Proclus himself compromises, with Iamblichus and Syrianus, by maintaining that the tale is *ἱστορία* but that it is also a symbolical indication of cosmic "diversity" (130.9. 132.16). That the island of Atlantis existed in fact is confirmed, he says, by the evidence recorded in the "Ethiopics" of Marcellus (177.10 -21) that in the sea beyond there used to be ten islands one of which was in possession of a tradition to the effect that in former times all ten had been governed by a larger island named Atlantis. Proclus emphasizes the truth of the story once more at 190.7 - *οὐ πέπλασται τὰ ἐγθίντα, ἀλλ' ἀληθὴ ἔστι*, and insists again on its cosmic significance. In fact, he

concludes (204.16f.), the whole of the preface of the "Timaeus", which Severus had considered unworthy of any interpretation, fits in with the scope and subject of the dialogue. It all serves as a suggestive *προοίμιον* or preamble to the ensuing scientific discourse; it is a sort of *προτέλεια* or initiatory ceremony before we pass from *τὰ μικρά* to *τὰ μέγιστα* (206.20).

The true comment on all this is that which seems to have been made by Longinus, that "Plato does not use riddles to expound his doctrines" (129.15).

The vision of a submerged "lost continent" has fired the imaginations and inspired the researches ever since of explorers, geographers, geologists, archaeologists, biologists, and even though the evidence is always inconclusive, speculation on the subject is still rife. We may mention three of the very latest theories. (1) Attention has been drawn to certain affinities in type, art, and religious outlook between the Neolithic cave-dwellers of Spain and Southern France and the natives of Mexico and Yucatan, and it is suggested, therefore, that for ethnological reasons the sunken Atlantis is to be found in the ocean-bed of the Atlantic Ocean. (2) There was formerly, during the Bronze Age, a land-link or ridge between England and the mainland of Europe, still discernible in the Dogger Bank - scientists are satisfied of the fact - and accordingly a Swedish professor and geologist has come forward and declared that here is Plato's

fabled continent, beneath the waters of the North Sea.

(3) Finally, a Professor Borchardt, of Munich, is now trying to prove that the mystery continent is not beneath the Atlantic nor the North Sea, but is a portion in the North-North-West of North Africa, the now almost dried up shott el Djerid, and the Director of the Archaeological Board in Tunis, Professor Poinso, has granted permission for work of excavation to be begun.

Really, however, the whole tale is nothing more than an ingenious romance and fantasy, to which Plato adroitly gives plausibility by referring to Solon as his authority. Critias' complicated explanation of its provenance is itself sufficient to show that the narrative is a concoction. He heard the story, he says, from his grandfather, who heard it from his own father Dropides, who heard it from Solon, who again heard it in Egypt from a priest, who finally got it from "sacred records" in an Egyptian temple. It will be noticed that Socrates' objection to the fitness of the poets to supply his want is just that they are "imitative" and lack imagination (19<sup>d</sup>), which pretty plainly implies that the whole tale is a figment of Plato's own imagination. The object is transparent. Socrates asks to hear of his *καλλίπολις* in action, and this is done by the tale of Atlantis. The narrative is closely connected with the recapitulation of Republic I -V, which precedes, and serves to justify and defend the sociological views there expressed. Plato never seems to

have regarded the pattern city of Socrates' dreams as an impracticable ideal; even in the "Laws" he does not really recant what is proposed in the "Republic", but only undertakes the construction of a form of society which shall serve as an easier and more tolerable "pis-aller." In the "Republic" Socrates continually reiterates his confidence in the feasibility of his imagined commonwealth. "That the Muse of philosophy should become mistress of a city is not impossible, nor are the things we describe impossible. But we admit that they are hard" (499<sup>d</sup>). "Our proposals are desirable if they can be realized, and their realization is difficult, but not impossible" (502<sup>c</sup>). "Our words concerning city and constitution are not mere pious prayers; our proposals are difficult, but somehow practicable" (540<sup>d</sup>). Plato regarded the visionary *πόλις* described by Socrates as something more than a "civitas dei", and we may suppose that he offers in his invented pre-historic Athens a firm defence of his political aspirations, adding still further conviction to the portrait by putting the tale into the mouth of one who was himself an embodiment of philosophy combined with state-craft (19<sup>c</sup>, 20<sup>a</sup>). "The imaginary citizens and city which yesterday you described to us, we will now convert into historical reality, and we will consider the state established by you as none other than ancient Athens. They will tally in every respect, and we shall not be far from the mark in asserting that your citizens are the veritable people who existed at that time" (26<sup>d</sup>). The

narrative is "a real fact, though unrecorded in history" (21<sup>a</sup>, 21<sup>d</sup>), "no pictured tale, but a true record" (26<sup>c</sup>). It is easy to "read between the lines" and to see that these reiterated protestations are meant simply to convince readers that the imaginary city of Socrates is no chimerical, quixotic Utopia, but an ideal within human attainment and one that had found a parallel in the distant past. Proclus also sees this point. For at I.191.27f. he observed that, looking at the *μῦθος* in another way, it shows that it is possible for *ἡ πολιτεία Σωκράτους* to exist in actuality, and that is why Socrates receives it with such enthusiasm. This consideration, he urges, justifies the conclusion that the tale "was not after all a fabrication" ( *οὐκ ἄρα ἦν πλάσμα*, 197.18).

The moral of the *μῦθος* is equally patent.

Not only can the ideal *πόλις* exist in actuality, but it can exist with success. The tale symbolizes the conflict of culture and materialism, and indicates that *φιλοσοφία*, represented by ancient Athens, will always justify itself. So in the "Critias", where the narrative is again taken up, we are told that Hephaestus and Athens<sup>a</sup>, being united both by blood and by "love of philosophy", were allotted a land naturally adapted for "wisdom and virtue"- Athens (109). The men and women of ancient Athens were renowned all over the world for the many "virtues of their souls" (112). For many generations the people of Atlantis likewise united "gentleness with wisdom" and despised everything but virtue,

but gradually their lower nature asserted itself until Zeus sent retribution(120). The moral could not be put more clearly. It is noticed by Proclus himself, for he remarks at I.173.9 that the subjugation of Poseidon by Athens, celebrated by the Athenian festival and re-enacted in the defeat of Atlantis by antediluvian Athens, stands virtually for the victory of the intellectual life (νοεὶς ἰσχύς) over γένησις, of the spiritual and united over the material and divided.

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CHAPTER III.

The Discourse of Timaeus.

General Argument.

Timaeus commences his discourse concerning the  $\gammaένεσις$  τοῦ  $κόσμου$  by laying down the broad distinction between that which is eternal ( $τὸ ὄν αἰεί$ ) and is intelligible, and that which is always becoming or coming into being ( $τὸ γιγνόμενον αἰεί$ ) and is sensible. He further assumes that, as the eternal is uncaused and has no "beginning of becoming" ( $γένεσεως ἀρχή$ ), so that which becomes is dependent on a cause ( $αἴτιον$ ) and is accordingly "begotten" ( $γεννητόν$ , 28c) or "born" ( $γενόμενον$ , 28c2,  $γεγονός$ , 29a). To which of the two categories does the  $οὐρανός$  belong? Obviously the  $οὐρανός$  is sensible, therefore it is a  $γιγνόμενον$ , and therefore also a  $γεννητόν$ . (It will be noticed that the whole reasoning depends on the a priori presupposition that nothing ever "becomes" unless there is a cause for its "becoming", on the equation of that which is becoming (i.e. subject to incessant change) with that which has become in the sense that it is referable to a pre-existent causal source. Proclus, in a long discussion of this passage (I.227f), asks, What is the precise extent of this initial distinction between  $ὄν αἰεί$  and  $γιγνόμενον αἰεί$ ? Does it cover everything without exception ( $πάντα τὰ ὄντα ὁπωσοῦν$ ), or not? Does  $τὸ ὄν αἰεί$ , for instance, refer simply to the Existent One ( $τὸ εἷν ὄν$ ), which is the first participant in the One Itself ( $τὸ εἷν αὐτό$ ).



and the highest intelligible, as Iamblichus thought (230.5, 232.8), or does it mean more? Proclus, while admitting this Neo-Platonic distinction between the One and the Existing One, rightly says that here Plato means by τὸ ὄν αἰεὶ the whole eternal world generally (ἀπας ὁ αἰώνιος κόσμος, 230.21). Likewise τὸ γιγνόμενον signifies everything of a corporeal nature, so far as it is regularized by something else (233.8f). There is no need to enter into Proclus' refinements concerning τὸ γιγνόμενον αἰεὶ and τὸ γιγνόμενον ποτέ (233.22f.) and the various aspects of τὸ αἰώνιον (234.6). It is sufficient to notice that Proclus sees that Timaeus is simply drawing a broad distinction between "Being" and "Becoming", eternal and mutable, and that he recognizes that the essential character of τὸ γιγνόμενον is its dependence as a derivative on something other than itself - τὸ δὲ γινεσθὲν εἰς ἄλλο ἀνάγκηται καὶ ἀπ' ἄλλων αἰτιῶν ἔχει τὴν πᾶροσόν (239.31, cf. 243.21). The world, as Proclus has remarked at the beginning of his Commentary (3.8 - I Diehl), "is moved by something else and is by nature unable to produce or to complete or to preserve itself".

Everything that "becomes", then, has an αἴτιον. Now the αἴτιον of the universe, its "Maker and Father" or God (ὁ Θεός, 30a), is indeed "hard to find and impossible, when found, to communicate to all men" (27c). {I.e., that there is an author of the universe, whom we

call God, is testified by reason. "For every house is built by someone, but He that built all things is God" (Hebrews III.4). The fact of God's existence as cause is shown by the bare ontological argument that the world must have an author; but the mode of God's existence, the nature of this Author, is not so easily discovered. Proclus puts the matter this way (I.300.28f). True apprehension of God is not a matter of opinion nor of a scientific syllogism, but is reached by a pure intellectual contact and union (*ἔνωσις*, 302.14), by a silence as it were (*ὄσον σιωπῆς*, 303.8) of the soul, and therefore it cannot be communicated to others except by the imperfect means of a scientific process. What Proclus is thinking of is the distinction between what we would call reason "discursive" and reason "intuitive".).

We may, however, ask: "On which archetype did God fix His gaze when He fashioned the world - the eternal or the begotten? If He used the former, His work must be beautiful; if the latter His work cannot be beautiful. But the universe is "most beautiful of all things that have come into being", whence it follows that God "looked to the eternal". God is in fact "the best of the causes"; He is simply the wise and good Artist (*δημιουργός*) who has constructed this universe after a changeless and eternal model (*παράδειγμα*). { Thus Timaeus is really following up the cosmological argument for the existence of God with the

teleological. The first argument amounts to no more than Locke's sterile proposition, "Something must be from eternity"; the "argument from design", the oldest of all arguments, is the guiding thought of the "Timaeus" and is at the bottom of the theism of "Laws" X. Note (1) The word *δημιουργός* appears first in <sup>opposition?</sup> apposition to *παράδειγμα* at 28a. Thus its real significance is not creation, but artistic operation. (2) God is described as the "best of the causes", so that there is no ground for the later Neo-Platonic view that above the Demiurge there is a yet superior God. (3) Proclus acutely notices that Plato is really making Timaeus follow the geometer's method of first laying down and defining a certain postulate or hypothesis and then proceeding to deduce its consequences or implications (*τὰ ἐπόμενα*) before demonstrating the truth of the hypothesis itself (Proc. Diehl I.228.25, 236.15.cf. 329.13, 348.13, 355.34, III 7.19). Thus Timaeus starts with the assumption of *τὸ ὄν αἰεὶ* and *τὸ γιγνόμενον αἰεὶ* and defines these terms. He tells us what they are before proving that they are. For just as the geometer, before demonstrating his proposition, tell us what a point or what a line is without showing that it is a point or that it is a line, so Timaeus says first what *τὸ ὄν* is and what *τὸ γιγνόμενον* for the sake of his immediate argument (236.30f.). This, says Proclus, is quite within the province of *φυσιολογία* (it is, in fact, the scientific method, the *σκεψίς ἐν λόγοις*, explained at "Phaedo" 101d). Later on, however, Timaeus

will go on to give an account of the postulate itself and to prove that τὸ ὄν is and that τὸ γιγνόμενον comes into being (Proc.I.237.7). As it is, by the assumption of these two γένε, we get the following συλλογισμός (Proc. 264.10f., 226.24f.). The universe has come into being. If it has come into being, it has come into being from a cause. There is, therefore, a demiurgic cause. If there is a demiurgic cause, there is also an archetype or pattern on which the Demiurge modelled the universe, either pre-existing in the Demiurge Himself or external to Him, and either superior to or inferior to or co-equal with Him. And, by laying down the further ἀφίωμα that the world is beautiful, we can next discover whether this pattern is αἰδίον or γένετόν (264.20). For eternal patterns are the patterns of things beautiful, begotten patterns of things not beautiful. The world is beautiful. It is, therefore, the copy of an eternal παράδειγμα).

At this point Timaeus lays down an important canon which is to guide his whole discussion. "This must be posited with regard to a likeness and the pattern from which it is drawn, that the discourses must be kindred to the subjects which they have to express. Discourses about the permanent and stable reality disclosed with the aid of thought must be permanent and unchanging likewise - so far as discourses can possibly and properly be both irrefragable and incontrovertible, they must in no way fall short of this; but discourses about that which is likened

to the former and is a likeness, should be likely and corresponding with their subjects. Knowledge stands to Belief as Belief to Becoming" (29bc).

{ To refer to Proclus' commentary on the passage (I.339.5f.), Plato, having defined the universe as *γενετόν* and *αἰσθητόν*, next goes on to explain that, as there are two subject-matters, *τὸ ὄν* and *τὸ γενετόν*, so there are two respective modes of apprehending them (*γνώσεις*), viz., Intelligence (*νόσις*) and Belief (*δόξα*), and two correlative modes of discussion (*λόγοι*), viz. the permanent or abiding (*μόνιμοι*) and the likely (*εἰκότες*) }. Timaeus accordingly only claims probability for his exposition; what he is giving is not "exact science" but a "likely tale" (*εἰκῶς μῦθος, λόγος*). Nature is in a constant state of inchoation, and since thought must always resemble its subject-matter, the knowledge of nature must always be incomplete.

Proceeding with his discourse, Timaeus explains that the true cause of the existence of the universe is the goodness of God. God's nature is not a "grudging" one, and so He resolved to extend His own blessedness as far as possible to something outside Himself. In Aristoteleian phraseology, as Proclus remarks (I.357.3), after what the universe is (*τὸ τί*) and what kind of a thing it is (*τὸ ὁποῖόν*), we must investigate on what account it is (*τὸ διὰ τί*). God, therefore, took over "all that was visible", a wild, lawless, featureless *Tohu Bohu*, "moving without measure and without order", and gave to it ordered configuration by

modelling it on "the all-perfect animal" (τὸ παντελὲς ζῷον, 31b), the eternal Generic Living Creature, the "Self-Animal" (τὸ ὅ ἐστι ζῷον, 39<sup>c</sup>), which embraces all the specific "forms" (ἰδέαι) of animal. As the prototype is one and cannot be second with another (since then the form which covers the two would be the true exemplar), so the ectype is one also.

Now the world, as Timaeus has already remarked, is γενόμενον and τὸ γενόμενον must be visible and tangible. Hence the universe must have a body. By a quasi-teleological and quasi-mathematical argument, it is shown that the body of the world is made of the four "elements", the Empedoclean εἰσώματα, fire, air, water, and earth. If the world is visible and tangible, it must have fire and earth, since the special characteristics of fire and earth are respectively visibility and solidity. But if fire and earth are to combine they need a connecting bond or "link" (δεσμός).

{ Proclus (Diehl II.29.31) explains the thought in this way. If there were only one element in the world, there would be no change, and all things would either be eternal or destructible. But if the elements must number at least two, these must be opposites to permit of mutual interaction. And if they are opposites, they will need a further factor to act as medium). Now the best "link" is an ἀναλογία or "progression" consisting of a mean or means linking the first and last terms in a proper mathematical proportion. If the elements were planes (ἐπίπεδα), one mean would be



sufficient; but they are volumes (στερεά), which have three dimensions, and accordingly our ἀνάλογια must consist of two mean proportionals. { In this connexion Proclus (II.33.13f.) notes with approval the comment of a certain Democritus that Plato does not say and cannot mean that only one medium falls between any given planes or that two fall between any given solids. For, he observes, between some planes there is obviously more than one mean, as between 16 and 81 we get the συνεχής ἀνάλογια 16:24::24:36::36:54::54:81. One, however, is sufficient, and this is what Plato means (II.31.15). Timaeus, as Martin explained, is only thinking of numbers which are the product of prime factors, of numbers consisting of two and three factors only and no more}. God accordingly set air and water between fire and earth, so that we have the geometrical proportion - fire:air::air:water::water:earth.

{Thus, says Proclus, (II.39.19f.) each of the elements has two properties common to the element adjacent to it and one property different, which he tries to specify in this way:-

Fire	- Rarity	Sharpness(i.e.to the touch)	Mobility.
Air	- Rarity	Dullness	Mobility.
Water	- Density	Dullness	Mobility.
Earth	- Density	Dullness	Immobility.

The whole of this account, observes Proclus earlier (II.7.19f.) is just another instance of Plato's practice, already noticed, of beginning a discussion by means of an initial postulate from which he makes his proof. Thus Plato

previously laid down the proposition that "he who is good feels no envy of anything at any time" so as to prove that the Demiurge makes all things good. Similarly, he assumed that "it neither was nor will be right for the best to do anything except the most beautiful" in order to show that the universe possesses soul and intellect. So now Plato first lays down the proposition that "what has come into being must be visible and tangible" and from this goes on to show the interconnexion of the four "elements" in the world's structure. We may here note also that Proclus has an *idée fixe* that there are different forms or species (*εἶδη*) of the elements varying in quality in different parts of the universe (II.9.15, 11.18, 17.12, 56.17, 62.26), the purest and most perfect, the highest points (*αἱ ἀκρότατες*) existing in the heavens (II.429f), so that in this sense, though in this sense alone (cf. III.115.6), the heavens may be regarded as consisting of a "fifth essence" (*πέμπτη οὐσία*, II.49.25, cf. III.112.29f; 115.4f, 142.3) }

In shape, proceeds Timaeus, God made the universe spherical, because the sphere is the most perfect figure, and provided it with a corresponding motion, the most intelligent of all the seven possible motions - uniform rotation on its own axis. He gave to it no organ of sensation or locomotion, nor of nutrition or excretion, because it is sufficient to itself and so needed none.

But if the universe is truly to be the "most beautiful of things that have come into being", in



accordance with the divine plan, it must have understanding or reason, since "no work that is devoid of reason will ever be fairer than that which has reason". But to have understanding, the world must have soul; for understanding is only displayed by soul. God therefore gave to the world a soul. { Here again the reason for the existence of the World-Soul is just the goodness of the world's Maker. The Demiurge set reason in soul "in order that he might be the author of a work fairest by nature and the most excellent" (30b). As Proclus puts it at I.401.21f., because the Demiurge is good, He makes the world most beautiful; because He makes the world beautiful, He gives intellect or reason; because He gives it intellect, He endows it with soul; and because He endows it with soul, He infuses into it life }.

In point of fact, God made the soul of the world before He made its body, although we give it second place in our discourse. "In order of production and of worth (γενέσθαι καὶ ἀρετῆ) God made the soul earlier and elder than body, to be mistress and queen whom the body should obey" (34c) { N. (1) the expression "earlier" and "elder" (προτίραν καὶ πρὸςβυτίραν) has no reference to antecedence in time, but is employed "propter excellentiam" and means only priority in order of dependence, as indicated by the further expression δεσπότιν καὶ ἄρξουσαν, and (2) the passage keeps soul and body clearly distinct and thus of itself disposes of Archer-Hind's theory that the "Timaeus" teaches the "evolution" of matter out of soul }.

Now the substance of the cosmic soul is compounded by the divine Demiurge out of the Undivided and the Divided, which in composition yield a third form of existence. All these are next blended together. The product is then divided like a long ribbon or monochord in accordance with the lengths of a musical scale built out of a double geometrical progression of seven terms. Finally, the entire structure is split and bent into two intersecting circles in different planes and crossing obliquely, the outer of which is called the circle of the Same (  $\delta$  τοῦ ἴσου κύκλος ) and the inner the circle of the Other (  $\delta$  τοῦ ἑτεροῦ κύκλος ). The latter is again subdivided into seven concentric circles corresponding with the seven terms of the double progression. The two circles have a double significance: astronomically, they are clearly meant, as Proclus notices (II.238.1 cf. III.73.27), to stand respectively for the sidereal equator and the ecliptic, and *thus* <sup>to</sup> account for the diurnal uniform revolution of the fixed stars and for the apparent irregularity of the planetary paths through the Zodiac; epistemologically, they represent the modes of the soul's spiritual and mental life, since they are the means by which the soul "declares that precisely wherewith anything may be identical or wherewith anything may be different, in what relation or ways or means or time anything happens to be identical or different or to have either character predicated of it" (37a,b). God then invested

the body of the world with the soul thus created, in such a way that the soul encompasses and yet interpenetrates the whole universe. "God set soul in the middle and extended it throughout the whole, and again wrapped the body with her from without" (34b). "Everywhere from the middle to the very extremities of the universe she was interwoven and veiled it around from without" (36e).

Coeval with the creation of the universe was the creation also of time. Time could not have existed previously to the cosmos because tense, with its distinction between the parts of time, past, present, and future, does not apply to "eternal being" (*ἡ αἰθέριος οὐσία*, 37e), but only to "becoming". To make the universe correspond as completely as possible to its eternal original, the Demiurge assigned to it an everlasting motion marked and measured by the recurrent movements of the heavenly bodies. For this purpose the seven planets, Moon, Sun, Venus, Mercury, Mars, Jupiter, Saturn, are set in the seven concentric circles of the subdivided *κύκλος τοῦ θατέρου* to control and regulate time. Time is thus simply measured duration, moving equably, "revolving according to number" (*κατ' ἀριθμὸν κυκλούμενος*, 38a), "defined and safeguarded" (38c) by the planets, the *ὄργανα χρόνου* (42a). It is identical with the motions of the planets. (This seems clearly to be Timaeus' meaning, as Aristotle understood - "Phys." 218<sup>b</sup> 1f. Proclus, however, will not believe that time is actually identified with "motion" (*κίνησις*) or "revolution" (*περιφορά*) - Diehl III.87.6f., *περίοδος*, he urges, means not only motion itself but also

the measure and extent ( *μέτρον καὶ παράτασις* ) of motion, so that when Plato speaks of time as the "wanderings" ( *πλάναί* ) of the planetary bodies, he is referring to their *περίοδοι* in this sense of *χρονικὴ μέτρα διαστήματα* (III.87.21, 90.15). Proclus is obviously begging the question, for in defining time as *τὸ χρονικὸν μέτρον*? he is including the term to be defined. His shirking of the issue arises from his desire to regard time as something exalted and not a mere *ἀμυδρόν τι εἶδος* (III.3.28). Time, he is eager to show, does not exist merely in conception ( *ἐν φιλαῖς ἐπινοαῖσις* , III.21.5, *κατ' ἐπίνοιαν φιλήν* , 95.10), as the Stoics thought (III.95.9), nor is it something accidental ( *συμβεβηκός τι* , III.21.6, *συμβεβηκός τῆς κινήσεως* , 95.14), as many Peripatetics supposed (95.9). Nor again is it even a by-product ( *γέννημα* , III.22.28) or appanage ( *παρὰ κολούθημα* , 24.31) of soul, as others with truer insight supposed; rather is it that in which the soul is the first participant (III.22.28). Nor, finally, is time identical with the circle of the Other and eternity with that of the Same, as Theodorus supposed (III.24.32); rather does the circle of the Other incline to *ἔγχρονον* , and that of the Same to *αἰώνιον* . Time is an *οὐσία* (III.23.27). Its nature is, in fact, dual (III.25.11f.). According to its internal activity ( *κατὰ τὴν ἑῶσον ἐνέργειαν* ) it is properly eternal ( *αἰώνιος* -cf. III.59.11), but according to its external activity ( *κατὰ τὴν ἔξω ἐνέργειαν* ) it is *κινητός* . Thus time is *ὑπερκόσμιος* as well as *ἐγκόσμιος*

(III.28.10, 53.13); in the former sense it is active, τὸ ἀριθμοῦν, in the latter sense, it is passive, τὸ ἀριθμυτόν or τὸ ἀριθμούμενον (III.26.15f., 32.22, 73.16); in the former sense, again, it is invisible (ἀφανής), in the latter visible (ἐμφανής - III.39.33f, 35.25f, 88.16f.). Plutarch in his "Platonicae Quaestiones" (Teubner Edition, G.N. Bernardakis, 1007a.25f.) similarly refuses to regard time as the "measure and number of motion in respect of prior and posterior" (Aristotle), or as "quantity in motion" (Spensippus), or as an "interval of motion" (Stoics). Pindar, he says, came nearer the truth when he described time as "the lord surpassing all blessed ones", and Pythagoras when he called it "the soul of this world". Time, insists Plutarch, is no affection (πάθος) or accident (συμβεβηκός) of motion, but is the source of all the order and regularity and symmetry displayed by created things - 1007b10f. }.

The planets, then, were created to "join in the production of time" (συναπεργάζεσθαι χρόνον, 38c). Now the motion of the outermost circle is "to the right by way of the side" - from East to West, that of the inner circle "to the left by way of the diagonal" - from West to East, the plane of the ecliptic being inclined obliquely to that of the equator as the diagonal of a rectangle is to its side (36c); and, moreover, "sovereignty" (κράτος, 36c) is with the circuit of the same. Hence the planets have a complex motion. For while they are carried along with the "sovereign" E. to W. diurnal motion of the outer circle, they also

revolve counter to the outer circle in their own periods in accordance with the W. to E. revolution of the inner circle of the Other. Next were fashioned the fixed stars, which were distributed in various positions between the Equator and the Poles and were formed for the most part of fire. They are divine living beings (Ἰῶα Θεῖα, 40b) and each is spherical in shape and has two motions: a uniform axial rotation in the same spot, since this is the motion of reason and each star has a rational ψυχῆ, and a uniform forward movement along with the diurnal circular revolution of the outer circle, the ἀπλανεῖς, so that unlike the planets, the stars constantly revolve in the same relative position (40 a, b.). { Have the planets individual souls like the stars? This is the teaching of the "Epinomis" (983cf.), and is believed by Proclus to be the meaning in the "Timaeus". In the seven "intellectual souls" (νοετὰ ψυχαί), says Proclus, the Demiurge places seven σώματα, so that the planets have each a σῶμα, a ψυχῆ, and a νοῦς (Diehl III.59.27. cf.70.8, 71.5f, 72.4). It is common both to the fixed stars and to the planets to be Ἰῶα Θεῖα, and each has an ἰδίᾳ ψυχῆ (III.116.30f., 127.27). Timaeus may only mean that the planets share the animation of the whole cosmic soul, but the expression he applies to them at 38c - δεσμοῖς ἐμφύχοις σώματα δεθέντα Ἰῶα ἐγγυθῶν - seems to support the view of Proclus (cf. Heath, "Aristarchus of Samos" p. 174).



The earth itself is "swinging on the path about the axis stretched through the universe" ( ἰλλομένῃν τὴν περὶ τὸν διὰ παντὸς πόλον τετεμένον, 40b).

(This, the reading restored and printed by only one modern editor, Professor Burnet, seems to be indubitably the true one and should settle the old "vexata quaestio" as to whether the earth has an independent motion of its own or not. For ἰλλομένῃν is attested by F, Aristototele, Plutarch and Proclus. Proclus paraphrases the verb ἴλλεσθαι with the words περὶ τὸν ἄξονα τοῦ παντὸς συνέχεται καὶ σφίγγεται (III. 136.31, σφίγγομένῃν καὶ συνεχομένῃν, 137.6, 143.21, συναγομένῃν 137.14, συνεχομένῃν ἐν τῷ μίσῳ, 138.16, συνέχεται, 139.18, συνέχεται καὶ ἐν τῷ κέντρῳ συνάγεται τοῦ παντός, 139.19) - "congregated and compressed about the axis of the universe". He emphatically denies that the earth is spoken of as moved in the "Timaeus", simply because he wants to preserve parallelism with the doctrine of the "Phaedo" (109a), where the earth is described as immovable, and because no mention is made by Timaeus of an ἀποκατάστασις or περίοδος of the earth in his exposition of the planetary system (III.138.11). It is amusing to notice that he cites the view that the earth is in motion and not stationary as an instance of the soul's confusion when its two circles are upset (III.346.6). Plutarch also believes that the earth is unmoved in the "Timaeus"

("Platonicae Quaestiones", Bernardakis 1006e 25f.). But at "de Caelo" 293<sup>b</sup> 30f - 296<sup>a</sup> 26 Aristotle twice illustrates Timaeus' meaning by means of the explicative phrase *καὶ κινεῖσθαι*, so that the word *ἰλλομένῳ* must connote motion; and since in the same passage Aristotle explicitly distinguishes the theory ascribed to Timaeus that the earth "goes to and fro" at the centre of the universe (a) from the Pythagorean view that the earth "revolves" round a central luminary and has a period of twenty-four hours, and also (b) from the view of *πολλοὶ ἄνθρωποι* who apparently gave to the earth an orbital revolution, it is probable that, as Professor Taylor maintains, what Timaeus means is an oscillatory movement rather than a circular revolution. The movement which he has in mind seems to be a periodic slide or slip, rectilinear excursions in a plane along the axis of the universe, and possibly also, as Professor Taylor further suggests, this speculation is intended not only to account for some of the apparent "excursions in latitude" of the planets, but also to explain why there is not a total eclipse of the sun at every new moon, a problem which must have worried thinkers after the discovery of the true explanation of solar eclipses as due to the interposition of the moon. Timaeus' explanation of the paradox would be that the earth is "out of the centre", not "in line with" the moon and the sun. This interpretation of Timaeus' words obviates the difficulty suggested by Proclus - that



Timaeus does not speak of any ἀποκατάστασις or recurrent return of the earth, since the earth does not travel through the Zodiac like the rest of the planets }.

To complete the perfection of the universe, there yet needed the creation of mortal kinds. The larger part of this task the Demiurge assigned to the stars, the "created gods" ( θεοὶ γεννητοί, 40d), the "young gods" ( νέοι θεοί, 42d), the highest order of living beings, who, though not "naturally" immortal and imperishable, cannot be dissolved "save by consent of" the Demiurge (41a), who will not destroy His own good handiwork (41b). { τὰ θνητά, as Proclus puts it (III.210.20f), as μόνως λυτά (213.21), are created by τὰ ἄλυστα πη καὶ λυτά πη - the "young gods", whom Proclus also calls οἱ ἐγκόσμιοι θεοί (194.20, 310.8). There surely seems to be a mistake in Diehl's arrangement of the bracketed clause < καὶ λυτὸν ἀπλῶς παρ' ἑτέρου καὶ ἑαυτοῦ > at III. 211.12. Proclus distinguishes two kinds of ἄλυτον and two corresponding kinds of λυτὸν - the simply ( ἀπλῶς ) ἄλυτον from itself and from other things, and the ἄλυτον in a certain respect ( πη ) from itself and from other things; and similarly, amongst λυτά, the πη λυτὸν and the ἀπλῶς λυτὸν in these twofold relations ( διχῶς , i.e. παρ' ἑτέρου καὶ ἑαυτοῦ ). The first - τὸ ἀπλῶς ἄλυτον - is the characteristic of νοητά, says Proclus, and the fourth - τὸ ἀπλῶς λυτὸν - of θνητά. According to Diehl's arrangement τὸ τέταρτον is τὸ λυτὸν πη,

whereas the whole point of Proclus' subsequent exposition is that τὸ λυτόν πῃ, and, with it, τὸ ἄλυτόν πῃ, are the means or media (μέσα) between τὸ ἀπλῶς ἄλυτον and τὸ ἀπλῶς λυτόν, and as such are the attributes of οἱ ἐγκόσμιοι θεοί. cf. especially 216.8f. and n.216.13 - τὸ δὲ μέσον ἐφήρμοσε τοῖς ἐγκοσμίοις θεοῖς, and 218.17 - τὸ μὲν πρώτως ἀθάνατον καὶ τὸ θυγτὸν ἄκρη; and with reference to οἱ ἐγκόσμιοι θεοί- cf. ἄλυτά πῃ (211.21)----πῃ λυτά (23), λύσις πῃ αὐτῶν ἐστὶ (213.13), ἄλυτον ἄμα καὶ λυτόν (213.17), ἀλύτους ἄμα καὶ λυτούς (215.10). Thus the right place for the bracketed clause in Diehl 211.12, as the context demands, seems to be at the end of the sentence after λυτόν πῃ δίχως. Proclus makes the same point further on (228.6). Things that at some time exist are dependent on (ἀνύετται) eternal realities. For τὰ μὲν πρώτα γεννητικὰ τῶν μέσων ἐστί, ταῦτα δὲ τῶν τελευταίων (228.8. cf. 242, 27 - μέσα δὲ τῶν τε πρώτως ἀθάνατων καὶ τῶν θυγτῶν τὰ ἀπὸ πληρουμένα τῆς ἀειγενούς Ἰουῆς). Proclus' point is that the "young gods" are at once indissoluble and dissoluble. They are indissoluble because they are τὰ ἔργα τοῦ πατρὸς (211.21); they are dissoluble, not in the sense that they can be dissolved κατὰ χρόνον, but in so far as they are composites of simple elements of which the Demiurge contains the form (λόγος, 211.23) and definite causes (διωρισμέναί αἰτίαι, 213.14, 210.28). Proclus' meaning is that because οἱ νέοι θεοί are composites, they are "de

facto" dissoluble into their simple elements; but they never will be dissolved because they are *ἔργα* of the Demiurge, and, as Proclus elsewhere remarks (III.340.22), it is not the nature of that which unites to dissolve any more than it is the nature of cold to give heat or of good to work evil. At the same time, in his anxiety to give due dignity to *οἱ ἐγκόσμιοι θεοί* as members of the divine hierarchy, Proclus is at pains to show further that they are *ἄλυτοι παρ' ἑαυτῶν* as well as *διὰ τὴν τοῦ δημιουργοῦ βούλησιν* (III.211.21, 212.16, cf. 214.35 - *κατὰ τὴν αὐτῶν φύσιν ἀφθαρτα*), in opposition to Severus, Atticus and Plutarch, who quite correctly understood Timaeus' meaning to be that the "young gods" are in their own nature dissoluble but are indissoluble by will of the Demiurge (212.7). }

First of all, God Himself prepared "the most divine and most holy element" (*τὸ θεϊότατον καὶ ἁγιάτατον*, 45a) of the human soul, the "immortal *ἄελγ'* of a mortal creature" (42e, 69c), in the same cup in which he had before fashioned the soul of the world and from *τὰ πῶν πρόσθεν δπόλοιπε* (41d), the residue, that is, of the three ingredients left over after the construction of the cosmic soul, as Proclus says (III.257.5). He divided the substance thus formed into as many souls as there were stars and placed each soul in a star "as in a chariot" (41e). There he revealed to them all "the nature of the universe and its fated laws". { The reason for this is, as Proclus observes (III.302, 28-31), to ensure that the souls them-

selves, and not their Creator, shall be responsible for their misdeeds. We may here note a point of similarity with the myth of the "Phaedrus," where at 252e -253a it is said, in the same spirit, that a man "lays hold of his own god with his memory", that is to say, directs his conduct by recollection and recognition of a moral law or standard which had been disclosed to his soul before its incarnation. cf. Ecclesiasticus XVII. 11-12: "Besides this he gave them knowledge, and the law of life for an heritage. He made an everlasting covenant with them, and showed them his judgements"). At first all were to come into the world alike, as men, "that none may suffer handicap at God's hands" (41e). Whoever should overcome his lower nature "throughout his due term" should again return to a blessed existence in his star. But whoever should succumb to the allurements of sense should be born again in the form of a woman, and, in the case of continued wickedness, should sink ever lower by various transmigrations until final redemption is won by conquest of the distracting and contaminating impulses of earthly existence. Thus apprized of their destiny, the souls are then sown by God into the "instruments of time", the planets which they are to inhabit, for incorporation in human bodies. {N. (1) There is no justification whatever, as J. Cook Wilson has shown ("On the Interpretation of Plato's Timaeus", pp. 51-53), for Martin's and Archer-Hind's supposition that the souls set in the stars are large

portions of soul-substance "not as yet differentiated into particular souls" (Archer-Hind p.141 n.13), "vastes dépôts de substance incorporelle" (Martin, "Études" II.p 151).

Timaeus distinctly says *ἔνειμε ἐκάστην πρὸς ἕκαστον* (41d), i.e. while in the stars the souls are already differentiated and learn of their destined embodiment and are then shown into the various planets in which their embodiment is to take place. It is indeed hard to see how Archer-Hind can reconcile his own explanation of the assignment to the stars as intended to account for individual varieties of character with his other assumption that the souls thus assigned "are not particular souls nor aggregates of particular souls".

(2) The embodiment of souls, as both Plotinus ("Ennead" IV.8.1) and Proclus (III.325.14) notice, is in the "Timaeus" represented as the fulfilment of a cosmic law and as necessary to the perfection of the universe, and is not due, as in the "Phaedrus" (248c), to a self-caused decline on the part of the souls themselves. The teaching of the "Timaeus" is that the existence of *θυγά* is essential to the completion of the universe. *τὸ θυγά* there must be, as Proclus says at III.222.3f., so that all things possible may exist and that there may be no lacuna between *τὰ ὄντα ἀεί* and *τὸ μηδαμῶς ὄν*, and in order that the world may be an adequate copy of *τὸ πενταδέσ φῶν* (cf III.227.13). The addition of *τὰ θυγά* is in fact the consummation and crown (*τελείωσις*) of the world's constructive life (223.15). There are, he explains earlier (III.97.5f), three kinds of "wholeness" (*δλότης*) imparted by the

Demiurge to the universe. First of all, the Demiurge had made the world a  $\delta\lambda\omicron\nu$   $\pi\rho\acute{o}$   $\tau\acute{\omega}\nu$   $\mu\epsilon\rho\acute{\omega}\nu$  when He created it a  $\psi\acute{\omega}\nu$   $\epsilon\mu\psi\upsilon\chi\omicron\nu$   $\epsilon\acute{\nu}\nu\omicron\nu$   $\tau\epsilon$ . Then He had made it a  $\delta\lambda\omicron\nu$   $\epsilon\kappa$   $\tau\acute{\omega}\nu$   $\mu\epsilon\rho\acute{\omega}\nu$  when He gave  $\delta\nu\alpha\lambda\omicron\gamma\acute{\iota}\alpha$  to the elements of the body of the universe and divided its soul into various parts. Now finally He makes the world a  $\delta\lambda\omicron\nu$   $\epsilon\grave{\nu}$   $\tau\acute{\omega}$   $\mu\acute{\epsilon}\rho\epsilon\iota$  by giving to it mortal Kinds and all animals - his greatest  $\delta\omega\epsilon\rho\omicron\nu$  - and thus completing its  $\epsilon\zeta\omicron\mu\omicron\iota\omega\sigma\iota\varsigma$  to  $\tau\acute{o}$   $\pi\epsilon\nu\tau\epsilon\lambda\acute{\iota}\varsigma$   $\psi\acute{\omega}\nu$ . Thus the universe is truly  $\delta\lambda\omicron\varsigma$   $\epsilon\zeta$   $\delta\lambda\omega\nu$  }.

The Demiurge then "withdrew to his rest" and left His lieutenants to complete what He had begun. "Everything subsequent to the sowing He delivered over to the young gods, to mould mortal bodies and, having fashioned all that remained of human soul needing yet to be added and everything adjunct to mortal bodies, to rule over the mortal creature and to pilot it as nobly and as perfectly as they could, without evil save what should befall it by its own fault" (42d,e). "Borrowing" from the universe fragments of the four elements, the minor deities built the human body and the "mortal species of soul", subdividing this inferior portion of soul further into a higher and a lower part. To the higher half belong courage ( $\alpha\acute{\nu}\delta\rho\epsilon\iota\alpha$ ) and mettle ( $\theta\upsilon\mu\acute{o}\varsigma$ ), to the lower the sensuous appetites ( $\epsilon\pi\iota\theta\upsilon\mu\acute{\iota}\alpha\iota$ ). The first is planted in the breast within hearing of reason, the second is lodged below the midriff like an animal tied in a stall



with the stomach to serve as a manger and the liver as a "mirror" (κατόπτρον) reflecting the messages of the brain (69d-71a). The divine element which was the direct work of the Demiurge was assigned to the head, with the neck as an isthmus between it and the mortal soul.

At 47e the argument of Timaeus takes a new direction. "If any man would declare truly how the universe has come to be, he must include also the Errant Cause (ἡ πλανώμενη αἰτία), so far as its nature admits" (48a). The "Errant Cause" or "Necessity" (ἀνάγκη), which we have so far neglected, now demands attention and its examination will entail a "return upon our steps" (πίλιν ἀναχωρητέον, 48f). Hitherto we have for the most part been discussing τὰ διὰ νοῦ δεδμηιουργημένα, the expression of rational plan, without much regard to τὰ δι' ἀνάγκης, the subordinate mechanism which supplies the means of this expression. So far, therefore, it has been sufficient for our purpose to take for granted the Empedoclean quaternion of "roots", fire, air, water, earth, and to regard them, as Empedocles had done, as the ultimate constituents or "simples" of the world of sense. In point of fact, however, so far from being the simple A B C (στοιχεῖα) of the alphabet of the universe, they are more composite even than "syllables" (συλλαβαί). Instead of accepting them as unanalyzable "elements", we have now to go behind them to what is truly ultimate, and to begin from a fresh "starting-point" (ἀρχή, 48b) more

satisfactory and more scientific than our original distinction at 27d-28a between  $\acute{\omicron}\nu$  and  $\gamma\iota\gamma\nu\acute{\omicron}\mu\epsilon\nu\omicron\nu$ ,  $\rho\omicron\gamma\tau\acute{\omicron}\nu$  and  $\kappa\acute{\iota}\sigma\theta\eta\tau\acute{\omicron}\nu$ , the eternal and the transient.

Accordingly, we must now distinguish three "forms" ( $\epsilon\acute{\iota}\delta\eta$ , 48e): the pattern ( $\pi\alpha\rho\acute{\alpha}\delta\omicron\tau\eta\mu\alpha$ ), the copy ( $\mu\acute{\iota}\mu\eta\mu\alpha$ ), and the "repository" ( $\delta\pi\omicron\delta\omicron\chi\acute{\eta}$ ) or "nurse" ( $\pi\iota\theta\acute{\upsilon}\nu\eta$ ) of becoming. The first is the  $\pi\alpha\nu\tau\epsilon\lambda\acute{\epsilon}\varsigma \int\acute{\omega}\nu$ , suprasensual and cognizable by thought; the second is the material order, created, destructible, and apprehended by "perceptual judgement". Both of these have already been discriminated. Our new factor is that wherein the cosmic process comes to pass, an everlasting receptacle which is itself without quality or configuration but is capable of receiving any determination from without just as a scentless oil takes on various perfumes. "It never anywhere or in any way assumes any of those shapes that enter into it" (50e). It is as it were the "mould" or "plasm" ( $\epsilon\acute{\kappa}\mu\alpha\chi\eta\tau\acute{\omicron}\nu$ ) on which form is impressed. It is in fact "Room" or "Space" ( $\chi\acute{\omega}\rho\alpha$ ,  $\tau\acute{\omicron}\pi\omicron\varsigma$ , 52a), geometrical extension, "invisible and formless" ( $\acute{\alpha}\nu\omicron\rho\epsilon\alpha\tau\omicron\nu$   $\kappa\alpha\acute{\iota}$   $\acute{\alpha}\mu\omicron\rho\epsilon\phi\omicron\nu$ , 51a). It is the spatial continuum or the volume in which the life and events of nature go on and receive contour, and as such it is too "dim and dark" (49a), too "hard to comprehend" (51a), to be anything more than an abstract logical concept, "accessible by a bastard sort of reasoning" (52b). We have thus three "Kinds" ( $\gamma\acute{\epsilon}\nu\eta$ , 50c): that which comes into being, that in which this comes into being, and that of which it is a natural copy.



The pattern plays the rôle of father, the *ὑποδοχή* that of mother, and begotten of the two (*ἔκγονος*) is the concrete physical world.

Anterior to the construction of the *οὐρανός* semblances of *τὰ ὄντα ἀεί* had already begun to enter upon the *ἑποδοχή*, but in such a way that it only showed rude "traces" (*ἴχνη*) of definite structure. "All things were without method or measure" (53a). God came and imparted order to the imbroglío. God "systematized the elements with forms and numbers" (53b), i.e. converted them into bodies definitely qualified and quantified. "We must conceive that the proportions of the elements in regard to their multitude and motions and the rest of their properties, when God had completed them in all these ways through precision, were then co-ordinated by Him in due ratio" (56c). God "introduced among them such measures of proportion and regularity as they would admit, each one in respect of itself and all in respect of one another (69b). "All these He ordered forth in the beginning, and out of them constructed this universe" (69b).

Now fire, air, water and earth are solid bodies, and every solid body is circumscribed by plane surfaces; every plane surface is composed of triangles; and the two primary triangles are the rectangular isosceles (the "half-square" of the Pythagoreans) and the rectangular scalene (the Pythagorean "half-triangle"). From the latter we get the equilateral triangle and thence the

three regular solids, tetrahedron (which is the elementary corpuscle of fire), octahedron (air) and icosahedron (water); from the former we get the square and then the cube (earth). In this way fire, air, and water are interchangeable with one another and so give rise to all the different varieties of body - ice, stone, alkali, and so on; earth, however, admits of no transmutation, because its frame-work is dependent on a different radical triangle (53c-56c). Thus we see that the shape and quality and variety of bodies are dependent in their last analysis on the geometrical structure of their elementary particles; each is in fact an example of the combination of the two Pythagorean factors, Limit ( $\pi\acute{\epsilon}\rho\alpha\varsigma$ ) and Unlimited ( $\alpha\prime\pi\epsilon\iota\rho\omicron\nu$ ).

The remainder of Timaeus' discourse deals with the principles of physiology, pathology and psychophysics (69a-87b). The point throughout is to show that the various parts and functions of the human organism are contrived "for the best". Thus the lungs were devised to act as a cushion to soften the bounding and throbbing of the heart in time of excitement (70d); the winding of the intestines was meant to serve as a precaution against gluttony (73a); nails, though of little value to men, were given to them to afford a means of defence for the inferior animals into which they would degenerate (76d). Diseases of the body are explained as arising partly from disturbances in the normal relations subsisting between the four elements which make up the body's constitution, partly from disorders in

the *δεύτεραι συστάσεις* or secondary structures of the body, - blood, flesh, marrow, bone, sinew, and partly from the vicious humours which are various forms of "bile" (*χολή*) and "phlegm" (*φλέγμα*), which again are simply unnatural conditions set up by decomposition (*τυκεδών*) of the flesh (81e-86a). Diseases of the soul are regarded as essentially pathological, arising in particular from the unhealthy secretions of bile and phlegm, and it is accordingly insisted that no one is willingly wicked (*κακὸς ἕκων οὐδείς*, 86e). Vice is simply an involuntary derangement produced by physical aberrations and aggravated by faulty training (87b). Hence proper education is indispensable to mental and moral health. The whole aim of life should be the preservation of proper balance or proportion (*συμμετεία*) in the *συναμφόρον* of soul and body by due exercise of both; the "mens sana in corpore sano" is Timaeus' ideal. Our greatest care, however, should be the soul, since it is to be "the guide" (*τὸ παιδαγωγῆσον*, 89d) of the body and contains in its highest part our "guardian spirit" (*δαίμων*, 90a, 90c) and our means of immortality.

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CHAPTER IV.

THE DEMIURGE.

The central figure of Timaeus' discourse is the Demiurge or God, who seems to be described as what we would call a "personal" God. Is this what Timaeus means? The Greek language, of course, lacked a precise term connoting personality, but the absence of a definite terminology does not entitle us to assume that Greek thought had no idea of what the conception itself implies. What, for instance, was the command of the Delphic inscription, γνώθι σαυτόν, "nosce teipsum", but an exhortation to man to realize his own identity and personality? (cf. Proclus. Diehl.III.352.19, where Proclus explains ὁ καταμελήσας who according to Timaeus is condemned by his neglect to a life of intellectual lameness, as meaning ὁ ἀφ' ἑἰς τὴν ἑαυτοῦ γνώσιν). At 77b of our own dialogue Timaeus himself recognizes self-consciousness, when he observes that planets are distinguished from men in that they lack power "to observe and reflect upon their own nature". His language about the Demiurge shows that the conception of what we more or less mean by personality was clearly implicit in his mind. He calls Him "Father", "Maker and Father", "Father of the gods" - 27c, 28c, 37c, 41a. "God was good, and in what is good there can never be any grudging of anything. Wherefore, being altogether ungrudging, He

wished all things to come into being as like Himself as might be" (29c). God "proceeded to abide in his accustomed nature" (ἐμνεεν ἐν τῷ ἑαυτοῦ κατὰ τρόπον ἦθει, 42a). God "reflects" and "takes thought" (λογίζεσθαι, λογισμός, 30a, 30b, 33a, 34a; λόγος καὶ διανοσία, 38c; ἐπινόησεν, ἐπινοή, 37c, 37d; διανοηθείς, 32a; νομίσεις, 33b; ἡγήσατο, 33d; ἦετο, 33d); He shows "forethought" (πρόνοια, 30b) and exercises "will" (32c, 41a, 41b); He "sees and rejoices" (37c); He speaks and commands (41a, 41c); He makes calculations (31b-34a, 35b-36d, 38c-39c). Above all, He is explicitly said to have mind or understanding (νοῦς, 39c) and since also νοῦς cannot dwell in anything without ψυχῆ (30b), the Demiurge must be a Soul. As such, He is the "best of the causes". "It was not nor is right for the best to do aught save what is most fair" (30a)-cf. Job XXXIV.10. "Far be it from God that He should do wickedness; and from the Almighty that He should committ iniquity" and James I.17, "Every good gift and every perfect gift is from above, and cometh down from the Father of lights, with whom is no variableness, neither shadow of turning".

Thus it is clear that the Demiurge of the "Timaeus" is no vague abstraction, but is a living rational Person who thinks, feels, and wills, a spiritual Being who is the supreme personification of intelligence and beneficence.

Proclus (I.266.21f) observes that, of "the ancients" (οἱ παλαιοί), the Epicureans denied the existence

of any Demiurge of the world; the Stoics admitted a Demiurge but maintained that He is inseparable from matter (cf. I.414.1f - Chrysippus made God ἀχώριστος τῶν διοικουμένων, inseparable from His subjects, and thus virtually confused material and immaterial); and the Peripatetics, while granting a separate cause, conceived of it as final and not efficient. The Pythagoreans and Plato, however, both affirmed a distinct efficient cause, the Demiurge. Proclus tries to justify this position by reference to Aristotle's own theory that God is the intellect which moves the world as the object of its love, on the ground that the world must obtain its being and an unlimited power of existence from the object of its desire as well as an unlimited power of motion. This seems to be a polemic on Proclus' part against the interpretation put on Aristotle's conception of God (with more justice to Aristotle's own words) by Alexander of Aphrodisias, as distinct from the view of Simplicius, adopted by the Neo-Platonists, that the God of Aristotle is in a real sense a producing as well as a final cause.

At I.303. 25f. Proclus, records the various interpretations of οἱ πρεσβύτεροι regarding the Demiurge. (N. the expressions οἱ πρεσβύτεροι, οἱ παλαιότεροι, and οἱ παλαιοί are used by Proclus in a very fluid and indefinite way. οἱ πρεσβύτεροι and οἱ παλαιότεροι generally refer to the "Eclectic" Platonists and Neo-Platonists



of the second, third, and fourth centuries - Atticus, Numenius, Plotinus, Porphyry, Iamblichus, Theodorus, as in the present passage and at, for instance, I.321.26 and III.103.17, while οἱ παλαιοί seem to mean the earlier thinkers after Aristotle, as e.g. at I.266.21f. or even Aristotle himself, as at I.10.7, or his disciple Theophrastus, as at II.120.8. But the distinction is not by any means an exact one, for cf. I.310.3, where the later Platonists are also spoken of as οἱ παλαιοί). Proclus tells us that (1) Numenius thought there were three gods - Father, Maker, the World, thus distinguishing two Demiurges (cf. III.103.28); (2) Atticus identified the Demiurge with the Good; (3) Plotinus, like Numenius, also supposed that there were two Demiurges - the so-called "Maker and Father" of 28c and the Intellect of the World; (4) Amelius conceived of a triad of Demiurges - He that is, He that has and He that sees, or Being, Intelligible, and Intellectual (cf. I.398.16 and III.103.18, and Plotinus "Ennead" II.9.6"); (5) Porphyry regarded the Demiurge not as νοῦς but as a ψυχή which uses νοῦς as pattern (cf. I.431.22 and II.99.30); (6) Iamblichus understood by the Demiurge the entire κόσμος νοητός or intelligible order; (7) Theodorus followed Amelius in assuming three Demiurges; (8) Syrianus regarded the Demiurge as an intellectual god as distinct from the intelligible and from the intelligible-intellectual gods, His particular function being the production of intellect, τὸ νοοποιόν. We may pass

upon all these speculations the judgement passed by Iamblichus on the interpretation of Amelius, that they are "too extravagant and far-fetched" ( *ἐξήγησις λίαν πρεϊτῶς διεσκευασμένη*, Proclus I.398.27), but they at least serve to indicate the importance which the *δευμιουργός* of the *Timaeus* assumed in the eyes of later expositors.

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CHAPTER V.

The Relation of the Demiurge to the "Forms."

Now if the Demiurge is conceived by Timaeus not as an inanimate metaphysical entity, but as a consciously-working Person, it follows that we must not devitalize the concept or eviscerate it of all spiritual content by regarding the Demiurge as merely an allegorical personification of the εἶδος τὰγαθοῦ of "Republic" VI. As Proclus urges against Atticus' identification of the two, the Demiurge is only called "good" and not the Good (I.305.8) in the "Timaeus." Proclus returns to the point at 1.359.30f. It is ludicrous, he there says, to identify the Demiurge with the Good, since the Good and one who is good are not the same. Rather is goodness that which gives to every god existence <sup>quâ</sup> god and determines his specific nature (361.6f), so that it is the goodness in νοῦς which makes it "demiurgic". But the truest argument against the identification of the Demiurge of the "Timaeus" and the Good of the "Republic" is that we have no right whatever to bind down Plato on a Procrustean bed and to try to square one dialogue with another in such a fashion.

Nor, again, may we identify the δημιουργός with the παρέδριγμα which is represented as directing His activity. There is, it is true, much in the language of Timaeus to suggest their identification. (1) It would appear at times that God in modelling the world after the νοῦτόν ἴδιον is simply contemplating His own nature.

With 30a, "unto that which is the fairest of things intelligible and altogether perfect did God wish to liken it", compare 29e, "God wished all things to become as like Himself as might be". (2) The παράδειγμα can never be "second with another" (31a) and is "all-perfect" (31b). Yet God is "the most perfect" (30a) and "the most excellent of natures intelligible and eternal" (37a). (3) The description of the παράδειγμα as "a living being which is eternally" (37c, cf. 31b) seems to imply that it is animated and is the source of life to all else. These and similar passages lead Archer-Hind to the summary conclusion that Plato "had reached a period in his metaphysic where he deliberately affirmed the identity of thought and its object" (p. 116n.) and that he presents to us in the Timaeus "a complete and coherent scheme of monistic idealism" (Introd. p. 2). But, as we have seen, unless we are to denude the God of Timaeus of all personality, we can no more identify Him with the νοῦτον ἕκγον than with the εἶδος τῶν ἀγαθῶν.

To identify the νοῦτον ἕκγον with the δημιουργός is to return to the old fallacious view that the "Forms" are the ideal conception of the world formed in God's intellect - an interpretation which was adopted almost unanimously by the early Fathers of the Church. In the same way Philo conceived of the world as the outward [and extrinsic] expression of the λόγος ἐνδρόθετος or intrinsic aggregate of εἶδη indwelling in the mind of God. Such a conceptualist view of the εἶδη, however, is summarily

disposed of at "Parmenides" 132 b,c. on the ground that every "thought" is an act or process about a corresponding object. { The same thought, that every mental activity must have an object distinct from itself, appears as early as "Charmides" 167 and is used to dismiss Critias' conception of *σωφροσύνη* as the "Knowing which knows itself". } Further, Aristotle through the whole if his critique never once regards the *εἶδη* as subjective products of the mind of the knower. Above all, Timaeus at 51-52 definitely affirms the independent and absolute existence of the *εἶδη* in much the same language as we find in the "Phaedo" and the "Republic". Are the objects of sense, Timaeus there asks, to be regarded as the only realities, and is the supposition of an *εἶδος ἐκάστου νογτόν* after all mere talk (*λόγος*, 51c)? In defence of the reality and independence of the "Forms" he advances what Aristotle calls "the argument from the side of knowledge" (*οἱ λόγοι οἱ ἐκ τῶν ἐπιστημῶν*), the point of which is to show that "objective reference" is the necessary condition of science. The material object can be no more than a matter of perception and opinion. The "Form" alone is always true. This conviction that there really is such a thing as valid and irrefragable knowledge about a stable and invariable object and that this object cannot be sensible existence with its lack of permanence and self-consistency, is the fundamental assumption on which the whole theory of "Forms" is built. The argument means that the "Forms" must be objective entities. But such objectivity does not mean

that the εἶδη are as it were quasi-concrete "things" existing in some isolated supra-cosmic "intelligible world". There is no doubt that, as Lotze seems to have been the first to insist, the thought at the bottom of the theory of "Forms" is the a priori "validity" or "timelessness" attaching to universal and eternal truths and laws (cf. Milhaud, "Des Philosophes - Géomètres de la Grèce - Plato et ses prédécesseurs" 327. ff).

It is clear, then, that in virtue of this independent character, the εἶδη, though known by God, do not depend for their existence on His thought about them and cannot be simply subjective states of His consciousness or creations of His intelligence. They are fixed and eternal truths, and so God thinks of them as they are and acts in accordance with them. {cf. Euthyphro 8-10, τὸ δέον is "that which the gods approve", i.e. an act is antecedently religious, good or bad "by nature", and is approved by the gods for that reason. The ethical corollary of the whole theory, of course, is that there really is an "eternal and immutable" morality independent of individual and subjective judgement, that moral "values" are what they are once for all and always and constitute the only true and valid ethical standard. }.

The "Forms", we may say, are the immutable "values" which God "perceives" (καθόρα, 39e) and whose direction He follows. The "Forms" and Mind are both distinct and yet, as intelligible object and conscious

subject, they are essentially related (the thought established at "Parmenides" 132). Mind and Truth are co-eternal, two inter-dependent yet equally primordial uncaused principles. The Forms are the "causa exemplaris" whose perfection inspires God, the "causa efficiens", in the ordering of the universe.

{ We may note that in Republic VI the εἶδος τῶγαθοῦ is exhibited rather as the teleological than the efficient cause - cf. Rep. VI.597b. } Proclus keeps the Good or the final cause and the αὐτὸ δ' ἔστι ἕωον, the form of organism, or the formal cause, definitely distinct. νοῦς, he says (I.361.16f.), produces at once from the pattern, with reference to ( πρὸς ) which it makes, and from goodness, on account of ( διὰ ) which it makes. He quotes the simile of Atticus (366.9), that, as the carpenter makes all his productions of wood, but according to different "forms" or "proportions" ( λόγοι ) makes one thing a bench, another a bed, and so on, so God makes all things good, but gives them distinction by using the "archetypal causes". Actually, however, the formal and the final cause coalesce in the "Timaeus" as in Aristotle's metaphysic. The νοῦτόν ἕωον is not only the form of organism but also, as the παράδειγμα, is the goal of the Demiurge's activity and of the world's development.

may be proved

The relation of the δημιουργός to the παράδειγμα is fully discussed by Proclus (I.319.26f.). The world, it has been shown, is γένητόν, and as such it must have a Demiurge or Artificer. Now every artificer whose work is

properly arranged must apprehend the form (λόγος) or arrangement (τάξις) of the thing he produces. Hence it follows that there must be a pattern or αἴτιον παραδειγματικόν as well as an agent. What then is the precise relation of this pattern to the Demiurge? There are three possibilities: it may be primarily existent in the Demiurge himself, or it may be subordinate to Him; or finally it may be antecedent to Him. Thus of οἱ παλαιοί, Plotinus favoured the first hypothesis, Longinus the second, and Porphyry the third. Now (1) if the Demiurge is Himself the primary possessor of the παράδειγμα, He is in effect intelligible and not intellectual; (2) if the pattern is posterior to Him, He will be making something inferior the object of His thought, and this is inconsistent with His divinity. It follows then that the παράδειγμα must be antecedent to the Demiurge (323.10) and as such is "seen" or contemplated by Him. But this cannot mean that the παράδειγμα is external to the Demiurge, else His contemplation will be an operation of sense and not of intelligence. It follows therefore that the pattern contemplated by the Demiurge is also in Him; so that it is both antecedent to and contained in the Demiurge - antecedent to Him intelligibly, in Him intellectually (νοητῶς πρὸ αὐτοῦ, νοητῶς δὲ ἐν αὐτῷ, 323.21). This is confirmed by the fact that the expressions used in the "Timaeus" seem at different times both to distinguish the Demiurge and His pattern and to identify them. Thus in a certain sense it is right to say with Iamblichus that the Demiurge contains the παράδειγμα in

Himself, or, with Amelius, that the *παράδειγμα* is the Demiurge (336.17).

Proclus returns to the question at I.431.14f. Atticus, he records, supposed that the Demiurge is superior to the *νοῦτὸν ἴδιον*; Porphyry conceived of Him as inferior; Iamblichus struck a middle course by uniting Demiurge and *παράδειγμα* as two interdependent correlatives, intellect and intelligible; and Amelius identified the two. Proclus repeats his own view that the *παράδειγμα*, while antecedent to the Demiurge, yet subsists in Him; so that in making the world after the image of the *παράδειγμα*, the Demiurge also makes it after the image of Himself (432.16), cf. II.110.29 - 111.19.

Proclus tries to put the distinction in yet another way at III. 100.4f. The *νοῦτὸν ἴδιον* is *νοῦς νοῦτός*, while the *δημιουργός* is *νοερός νοῦς*, whose *νόησις* or thinking consists in seeing (*ὄρασις*) - i.e. contemplation of the intelligible. But, he insists again, this does not mean that the Demiurge looks to what is external to Him (*τὸ ἕξω*, 102.5). He beholds *ὁ κόσμος νοῦτός* by conceiving or thinking of Himself (*ἑαυτὸν νοῶν*). By making the *νοῦτὸν ἴδιον* distinct from the *δημιουργός* we do not make *τὸ νοῦτὸν* external to *νοῦς*; we simply mean that *τὸ δρώμενον* is antecedent to *ὁ δρών* (102.29).

The point Proclus is trying to labour through-out is that logically the *παράδειγμα* is prior to the *δημιουργός*, and yet at the same time is in Him, since He has not to look beyond Himself to contemplate it. - πῶς γὰρ



ἔγω βλέπει νοῦς ὧν ; III.6.26. We may compare Augustine's doctrine that as contemplating the Word, God is the Father, as contemplated by Himself, He is the Son. Proclus is quite rightly trying to insist that the Demiurge as Intellect or Intelligence and the *πρότυπα* as Intelligible are essentially correlated and that the *εἶδη* are not "things" existing outside of the Demiurge but are antecedent and immutable "values" which it is proper to God to contemplate. Plotinus makes the same point at *Ennead* III. 9.1. The Intellectual Principle, he there says, stands as Intellectual Principle to that which it contemplates. It is the Intellectual Principle in virtue of having that intellection.

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CHAPTER VI.

THE ERRANT CAUSE.

God, then, is regarded in the "Timaeus" as a living, self-conscious Person or Being, thinking, choosing, deciding, planning and acting. He is, further, intimately related to the εἶδη which make up the content of the νοητὸν ἕκαστον in that they are the proper object, though not the product, of His thought. But "the creation of this world", says Timaeus at 47e, "was a mixed one, and arose from a concurrence of Necessity and Mind". So again at 68e we are warned to differentiate between two "species of cause" - the necessary (τὸ ἀναγκαῖον) and the divine (τὸ θεῖον). What, then, is this further factor? Have we in "Necessity" (ἀνάγκη) another equally independent principle side by side with Mind or God?

Now throughout his discourse Timaeus seems to represent the Demiurge as a "finite God", or at least as unable to do all He would like. Qualifying phrases are continually used in the description of His activity. God, we are told, wished to communicate His own likeness to all things as far as possible (ὅτι μάλιστα, 29e); He desired that there should be no evil as far as might be (κατὰ δύναμιν, 30a); He sought to make the product of his workmanship as beautiful and as good as possible (ὅτι κάλλιστον ἄριστον τε, 30b); He wanted to assimilate the universe most nearly (μάλιστα) to the fairest and best

(30d); He intended the universe to be as far as possible ( ὅτι μάλιστα ) a perfect living creature (32d); it was His aim to work out "the best" as far as possible ( κατὰ τὸ δυνατόν , 46c); He formed the elements to be as fair and as good as possible ( ὡς κάλλιστα ἄριστα τε , 53b); He introduced measure among the elements in as many kinds and ways as they could admit measure ( συμμετρίαι ὅσας τε καὶ ὅπου δυνατόν ἔν , 69b). In the same spirit Timaeus Teaches at 42a that individual souls are "of necessity" ( ἐξ ἀνάγκης ) implanted in bodily forms and that it is "necessary" ( ἀναγκαῖον ) that they should all have sensation. So at 69c-d the mortal soul is spoken of as bearing "dread and necessary passions" which the junior deities "necessarily" blended with sensation. At 46d-e a sharp distinction is drawn between those causes which "have understanding and are producers of things fair and good" and those again which "are devoid of wisdom" and produce on each occasion hazard and disorderly effects". At 48a "Necessity is definitely called "the Errant Cause" ( ἡ πλανωμένη αἰτία ) which Mind cannot coerce but can only "persuade to direct most things ( τὰ πλεῖστα ) created to the best issue". The same thought is repeated at 56c: God made the world perfect "only in so far as the nature of Necessity, rendered willing by persuasion, allowed". In this capacity Necessity stands particularly for all the ancillary or concomitant causes ( συναίτια , 46c, συμμεταίτια , 46e, αἰτίαι ἐπηρετούσαι , 68e) which God has to use for His intelligent purposes.

The whole of this account of "Necessity" or the "Errant Cause" does seem "prima facie" to imply a



"Timaeus" as much as in "Laws" X (cf. "Timaeus", 34d). Proclus certainly had no sympathy with such a notion of ἀνάγκη as an independent evil force limiting the authority and beneficence of the Demiurge, as is clear from scattered references through his Commentary on the dialogue. We may note, first of all, what he has to say in his interesting analysis of the problem of evil at I.372.19f. Anticipating the Hegelian conception that the world is as essential to God as God is to the world, Proclus declares that τὸ γεννώμενον is the indispensable condition or sine qua non of divine nature, since without τὸ γεννώμενον, thing begotten, that which begets (τὸ γέννων) cannot show its superiority. Does then the necessity of γένεσις carry with it the necessity of evil? If the Demiurge wished all things to be good, what is the explanation of evil? Proclus' answer is that God's relation to things is different from ours, and that the relation of wholes to parts is different from that of parts to each other. Consequently what is evil to a part is to the universe as a whole good, and therefore to God nothing is evil (cf. I.125.21 and III.303.13f). There is no such thing as absolute evil (τὸ αὐτοκακόν), for evil is everywhere bound up with what is good (τῷ ἀγαθῷ συμπηλεγμένον, I.374.21). In the case of bodies (parts moved "ab extra"), for instance, disease and destruction are unnatural and evil to a particular body but are good to the wholeness of bodies, inasmuch as corruption and consequent transmutation are necessary for the life and preservation of the universe as a whole (on

the principle that ἡ ἄλλου γένεσις ἄλλου φθορὰ ἐστίν, ἢ δὲ ἄλλου φθορὰ γένεσις ἄλλου—I.376.31f., 379.11f. cf. II.28.19, 87.22, 89.19, III.43.25, 318.19, 352.24). So again in the case of souls (parts moved "ab intra"), a voluntary deed or action corresponds in quality to the antecedent choice (αἴρεσις), and though without qualification (ἀπλῶς) an evil deed is evil, yet the sequence of evil action upon evil choice is the just embodiment of a law of nature (κατὰ δίκην), and as such it is good (I. 377.9f.). Proclus concludes therefore that evil is necessary for the perfection of wholes, and that all things are good by the will of God (381.8). He does not attribute evil to ἀνάγκη. Similarly at III.313.13f. he insists that, though the junior gods, οἱ δεύτεροι δημιουργοί, are by delegation the fabricators of τὰ μερικά as distinct from τὰ ὅλα and though evil only affects μερικά, yet they are not to be regarded as responsible for evil any more than ὁ τῶν ὅλων δημιουργός. Proclus is emphatic on this point - οὐτ' οὖν ἐπὶ τὸ θεῖον ἀνενεκτέον τὸ κακόν (303.9), οὐδὲν κακὸν οὐδὲ παρὰ φύσιν ἀπὸ τῶν οὐρανίων γίγνεται θεῶν (313.4). Accordingly he will not countenance any distinction between one god who is beneficent (ἀγαθοεργός) and another who is malignant (κακοποιός, 313.15). The gods are all-good, all-perfect, and all-powerful, so that, as he asserts earlier (III.303.15f.), if evil exists, it does not exist in an antecedent way (κατὰ προηγουμένην ὑπόστασιν, 303.16), but is adventitious (ἐπιπροσδιδώς, 22). The Demiurge for Proclus is without any limitation. Thus at I.381.18, in

commenting on the words "God wished that all things should be good and that there should be nothing evil as far as possible" (30a), Proclus denies that the expression "as far as possible" (κατὰ δύναμιν) connotes any imperfection (ἄτελής δύναμις) on God's part; at II.55.14, he insists that impotence (ἀσθένεια) is foreign to the Demiurge; at III.7, 21-25, he declares that God's beneficence (δόσις) is always invariable and unimpeded, though we ourselves may not be fit to receive it; and at III.213.3, he repudiates any separation of the Demiurge's βούλησις from His δύναμις (cf. 214.15, τίς δύναται βιάσθαι τὸν δημιουργόν;).

The real significance of ἀνάγκη, as Professor Taylor has demonstrated, is closely connected with Timaeus' initial distinction at 29.b.c. between "Knowledge" (ἀλήθεια) and "belief" (πίστις) and their corresponding objects, οὐσία and γένεσις. Timaeus there refuses to claim for his account of the structure of the cosmos anything more than "vraisemblance". He admits that it is only an approximate or "probable" attempt at explanation. For knowledge final and incontrovertible applies only to objects that are correlatively stable and invariable; "exact science" is only attainable about that which "is" always, about the "Forms" and the numbers and figures of pure mathematics. Cosmology, however, deals directly with that which "never is, but is always becoming"; it studies not ὄντως ὄντα but γιγνόμενα, things perpetually subject to variation and succession in time and place. The "laws" of natural science



can consequently never reach absolute precision but must always be suppositional. They can never be anything more than provisional hypotheses which the true "critical" philosopher must be prepared to revise or even to reject should he find that they fail to do justice to the phenomena which they seek to explain. The true philosopher must always be ready to examine and "give an account of" the postulates on which his deductions are based, just as Timaeus himself at 51b f. calls into question and formally justifies his preliminary assumption of τὸ ὄν αἰεὶ and τὸ γιγνόμενον αἰεὶ laid down at 27d.- as Proclus points out at I.237.7.

Thus science can never completely "explain" the sensible world and the facts given in experience. If it could, all the "laws of nature" would be revealed as "causae concomitantes" or expressions of νοῦς, the "Causa principalis". As it is, the world of experience displays much that seems contingent and incalculable, and it is this apparent element of casualty and indetermination that Timaeus means by the "Errant Cause" or "Necessity". The "Errant Cause" stands for all the unexplained "datum" in the present order of things. Such datum there must always be, because the physical world is αἰεὶ γιγνόμενον and not αἰεὶ ὄν and is only a "copy", not a reduplication of its eternal and self-same original. It is only "like God as far as possible". This, as Plotinus says ("Ennead" II.9.8), is its very nature; the world cannot be anything more than a symbol or replica, else there will be no distinction between it and God.



At the same time, though nature can never be rationally explained and co-ordinated in every detail, that is still the ideal of positive science. Though cosmology can never be an "exact science", it should be our aim to convert it as far as possible into "exact science" by following the latter's method. The only true way of trying to reach a rational and scientific understanding of this spatio-temporal universe is by an explanation of it in terms of mathematical physics. - On the general principle that *θεὸς ἀπὶ γεωμετρειῶν*. Such a geometrical science of nature is undertaken by Timaeus at 48c-61c, where he seriously tries to explain the total physical fact as resolvable ultimately into mathematical formulae by a molecular analysis of the four "elements", though he takes care to insist that such an attempt is itself only a tentative *εἰκὼς λόγος* (53d, cf. 48d). None the less it is a genuine endeavour to reduce physics to applied geometry, and Aristotle was quite right in taking this account of the derivation of the elements literally (cf. "de Caelo" III.298b.33f., "de Gen.et.Corr".I.315b.30). The same doctrine, that solids can be built out of mathematical *ἐπίπεδα*, was in fact held in the Academy after Plato (Aristotle, "Met." 992a.10-23). Proclus <sup>silently?</sup> gets the whole point of Timaeus' geometrical analysis of the *στοιχεῖα* quite clearly at I.343.18f. He there insists that, though only *εἰκοτολογία*, the "myth" of the "Timaeus" is not a "myth" in the sense of being mere guess-work. Conjecture (*τὸ εἰκάζειν*) and likeness or assimilation (*τὸ εἰοικέναι*) are two distinct things: the

former belongs to objects which, though copies, are not copies of the intelligible but of the sensible, whereas the latter applies to εἰκόνες τοῦ ὄντος. For the one we have εἰκαστικοὶ λόγοι (conjectural), for the other εἰκότες λόγοι (likely). Timaeus is dealing with τὰ ἔργα τῆς φύσεως, not τὰ κατὰ τέχνην. And we have to be satisfied with approximation (τὸ σύναγγυς, 349.9, τὸ ὡς ἐπὶ τὸ πολὺ, 352.2, τὸ ἔγγυς 536.6) in such an account (1) because the material is in a constant state of instability, and (2) because whatever exactness astronomy and physical speculation possess come only from the amount of geometrical proof they use, since geometry is a science of intelligibles and universals (346.20f.cf. Xenocrates on ἀστρολογία in Ritter and Preller <sup>^</sup> 282). Timaeus, Proclus points out (351.3-353.4) gives us a double reason for the difficulty or impossibility of accuracy in physical speculation - (1) the nature of the objects discussed, since material things do not admit of scientific and irrefutable exposition, and (2) our own impotence (ἀδυναμία) or weakness (ἀσθένεια) as finite human beings who have for the most part to employ sensation and empirical aids.

Lotze at the conclusion of Book III of the "Mikrokosmos" writes: "The wholesum of nature can be nothing else than the condition for the realization of the Good... . But this decided conviction indicates only an ultimate and farthest goal that may give our thoughts their direction: it does not indicate knowledge that deserves the name of

science, in the sense, namely, that it can be formulated in a demonstrable doctrine. To our human reason a chasm that cannot be filled, or at least that has never yet been filled, divides the world of values from the world of forms."

Substituting word "facts" for the word "forms", we may say what Timaeus seeks to do is to bridge the "chasm" between the world of "values" and the world of "facts" by the application of mathematics to physics. The more we understand the natural world in terms of mathematics, the more we shall clarify it of the irrational, *ἀνάγκη*. We shall see more and more clearly that, in the words of Leibnitz, "causae efficientes pendent a finalibus", that mechanism is not the true cause of things but merely fulfils what Timaeus calls the office of "underling" or "understrapper" (*ὑπηρέτης*, 46c, *ἀΐτία ὑπηρετούσαι*, 68e, for which meaning cf. Euthyphro 13a-d, where "service of the gods" is shown to be simply a form of *ὑπηρετική*, the art of "co-operating as a subordinate with a superior" for the achievement of a *πάγκλον ἔργον*). In this way physical science will virtually consist in an increasing and progressive revelation of the goodness of God. The more we see the facts of nature, not as mere contingent and unexplained "data", but as necessary and integral parts of a uniform and intelligible system, the more shall we view the world and the "art of world-making" in the light of *τὸ ἀγαθόν*, and the more shall we learn of "the depth of the riches both of the wisdom and knowledge of God".

Such a mathematical interpretation of physical reality was clearly an ideal of Plato himself. It explains the inscription reputed to have been put over the gate of the Academy, <sup>ἡ δὲ δόξα ἀεικαταστήσασθαι</sup> Ἀγεωμέτρητος μὴ εἰδέναι, as well as the charge said to have been laid against Plato by his opponents, that he κατεμάθυματικεύσατο τὴν φύσιν. Now it seems clear that the starting-point of the distinctive πραγματιὰ which Aristotle ascribes to Plato in the "Metaphysics", the analysis of the "Forms" into the One and the "Indefinite Duality", was the demand for a definition of "irrationals" or "incommensurables".

It seems, further, that, as <sup>π.</sup> H. Stenzel and Professor Taylor maintain (see chapter on "Plato in the Academy" in A.E. Taylor's "Plato: The Man and His Work"), in his conception of the ἀόριστος δυνάς Plato was thinking of the formation of successive "convergents" to an endless "continued fraction" and that he had in mind the problem of obtaining a series of ever closer approximations to the precise definition of quadratic and cubic surds. If this is true, then clearly the underlying thought is closely connected with that which guides Timaeus' treatment of ἀνάγκη. It is the "surd" or "incommensurable" in nature that Timaeus personifies in ἀνάγκη and it is just the partial "rationalization" of such a "surd" that he attempts tentatively to make in the elaborate mathematico - physical scheme which he offers at 48cf.

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CHAPTER VII.

THE SOUL OF THE WORLD.

Timaeus' account of the formation of the cosmic soul presents perhaps the greatest "crux criticorum" of the dialogue. The account is contained at 35aff., and is important enough to be quoted "in extenso". The text

followed is that of Burnet. τῆς ἀμειστόου καὶ  
ἀεὶ κατὰ ταῦτ' ἐχούσης οὐσίας καὶ τῆς αὖ πρὶ  
τὰ σώματα γυγνομένης μεριστῆς τρίτον ἐξ ἀμφοῖν  
ἐν μέσῳ συντεκράδατο οὐσίας εἶδος, τῆς τε ταύτου  
φύσεως [αὖ πρὶ] καὶ τῆς τοῦ ἑτέρου, καὶ κατὰ  
ταῦτ' (v. l. ταῦτ') συνίστησεν ἐν μέσῳ τοῦ τε ἀμειστοῦς  
αὐτῶν καὶ τοῦ κατὰ τὰ σώματα μεριστοῦ καὶ  
τρία λαβὼν αὐτὰ ὄντα συντεκράδατο εἰς μίαν πάντα  
ἰδέαν, τὴν θεατέρου φύσιν δύσμεικτον ὅσων  
εἰς ταῦτόν συναρμόττων δίχα, μεγάλως δὲ μετὰ  
τῆς οὐσίας καὶ ἐκ τριῶν ποιησάμενος ἐν  
πάλιν ὄλον τοῦτο μοίρας ὅσας προσῆκε δεινύμεν,  
ἐκάστην δὲ ἐκ τε ταύτου καὶ θεατέρου καὶ τῆς  
οὐσίας μεμετριμένην.

Difficulties of interpretation are here aggravated by difficulties of text. The two words αὖ πρὶ read by the manuscripts after τῆς τε ταύτου φύσεως are indubitably a spurious interpolation repeated from the preceding clause; while the whole context favours the similar rejection of the manuscript ταῦτ' for Burnet's reading ταῦτά. The chief problem of the Greek is the construction of the genitives in the paragraph. Now the first two genitives, τῆς ἀμειστόου οὐσίας καὶ τῆς

μεριστῆς, are clearly dependent primarily on ἐν μίῳ; the phrase ἐξ ἀμφοῖν also refers to these two genitives but as it stands it seems best regarded as lending idion to τρίτον - "a third out of both". The third genitive οὐσίας is of course a simple genitive of material after εἶδος. The other pair of genitives, τῆς τε ταύτου φύσεως καὶ τῆς τοῦ ἑτέρου, are also to be construed with ἐν μίῳ in apposition to the first two, so that the two pairs become identical in meaning. Even if we take τῆς ἀμείστου οὐσίας καὶ τῆς μεριστῆς with ἐξ ἀμφοῖν and τῆς τε ταύτου φύσεως καὶ τῆς τοῦ ἑτέρου with ἐν μίῳ, as Archer-Hind does, it will be hard to see how God can make the τρίτον οὐσίας εἶδος intermediate between the Same and the Other by compounding it out of the Undivided and the Divided, except on the supposition that both stand for the same pair of categories. Or, again, if we take τῆς ἀμείστου κ.τ.λ. with ἐν μίῳ and construe τῆς τε ταύτου κ.τ.λ. with ἐξ ἀμφοῖν, the Undivided and the Divided will play no part in the chemistry at all. Zeller ("Plato and the Older Academy", chapter on "Physics") would refuse to reject both the words αὐὸ περί after τῆς τε ταύτου φύσεως but would retain αὐὸ, taking both ἐξ ἀμφοῖν and ἐν μίῳ with all four genitives, and we are accordingly to understand that God first blended the ἀμείστον and the μεριστόν into a third intermediate οὐσία, and then did the same again (αὐὸ) with ταύτον and ἕτερον. But what, on this construction, will be the three materials (τρία ἀβείν,



35a.6) of the next mixture? We have already been given two compound substances. What is the third ingredient? Apart, however, from textual details, the identity of *ἀμείριστον* and *μειριστόν* with *ταῦτόν* and *θάττερον* is asserted plainly enough at 37a, where it is said that, since the soul is blended of the Same and the Other, it can, when it "revolves upon itself", meet and respond to *οὐσία ἀμείριστος* and *οὐσία σκεδαστή* and their various relations external to itself (where note also the words *ἐκ τῆς ταύτου καὶ τῆς θαττέρου φύσεως ἐκ τῆς οὐσίας τριῶν τούτων συγκραθεῖσα μοιρῶν*, with which cf. *τρία λαβῶν* at 35a.6).

The translation of the whole passage, then, stands thus: "Intermediate between the undivided and ever self-identical being and that which is divided about bodies and becomes, God compounded a third form of being out of both, intermediate between the nature both of the Same and of the Other, and by the same means He composed it intermediate between the undivided and that which can be divided. And He took them, three in number, and blended them all into a unity. He constrained the nature of the Other, in spite of its reluctance, to unite with the Same, and, having mixed them with the other being, out of the three He produced one. This whole He next divided into as many portions as was right, and each portion was compounded of the Same, of the Other, and of the third substance". Accepting the *ἀμείριστον* and *μειριστόν* and the *ταῦτόν* and *θάττερον* as signifying



one and the same pair of "opposites", we can see clearly enough what the Demiurge is represented as doing. He first took parts of the two "opposites", the Undivided and the Divided, or the Same and the Other, and fused them into a third intermediate οὐσία. This compound He again blended with the ingredients of the first mixture, and then divided the final product into portions according to the intervals of a melodic progression and split it into two great circles.

At "de Anima" 406b.25f. Aristotle treats this account of the creation of the soul of the οὐρανός strictly "au pied de la lettre" and criticizes it accordingly. He takes it to mean that the soul is a "magnitude" (μέγεθος) and from this standpoint he objects that, if the soul is a magnitude, it cannot think, and that Plato makes the soul a revolving circle and identifies the circle's revolution with the soul's thinking, thus making thought an endless process or cycle, whereas processes have "limits" (πέρας). Other strictures which he passes are that no teleological explanation of the soul's circular motion is offered by demonstrating that it is βέλπιον, and that the whole speculation ignores the intimate relation (κοινωνία) subsisting between soul and body. This last is clearly the chief objection which Aristotle wishes to make. He finds nothing in the ψυχογονία of the "Timaeus" to substantiate his own theory of the soul as the ἐντελέχεια or "actual realization" of a "natural organic body", and all his

criticisms are designed to lead up to the main objection, viz., that the account does not explain the dependence of a particular soul upon a particular body, and that, instead of attempting to show whether there is any organic relation between soul and body or not, talks "as if it were possible for any soul taken at random, according to the Pythagorean stories, to pass into any body".

Thus Aristotle's criticisms are not altogether disinterested. They are obviously an unjust "tour de force". For we must remember that the speaker is a fifth-century Pythagorean who, faced with the difficulty of expressing non-sensuous thought by means of a language as yet inadequate for such a purpose, would have spoken much as he is made to speak. Similarly Theophrastus' criticism, mentioned by Proclus at II. 120.7f., that it is illegitimate to inquire into the cause of what is an ultimate and always to investigate "the why" ( τὸ διὰ τί ) in natural science, was also founded on a misunderstanding. For Timaeus, as Proclus replies, is treating of the soul of the world not particularly as a physical, but more widely as a philosophical entity. From this point of view, it is not a "first principle" (Proclus II.123.1,13) but is a derivative, and it is therefore quite properly described as begotten ἀπ' ἀλλῆς ἀρχῆς. Accordingly, Proclus himself agrees with most of the exegetes in refusing to accept the literal statement of Timaeus and in treating the whole account as figurative. He regards the account as a kind of

anatomical analysis of the soul's οὐσία - of the elements and proportions which make up its constitution (II.123.30f.), and he is therefore careful to insist that, while the soul, like everything else, consists of Being (οὐσία), Capacity (δύναμις), and Activity (ἐνέργεια), in speaking of the formation of the soul we are discussing chiefly its "essentia" or quiddity (II.141.14f., 150.19, 152.21, 154.18, 162.2, 193.32), its οὐσία, and only secondarily its δύναμις and ἐνέργεια (II.258.3f., 279.22f.). Such a distinction must not be unduly pressed, for the real point of this account of the formation of the οὐσία of the soul of the world is to describe and illustrate just what Proclus calls its δυνάμεις and ἐνέργειαι.

What we have to do, therefore, is to try to understand what these δυνάμεις or "powers" are which Timaeus is attempting to delineate under the picture of the Soul's creation, and for this purpose, as Professor Taylor insists, the tradition should be our truest guide. Now at "de Anima" 404bff. Aristotle, who was associated with Plato for twenty years, in a discussion of the "propria" of soul (τὰ μάλιστα δοκοῦνθ' ὑπέχειν αὐτῇ κατὰ φύσιν, 403b) remarks that some, such as Democritus and Anaxagoras, focussed their attention upon soul as cause of motion, upon τὸ κινεῖσθαι, while others concentrated on the soul's "awareness", on τὸ γινώσκειν καὶ τὸ αἰσθάνεσθαι τῶν ὄντων. These latter regarded the soul as constructed from the same constituent elements

(ἀρχαί) as the objects which it apprehends, on the ground that "like is known by like". Empedocles, for instance, declared that "with earth we see earth" - γαίῃ μὲν γὰρ γαίαν ὁπώπαμεν (Frag.109d). "In the same way Plato in the 'Timaeus' makes the soul out of the elements (ἐκ τῶν στοιχείων); for like is known by like (γινώσκουσι γὰρ τῷ ὁμοίῳ τὸ ὅμοιον) and the objects are compounded of the ἀρχαί". Others, again, Aristotle goes on, had combined the conception of soul as κινητικόν and that of soul as γνωριστικόν and had accordingly defined it as "self-moving number" (ἀριθμὸς κινῶν ἑαυτὸν). Aristotle says much the same thing about the "Timaeus" at 406b.26f., where he says that the soul was made out of the elements (συνεστηκίαν ἐκ τῶν στοιχείων) and divided in harmonic ratios "in order that it might have an innate perception of proportion" (ὅπως αἰσθῆσιν σύμφυτον ἀρμονίας ἔχῃ).

Xenocrates, , president of the Academy 335-315, is the person meant by Aristotle in his reference to a third party who combined the soul's two functions of motion and cognition. According to Xenocrates' interpretation, the derivation of the soul from the Undivided and the Divided represents the logical deduction of the series of ἀριθμοί or natural integers from the One and the "Indefinite duality"; while the introduction of two other ingredients, the Same and the Other, Permanence and Variety, exhibits the soul as an ἀρχή of movement and rest (Plutarch, "de Animae

Procreations", 1012.d-f.). Xenocrates accordingly defined the soul as a "self-moving number". Proclus ascribes the same conception of the soul as a "number" to Aristander, Numenius, and "most of the other exegetes" ( *ἄλλοι πλείστοι τῶν ἑξηγητῶν* - II.153.23) and objects to such an interpretation on the ground that Timaeus has given us no intimation whatever that soul is "number".

Crantor, another member of the Academy, agreed with Aristotle in regarding the psychogony as concerned primarily with the soul's "cognitive" character. He fixed his attention on *αἰσθησις* to the exclusion of *κίνησις*. The soul's distinctive "proprium" is the apprehension of the permanent and the mutable, the intelligible and the sensible, or the Undivided and the Divided; and also of the various relations of identity and diversity obtaining in and between the objects of both realms, whence the introduction of two further factors, the Same and the Other (Plutarch, op.cit.1012 d, f. 1013a). The soul, in Crantor's view, "is composed of all things in order that it may cognize all things" ( *ἐκ πάντων συγκεκράσθαι ἵνα πάντα γινώσκῃ*, Plut.op.cit.102f.11).

Both Xenocrates and Crantor, whose respective interpretations seem to have divided the early Academy, held in common, says Plutarch (op.cit.1013a.18), that the soul is not begotten in time but has several "powers" or "properties" (*δυνάμεις*) into which its *οὐσία* is here analyzed *θεωρεῖς ἐν-ε-κ-ε*, for a lucid understanding of its nature.

Both Xenocrates and Crantor agreed also, it will be seen, in keeping the two pairs, *ἀμείριστον* and *μεριστόν, ταῦτόν* and *θάτερον*, distinct from one another. Plutarch who takes the whole account literally, does the same. According to his interpretation (op.cit.1025.a-b), soul consists of an *ἀναλογία* like that of the body. Just as God united the two mutually opposed "elements", fire and earth, by setting air and water between them, so He drew together the two anithetic extremes, the Same and the Other, "not immediately, but by placing other substances between them, the Undivided next to the Same and the Divided next to the Other". "God", says Plutarch further on (1027a), "bounded indetermination by unity, in order that the soul might be made a substance that partakes of determination, and by the agency of the Same and the Other He blended together order and mutability, diversity and identity; and to all of these He communicated mutual fellowship and friendship by means of numbers and attunement".

Proclus also keeps *ἀμείριστον* and *μεριστόν* distinct from *ταῦτόν* and *θάτερον*, and so, apparently, did most of the expositors. For we may gather from Proclus (II.155.20f.) that the point disputed by the exegetes was not whether the two pairs were identical or distinct, but which of the two constituted the wider category. Some regarded Same and Other as included respectively under Undivided and Divided, but Proclus, whose exposition of the psychogony is based on the classification of the *μέγιστα*

γένυ (Being, Sameness, Otherness, Motion, Rest) at "Sophist" 250-254, urges that Same and Other, as two of the comprehensive γένυ τοῦ ὄντος, cover the other pair and points in corroboration to the word αὐτῶν in the expression ἐν μέσῳ τοῦ τε ἀμεροῦς αὐτῶν καὶ τοῦ κατὰ τὰ σώματα μεριστοῦ - "intermediate between the undivided and divided of these" (i.e. of Same and Other). Sameness is present in τὰ μεριστά and Otherness in τὰ ἀμέριστα but the former predominates in τὰ ἀμέριστα and the latter in τὰ μεριστά (156.1f.31f.). As regards the meaning of the four terms, the Same for Proclus is similar in significance to "Limit" (πέρας), the Other to "Unlimited" (ἄπειρον, II.133.29f., 262.4f.). The Undivided and the Divided, in a general sense, apply respectively to everything intelligible and intellectual and to every quality or substance of a sensible or bodily nature (II.139.9f). More particularly, however, the Undivided means especially the intellectual life of the universe and the Divided the bodily, the life of the soul being intermediate between the two in that it is "per se" separable from the organic life of the world but yet is not without contact with it (140.30, 142.25, 27, 148.25, 152.21, 154.24, 285.12). Accordingly, Proclus regards the soul as compounded of three intermediate "species" (εἶδη) - the μέσον of ἀμέριστον and μεριστόν in the "genus" (γένος) Sameness, the μέσον of ἀμέριστον and μεριστόν in the γένος Otherness, and the μέσον of ἀμέριστον and μεριστόν in the γένος Being (this μέσον or μόριον τῆς οὐσίας being



itself called οὐσία - i.e. the τρίτον οὐσίας εἶδος, 158.1). Then the three μέσα or εἶδη are blended, as Timaeus says, into one ἰδέα, so that the soul actually becomes an εἶδος εἰδῶν (157.25). And the three γένη used, ταῦτον, θάτερον, and οὐσία, are distinctive in that they are themselves τὰ μέσα γένη (136.21 and 155.10), and they are "intermediate" or μέσα in the sense that in each of them "Limit" and "Unlimited", τὰ θεία γένη (160.5), have equal dominion (137.23f.). If "Limit" were more powerful than "Unlimited", the γένη would be ἀμείριστα; if "Unlimited" were stronger than "Limit", they would be μεριστά. As it is, the two are equals, so that the three γένη are μέσα. The three γένη are present everywhere in the soul, but in one place ταῦτον predominates, in another θάτερον, while οὐσία is common equally to both and thereby gives union to the soul. It is just because οὐσία is common that the Demiurge does not fashion a circle of οὐσία as well as of ταῦτον and of θάτερον (257.25, 267.8f.).

Proclus is careful to insist throughout his exegesis that we are talking of one particular specific soul - ἡ κοσμικὴ ψυχή, the soul of the world (II.141.3f, 142.9f, 143.23f., 158.3f., 241.3f, 280.14., III.251.23). Plutarch also stresses this point ("de Anima Procr."1024a). Proclus is equally emphatic about the figurative character of the whole account. Thus he warns us that, when Timaeus speaks of the Demiurge as splitting the soul into parts, his words must not lead us to conceive of the soul as a sort of

rod or rule (κανὼν, 165.29) or as extended in space (διάστατος, 166.7), or as split up into integers (166.9). For the soul preserves its unity (ἔνωσις) along with its division (διαίρεσις) - this indeed is the peculiarity of "immaterial mixture" (ἄυλος μίξις, II.254.7) - just as the circle of the Other does not have its unity destroyed by its subdivision into seven minor circles (III.60.2). The soul is at once continuous and discrete (II.166.6, 194.17f., 238.12f., 246.17), both monad and number (μονὰς καὶ ἀριθμὸς, II.238.17). The οὐσία of the soul is in fact at once ἀριθμητικὴ and γεωμετρικὴ (II.238.27). From this point of view Proclus is in sympathy with the Xenocratean conception of the soul as an οὐσία κατ'ἀριθμὸν (II.165.9), so far as it be taken to mean that the soul is a unity made up of essential parts (μέγ' οὐσιώδη). He sympathizes, too, with the identification of the Undivided and the Divided with the One and the "Indefinite Duality", so far as this means that the soul is a link between νοῦς and σῶμα or between πέρασ and ἄπειρον, and not merely that the soul is an ordinary ἀριθμὸς μοναδικός (II.196.19, cf. 242.16f.). At II. 193.14f. Proclus insists again that the division of the soul is not material or geometrical or arithmetical, but is essentially immaterial (ἄυλος) and intellectual (νοερός). So again at II.245.23f. he urges, in reply to "the clever ones amongst the Peripatetics", that the "line" (γραμμὴ) meant in Timaeus' description of the soul's creation and division is not material or mathematical, but is "essential"

(οὐσιώδης) and, as Xenocrates said, "indivisible" (ἄτομος). Plato's language, he cautions us (247.23f.), is not to be taken literally, but must be regarded as a symbolical "veil" (παρεπέτασμα). In the same spirit, he remarks at II.249.31f. that the soul cannot really (ὄντως) be a figure consisting of circles, as such a conception would involve us in endless absurdity (ἄλογία). Actually the soul is without shape and without extension (ἀσχημάτιστος καὶ ἀδιάσπαστος). At II. 278.27f. Proclus makes a passing reference to the criticisms made by Aristotle and repeats that the soul is not a magnitude (μέγεθος). Finally, at II.284.19 he points out that Plato's own language at 36e shows that he did not intend us to understand the details of the psychogony literally. For how can the soul be really (ὄντως) circular and yet be spoken of as "woven into" (διαπλακείσα) the world and at the same time as "wrapping it around" (περικαλύψασα)? The two expressions, says Proclus, simply combine to express the double conception of the soul's omnipresence and of its superiority to the body which it animates.

We come to what Proclus understands by the figurative details of the ψυχογονία when he turns from the soul's οὐσία to discuss its δυνάμεις and ἐνέργειαι at II. 258.1f. The soul's δυνάμεις, he says, are exhibited in the various motions of the eight circles of the soul. Its "activities" or ἐνέργειαι relate partly to knowledge (τὸ γνωστικόν), partly to motion (τὸ κινητικόν -279.28). Plato, in fact shows how the soul by moving itself moves other things, and how by apprehending itself it apprehends both

things antecedent and things posterior to it (280.1), for all things are as it were "rooted" in the soul (282.32). Thus the soul's "revolution in itself" is indicative (1) of the soul's self-motion (αὐτοκίνησις), and (2) of its knowledge (γνώσις) of itself and of all else (286.20f.). Now the soul contains as media between the Undivided and the Divided εἶδη of the three γένη Being, Same, and Other, and by virtue of these three it knows their counterparts in both ἀμέριστα and μεριστά (297.14f.), and this is what is meant by the words αὐτὴ ἀνακυκλουμένη πρὸς αὐτήν, "returning in a revolution to herself", at 37a (298.24, cf.311.19). Like Aristotle, Proclus quotes the words of Empedocles, γαίῃ μὲν γὰρ γαίαν ὁπώπαμεν (298.6). All knowledge, he goes on to say, in fact consists in a correspondence (ὁμοιότης) between subject knowing and object known (298.27), in a "return and adaptation and agreement" of τὸ γιγνώσκον to τὸ γιγνωσκόμενον<sup>287.2cf.35.21</sup>. Here we may compare II.136.1, where Proclus remarks that the soul is made to consist of the primary γένη, of numbers and harmonic proportions, and of figures and various motions, "in order that it may cognize being, number, harmony, figure and motion in all else", as well as II. 266.1, where he says that the soul of the world contains within it the forms or proportions (λόγοι) and intellectual causes (νοετὰ αἰτίαι) of all things in the world.

More particularly, however, proceeds Proclus, the circle of the Same apprehends especially ἢ ἀμέριστος

οὐσία and τὸ νοητόν, that of the Other γ' σκεδάσθαι  
οὐσία and τὸ αἰσθητόν (II.299.11,23). What faculty, then,  
is able to distinguish between νοητόν and αἰσθητόν, since,  
as the "Theaetetus" teaches us (185b), it is not possible  
to know and speak about the difference between the two without  
a knowledge of both? The λόγος which distinguishes the  
two constitutes exactly the ἐνέργεια of οὐσία, for it is  
common to both the circles (cf.255.4), and this it is that  
makes the soul and its knowledge one and uniform and entitles  
us to call the soul as a whole "rational" (λογικός, 299.16-21,  
cf.307.27). Indeed, why are there not three κύκλοι instead  
of two, to correspond with the three στοιχεῖα of the soul,  
unless there is one οὐσία in both κύκλοι (306.12)? And  
whereas the two other κύκλοι apprehend intelligible and  
sensible separately or in isolation (διηρημένως), the λόγος  
which is the δύναμις of οὐσία is a uniform or unifying  
knowledge (ἐνοσιδὴς γνώσις, 308.2).

Proclus' final definition of the soul is  
given at III.254.13-18. "Soul is an essence intermediate  
between real Being and Becoming, compounded from the  
intermediate genera, divided into essential number, bound  
together by all the media, diatonically attuned, with a  
life both one and dual, and with a knowledge at once single  
and twofold." In the same context he discredits Aristotle's  
definition of the soul as the "actual realization of a natural  
organic body" on the ground that it talks <sup>of</sup> what the soul  
is without defining what soul itself is.

Now, taking these four interpretations of

the psychogony. (Aristotle, Xenocrates, Crantor, and Proclus) along with Timaeus' own words, and bearing in mind that Undivided and Divided and Same and Other represent one and the same antithesis, we may note three points. (1) It is clear, first of all, that the basic thought underlying all of them is the general principle that "like is known by like". Their agreement on this point makes it more or less certain that we have here the key to the right appreciation of Timaeus' account. (2) The description of the Demiurge as blending the continuous and the discrete into a third substance, taken in conjunction with Aristotle's explanation that in the "Timaeus" the soul is constructed of the *στοιχεῖα*, at once suggests a correspondence with the thought of the "Philebus" (24e.f), where two similar antithetic elements, *πέρας* and *ἄπειρον*, determination and indetermination, the original Pythagorean *στοιχεῖα* of "things", are likewise fused into a *μῖξις* or *κράμα*. (3) Finally, when we remember that Timaeus is a fifth-century Pythagorean, it becomes fairly clear that, as Professor Taylor maintains, the *στοιχεῖα* of the soul's constitution mentioned by Aristotle are not, as Xenocrates plainly supposed, the *στοιχεῖα* into which Plato analyzed his "Forms" or "Numbers" - the One and the "Indefinite Duality", but the fundamental Pythagorean *ἀρχαί* which Aristotle also distinguishes in his account of the Platonic *πραγματεῖα* - viz., the *πέρας* and *ἄπειρον* (cf. Aristotle, "Met." 986.a.17, 987b.20), and that the foundation of the whole thought of the passage

is the Pythagorean doctrine of the derivation first of the unit and then of the series of *ἀριθμοί* from "Limit" and "Unlimited" - which serves to explain the double mixture which Timaeus represents the Demiurge as performing. Proclus, as we have already seen, introduces the Pythagorean categories *πέρας* and *ἄπειρον* into his exposition. And as in the formation of the soul the *ἀμέριστον* and the *μεριστόν* are blended into a third *οὐσία*, so later (52d) we find that in the physical world at large there is a corresponding combination of *ὄν* and *χώρα* into the determinate process called *γένεσις*. To apprehend its proper objects, the soul, on the principle that "like is known by like" must have a constitution answering or similar to them. Thus the immediate emphasis of the whole passage is especially on the "gnostic" or "cognitive" aspect of the soul, on its intelligence as apart from its motion. Astronomically, of course, as is shown later on (38b-39e), by means of the *κύκλοι* of which it consists the soul is the source of the orderly motion of the heavenly bodies, but all we hear in the present context of the soul as a cause of movement is the passing remark that soul is "that which is moved by itself" (*τὸ κινούμενον ἑφ' αὐτοῦ*, 37b), though it is implied often that the soul's motion is intimately connected with and involved in its mental activity (cf. 39c, 40a, 89a, 90d).

The most important point, however, is that we should avoid supposing that the soul consists of elements identical with those which make up the objects it cognizes.



For such an assumption not only destroys the distinction between subject knowing and subject known, but in effect makes the soul a "res extensa". Proclus himself warns us against this error. Plato's words, he says (II.152.24f), must not lead us to regard the soul as a mixture containing something incorporeal and something corporeal (τι καὶ ἀσώματος καὶ σωματικόν), as Eratosthenes supposed, or as a sort of geometrical entity made up of a point and a line, as Severus conceived it, for in neither case is such a combination possible. This is, in fact, the pitfall into which most of the interpreters are prone to fall. It leads Xenocrates to regard the soul as itself a "number", and it is the defect which likewise vitiates Crantor's exegesis. This point is clearly seen by Plutarch, who remarks that, on Crantor's interpretation that the soul is blended ἔκ τε τῆς νοητῆς καὶ τῆς περὶ τὰ κίθνητὰ δοξατῆς φύσεως, it is not clear how such a mixture can give rise to soul more than to anything else, since the whole world itself and all its parts consist of intelligible and corporeal ("de Anima Procr. 1013 b-c). He says the same thing again at op.cit.1023a. "What difference", he there asks, "will there be between the origin of the world and that of the soul, if both are constructed out of material and intelligible?" The same error reappears in the fragmentary treatise called the "Timaeus Locrus", probably a production of the first century A.D., where the soul is similarly described as "a blend of indivisible form and divisible being" (95e); and

again in the interpretation of the Stoic Posidonius, whose definition of the soul as the "form of the extended in every direction" ( *ἰδέα τοῦ παντὴ διαστάτου* ) is tantamount to materialism, as Plutarch remarks (op.cit.1023b). [In common] against both Xenocrates and Posidonius, Plutarch further objects that "neither in limits nor in numbers is there any trace of that faculty which enables the soul to form judgements about the sensible." For, he goes on, it is impossible to suppose that opinion, belief, imagination and such physical affections "proceed from units or lines or surfaces" (op.cit. 1023a).

What Timaeus seems to mean, therefore, is simply that the soul in its ultimate law of structure is analyzable into constituents analogous to those which make up the different objects of the physical world. And because there is such a correspondence between them, the soul is able to deal in its complex mental life both with the *νοητῶν φύσιν* and with the *σωματικῶν φύσιν*, with the truths of exact science and with the transitory objects of sense-perception. In virtue of its composite nature, the soul by "revolving upon itself" can formulate impressions at once about the stable and about the mutable, about the eternal and about the temporal. Yet though the soul thus frames two different sets of judgements, it still remains a single consciousness that can keep the two distinct instead of confusing them. This, perhaps, is the point that Timaeus has in mind when he makes the blend of the Undivided and

the Divided itself an ingredient in the divine chemistry. This at any rate was the interpretation of Proclus (II.299. 16f.), as we have seen. It was also that of Plutarch, who says that God made a blend of the Undivided and the Divided (i.e. τὸ τρίτον οὐσίας εἶδος ) for the reception of the Same and the Other in order that the common reason ( ὁ κοινὸς λόγος ) may be enabled to "separate the one from the many and the undivided from the divided by determinations and distinctions", and "in order that there might be produced order in diversity" ( ἵν' ἐν διαφορᾷ τάξις γένηται, op.cit. 1025e). The κράμα of ἀμείριστον and μεριστόν seems to represent the unity to which ταῦτόν and θάτερον announce their independent judgements; and this faculty, because it is a combination of both, is able, not only to keep the two processes distinct, but also, in virtue of the ἀμείριστον or ταῦτόν which it contains, to give a certain amount of clarity and definitude to the soul's empirical apprehension of sensible phenomena. This, in fact, is what makes possible the construction of a "likely" and intelligible, if provisional and progressive, doctrine about the nature and structure of the physical universe.

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CHAPTER VIII.

THE MEANING OF THE "MYTH".

We are now in a position to consider the general meaning of the "tale" of Timaeus and to try to determine what is the positive doctrine which he is attempting to set forth amid all the fanciful decoration of his discourse. Now throughout his account Timaeus seems to speak of an historical creation in time. He lays down at the outset that the world "has come into being and has had a certain beginning" ( γέγονεν, ἀπ' ἀρχῆς τινὸς ἀρξάμενος, 28b -cf. 32c, 34b- ὁ ποτὲ εἰσόμενος θεός, 37e, 38b, 41a, 44c, 51a, 52c), and he concludes on the same note ( ὅδε ὁ κόσμος οὕτω γέγονεν, 92c). He describes the soul as "the best of all things begotten" (37a), and he distinguishes more than once between the eternal or that which is out of time altogether, and the everlasting in time. "One and only-begotten this universe has become, and is, and ever shall be" (31b). The soul of the universe "made beginning of her divine life of understanding, which continues without end for evermore" (36e). "The nature of the intelligible living creature was eternal, but to attach eternity altogether to the begotten was impossible" (37d). "The pattern is existent for all eternity, but time<sup>2</sup> (or, the universe) has become and is and shall be continually through all time" (38c). At 48b Timaeus undertakes to "investigate the very origin of the elements before the generation of the universe", asserting

that "there was Being and Space and Becoming, three distinct natures, even before the universe came into being" (52d).

Accordingly [the] two later Platonists, Plutarch of Chaeronea and Atticus, definitely understood the dialogue as teaching a beginning of the world in time - not, however, in the difficult sense of a sudden creation "de nihilo" (though such a conception was not unknown to Plato, for cf. "Sophist" 265c, where the "visitor from Elea" says that what distinguishes divine from human creativeness is the fact that the former creates what was previously non-existent - *πρότερον οὐκ ὄντα*), but in the sense of the co-ordination by God of antemundane forces. The "creation" taught by Timaeus, they thought, was not an evolution of something out of nothing, but rather the superinduction of order and plan upon a pre-existing chaotic medley of heterogenous elements. "The creation did not arise from what was not, but from what was rude and imperfect, like the materials of a house or a garment or a statue" (Plutarch, "de Anima Procr." 1014b). "God was father and artificer, not of body pure and simple nor of bulk and matter, but of proportion about body and of beauty and uniformity" (op.cit.1017a). "The soul that lacked understanding and the body that lacked form co-existed without ever any origin or beginning. But when the soul partook of understanding and attunement and became rational by means of unison, it brought about a transformation in matter and directed and converted its motions by the domination of its own motions" (Plutarch, Quaestiones Plat."

1003a, cf. Proclus. I. 381.26f).

"Prima facie" this is what the language of Timaeus seems to suggest. He talks quite unequivocally at 30a and 54af. of a precosmical *μίγμα*, and he represents the activity of the Demiurge as combinative rather than formative - *συνεστήσατο* (32b, 34c, 53b, 69c), *συνεκκράσατο* (35a, 37a, 68d), *συνετκταίνετο* (30b), *συνέρφας* (34c), *συναρμόττων* (35a), *συναγαγών* (36e), *ὁ συνιστᾶς* (30b, 30c, 32c, 36d), *ὁ συνθεῖς* (33d), *ὁ συνδύσας* (32c). The Demiurge "ordered forth" (*διεκόσμησε*, 69c) the cosmos by "taking over" (*παραλαβών*, 30a, *πρελάμβανεν* 68e) and "shaping" (*διοσχημάτισατο*, 53b) materials already existing, like a potter and his clay. The teacher of the "Gorgias" (503cf) and the philosopher-statesman of "Republic" VI (500d) are conceived of as doing much the same thing with human nature (cf. also "Cratylus" 388f., and "Politicus" 309c).

Such a literal interpretation of the "Timaeus" however, involves insuperable *ἀπορίαι*. Although a "beginning in time" was read into the dialogue also by Aristotle (cf. "Met". 1071a.37-1072<sup>a</sup>2, "de Caelo" 279<sup>b</sup>33), it was certainly not the traditional interpretation, for at the beginning of his essay "de Animae Procreatione in Platonis Timaeo" (1012b) Plutarch acknowledges that his exposition is contrary to that accepted by most Platonists and asks for indulgence on that account. It assumes the pre-existence of *τὸ σωματοειδές* in flat contradiction to the priority which Timaeus gives to *ψυχῆ* (34c). This emphasis on the precedence

of soul is of itself sufficient to show that the description of a *ψυχή* "indigesta moles" once existing uninformed by mind is only symbolical. Moreover, how can there have been a visible *σῶμα* before the universe came into being? For Timaeus implies at 31 b, c. that the quality of being *σωματοειδές* *καὶ ὄρατόν ἔπτόν τε* is itself the result of God's design and as such applies only to *τὸ γινόμενον*. And Timaeus has no place in his physical doctrine for an imperceptible "matter". For him the whole physical world is also the sensible world, *ὄρατὸς ἔπτός τε*, as he asserts it at 28b. He would have had no sympathy with the distinction of Locke between substance and qualities, essence and appearance, although some such theory is what Archer-Mind actually tries to read into the dialogue (cf. Archer-Mind, Introduction p. 32 - material objects "have no substantial existence, but are subjective affections of particular intelligences"). Even his *ὑποδοχή* or *πιθὴν γενέσεως*, the spatial continuum, is no "substrate", but is simply that in which the events and processes of nature come to pass (*τὸ ἐν ᾧ γίνεταί*, 50d). It is on the mistaken idea that the *ὑποδοχή* is *ὑποκείμενον τι* that Aristotle's criticism at "de Gen. et Corr." 329a.13f. is based. Further, if there was a disordered motion anterior to the creation of the cosmos, it must have been an event in time. But the generation of time is declared by Timaeus to be synchronous with that of the *οὐρανός* (38b); time is regarded simply as an equable succession marked and measured by the motions and periods of the planets, the *ὄργανα χρόνου*. Thus



time cannot exist apart from events nor events apart from time, so that (1) motion cannot have taken place when as yet there was no time, and (2) there can never have been a completely empty and stationary time in which there was no motion. Aristotle himself, although he took the "Timaeus" literally, saw the contradiction involved in the "generation of time in time" - cf. "Physics", 251b.17ff., "de Caelo" 279.280.

Proclus comments very frequently upon the view of a *χρονική ἀρχή* of the universe (which, it is worthy of notice, he ascribes at I.276.31 to "many other Platonists" - ἄλλοι πολλοὶ τῶν Πλατωνικῶν - as well as to Plutarch and Atticus, with which cf. also οἱ περὶ Πλούταρχον καὶ Ἀττικόν, I.381.26, 384.4, and οἱ περὶ Ἀττικόν, I.391.7, III.37.12). He emphatically rejects it - πόρρω χρονικῆς γενέσεως ἰδεύει (sc. ὁ Τίμαιος) τὸ πᾶν, I.283.23, ὁ κόσμος ἀγέννητος κατὰ τὴν χρονικὴν γένεσιν, I.328.9, and attacks it with many extremely acute arguments. First of all, he refers at I.283.27f. to "the remarkable supposition of Atticus" that the disorderly chaos (τὸ πλῆγμαδῶς καὶ ἀτάκτως κινούμενον) which Timaeus talks of as preceding the world is unbegotten, while the world itself is begotten "from time" (ἀπὸ χρόνου). Proclus objects: (1) Plato at 28b says that what is sensible is begotten, and therefore, if we understand by *γενητόν* begotten in time, the *πλῆγμαδές* must be begotten in time. Atticus apparently got out of this impasse by saying that τὸ πλῆγμαδές is not now sensible or visible but was so before the creation of the world, and that when Plato talks

of the visible being begotten he means that which is and not that which was visible. Proclus rightly urges that the definition simply says that everything sensible is the object of opinion plus sensation and is therefore begotten.

(2) It also follows that τὸ πᾶσι μετέσθαι and the universe are both either begotten or unbegotten. If both are begotten, then the Demiurge begat disorder, and therefore cannot be good.

The whole hypothesis of a "beginning in time" is discussed more fully by Proclus at 1.286.20f., where his most cogent arguments may be thus summarized. (1) Plato says that time came into being together with the universe, and therefore if the universe had a "beginning in time", time must also have had a "beginning in time", when as yet there was no time. (2) Plato gives life to the soul of the universe only on its conjunction with the body, thus making the soul and the body co-extensive in life: if, therefore, the soul is always, the body is always also. (3) If the Demiurge is eternal and unchanging, as He is described, He must always create, and consequently the object of his creative activity (i.e. the universe) must always exist. Otherwise, why should the Demiurge suddenly stir from an infinity of idleness? He cannot have abruptly decided that creation would be a better thing than idleness, else He must previously have been ignorant, and we shall have the absurdity of a νοῦς containing ἄγνοια as well as γνώσις. And if creation were not better for Him, why did he not continue idle? (4) If the world once was not, there was a time when the Demiurge was not creating. He was thus only a Creator in potentiality (δυναμικός),

and was therefore for some time imperfect. The Demiurge Proclus continually insists, creates eternally and is an *αίδιος ὑποστάτης* (cf. II.195.1, II.249.1, III.7.22, cf. Plotinus "Ennead" II.9.8).

At I. 366.27f, Proclus advances further arguments against the conception of *ἢ κατὰ χρόνον γένεσις* from the assumption that the Demiurge is good. Was the non-existence of the universe, he asks, due to the Demiurge or to the disordered condition of the "substrate" of the world (i.e. the *πᾶν ὄσον ἦν ὀρεκτόν* of 30a)? (1) If due to the Demiurge, does this mean that He too did not exist eternally? That is an illegitimate and jejune hypothesis, and we must suppose instead that there was a time when the Demiurge was inactive. In this case, then, was the Demiurge unwilling or unable to create? If we adopt the first alternative, we shall inadvertently be denying the Demiurge's goodness; if the second, we must suppose that the Demiurge at one time lacks the power which at another time He possesses, and that is absurd. (2) If the "substrate" was responsible, was it previously suited or unsuited to systematization? If suited, obviously it was not it that stood in the way of creation. If unsuited, how did it become suited? Since it is unable to move itself, the impulse must have come from the Demiurge. If, then, the Demiurge was good and wanted all things to become like Himself, why did He delay? If the Demiurge is always good, He always wishes to diffuse good; and if He always wishes to diffuse good, He is always able to do so, since to desire what one

cannot attain is the mark of the meanest natures (cf. III.213.3). But if the Demiurge was always able to communicate good, He always does so in actuality, else His power will be imperfect. And if He is always communicating good, the world is always coming into being.

At I. 391.4f, Proclus recapitulates the "reverend conceptions" ( *ἱεροπρεπή νοήματα* ) of Porphyry in refutation of Atticus' assumptions that there are two distinct and unbegotten *ἀρχαί*, God and "Matter" ( *ἕλη* ), and that this "Matter" was impelled by an irrational soul and was arranged at a certain moment in time into a cosmos. Porphyry's arguments may be summarized thus. (1) His objections to the first thesis, that God and "Matter" are both unbegotten, are all reducible to one. If two such diverse principles as God and "Matter" agree in being unbegotten, what accounts for their difference in nature ( *διαφορά* )? Why does one tend to preserve, the other to destroy, or why is one immutable and the other mutable? There can only be one *ἀρχή* and not many - *μία ἢ ἀρχή καὶ οὐ πολλαί* (392.24), a position which Porphyry supports by reference to Plato's enunciations in other works - "Republic", "Epistles", "Philebus" and "Sophist". (2) Atticus' other thesis that the world had a "beginning in time" is discredited by a shrewd argument similar to that which we have already met with at 288.14f, the point of which is that if the essential nature of a cause or *ἀρχή* consists in the communication of order, the cause as cause must be as much dependent for its existence on the effects as the effects on the

cause; the cause cannot exist without simultaneous existence of the effects. Unless God is imperfect and His power as Demiurge is something supervenient or adventitious (*ἐπίκτητος*), He must always be creating. (3) A further argument (394.11f) *anticipate* repeats that given by Proclus at 366.27f. The absence at one time of order must have been the fault either of God or of "Matter". It cannot have been due to the will of God, because He is always good and as such would always produce good. And if it was due to resistance on the part of "Matter", what overcame its resistance? The assumption of a pre-existent state of disorder (*ἀταξία*) is simply a logical or hypothetical (*καθ' ἐπόθεσιν*) separation of form and formless intended to indicate the order which material things enjoy and their dependence for this enjoyment on other sources.

At II.104.9 Proclus remarks that the account of the origin or *γένεσις* of the soul proves of itself the eternity of the world. For if *γένεσις* is ascribed to things without origin, (i.e. soul), obviously the *γένεσις* meant cannot be an actual origin in time. Further (II.118.28f), soul, according to Timaeus (34c), was originally made by the Demiurge "mistress and ruler" of the body, and thus to be ruler (*τὸ ἀρχεῖν*) must be an essential attribute of soul. And if this is essential (*κατ' οὐσίαν*) and not merely accidental (*κατὰ συμβεβηκός*) to soul, it is always present to it. It cannot be present to it in potentiality (*δυναμει*) only, else the soul will be imperfect. It must therefore be present to it in actuality (*κατ' ἐνέργειαν*), from which it

follows that the universe (or rather its body), of which the soul is ruler, is co-existent with the soul.

At III.37.7f, Proclus points out that Timaeus' description of "was" and "will be" as "forms of time that have come into being" (*Χρόνου γεγονότα εἶδη*, 37e) involves the corollary (*πόρισμα*) that, since time came into being simultaneously with the universe, "was" cannot have existed anterior to the creation of the universe. And if "was" did not exist before the universe, neither did motion (since, as Aristotle showed, motion is in time and is made up of "was" and "will be"). But if there was no motion before the universe came into being, then Atticus' unbegotten "much-noised irregular motion" (*πολυθρύλιτος πληγμελής κίνησις*) moving in *ἄτακτος χρόνος* cannot have existed either. The whole language about time - that "time has come into being along with the universe, in order that, having come into being together, together they may also be dissolved, should ever any dissolution of them come to pass" (38b), shows, says Proclus a little later (II.49.29f), that the universe is both unbegotten and indestructible. (1) If the universe has come into being (i.e. in the ordinary sense), it has come into being in time. But if it has come into being jointly with time, it cannot have come into being in time, unless we are to suppose that time itself came into being in time, and that there is "time prior to time" (*πρὸ χρόνου χρόνος*). (2) Every thing which is dissolved is dissolved at a certain time (*ποτε*). Now time cannot be dissolved in a part of itself and therefore can never be dissolved; and, since the universe is indissoluble as long as time is indissoluble, the

universe can never be dissolved either.

Finally, at III.282.27. Proclus puts forward still another argument against the conception of a *Χρονικὴ ἀρχή* as a consequence or *πρόρρισμα* from the assertion at 42a that all souls at their first incarnation become men. If the universe had a first moment, so did the descent of souls into *γένεσις* and there must have been a first soul that descended and became a man. This first man cannot have been born of woman, nor again can he have generated woman. Plato, therefore, cannot mean a *Χρονικὴ ἀρχή* of man, and male and female must always exist. The argument is repeated in a similar form at III.294.4f.

Proclus also records at I.289.7, and again at II.95.29f. the interpretation of Severus, like that of the late Dr. Adam ("Nuptial Number of Plato"), that the world simply considered (*ἁπλοῶς*) is eternal, but that the world now existing is begotten. The history of the universe is made up of two continual and successive cycles in opposite senses, as described at "Politicus" 270b, on one of which the universe is now travelling, so that in this sense the universe, our universe, had a beginning. Proclus objects (1) that it is not legitimate to employ deliberate "myth" for the interpretation of scientific questions: (2) how can the soul of the world alter its motion? (3) how can the universe be perfect and self-sufficient if it seeks such alteration? (4) How can there be any alteration in the circuits if they



remain perpetually the same and preserve their appointed sense (cf. II.96.3)? In this last objection Proclus is obviously confounding the cycles of the "Politicus" with the two κύκλοι ascribed to the world-soul in the "Timaeus", and he actually quotes "Timaeus" 36c. The really valid argument is the first one. The hypothesis that the world is subject to periodical and alternate half-cycles of γένεσις and φθορά has no support other than that of the fanciful Orphic "myth" which is related "in play" in the "Politicus" and which is not intended for science but is there put forward simply as an illustration of the statesman's function as "shepherd" of the human flock. As a cosmological doctrine it is definitely discountenanced by the eternity in time which, as we have already seen, Timaeus emphatically attributes to the world - 31b, 36c, 38c, cf. also 32c, 33a.

It should, therefore, be quite clear that the description of creation as an actual event with a "first moment" is not the real meaning of Timaeus, but is put forward "for purposes of exegesis" (θεωρίας ἕνεκα) or "for expository clearness" (σαφηνείας ἕνεκα διδασκαλικῆς), as the earliest interpreters understood (cf. Plutarch, "de Anima Procr." 1013a, Proclus I.290.3-11, Aristotle, "de Caelo", 379b, Plotinus, "Ennead" IV. 8.4). We have seen already that the object of Timaeus' geometrical analysis of the four Empedoclean εἰσώματα is simply to exhibit the structure of the world as the embodiment of rational plan. This should

indicate to us the real purport and significance of the whole *μύθος*. The "Timaeus" in all the miscellany of its contents and scientific minutiae is simply a luminous and symbolical way of declaring that the physical universe is not its own "raison d' être" but is only explicable in terms of other more ultimate factors. This is what Proclus means when he says at the beginning of his commentary that the dialogue is an attempt to show the subordination of "concausae" to the true and proper causes of the events of nature (*αἰεὶ κυρίως αἰτίαι τῶν φύσει γινομένων*, I.2.7). Proclus himself reduces *αἰεὶ πρωτουργοὶ αἰτίαι* to three: (1) a "demiurgic" Mind, (2) an intelligible pattern, and (3) the Good, corresponding respectively to the efficient cause (*τὸ ποιητικόν*) the "archetypal" (*τὸ παραδειγματικόν*), and the final (*τὸ τελικόν*) - I. 2.8, 3.4; and *συναίτια* he divides into (1) the "understuff" or "substrate" (*τὸ ὑποκείμενον*, I.3.16, *ἡ ὑποκειμένη φύσις*, 3.23, i.e. the *ὑποδοχή*, *τὸ πανδεχὴς*, 3.1, though, as we have seen, the *ὑποδοχή* is not really a "substrate"), and (2) the "form" (*τὸ εἶδος*, 3.16, *τὸ ἔνυλον εἶδος* 3.2, by which Proclus probably means the geometrical structure of the corpuscles of the four "elements"). Though Proclus keeps formal or "archetypal" cause distinct from the final, virtually, as mentioned earlier, the two coalesce.

In particular, the emphasis of *Timaeus* throughout is that Mind, in the form of a consciously-working good God, is the force at work behind the existence

and functioning and processes of nature. As Proclus explains at 1.231.27 and 1.285.26, when Plato says that the world had an ἀρχή, the meaning, as stated at 29e, is that the world is dependent on the [most] supreme ἀρχή, the goodness of God. This, as we saw, is the real point of the distinction between νοῦς and ἀνάγκη. Mechanical causes are not the real causes of the arrangements of nature, but are simply subordinate though indispensable preconditions. The true cause is always, in the words of "Phaedo" (97d), τὸ ἀρίστον καὶ τὸ βέλτιστον. Aristotle likewise insisted that the working of nature is essentially teleological, and that material causes are not positive causes but are only indispensable aids (ἐξ ὑποθέσεως ἀναγκαῖον, τὸ οὐδ' οὐκ ἔνευ τὸ εἶναι, cf. "Phys." 192b 14, 193a 28, 199b 15, "de Part. Anim." 639b11), but with this important difference, that he regarded the design at work in nature not as deliberate but rather as instinctive and implicit, whereas for Timaeus νοῦς as such belongs to a conscious and personal ψυχή and there can be no such thing as what modern philosophy would call "de facto teleology" (cf. "Timaeus", 37c). We notice the "young gods" exercising forethought and purposive intelligence just like their own "Father". In fact, the distinction between οἱ νέοι θεοί and οἱ δημιουργοί is not always clearly kept by Timaeus - cf. 46c, 47a, 47b, 71a, 74b, 74c, 74d, 75c, 78b. At 71a we actually find the plural εἰδότες, followed by the singular ἐπιβουλεύσας, as again θεοί at 91a is followed by θεός at 92a. The "young gods" are imitating the beneficent example

of their own Maker (cf. 42e, 69c, 71d), and so He is the virtual cause of their intelligent activity. The point of Timaeus is to insist, as Socrates does in the "Phaedo" (95b-99d), that all the particulars of the universe are arranged "for the best", though they may not always appear to be so and though we seem to meet always with an element of the incalculable. All the scientific details of his discourse are intended to express this one truth. Timaeus felt that "no astronomer can be an atheist".

Thus in a way the dialogue serves as a theodicy, as an attempt in Milton's phrase, to "justify the ways of God to men". "That God constructed these things to be as fair and as good as possible, finding them not so - let this above all things be laid down as our consistent thesis" (53b). The true rationale of the world, the ἀρχὴ κρείστωτος (29e) of its existence, is just the ungrudging nature of God, whose Essence consists not in self-cloistered and isolated bliss, but in the eternal and unselfish manifestation and realization of His own goodness. So the message of Christianity is that God is Love infinite and self-giving, that "he that loveth not knoweth not God; for God is Love" (I. John IV.8). Actually the world is eternal both "a parte ante" and "a parte post", but Timaeus finds it convenient for his purpose to assume a beginning of the world "in time" and to begin "ex hypothesi" with an antemundane state of disorder out of which the "world as God made it" has emerged. Stript of parabolical decoration, this is simply a graphic

way of saying that the world as *γίγνόμενον* does not exist in its own right but is dependent on the intelligent guidance of God, and as such is the "best of all possible worlds". The historical narrative of the world's origin we need not regard as anything more than, in Timaeus' own words, an innocuous "divertissement" (*ἀνάπνευσις*, 59c). The real history of the world consists in a continual approximation to reality Absolute and eternal, as the history of cosmology consists in a never-ending approach to knowledge stable and final. "The world is not yet made, it is only in the making". Its life is always, in Browning's words, "a mainly onward moving, never wholly retrograde".

It is very much the same view that Proclus insists upon in his frequent discussion of the question of the world's *γενέσεως ἀρχή*. The universe, in his view, is *γεννητόν* in the sense that it is composite and that it is dependent, in so far as it is body, on other causes for its being (I. 277.14f), since body is unable to beget or to sustain itself (293.22, cf. 233.11, 297.11). As such, the universe always (*ἀεί*) partakes of life and motion and mutability. But this is not a primary and eternal *ἀεί*, but a secondary and temporal one (*χρονικόν*), the difference being that the eternal *ἀεί* is once for all and all at once, while the temporal is "stretched out" along with the whole continued and infinite duration of time (278.9, 285.9, 294.29, cf. 239.2, III.3.6). The meaning of Timaeus is that the world does not beget itself but is

produced by something else, "becomes" a copy of something else, is compounded out of many unlike constituents, and has a "becoming" which is unfailing and is co-extensive with the whole stretch of time (280.28f). In this way the world is always being begotten and has had a beginning and has an end of being begotten, there being no distinction between beginning and end in the world's history because the world is begotten in the whole of time and not in a portion or section (282.2f.). We may explain Proclus' point thus. The beginning of the world's *γίνεσθαι* is conterminous with its end ~~■~~ in the same way as any point on the circumference of a circle may be taken both as the beginning and as the completion; there is no absolute beginning as in a terminated straight line. Thus, as Proclus says, the universe always is coming to be and always has been coming to be ( *γιγνόμενος ἔστιν ἀπὸ καὶ γεγονώς*, 282.17), that is to say, coming to be what absolutely is ( *αὐτὸ ὅ ἐστι*, 291.1). For the world is unable to admit all at once the whole infinity of the Demiurge's begetting power, but can only take something of it in the "now" (294.22).

Proclus repeats the point at 1.366.21f. The Demiurge makes eternally, and the world is eternal according to the sempiternity "stretched out" along the whole of time. The universe is always in process of arrangement and always being made good, but is never all at once ( *αὐτόθεον* ) good. The world, that is to say, is always "in the making", its life is an eternal process and

not a static eternity - *γιννομένη και οὐχ ἑστῶσα*  
*ἀιδιότης*, I.367.18. It is the same with the soul, which,  
like the corporeal, cannot receive being all at once (*ἅμα*)  
in its entirety and infinity, but is always receiving it in  
time, and accordingly its activity (*ἐνέργεια*), unlike that  
of intellect, differs at different times and partakes of  
change (*μεταβατική*) - II.123.6f., 124.12f., 243.18f.,  
290.24. For this reason it is everlasting (*ἀείδωρος*, 124.28)  
and indestructible (*ἀνώλεθρος*, 125.8), but it is not truly  
and simply eternal (*ἀπλῶς αἰώνιος*). It is the same, too,  
with *οἱ νέοι θεοί*, who are only secondarily immortal because  
their life consists in always coming into being throughout  
the whole of time (111.215.25f., 217.20f., 218.24). This is  
indeed one of the reasons why they are called the "young" gods  
- *οὐχ ὡς ἀρχαῖοι ποτε εἶναι, ἀλλ' ὡς ἀειγένετοί*  
(111.311.9). Everything *γεννητόν*, as Proclus says at III.  
220.1 has <sup>at best</sup> a "repaired immortality" (*ἐπισκευαστή ἀθνησίδα*)  
and a "bond" (*δεσμός*) given to it from extraneous sources,  
since it is unable to keep together or to impart life to  
itself.

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CHAPTER IX.

THE "TIMAEUS" IN RELATION TO PLATO'S OWN THOUGHT.

We may conclude with a few words on the second question raised in the first chapter - Whose doctrine does the "Timaeus" present to us, and how is it related to Plato's own thought?

Now there is abundant evidence, as we have already seen and as Professor Taylor has demonstrated, to indicate that in the dialogue we are dealing not with distinctively Platonic doctrine but with Pythagoreanism. Not only does Proclus insist that the speaker is a Pythagorean, as we noticed, but he continually stresses the Pythagorean character of the whole dialogue. Thus he observes at the outset that in the fundamental teaching of the dialogue Plato is consciously following Pythagorean method and doctrine, being, in fact, the only philosopher to do so (I.1.25, 2.30), and he lays down accordingly that our interpretation must be made to fit in with Pythagorean tenets (I.15.22). He remarks that the dialogue is, in form, a combination of Pythagorean elevation of conception with Socratic ethical interest (I.7.21f). It is *Πυθαγόρειον ἔθος*, he declares, that Plato is adopting in studying the *ἀληθινὰ εἶτα* of nature (I.1.25, 2.30, 17.15). It is likewise *τὸ Πυθαγορικὸν ἔθος* of connecting subject investigating with object investigated that Plato has in mind when he says at 90d that he who would be happy must assimilate himself to the

object of his thought, i.e. to the universe (I.5.21f). Plato's employment of mathematical and geometrical figures in the description of the soul's constitution is similarly suggested by the Pythagorean division of things into *νοητά*, *μαθηματικά*, and *φυσικά* (I.8.14); while the introductory recapitulation of the first five books of the "Republic" is itself simply an illustration of the Pythagorean *ἔθος* of premising actual doctrine with simile and allegory (I.30.4, 33.8). So again Plato alone follows the Pythagoreans in saying that everything which comes into being does so from a cause (I.262.10), just as he agrees with them further in regarding this cause as a *ἄμεινον* "apart from" the world (287.1). "Timaeus", as a Pythagorean, adheres to the principles of the Pythagoreans" (III.168.8). In these references to Pythagorean doctrine Proclus is probably basing his statements partly on the first-century "Timaeus Locrus", and partly on the "Fragments of Philolaus", from which he quotes, for instance, at I.176.29.

The type of Pythagoreanism which Timaeus represents is clearly suggested at 40d-41a, where Timaeus covertly ridicules and dissociates himself from the theogonical fancies and extravagances of the Orphics and such sectaries. That his reference is to the Hesiodic and Orphic cosmogonies and not, as generally supposed, to the national cultus and mythology of Athens, is proved, as Professor Taylor points out, by the figures mentioned —

Gaia, Uranus, Oceanus, Tethys; and that the passage is simply humorous satire is clear from the scoffing remark that our only evidence for the existence of these obscure deities is the authority of those who profess to be their progeny and who must surely know their own forefathers. Eusebius, the ecclesiastical historian (C.260.340 A.D.), recognized not only the irony but also the persons against whom it was directed ("Praeparatio Evangelica", XIII.640 - *διαβάλλει τοὺς θεολόγους ..... παίψειν δ' ἔοικε*) Proclus, too, though he missed the sarcasm, was at least fully aware that it is *αἱ Θεογονίαι* (III.156.11 and 22) and *αἱ Ὀρφικαὶ γενεολογίαι* (III.161.3) that Timaeus has in mind, and he builds upon the whole passage an elaborate demonology. In this connexion we may note also that "Necessity" (*ἀνάγκη*) was not only the name, as recorded by Aetius, of the *δαίμων ἢ πέντε κυβερνᾷ* in Parmenides' exposition of early Pythagorean theology given in the Second Part of his poem, but is also applied to the mother of the Fates in the manifestly Pythagorean myth of Er in the tenth book of the "Republic" (617). Timaeus, as Professor Taylor says, seems to be deliberately displacing "Necessity" from its pedestal and making it, no longer a goddess, but a mere "underling". Plato thus makes it clear that Timaeus was not one of the Pythagorist "spirituali", with whose superstitions, indeed, neither Socrates nor Plato had any sympathy. Professor Burnet has shown, for instance, that the real point of the "Euthyphro" is to

repudiate any idea that Socrates was a "mystic" of the debased Orphic type. So Adeimantus' scornful strictures upon religion at "Republic" II. 363-364 are levelled particularly at Hesiod and the Orphics, like Socrates' proposed reforms at 379-380. We know that there was a rupture in the Pythagorean Order in its later period, a breach between scientists and mystics, "Pythagoreans" and "Pythagorists", just as in the sixteenth century the alchemists in England divided into two groups, one devoting itself to serious scientific research and the other to mysticism and astrology; and Timaeus is plainly portrayed as one of those in whom the religious side had been superseded by the scientific, like Simmias and Cebes of the "Phaedo". The whole medical and biological interest of the dialogue indicates the same thing, and the matter is placed beyond doubt when we find that Timaeus' geometrical analysis of the four "elements" at 48e. ff. is simply an illustration of that attempt to fuse Empedoclean biology and Pythagorean mathematics which was the distinctive feature of later Pythagoreanism (see Burnet, "Early Greek Philosophy" 3, pp.278,279).

How far, then, are we entitled to assume that such a record of fifth-century Pythagoreanism embodies doctrine with which Plato himself was in agreement? Now the "Timaeus" is manifestly to a large extent an elaborate development of the doctrine of the "Phaedo" that *νοῦς ἐστὶν ὁ δεικνομένων τε καὶ πάντων αἰτίος* (97c) and that

consequently all details of nature are so arranged because "it is best they should have such an arrangement" ( *ὅτι βέλτιστον αὐτὴ οὕτως ἔχειν ἐσθὴν, ὥσπερ ἔχει, 98a*). Socrates in his early days, as he himself records in the "Phaedo" (95e-99d), had interested himself in natural science - a fact which is borne out by Arisophanes' "Clouds" as well as by the familiarity with early cosmological theories which is attributed to Socrates at, for instance, "Lysis" 213 d. ff. He had been particularly attracted by the doctrine of Anaxagoras, who had represented *νοῦς* or Mind as the motor-energy of the cosmos. Socrates was chagrined, however, to find that Anaxagoras did little to uphold purposive government of the universe but had recourse instead to mechanical causes like "airs and ethers and waters and many other absurdities" (98c). None the less Socrates did not abandon the idea of government by the *ἀγαθὸν καὶ δέον* and he tried to account for this by what he humorously called his *δευτέρως πλοῦς*, the theory of "Forms". The "Timaeus" seems to be a plain attempt to supply what Socrates desiderated, the application to nature of the idea of intelligent contrivance, and this again seems to be the reason why Plato represents Timaeus as expounding a teleological cosmology in response to an appeal from Socrates. Not only, however, is the Timaeus largely a commentary upon the text of "Phaedo" 97-99, but it is obvious, further, that the presupposition underlying the whole discourse of Timaeus is the thesis of "Laws" X.893b-899c,

that soul is the only entity possessing spontaneous activity ( ἡ δυναμένη αὐτὴ αὐτὴν κινεῖν κίνησις, 895e) and, as such, the sole "causa movens" of all physical movement, and that the soul which moves and orders the world is the ἀριστὴ ψυχὴ called God. Apart from "Phaedrus" 245 cf., where Socrates makes the self-moving character of the soul an argument for the soul's immortality, we can see Plato "cutting steps" towards this doctrine at "Sophist" 248e, where the "Eleatic stranger" declares that it would be incredible for "absolute being" ( τὸ πανταχῶς ὄν ) not to have "motion and life and soul and understanding" ( κίνησις καὶ ζωὴ καὶ ψυχὴ καὶ φρόνησις ). These words do not imply a new theory of "animated Ideas", as Lutoslawski ("Origin and Growth of Plato's Logic") supposed. The passage only means that soul, with its attributes of life and motion, must be part of Reality just as much as unchanging and unmoving entities such as the "Forms". This conception of the soul as "causa movens" is at the bottom of Timaeus' description of the soul at 34c as the "queen and mistress of the body" and as "earlier and elder than the body", which is indicative, as Proclus rightly explains (II.118.3, cf. II.114.33), of the soul's ἐκπεροχὴ ὡς αἰτίου πρὸς αἰτιατόν . We have here implied, in fact, the Academic definition of ἀνθρώπου as ψυχὴ σώματι χρωμένη, quoted by Proclus himself at III.309.31. At 57e Timaeus definitely asserts, in the spirit both of the "Phaedrus" and of "Laws" X, that motion presupposes both τὸ κινεῖν and τὸ κινούμενον. Actually, even this

conception of the soul as "self-moving" is not an original development on Plato's own part, since it is traceable, as Aristotle tells us at "de Anima" 405a 30, to Alcmaeon of Croton, but the fact that the thought is given definite scientific exposition in the "Laws", Plato's own "magnum opus" and a work which cannot be far separated from the "Timaeus" in point of date, justifies our concluding that we have presented in the main thesis of the "Timaeus" a reproduction and application of a cardinal Platonic doctrine. Soul is the *ἡλεκτή κίνησις* and God is the *ἡλείσθη φύξις* in the "Timaeus" as much as in the "Laws", with this difference, that what the "Laws" seeks to establish scientifically by logical or "theoretic" judgement is accepted in the "Timaeus" as an article of conviction or religious "trust", just as in a similar spirit Timaeus does not use scientific reasoning to prove that the human soul is immortal but regards its immortality, like that of *οἱ νότοι θεοί*, as dependent simply on the goodness and will of God (41a-b). It is by this supposition of a supreme and perfectly wise and good Soul who contemplates the "Forms" and reproduces them in the sensible world, that the "Timaeus" gives content to and elaborates Socrates' conviction in the "Phaedo" that "the good and the ought" is the true rationale of the structure and processes of nature.

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