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PLATO:
TIMAEUS AND CRITIAS

BY THE SAME AUTHOR

ELEMENTS OF METAPHYSICS

PLATO THE MAN AND HIS WORK

PLATO:
TIMAEUS AND CRITIAS

TRANSLATED INTO ENGLISH
WITH INTRODUCTIONS
AND NOTES ON THE TEXT
BY

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METHUEN & CO. LTD.
36 ESSEX STREET W.C.
LONDON

First Published in 1929

PRINTED IN GREAT BRITAIN

PREFACE

SOME friendly reviewers of my recent *Commentary on Plato's Timaeus* (Oxford, 1928) have complained that the commentary ought to have been preceded by an English version of the dialogue. It is in deference to these criticisms that I venture to publish the present translation, to which I have added, for the sake of completeness, a rendering of the few pages of the unfinished fragment *Critias*. The little work may, I hope, interest two classes of readers, persons who care for the history of scientific theories may be glad of an English version, as faithful as I can make it, of the work which, more than any other, furnished educated men at large for the first thirteen centuries of our era with their general view of the 'natural world', and persons who care for romance may be willing to have the tale of Atlantis made more accessible to them. Since I have so recently attempted an exposition of the *Timaeus* in detail, I have, in the present small book, confined myself as closely as I can to the function of the translator. My aim is to convey, as exactly as I can in our language, the verbal sense of what Plato has written, without putting my own or another's interpretation on his words. So far as I know, I have been careful never to allow any theory of what Plato meant to teach to influence my judgement on the question what Plato, in fact, wrote. I have sought to ascertain, as exactly as possible, what is the true text of each sentence and to render that sense accurately. The few footnotes I have subjoined are intended only to explain, when necessary, what the Greek text I am following is, or to obviate some simple verbal ambiguity. They do not profess to be of the nature of interpretation.

May I take this opportunity to say that the brief remarks (pp 131-2) on the history of speculation about the *Atlantis* story are simply condensed from the full and learned essay on the subject by T H Martin referred to on p 132?

A. E. TAYLOR

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TO
MY SISTER

PLATO: 'TIMAEUS' AND 'CRITIAS'

INTRODUCTION TO THE 'TIMAEUS'

THERE can be no occasion to prefix a lengthy *Introduction* to this version of the *Timaeus* (For a general account of the contents of the dialogue I may be allowed to refer to Ch XVII of my book *Plato, the Man and His Work*, and for discussion of details to my *Commentary on Plato's Timaeus*) Little is needed here beyond a brief statement of the main facts known about the *dramatis personae* of the dialogue and a few observations about the imagined date of the conversation

The persons engaged in conversation with Socrates are three, Timaeus, Hermocrates and Critias, of whom Hermocrates is virtually a silent personage, having only one brief speech to deliver (20 *c* 4—*d* 3) Of Timaeus we know certainly only what Plato has told us, that he was an astronomer from the Western Locri at the extreme south end of the Italian peninsula, and had achieved the highest distinction in the public life of his city as well as in his science As he has this public career behind him (20 *a*), he is clearly to be thought of as elderly, if not actually old. From the character of the cosmology he is made to expound, it is clear that the vast majority of readers have been justified in their inference that he must have been a Pythagorean The name does not occur among those of the Locrian Pythagoreans of the ancient catalogue preserved by Iamblichus (*Vit Pythag* 267), but there is a Timaeus among the Parians, who appear immediately before the

Locrians in the list It is possible that this name has got out of its place and is really that of our astronomer Hermocrates is spoken of by Socrates at 20 *a* in a way which shows that he is known to him as a stranger of remarkable promise, i.e he is not an Athenian, and has his career in the main still before him, though it is sure to be one of high distinction He and Timaeus of Locri are apparently in Athens for some common purpose, as they are both being entertained by the third speaker, Critias (20 *c* 7) These particulars enable us to identify him with the famous Syracusan, Hermocrates son of Hermon, who first appears in history as making a great reputation at a congress of the Sicilian states held at Gela in the year 425–4 (*Thuc* IV, 58), where he advocated the doctrine that Sicily was to be considered a world in itself and kept out of entanglement in the confederacies and alliances of Eastern Hellas Ten years later he was prominent as the leader of the Syracusan national resistance to the Athenian armada of conquest On the collapse of the invasion (413), he served with the Peloponnesian fleet, was exiled from Syracuse after the Athenian victory of Cyzicus (410) and joined Pharnabazus, satrap of Phrygia, at the moment the most energetic of the enemies of Athens (Xen *Hellenica*, I, i, 27, I, iii, 13) Supported by Pharnabazus, he returned to Sicily, took the field against the Carthaginian invaders of the island from Selinus, gaining some marked successes over them, but was repulsed and killed in a night assault on Syracuse itself (408 or 407), leaving the double task of restoring order in Syracuse and arresting the Carthaginian progress to be taken up by Dionysius I Critias is depicted as an exceedingly old man, who has vivid memories of his boyhood, but can hardly remember what he was told yesterday, incidentally we learn that the verses of Solon were a popular novelty at Athens when he was a boy of ten. This shows that the person meant cannot be the Critias who was the cousin of Plato's mother and played a prominent part as one of the leaders of the extreme anti-democrats in the year of anarchy 404–3. Our speaker

must be the grandfather of this Critias, Plato's own great-grandfather.[1]

As to the supposed date of the conversation, we should see at once that the presence of Hermocrates makes it impossible to put it after the Athenian expedition for the conquest of Sicily, while that of Critias, in whose boyhood the poems of Solon had been 'novelties', reinforces the same conclusion The natural assumption is that we must look for a date not very far from 425–4, the year in which Hermocrates first seems to have attracted notice to himself • The remarks of Critias about the poems of Solon suggest that his tenth year is to be taken as falling somewhere about 500, shortly after the downfall of the Pisistratids, who are not likely to have encouraged the circulation of verses breathing such sentiments as those of Solon Critias would then be eighty-five or thereabouts in 425 The family was a long-lived one, and if we suppose him to have survived to be ninety or more, he would still be living as late as 420 The presence of Timaeus and Hermocrates in Athens indicates that the year is supposed to be one of peace This forbids us to assume a date during the active prosecution of the Archidamian War, the great age of Critias stands in the way of assuming one much later than its conclusion. The indications thus point to a dramatic date about the time of the peace of Nicias (421 B C), and a similar date is demanded by the *Republic*, with which the *Timaeus* is made to connect itself If we adopt this date, we also get some light on the presence of

[1] According to the MSS, Xenophon (*Mem* I, II, 48) mentions another Hermocrates, otherwise unknown to us, among the friends who frequented the society of Socrates with a view to self-improvement If such a man existed, and it is highly probable that the name is a mere scribe's error for Hermogenes, the half-brother of the wealthy Callias, who appears in the *Cratylus* of Plato and the *Telauges* of Aeschines of Sphettus as well as in Xenophon's *Memorabilia* and *Apology*, he cannot be the speaker in our dialogue, who is manifestly a foreigner of high distinction The same combination of scientific attainments with political capacity is found, according to Socrates, in all three of his interlocutors (*Tim* 19 *e* ff).

Timaeus and Hermocrates in Athens The Athenians had been for some years interesting themselves in the Western Mediterranean, and had sent out a diplomatic mission in 422 with express instructions to promote an anti-Syracusan coalition among the Italian and Sicilian cities, one of the results had been a proposal from Locri, the city of Timaeus, for a treaty of alliance with Athens (*Thucyd* V, 4–5) At the general pacification of 421 there would thus be a number of matters to be adjusted of importance to both Syracuse and Locri, and representatives of both states might very naturally be in Athens [1]

If the supposed date of the dialogue is 421 or the end of 422, Socrates must be thought of as a man still under fifty, and it is pertinent to remember that we are dealing with a time only a year or two later than the performance of Aristophanes' clever burlesque of him, the *Clouds* The point of the burlesque is largely to represent Socrates as teaching the doctrines of Ionian cosmologists This, to be sure, is burlesque, and there is no reason to suppose that Socrates had ever *taught* any cosmology at all But since we find Plato treating it as a plausible fiction that Timaeus and the others, when they wish to entertain Socrates, deliberately give the first place on their programme to a cosmological discourse, we may be fairly confident that the burlesque is good of its kind, and that Socrates, though he did not profess a cosmological system of his own, could at least take an 'intelligent interest' in those of other men, and had the acquirements necessary for following such an exposition with appreciation (Cf what Timaeus' implies about his mathematical knowledge at 53 *c*) The unbroken silence in which Socrates is made to listen is a clear indication that the topics handled are 'outside his subject', but that the discourse is delivered for his pleasure and that he subsequently professes himself extremely

[1] Of course I do not mean to suggest that we are bound to believe the meeting of Socrates with Timaeus and Hermocrates to be historical fact I mean that Plato, as it was his business to do, has provided a very probable occasion for such a meeting

gratified by it (*Critias*, 108 *b*) must not be forgotten when we attempt to reconstitute the 'historical Socrates' When Plato set himself to compose a treatise on jurisprudence, he was careful not to include Socrates among the personages, it is all the more significant that he felt no scruple about admitting him among those of a cosmological work A sober historian is bound to reckon with facts of this kind [1]

The *Timaeus* opens with references to a discourse delivered 'yesterday' by Socrates which is shown, by the recapitulation of its contents, to be the *Republic* The fiction then is that the present conversation is taking place two days after that with Glaucon and the rest in the house of Polemarchus, the unnamed audience to whom Socrates in the *Republic* narrates his experiences of the day before being now identified as Critias and his friends.[2] Thus the dialogue points back to the *Republic* as well as forward to the *Critias* But there is an important difference between its relations with these two dialogues There is nothing in the *Republic* which points forward to a continuation It is clear that no continuation was in Plato's mind when the *Republic* was composed, and that the linking with it of a work written, as the style shows, so much later was a complete after-thought The *Timaeus*, on the other hand, not only announces a discourse by Critias and mentions its subject, but actually anticipates it by giving a brief summary of the story of the prehistoric war of Attica with Atlantis, which the *Critias* was to relate at length. The pages of the dialogue in which this summary is given are far better known to readers in general than any other part of it, but they have no real logical connection with the

[1] The silence of Socrates perhaps serves the further purpose of relieving Plato from undue responsibility for the details of the science of his Pythagorean speaker

[2] We might, indeed, imagine Socrates as having, on some different occasion, held a conversation covering much the same ground as that of the *Republic* But Plato clearly intends to remind his *readers* of the dialogue and must have been aware that they would naturally take 'the discourse of yesterday' to mean the actual narrative given in the *Republic*

Timaeus itself, their function is to keep the hopes of a reader jaded with 'physical science' alive by the promise of something to come with 'human interest' about it And it may not be superfluous to remark that the real theme of Critias is not the glories of Atlantis—we are told in the last complete paragraph of the *Critias* that at the time of its greatest apparent splendour, Atlantis was inwardly 'foul' with wicked 'covet' and lust of dominion —but the patriotism and piety of Athens Atlantis was to figure in the story as a dreadful example of what a people can become when it has lost its fear of God and reverence for the rights of man It is only because Plato has left us no more than the prelude to the tale that it is possible for a hasty reader to take it for a glorification of the Atlantids.

It is usually said that Plato intended, besides the *Timaeus* and *Critias*, to write a third discourse in which Hermocrates was to be the speaker The only reference to such a purpose is a playful remark in the *Critias* (108 *c* 5) to the effect that Hermocrates will know what 'stage-fright' is when it comes to his turn to perform, and an earlier remark of Socrates in the same dialogue (108 *a* 5) that Hermocrates need not take the trouble to begin his speech, as both Timaeus and Critias have done theirs, by a complaint of the difficulties of his subject In the programme laid down at *Tim* 27 *a*, nothing is said about a theme to be treated by Hermocrates, and it is difficult to see what topic would be left for him after a discourse by Timaeus on the creation of the world and man, another by Socrates on the principles of morals, education and politics, and a third by Critias describing the heroic action of a community imbued with these principles It therefore seems to me not unlikely that Plato never seriously designed Hermocrates to be more than an auditor—he is the youngest of the company—and that the allusions of the *Critias* to his expected speeches are to be taken as merely playful

The main principles I have laid down for myself in making my translation are two the version is to be made

from a text constituted carefully in accord with sound critical principles, and is to show, in all cases in which there could be any uncertainty about the syntax of the original, exactly how I take it to be construed (except, of course, where this could not be done without a grammatical note) Accordingly I have followed the text of Professor Burnet, down to its paragraphing, except in a small number of places already duly mentioned in the Prolegomena to my *Commentary* on the dialogue and two others [1] When the occasion demanded it, I have not scrupled to sacrifice elegance of style to the duty of making my view of the grammatical construction plain Otherwise I have not been unduly solicitous *verbum reddere verbo* The diction of the version, I own, is very much of a patchwork. It will be found to mingle three distinct strains, that of simple and slightly conversational narrative, that of a somewhat archaistic and poetical prose, and that of the scientific text-book The result is not likely to be universally pleasing, but I would plead in my own defence that all three strains are recognizably present in the language of the original text and ought, therefore, to be preserved If the attempt to reproduce these peculiarities has led me into over-emphasis and caricature, the danger is one which besets all conscientious translation I have not felt justified in substituting for a translation a free transcription into a uniform diction of my own

I have made considerable use of the Latin version of the two dialogues by Ficinus, the French version of M Rivaud, the earlier French version of the *Timaeus* by T H. Martin, and the English version in the edition by R D Archer-Hind, and have thought myself free, with this acknowledgement, to profit occasionally by valuable hints from all When

[1] *Tim* 33*a* 7, where I think now we should read *ἓν* with APWY against *ἕνα* adopted by Burnet from F Proclus and Simplicius, and *Tim* 54 *b* 2 where I have accepted Hermann's *ἀνευρόντι μή* for the *ἀνευρόντι δή* retained by Burnet This reading was presupposed in my *Commentary*, but by an oversight the departure from Burnet's text was not recorded

I have found errors in my precursors, I have done my best to avoid them in silence with one or two exceptions for M Rivaud's rendering of the *Critias* There are so few aids to the student of that difficult fragment that in one or two cases where I have felt bound to diverge markedly from the French translator, I have thought it a duty to justify myself The use of Jowett's English translation I have interdicted myself, on the ground of the very charm and seductiveness of its diction. I have also derived much profit from the second excursus—that on the topography of Atlantis—in Mr. P Friedlander's recent work *Platon, Eidos, Paideia, Dialogos* and the admirable plates by which it is accompanied

SYNOPSIS OF THE 'TIMAEUS'

INTRODUCTION. Socrates recapitulates the principles of *Republic*, I–IV, he would like to see them illustrated by a vivid tale of heroic exploits springing from sound public *moral* Critias gives a brief summary of the story of the defeat of the kings of Atlantis by the prehistoric Athenians as a narrative in point; the full story shall be told after Timaeus has delivered a discourse on cosmogony (17 *a*—27 *c*).

Discourse of Timaeus Natural science cannot be 'exact', since it deals with the temporal, not the eternal (27 *d*—29 *d*) The sensible world an image of the eternal, its cause the goodness of God It is one, has a spherical body, made of the four 'elements', and a soul (29 *d*—34 *b*). The soul made of three constituents, Same, Other, Being; a musical scale worked into its structure, which is then distributed into the circles of the Same (sidereal equator) and Other (ecliptic) (34 *c*—36 *d*). The body made and fitted to this soul (36 *d*—37 *c*) The making of Time and the seven 'planets' character of their motions (37 *c*—39 *e*) Making of the various living creatures contained in the world, in particular, the 'visible gods' (the stars) Their motions, and that of the earth (39 *e*—41 *a*). Address of the Creator to the 'created gods', calling on them to take part in the making of mortal animals (41 *b*—*d*) Human souls made, instructed in the moral law of the universe and sowed in the earth and planets, where they are in due time to be born from the soil as men (41 *d*—42 *e*) The human body made from the 'elements' by the created gods, anticipatory description of the shock caused to the 'circles' in the souls by their incarnation (42 *e*—44 *d*) General structure of the human body, and the reasons for

it, structure and working of the eye, with an explanation of mirror-vision (44 *d*—46 *c*) The principal purpose in endowing men with sight and hearing was that they might learn the lesson of law and order from astronomy and music and apply it to the right ordering of their own lives by correcting the perturbations of the 'circles' in their souls (46 *c*—47 *e*)

So far we have been treating of intelligent purpose as the source of the world-order There is another, unrationalized factor in it, 'necessity' ('brute fact') We must now take account of this 'necessity' and the way in which it was controlled by God's purpose, beginning with the creation of the four falsely so-called 'elements' already mentioned (47 *e*—48 *d*) We need now to distinguish from the 'forms' of which sensible things are copies and these copies themselves, a third thing, the 'matrix' or 'receptacle' in which the copies are located That there are really 'forms' is shown by the consideration that knowledge is really different from true belief The 'forms' are apprehended by understanding, the copies by belief conjoined with sensation, the 'receptacle', which is, in fact, *space*, by a kind of 'bastard inference' (47 *e*—52 *d*). We have to think of space as originally agitated by random irregular vibratory movements, God's first step in introducing order was the construction of bodies of definite geometrical structure (52 *d*—53 *c*) The simplest 'elements' of such structure are two. (*a*) the isosceles right-angled triangle, (*b*) the right-angled scalene whose sides have the ratios $1 . \sqrt{3} \; 2$ From (*a*) we can build up the cube, from (*b*) the tetrahedron, octahedron and icosahedron, and may take these as the forms of the corpuscles of earth, fire, air, water respectively (53 *d*—55 *c*) Equations which determine the reciprocal transformations of these bodies (55 *c*—56 *c*) The leading sub-varieties of each of the four, and the compounds they form with one another (56 *c*—61 *c*). Connection of qualities perceived by 'touch' with the corpuscular structure of bodies (61 *c*—62 *a*) Explanation of weight (62 *c*—64 *a*) Why some sensations are pleasant,

others painful (64 *a*—65 *b*) Sensations of the specialized senses, tastes (65 *c*—66 *c*), smells (66 *d*—67 *a*), sounds (67 *b*—*c*), colours (67 *a*—69 *a*) Details of anatomy, physiology and pathology To fit the soul for its embodied life, it receives two temporary additions, a 'mettlesome' part, seated in the heart, and a 'concupiscent' part seated in the lower part of the trunk Construction of the liver, with its appendix, the spleen, to convey admonitions to the 'concupiscent part' in dreams and visions (69 *a*—72 *d*) The intestines and their function (72 *d*—73 *a*) Structure of the leading organic tissues, the marrow, bones, flesh, tendons, skin (72 *b*—76 *e*) Description of respiration, pulsation of the heart, digestion as a single great rhythmical process which maintains the vital heat of the body and distributes nourishment through the blood to the various tissues, mechanism of this process, and the structure of its organs (77 *a*—79 *e*, 80 *d*– 81 *e*), with a digression on other examples of 'cyclical' rhythms in motions (80 *a*—*c*). Pathology, description of bodily diseases according as they are due to (1) faults in the primary constituents of the organism (earth, water, fire, air), to (2) morbid conditions in the 'secondary formations' (bone, flesh, etc), or (3) unnatural accumulations of wind, phlegm, bile (82 *a*—86 *a*) Pathology of the soul Its one disorder is 'folly', which has two species, frantic insanity and ignorance. The causes of all spiritual disease are, in the main, two, congenital bad physique and bad education in a wrong social tradition (86 *b*—87 *b*) Physical and moral hygiene. It is our business to see that both body and mind are kept in health by proper regimen In the regimen of the body our rule should be that active exercise is more wholesome than passive, and both than purgation by drugs, which should only be admitted when it is unavoidable (87 *c*—89 *c*) The great rule of moral hygiene is that the immortal part of the soul should get its proper food and 'exercise' and the merely mortal parts should minister to this end, so that the 'circles in the soul' are brought into tune with those of the soul of the world (89 *d*—90 *e*). Finally,

we may account for the existence of the female sex and the lower animals by saying that in the second generation, the second-best of the original men were reborn as women, and that the animals generally represent a series of increasing degenerations from the original human pattern, the lower a soul has fallen, the further removed the body it inhabits from the human type (90 *e*—92 *c*) With this, our story of the generation of the great 'visible god' is completed (92 *c*)

Note —Since the present work is a translation, not a commentary, I have abstained from offering interpretation as completely as possible Readers who wish to know how the dialogue has been interpreted, or how I interpret it myself, are referred to Ch XVII of my *Plato, the Man and His Work* (Methuen, 1927), or for details, to my *Commentary on Plato's Timaeus* (Oxford, Clarendon Press, 1928) There is one verbal point, however, which I should like to explain here The expressions of my version, Heaven, the world, the all, which answer respectively to Plato's οὐρανός, κόσμος, το πᾶν, are meant to be strictly equivalent All mean what we should call a 'stellar system', if it is understood that it is supposed that there is only one such system and that the earth is its central body That is, 'heaven' is always to be taken as inclusive of 'earth' and 'world' never means 'the earth'

TIMAEUS

SOCRATES, TIMAEUS, HERMOCRATES, CRITIAS

St. III

17 So One, two, three Why, my dear Timaeus, where is the fourth of our guests of yesterday, who are to be our hosts now?

Ti. Overtaken by indisposition, Socrates, I promise you he would not be staying away from our present conference if he could help it

So Then we may look to you and the others to discharge the absentee's part, as well as your own?

b Ti. With all my heart, so far as our abilities permit, you shall not be disappointed after the elegant entertainment you provided for your visitors yesterday, it would not be common fairness that the rest of us should be backward in offering you a return banquet

So You all recall the scope and topics of the discourse with which I charged you?

Ti Yes, in part, and where our recollections fail us, you will be here to refresh them. Or, stay! If it is not giving you too much trouble, you might recapitulate the matter briefly, then we shall have a securer grasp of it

c So Why, so I will The main theme of my argument yesterday was my views on the best constitution for a city and the type of men from whom such a city might be fashioned

Ti And very much to our mind we all found the description, Socrates

So We began, did we not, with a sharp separation of the farmers of our city, and her craftsmen in general, from the class who were to be her fighting-men?

TI. We did

So To each group, according to its natural aptitudes,[1] we gave one, and only one, occupation, one sole profes-
d sion, that appropriate to it Thus we said that the group who were to fight for all must be guardians of the city against attacks from without, or indeed from within, and must be nothing else They were to administer a lenient
18 justice to their subjects and natural friends, but show themselves stern to enemies encountered in the field

TI Precisely

So A guardian's temperament, we said, must, in fact, be at once exceptionally spirited and exceptionally philosophic, if they were to prove themselves rightly lenient and rightly stern to either party

TI Yes

So And as to their training? Were they not to be trained in gymnastic, music, and all branches of study appropriate to their calling?

TI They were indeed

b So And men so trained, we said, were not to look on gold or silver, or goods of any kind, as their personal property They were to be a garrison,[2] and, as such, to receive a wage for their services from those whose safety depends on them, a wage no more than would content modest men They were to expend it on their public maintenance and to lead a corporate daily life, in unremitting practice of goodness and complete freedom from all other occupation

TI This was in the regulations we laid down

c So Then we touched on the question of women Their native qualities were to be developed on the same lines as those of the men, with whom they were to co-operate in all the activities of war and of life generally

TI Yes, we made that regulation too

[1] 17 *c* 10 *κατὰ φύσιν* belongs in thought to *τὸ καθ' αὑτὸν ἑκάστῳ πρόσφορον*

[2] *ἐπικούρους* 18 *b* 3, the technical name for paid professional 'Guards'

So Then, as to the procreation of children? But the very novelty of our regulations on that head makes it hard to forget them. We appointed the marriages and children of them all to be in common, they contriving that none of them should ever recognize his own individual progeny,
d but that all should account of all as one family They were to regard all who fell between appropriate limits of age as their sisters and brothers, all who fell outside and beyond these limits as parents and parents' parents, all who fell below as children and children's children

TI Yes, and, as you say, it would be hard to forget it

So Then, if you remember, to secure the best congenital endowments obtainable, we said that the officials of both
e sexes must practise some privy contrivance with lots in the pairing of the couples, such that the inferior sort of men and the better shall both obtain corresponding partners and yet no ill-feeling be occasioned, as they will fancy the allotment to be an effect of chance

TI Yes, so we recollect

19 So Then further we said that the progeny of the good should be educated, but those of the worse privily distributed through the city at large As the children grow up, they must be repeatedly inspected, and those who are found worthy restored again, while those from their own ranks who prove undeserving should be transferred to the place left vacant by these restorations

TI Just so

So Well, then, my dear Timaeus, is this review of yesterday's conversation now complete, as a summary of the main points? Or are we still sensible of any omissions?

b TI No, Socrates, this is the very substance of what was said

So Then I may now proceed to tell you how I feel about the society we have just described My feelings are much like those of a man who has beheld superb animals in a drawing, or, it may be, in real life, but at rest, and
c finds himself longing to behold them in motion, executing

some feat commensurate with their physique. That is just how I feel about the city we have described I should love to hear a narrative of her contention with other cities in some of the rivalries of public life, of her entrance upon a war in a fashion worthy of herself, or honourable achievement in that war of results answerable to her education and training, both in deeds of arms and in diplomatic intercourse with various cities Now my judgement on myself,
d Critias and Hermocrates, is that I am incapable of commending such a city and her citizens as they deserve There is nothing surprising in this personal limitation, but I have come to the same opinion about the poets both of the past and of the present Not that I would disparage poets as a class, but it must be obvious that the tribe of
e imitators will imitate nothing so readily or so well as their familiar surroundings, what lies outside these surroundings it is hard for any man to imitate well in action, and still harder to do so in language The sophists, again, I grant you, are well skilled in eloquent discourse in general,[1] but I suspect that, thanks to their perambulations from city to city and their lack of settled abodes of their own, they may be but ill acquainted with such action and speech as would be employed in the intercourse of war and battle by men who are at once philosophers and statesmen
20 There remains, then, the class to which you gentlemen belong, a class which unites the natural and educational advantages of both these types Timaeus, for instance, comes from a city with most admirable laws, the Italian Locri, where he has no superior in fortune or birth, and has enjoyed the highest offices and distinctions his city has to bestow, in philosophy, also, if I am any judge, he has attained the very highest eminence As to Critias, of course every one in Athens knows that he is no layman in any of these matters And that Hermocrates is competently qualified in them all by natural parts and education is attested by many witnesses, whom we must believe.

[1] 19 *e* 2 *πολλῶν μὲν λόγων καὶ καλῶν ἄλλων=λόγων μὲν ἄλλων πολλῶν καὶ καλῶν.*

b Indeed this is what was in my mind yesterday, when I was so ready to gratify your request for my disquisition on constitutional principles I knew that no group of men would be more competent to supply the appropriate sequel, if you were so disposed, you could engage my city in a war worthy of her and depict her conduct of it in its right colours, as no other living persons could So, of course, I delivered the discourse enjoined on me, and laid on you, in return, the injunctions I am now recalling. Well, you agreed that you would consult with one another and enter-
c tain me by to-day with a return feast of discourses And so here I am, in holiday garb and with the best of appetites for the banquet

HERM. Indeed, Socrates, as Timaeus has said, we shall not be wanting in good will, and we can have no pretext for disappointing you In fact, as long ago as yesterday we had our thoughts on this very point, as soon as ever we had got back to the guest-chamber of Critias, with whom we are staying, and even while we were still on the way
d there Well, our friend related a story which he had heard a long, long while ago Repeat it now, Critias, for Socrates, that he too may have the opportunity of judging whether it meets his injunctions or not

CRI. Readily, if our remaining partner, Timaeus, approves

TI. As I certainly do

CRI. Here, then, Socrates, is the story, extraordinary
e as it is, it is absolutely true, as Solon, the wisest of the wise seven, once declared Solon, who, you must know, was, as he says in several places in his poems, a kinsman and close friend of my great-grandfather Dropides, told my grandfather Critias (so Critias, in his turn, used to repeat the story to me in his old age), that there are great and splendid ancient exploits of our city which have been forgotten from lapse of time and decay of population, and, in particular, one, the greatest of all. To commemorate
21 the exploit to-day would be a becoming way at once of showing our gratitude to you, and honouring our

goddess, on her festival, with a true and loyal hymn of praise

So Well said, indeed But pray, of what nature was this authentic, though unrecorded, ancient exploit of our city of Athens, as described by Critias on the faith of Solon's statement ?

CRI I will tell you, though it is a long while since I heard the story, and the narrator himself was far from a
b young man In fact, Critias was, at the time, by his own account, on the verge of ninety, and I myself some ten years old We were keeping the Apaturia, and the day was the Cureotis Well, we boys celebrated the festival in the regular customary way , our fathers set us to recite verses against one another for a prize Of course, various compositions of different poets were repeated, and, in particular, a good many of us boys sang Solon's verses, which were novelties at the time So one of the confraternity observed—it may have been his real opinion, or he may only have meant a compliment to Critias—that Solon had been, in his judgement, not merely one of the
c wisest of men, but, in his verse, the most free spoken of all poets The old man—how well I recall the scene !—broke into a delighted smile 'Ah, Amynander,' he replied 'if he had given himself to verse seriously, like others, and not made a mere pastime of it , if he had completed his treatment of the story he brought home from Egypt but was forced to lay aside by the faction-feuds and other disorders which he found here on his return , then, in my
d judgement, no poet's reputation—not that of Hesiod or Homer—would have stood higher than his ' 'And what story was that ? ' says the other 'That of a mighty achievement, worthy of superlative renown, once accomplished by our city, though, owing to lapse of time and the destruction of those who accomplished it, the tale of it has not lasted down to our own age ' 'Let us have the whole,' says the other 'What was the story Solon related as true ? How did he come to hear it, and on whose testimony
e did he tell it ? ' 'In the Egyptian Delta,' said Critias,

'where the Nile splits into its several mouths, there is a region called the Saitic nome, of which the principal city is Sais, the native place, as you know, of King Amasis The goddess who presides over this city is called Neith in the Egyptian language, in Greek, as the inhabitants say, her name is Athene, the citizens profess to be warmly attached to Athens and, in some sense, connections of ours Well, Solon said that he visited this city and was received there with great honours. In especial, he made inquiries about
22 ancient times from such of the priests as were most conversant with them, and so discovered that neither he nor any other Greek knew anything to boast of about such matters Once, being minded to lead them into talk about antiquities, he began to tell them the most venerable of our legends, those of Phoroneus, the reputed first man, and Niobe, then he went on to tell the story of Deucalion
b and Pyrrha, how they fared after the deluge, to trace the pedigrees of their descendants, and to try to compute the years which had elapsed since these events by a reckoning of the times "Ah, Solon, Solon," says one of the priests, an exceeding old man, "you Greeks are always children; there is no Greek that is a greybeard" "How do you mean that?" says Solon when he caught the remark "You have all boys' minds," says the priest, "ancient tradition has stored them with no venerable belief nor any
c hoary lore And the cause is this Many and divers are the destructions of mankind which have been and shall yet be, the greatest are wrought by fire and water, but there are others, slighter, wrought by countless causes Thus the report which is current even among yourselves that Phaethon the Sun-child once harnessed his father's car, but being unable to guide it on his father's track, scorched the face of the earth and was himself consumed by the thunderbolt, has indeed the semblance of a mere
d fable, but the fact of it is a deviation of the bodies which revolve in heaven about the earth and a destruction, coming at long intervals, of things on the earth in much fire. Hence, at such times, those who dwell among moun-

tains and in highlands and dry places perish more completely than dwellers by rivers or the sea As for us, the Nile, our universal preserver, then preserves us from this peril also by his rising [1] On the other side, when the gods cleanse the earth with a flood of waters, while the herdsmen and shepherds in the mountains come safe off, dwellers in
e your cities are swept by the rivers into the sea But in this land of ours, neither then nor at other times does water descend on the fields from above, its way is ever to ascend from beneath. These are the causes and reasons for which the traditions preserved here are reputed the most ancient of any, though in true fact, in all regions where excessive rains or heats do not forbid it, there are always men to be found, sometimes more, sometimes fewer And whatever
23 has come to pass that is heroic or grand or in any way memorable, in your own land, or here in Egypt, or in any other region that has come to our ears, the records of all this have from old times been written down here, in our temples, and are there kept safe; whereas, with you and the rest of mankind, life has but just been furnished with the art of writing and the other requisites of cities, when the torrents come down on you from heaven again, at the usual period, like a pestilence, and leave behind them only the rude and unlettered Thus you revert, so to say, to
b your childhood and know nothing of all that has befallen in ancient times, in our country or in your own Why, Solon, the story you have just related of past generations in your own land is not much better than a tale of the nursery Your people can recall but one deluge, though there were many before it, and, what is more, you do not know that the bravest and noblest men of all history once existed in your own land You and all your fellow-citizens
c are sprung from a scanty remnant of them, though you never suspect this, because their survivors for many generations passed away without utterance in writing Yes, Solon,

[1] *αὐξόμενος*, Cook Wilson Of the MSS readings *ῥυόμενος* appears to be a mistaken correction of *λυόμενος*, which itself yields no satisfactory sense

once on a time, before the great Deluge, what is now Athens was a city right valiant in war and with laws in all things exceeding excellent Her exploits and her polities are said to have been the noblest of all under heaven whereof
d any report has come to our ears" When Solon heard this, he was amazed and besought the priests with much earnestness to tell him the full tale of those our citizens of old in order So the priest made answer "Solon, I will not stint you, the tale shall be told, for love of you and your city, but, chiefly, of the goddess, your patron, foster-mother and tutress, and ours Yours she was first, taking over the seed of you from Earth and Hephaestus, ours later
e by a thousand years Now the age of our native institutions is recorded in our sacred writings as eight thousand years So I will unfold to you in few the laws of your citizens of nine thousand years ago, and the noblest of their exploits, the full and precise story shall be related some
24 other time, at our leisure, with the very texts before us First, then, compare your laws with ours here in Sais; you will still find among us many an illustration of those you then had. There is, first, the sharp separation of the priesthood from other classes, next, the rule for the craftsmen each craft, herdsmen, hunters, farmers, plies
b its own calling, meddling with no other. The soldiery, in especial, as you must have observed, are a class apart from all others, forbidden by the law to concern themselves with any calling but war. Moreover, the fashion of their equipment is with shield and spear, arms which we were the first people in all Asia [1] to bear, being so taught by the goddess, even as she had taught you first in your part of the world. Next, as to wisdom, you see what care our law has bestowed on it from its very starting-point, how it has encouraged cosmology, devising salutary regulations for human life, down to the very rules of divination and
c medicine, from that divine study, and conquering all the sciences which attend it Now all this order and system

[1] Egypt being regarded, in the customary Greek fashion, as a part of Asia

the goddess had bestowed on you before us in your first establishment The region wherein you were born she chose for herself, because she perceived that its well-tempered climate would bear a harvest of most intelligent men Being then a lover alike of war and of wisdom, she chose
d out the region which would yield her men likest herself, and made her first settlement there You dwelt there, then, under laws like these and even better, surpassing all mankind in all manner of goodness, as was but meet for the progeny and pupils of gods Now the great deeds of your city which are recorded and admired among us are many, but one there is surpassing the rest in heroic valour Our records tell
e us of a proud and mighty power which your city once arrested as it poured itself over all Europe and Asia from its base in the Atlantic Ocean. In those far-away days that Ocean could be navigated, as there was an island outside the channel which your countrymen tell me you call the 'pillars of Heracles' This island was larger than Libya and Asia together, and from it seafarers, in those times,
25 could make their way to the others, and thence to the whole of the opposite continent, which encircles the true outer Ocean (The waters within the channel just mentioned are manifestly a basin with a narrow entrance, what lies beyond it is the real Ocean, and it is the land enclosing that Ocean which should rightly be called a Continent) In this Atlantic island had arisen a great and wonderful monarchy, which was mistress of the whole island as well as of many others and of parts of the mainland [1] Its monarchs, moreover, within the straits, held Libya as far
b as the Egyptian border, and Europe as far as Tyrrhenia. Now, this power concentrated its forces on an attempt to enslave your country, ours, and the whole territory within the straits at one fell swoop It was then, Solon, that your city's qualities of heroism and energy shone out in the eyes of mankind She took the lead in daring and military skill. At the head of the Hellenes, and then, when her

[1] The mainland meant is the supposed outer continent which is imagined to enclose the whole 'Ocean'.

c allies had been forced to abandon her, in isolation, she faced the supreme peril, overthrew the invaders and set up her trophy Those who had not yet been subdued she preserved from subjugation, all the rest of us who dwell within the limits set by Heracles she generously liberated Afterwards came a time of extraordinary earthquakes and
d inundations In one terrible day and night of storm, your warriors were swallowed in a body by the earth, and Atlantis likewise sank into the sea and vanished. This is why the Ocean in that part to this day cannot be navigated or explored, owing to the great depth [1] of the mud caused by the subsiding of the island" '

This, Socrates, is a succinct account of the story told by old Critias, as he had heard it from Solon It all came
e back to my mind yesterday, as you were discoursing of your state and its citizens, and I was surprised to observe your wonderful and significant coincidence on so many
26 points with Solon's narrative Still, I preferred to say nothing of it at the moment, after so many years, my memories were imperfect I resolved, then, that I would not repeat the story until I had first gone thoroughly over the whole in my own mind That was why I was so ready yesterday to fall in with your injunctions, in a case like this, I said to myself, the great thing is to propound a theme which meets the wish of the company, and we shall not have much difficulty about that So, as Hermocrates has told
b you, I began at once to communicate my reminiscences to our friends on my way back home yesterday, and when I had got home, I spent the night in making a pretty complete review of them How true the saying is that we have a wonderful memory for what we learn in childhood! I hardly know whether I can recollect all I heard yesterday, but I should be much surprised if I have lost a single detail of this story, though it is so very long since it was told me. You see, it gave me a great deal of sport and enjoyment to

[1] *κάρτα βαθέος* A² gives the necessary sense The *βραχέος* of other MSS seems to me unintelligible Possibly the original word was *παχέος* (E. R Bevan)

c listen, and the old man was delighted to answer my repeated questions, thus it has all been impressed on me like the lines of an indelible design In fact, I told it all exactly to our friends early this morning, that they might be provided with a subject as well as myself So here I am, Socrates—this is the point I have been so long coming to—ready to tell the story, not in outline, but with full details, as I heard it myself. We will translate the citizens and the city of
d which you were discoursing yesterday from fiction to fact, the city we will take to be our own Athens, and the citizens of your imagination we will identify with those actual ancestors of ours of whom the Egyptian priest talked I am sure they will fit the part, and we shall not strike a false note if we say that they are the very Athenians of that distant time. The subject shall be divided between us, and we will all do our best to make a worthy response to your injunctions It is for you, then, Socrates, to consider whether
e this theme is to our mind or some other should be found to take its place

So What possible theme, Critias, could be preferable to one which is, from its connection with the goddess, so appropriate to to-day's festival, and has the further very great recommendation of being no imaginary tale, but an authentic history? How and where shall we find another group of characters, if we do not avail ourselves of these? No, no you must make your discourses, and good luck to
27 you! As for me, it is my turn to rest and listen, after my discourse of yesterday

CRI Then, Socrates, let me explain the programme we have arranged for your entertainment We have resolved that Timaeus, our leading astronomer and special devotee of natural science, shall be the first to speak he will begin with the formation of the universe and end with man I am to follow him I shall take over mankind from him as, in theory, already born, and some of them from you as already
b specially educated. I shall then, in the spirit of Solon's legislation no less than of his narrative, produce them before ourselves as a court, and declare them freemen of our own

city, on the plea that they are those same Athenians of old of whose disappearance we have been informed by the report of the Egyptian sacred texts. Thenceforward they will be referred to as Athenians and fellow-citizens

So. I see I am to receive a complete and brilliant return banquet of discourses It is yours, now, Timaeus, to speak. But you must first invoke the gods, as usage requires

c Ti As for that, Socrates, all men who have even a slender measure of wit surely invoke a god at the outset of every undertaking, small or great. We, who are now to discourse of the universe and its generation—or, it may be, its ungenerate existence—unless we are utterly beside ourselves, cannot but invoke gods and goddesses with a prayer that our utterance may be well-pleasing to them as well as
d consistent with itself So much, then, for the gods' part in our prayer, for ourselves my petition is that you may follow me readily and that I may give clear expression to my thoughts on the subject

We must begin, then, in my judgement, with this distinction What is that which ever is, but never comes to be, and what that which is ever coming to be, but never is?
28 The one is apprehended by thought and discourse, being ever self-same, the other grasped by belief and unreasoned sensation, coming to be and ceasing to be, but never veritably being Again, whatever comes to be must come to be through the agency of a cause, without a cause, nothing can come to be Now when the maker of anything fixes his gaze upon the ever self-same and takes it for his model in the fashioning of form and quality, the thing thus fashioned is necessarily always beautiful, if his gaze is upon that
b which has come to be and his model a thing that comes to be, his work is not beautiful So the whole Heaven, or World—or we may give it any other name, as may be most acceptable to itself—I say, we must ask first concerning it the question sound method bids us begin with everywhere. Was it always, and had it no beginning of coming to be? Or has it come to be, and had it a beginning of becoming? It has come to be, for it can be seen and touched and has

body, and all that is such is sensible, and the sensible, being apprehended by belief and sensation, has been seen to come
c into being and to be generable And again, we say that what has come to be necessarily must have come to be through the agency of a cause Now, as for the maker and father of this universe, to find him out is hard, and to speak of him, when one has found him, before all mankind impossible But as to the world we must ask this further question On which of the models did its builder fashion it, on the model of the identical and self-same, or on that
29 of that which has come to be ? For if this world is a thing of beauty and its maker good, manifestly his eye was upon the eternal, if—but it were blasphemy to utter the words !— upon something that had become. Surely, it must be plain to any man that he looked to the eternal, for the work is the most beauteous of things that have come to be, and its maker the best of causes Since this was the manner of the world's coming to be, it is wrought on the model of that which is apprehended by discourse and understanding and
b is self-same And since this is so, this our world must further assuredly be a likeness of somewhat Now in every matter it is of high moment to begin at the true beginning Concerning likenesses and their models, then, we must distinguish in this fashion Discourses are akin in their character to that which they expound, discourses concerning the abiding and stable and apparent to understanding, themselves abiding and unchanging—(so far as it is possible and proper for discourse to be unanswerable and irrefutable,
c they must not fall short of this)—discourses concerning that which is fashioned in the likeness of the former, but is but a likeness, themselves but likely, and in a due proportion to the others, as being to becoming, so is truth of fact to belief If, then, Socrates, we find ourselves in many points unable to make our discourse of the generation of gods and the universe in every way wholly consistent and exact, you must not be surprised Nay, we must be well content if we can provide an account not less likely than another s, we must remember that I who speak, and you who are my

d. audience, are but men and should be satisfied to ask for no more than the likely story.

So Well said, Timaeus, such terms ought to be satisfactory to us We *are* excellently satisfied with your prelude, now proceed to give us the melody itself.

e Ti Then let us say why becoming and the universe were framed by him who framed them He was good, and none that is good is ever subject to any motion of grudging[1] Being without grudging, then, he desired all things to become as like as might be to himself This, teach the wise, is the true sovereign source of becoming and of the world,
30 and most right it is to listen to their teaching. God's desire was that all things should be good, nothing, so far as might be, bad; so he took in hand all that was visible—he found it not at rest, but in discordant and disorderly motion—and brought it from disorder to order, since he judged this every way better than that Now he that is best might not and may not effect anything but that which is most beautiful
b So he considered and discovered that, whole for whole, of things visible nothing without understanding would ever be more beauteous than with understanding, and further that understanding cannot arise anywhere without soul Moved by this consideration, he framed understanding within soul and soul within body, and so made the fabric of the universe, to the end that the work of his fashioning might be in its kind most beauteous and best This, then, is how, according to the likely account, we must say that this our world, a creature with life, soul, and understanding, has verily come
c to be through the providence of God.

This being presupposed, we have next to say in the likeness of what living creature it was framed by him who framed it We are not to suppose, then, that it is like anything that is but a part, for what is like a thing imperfect can never be beautiful We should rather assume that it is likest of all things to that whereof all living creatures besides itself are, severally and in their kinds, parts. For

[1] *φθόνος* (29 *e* 2) is the temper of the 'dog in the manger' who tries to engross everything worth having to himself.

that embraces and contains within itself all intelligible living creatures, even as this our world contains ourselves
d and all visible kinds that are God, purposing to make it most nearly like the every way perfect and fairest of intelligible things, fashioned one visible living creature, contain-
31 ing within itself all living things which are by nature of its own kind [1] But have we been right in calling it *one* heaven ? Might it not have been truer to speak of many or an indefinite number ? Nay, we must say, *one*, if we are to hold that it has been made to answer to its model That which embraces all intelligible living creatures whatsoever cannot be one of a pair. For then there would needs be a second such creature, that which embraces the two , they would both be parts of it and thus our world would be more truly said to be after the likeness not of them, but of it, which embraces them Therefore, to the end that by its solitude our universe might
b be like the perfect living creature, the maker made neither two worlds nor a countless number , sole and single this our heaven came into being, sole it is, and sole it shall remain

Being bodily, that which has come to be must be visible and tangible Without fire nothing visible can come to be, nothing tangible without solidity, nothing solid without earth whence God, in the beginning of his fashioning, made the body of the universe of fire and water. Now two terms cannot be fairly wrought together without a third ,
c there must be a bond between them to bring them together The fairest of all bonds is that which makes itself and the terms it binds together most utterly one, and this is most perfectly effected by a progression. For when of three integers, or volumes, or characters, the midmost is to the
32 last as the first to itself, and, inversely, as the last to the midmost so the midmost to the first, then all will necessarily take one another's places, the midmost becoming first and last, and both the first and last midmost, and so, by substitution for one another, they form a perfect unity [2]

[1] I e are visible

[2] I e if *a b b c* then (*convertendo*) *b a c b*, where *b* 'takes the places' of *a* and *c* and *a* and *c* the place of *b*

Now if the body of the universe could have been a plane without depth, one middle term would have sufficed to bind
b together its companions and itself But in fact the world was to be a solid, and solids must always be conjoined not by one middle term, but by two So God inserted water and air between fire and earth, and made them all, as far as was possible, proportional to one another, air being to water as fire to air, and water to earth as air to water Thus was compacted and constructed a visible and tangible heaven On such wise and from such constituents, to the
c number of four, was the body of the world formed, being wrought into accord by proportion, and from thence it derived Friendship and came to a unity with itself indissoluble by any but him who had compacted it

Now the frame of the world took in the whole of each of the four For he that framed it framed it of all the fire and all the water, air and earth, leaving no part nor property of any of them outside it This he did to the following
d intent, first that it might be to the utmost a living being whole and perfect, of perfect parts, next that it might be
33 one, nought being left over of which such another might be made, third, that it might be immune from old age and disease For he remembered that when a composite body is beset round and encountered by heat and cold or any agent of vehement quality, it is dissolved before its time [1] and wastes before the attack of disease and age Wherefore, for this cause and reason, he built a single whole,[2] all whose parts were wholes, to be perfect, immune from age and disease

b For its figure he gave it that which was fitting and in keeping with its nature Now, for the living creature which was to embrace in itself all living creatures the fitting figure must be that which contains all figures in itself Therefore he wrought it on his lathe spherical and round, with centre

[1] *ἀκαίρως* 33 *a* 5 must be taken with *λύει* to make the reasoning satisfactory

[2] 33 *a* 7 read *ἕν* with APWY, against *ἕνα*, adopted by Burnet from F, Proclus and Simplicius.

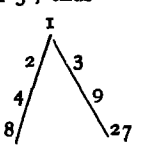
equidistant from extremity in every direction, the figure of all others most perfect and uniform, judging regularity beyond compare more comely than irregularity Moreover he rounded its outer surface to a perfect smoothness, and
c that for many reasons It had no need of eyes, for nothing was left outside it to be seen, nor yet of ears, for there was nothing to be heard, there was no air around it, to call for respiration, nor again had it need of organs wherewith to take its nutriment into itself or excrete it once more when drained of its juices Nothing was given off from it, nothing entered it,—there *was* nothing but itself it was contrived by art to feed itself on its own waste, to act wholly on itself and be acted on by itself alone For he that contrived it
d thought it would be better self-sufficient than dependent on any thing else He saw no need to give it superfluous hands, which it would require neither for grasping nor for defence,
34 nor yet feet or other support to stand on For he had assigned it the motion proper to its body, that one of the seven [1] which has most to do with understanding and intelligence. Accordingly, he spun it uniformly upon itself in the same volume and made it revolve in a circle, the other six motions he denied it, giving it no part in their aberrations And since feet were not wanted for this revolution, he begat it without feet or legs

This, then, was the whole purpose of the God who is for ever for the god who was yet to be, in accord wherewith he
b made it smooth, uniform throughout, equidistant from its centre, a body whole and perfect, with perfect bodies for its parts Then he set a soul in its centre, stretched it throughout the whole and further wrapped it about its body without Thus he established a round revolving Heaven, one, sole, solitary, able, in its excellence, to be its own companion, needing nothing beyond itself, its own sufficient acquaintance and friend In all these respects he begat it a blessed god

[1] The seven motions are rectilinear translation in the six directions (up, down, forwards, backwards, to the right, to the left) and circular revolution

But as to this soul though we presume now to speak of it as the later-born, it was not then junior in God's con-
c triving; he would never have permitted senior to be subject to junior at their coupling. In us, methinks, there is too much of the casual and careless, and our speech is like ourselves He fashioned soul as body's elder and senior in time and worth, to be its queen and sovereign The
35 material and manner of the fashioning were thus Midway between being indivisible and ever self-same and being which becomes in bodies and is divisible, he made a third form of being, a blend of two, of the Same and of the Other, and, in like manner, made it a compound midway between that of them which is indivisible and that which is divided in bodies Then he took the three of them and blended all into a unity, forcing the Other into composition with the Same, reluctant though it was to combine
b Mingling them by the aid of Being and having made one of the three, he next went on to divide this whole into portions as many as were meet, each of them blended of Same, of Other and of Being He began the division thus First he cut off one portion from the whole, next another, double of this. The third portion he made half as great again as the second, or thrice as great as the first, the fourth double
c of the second, the fifth three times the third, the sixth eight times, the seventh twenty-seven times the first [1] Then he
36 proceeded to fill up the intervals of the double and the triple, still cutting off portions as before and inserting them in these intervals, so that in each interval there were two middle terms, the one exceeding and being exceeded by the same part of the extremes, the other exceeding and being

[1] This gives us a double series of the ascending powers of 2 and 3, from 2^0 and 3^0 to 2^3 and 3^3, thus



exceeded by an equal number.[1] These links gave rise to intervals of three to two, four to three, and nine to eight within the old intervals So he filled up all the intervals of four to three with the interval of nine to eight, leaving
b in each case a fraction such that the interval determined by it is represented by the ratio of 256 to 243 [2] And by this time the blend from which he was cutting off these portions was at last exhausted So he split this whole construction in two, down its length, made the halves cross one another at their
c centres, in the form of the letter *Chi*, and bent them into circles, so that each met itself and the other at a point opposite that where they had been crossed He then enfolded them in the motion of uniform revolution, and made one of them the outer, the other the inner circle The outer circuit he named after the Same, the inner after the Other. To that of the Same he gave a spin 'by the side' to the right, to that of the Other a spin 'by the diagonal' [3] to the left,
d and assigned the supremacy to the circuit of the Same and Uniform For he left it one and undivided, but the inner he split by six divisions into seven unequal circles, to correspond to the intervals of the double and triple, of each of which there were three The circles he commanded to revolve in opposite senses, and with velocities of which three are equal, four unequal to one another and to that

[1] These are, of course, respectively the 'harmonic' and the 'arithmetical' mean Calling these x and y, and the extremes a and b, they are respectively determined by the equations $(a - x)/a = (x - b)/b$ and $y = (a + b)/2$ The intervals of 3 2, 4 3, 9 8 correspond respectively to those of the fifth, fourth and major tone in the musical scale 256 243 gives the λεῖμμα, the 'semi-tone' of the Greek diatonic scale

[2] The final result of the process is the construction of a scale with the compass, corresponding to the numerical interval 1–27, of four octaves and a major sixth On the details see my *Commentary* on the passage

[3] This is a concealed anticipation of 39 *a* 1, where we are expressly told that the circle of the Other was tilted, so as to give it an oblique inclination to that of the Same The 'circles' thus come to symbolize the sidereal Equator and the Ecliptic

of the three, though there are ratios between their motions [1]

And when the whole fabric of the soul had been finished to the fashioner's mind, he next fell to shaping within her
a all that has body and fitting the two together, centre to centre. When she was thus inwoven every way from the centre to the outmost heaven and wrapped thereabout without, she entered on a God-given beginning of unfailing and intelligent life for all time to come Thus have come to be the body of heaven, a thing visible, and heaven itself,
37 a soul invisible but endowed with reason and melody, most excellent of things made, as her author most excellent of things intelligible and abiding Seeing then that she is commingled of Same and Other and Being, these three, and divided and compounded by proportion, and moreover revolves upon herself, whensoever she has contact with aught that has being, dissipable or undivided, moving throughout her whole being, she declares with what thing, in
b what manner, how and when that wherewith anything is the same, or than which it is other, is and is predicated to be either, whether among things that come to be or with reference to things that are ever self-same Now when such true and coherent discourse concerning Other and Same stirs noiselessly and soundlessly in the self-moved,[2] if it concern the sensible, and the circle of the Other, moving aright, report it to the whole soul, there arise assured and true opinions and beliefs But if it concern the rational, and
c the circle of the Same, running smoothly, declare it, there are necessarily produced understanding and science And if any should call that wherein these two [3] are born by any name but 'soul', he will be saying anything rather than the truth

Now when the father that had begotten it beheld it

[1] Timaeus probably means that the ratio of the period of any one planet to that of another is a *rational* fraction

[2] That is 'in the soul' the one thing which can 'set itself in action'.

[3] The 'two' are (*a*) true belief, (*b*) understanding and science. 'That within which they are born' is 'the self-moved'.

moving and quick, a created image of the eternal †gods,[1] he rejoiced, and in his delight devised how to make it yet
d more like its model So, as that is an eternal living being, he sought to make this universe also such, as far as might be. Now the nature of that living being was everlasting, and this it was impossible to confer wholly on a creature. But he devised the making of a moving likeness of everlastingness, so, in his ordering of heaven, he makes a likeness, proceeding by number, of everlastingness that abides in unity, the same we have named time. For days and nights and months
e and years,—these were not before heaven was made, he contrived them then, as it was being fashioned All these are divisions of time, and 'was' and 'shall be' are created parts of time, we unwittingly do ill when we attribute them to eternal being We say it was and is and shall be, but, if we would speak truly, only 'is' belongs to it, 'was'
38 and 'shall be' should be said of becoming that proceeds in time, since they are motions But to that which is ever immutably self-same it belongs neither to grow older or younger by lapse of time, nor yet to have come to be heretofore, nor to continue to be now, nor again to be still to come nothing belongs to it of all that becoming attaches to the changing things of sense, all have come to be and are parts of time, imitating everlastingness by its numbered revolution It is the same, too, with all those phrases, that what has come to be *is* come to be, what comes to be *is*
b coming to be, and even that what will come to be *is* to come to be and what is not *is* what is not—none of them all is exact But the present, perhaps, is no fitting time for exact discourse of this

Time, in fact, came to be with heaven, that, as they were born together, they may also be destroyed together, if ever they should be destroyed, and was fashioned on the model of the everlasting, that heaven might be as like to it as might be. For as the model is,

[1] The MSS have *τῶν ἀιδίων θεῶν*, but *θεῶν* must be corrupt unless, as is barely possible, it comes from *θέα*, with the sense 'his eternal contemplations'.

abidingly throughout everlastingness so heaven has been and is and shall be through all time By this purpose and plan of God for the making of time, that time might be born, sun, moon, and five other stars—the 'vagrants' as they are called—were made, to determine and preserve the numbers of time When he had made each of them a body, God set them in the orbits of the circle of the Other, seven stars in seven orbits, the moon in that which is next the earth, the sun in the second nearest, the morning-star and that called sacred to Hermes in orbits revolving with the same speed as the sun, but having a quality [1] the contrary to his Hence sun, star of Hermes and morning-star overtake, and are likewise overtaken by each other For the rest, where he set them and why he set them there, if one should explain the full reasons, this argument, though but a side-issue, would task us more than our main theme, perhaps the subject may receive adequate treatment at some later time, when we have leisure for it But to resume When all the creatures needful for the joint making of time had found their due orbits and become living beings, with bodies bound in vital bonds, and learned their orders, they began to revolve in the orbit of the Other which passed athwart [2] through the
39 orbit of the Same and was subjected to it, some in greater circles, some in lesser, those with the lesser circles moving faster, those with the greater more slowly Hence, by reason of the movement of the Same, those which moved most quickly seemed to be overtaken by the slower, though in truth they were the overtakers For since their revolutions are in two planes at once and in contrary senses, the movement of the Same gave them all a spiral twist and made the body which recedes most slowly from itself, and so is
b swifter than them all, seem closest to itself That there

[1] *τὴν δ' ἐναντίαν δύναμιν* 38 *d* 4 What this *δύναμις* is is never explained For the different theories see my *Commentary*, in loc

[2] *ἰόνσης τε καὶ κρατουμένης* 39 *a* 1, the uniform reading of the best MSS, yields no sense here and seems to be corrupt I translate the *ἰοῦσάν τε καὶ κρατουμένην* of inferior MSS, which I take to be a correct conjectural emendation.

might be a plain measure of their relative slowness and speed, and the eight revolutions go on their way, God kindled a light in the orbit next but one to the earth, even that we call to-day the sun, to the end that he might shine to the utmost bounds of heaven, and that all living things for whom it is meet might get knowledge of number, learning it from the circling of the Same and Uniform. Thus, then,
c and for this purpose came about night-and-day, the period of the single and most intelligent revolution, the month comes to be when the moon completes her circuit and overtakes the sun, the year when the sun completes his own circuit As for the periods of the rest, men, save for a very few, have not discerned them, and so neither give them names nor measure them against one another by numerical reckoning, they barely know that their wanderings are
d time at all, so bewildering are their numbers [1] and so marvellous their intricacies Yet, none the less, we can understand that the perfect year is then fulfilled by a perfect number when all eight periods have run all their heats against one another and 'come full circle',[2] the computation being made by the revolution of the Same and uniformly moving On this wise, then, and for this purpose were made the stars which turn back on their steps as they traverse heaven, to the end that this our world may be most fully like the perfect and intelligible living creature, through
e imitation of the eternal

With the birth of time, it had now been in all things else fashioned in the likeness of that to which it was being made like, but there was still this point of difference, it

[1] *πλήθει ἀμηχάνῳ* 39 *d* 1–2 The meaning is that to express the period of each planet in terms of those of all the rest would involve many and complicated calculations, not that the number of 'independent motions' of a planet is considerable Each has only two, its 'proper' motion and that communicated to it by the 'circle of the Same'

[2] The meaning is that there is some period which is at once a whole number of days, of solar years, of revolutions of each of the planets This is the 'perfect year', at the end of which all the seven 'planets' are relatively in the same position as at its beginning

had not yet all living creatures within it, for they were not yet all born So he went on to fashion it in this point also on the pattern of its model Whatsoever forms understanding beholds in the living creature that truly is, in their kinds and their numbers, such and so many he purposed that this world also should receive Now, there are four first, the gods of heaven, then creatures with wings
o that wander in the air, third, the sort that live in the waters, and fourth, those that go on dry land The substance of the divine he fashioned chiefly of fire, that it might be bright and beautiful to behold, made spherical like the universe and set in the mind of the Highest,[1] to keep company with It, strowing them all over heaven to be in very deed a broidered adornment for the whole thereof To each of them he gave two motions, one in the same volume and with the same sense, even as each of them ever thinks the same thoughts about the same
) things, and one forward, in virtue of their subjection to the revolution of the Same and uniform in respect of the other five motions he made them unmoving and still, that all might be most utterly good [2] From this cause came to be all the unmoving stars, living creatures divine and eternal which abide ever revolving in one place and one sense; those that turn back and wander in such fashion were made in the manner we have already described But
; earth, our foster-mother, that goes to and fro on her path about the axis of the universe, he contrived for a guardian and artificer of night and day, first and most ancient of the gods born within the heaven Concerning these same gods, to tell of their mazy dances, their juxtapositions, the retrogradations and advances of their orbits with respect to

[1] I e in the 'circle of the Same', which, we must remember, is itself 'in the soul' of the world The 'gods' meant are the true stars

[2] The five movements found in planets but not in the 'fixed' stars are (1) retrogradation, (2) and (3) excursions N and S in latitude, (4) and (5) perigee and apogee The two allowed to a star are (1) axial rotation, (2) the diurnal movement with the 'circle of the Same'

one another, I say, to tell which of them in their conjunctions—or their oppositions—hide themselves from our sight
d behind which, and at what times, and by their reappearing send terrors and signs of things to come to men who cannot reckon,—without a visible model this would be but wasted labour What we have said of the matter must suffice, and here our discourse of the visible created gods shall come to its end

To tell of other spiritual beings or to know how they were born is a task beyond our powers, so we must believe those who have told the story before us; they were by their own account descendants of gods, and surely they knew well enough who were their own ancestors. We cannot distrust sons of gods, though their statement is unconfirmed by probabilities or cogent proofs, but must
e conform to usage and receive it as a report of their own family history Let our statement about the birth of these gods, then, be made, on their authority, in the following terms. From Earth and Heaven were born Oceanus and Tethys, and from them Phorcys, Cronus and Rhea, and
41 their companions The children of Cronus and Rhea were Zeus, Hera and their brothers and sisters whose names we know, not to mention *their* children But to return When all the gods had been born, both those who revolve before our eyes and those who display themselves only when such is their pleasure, he that had begotten this universe addressed them in these words

'Ye gods,[1] works whereof I am maker and father, seeing they were fashioned by my hands, are indissoluble without my consent Now, whatsoever has been put together is indeed dissoluble, yet none but an evil being would consent
b to dissolve that which has been wrought into a thing of beauty and is good Therefore, since a birth you had, you are not, indeed, utterly immortal or indissoluble, yet you shall never be dissolved nor taste of death, but shall find my will a yet mightier and more sovereign bond than

[1] Reading with Badham in 41 *a* 7 *θεοί, ὅσων* for the MSS *θεοὶ θεῶν, ὧν* 'Gods of gods' would mean nothing suitable to the context

. those with which you were fashioned in your birth. Give ear, then, to that I now declare to you There are three sorts of mortal creatures yet unborn If these are not born, heaven will be imperfect, for it will not contain every sort of living creature, as it must if it is to be sufficiently perfect But if they are made and endued with life by my own hands, they will be the equals of gods To the end, then, that mortality may be and this universe be a universe indeed, turn ye also, as your nature bids, to the making of living creatures, copying my action in your own creation And inasmuch as it is meet there should be somewhat in them to bear the same name as the immortals, being called divine, and to be the guide of those of them who are at any time minded to follow righteousness and you, I will provide it. I will sow the seed and make the beginning, thereafter do ye fashion living creatures, weaving mortality upon immortality Bring them to the birth, give them their sustenance and growth, and when they fail, receive them again to yourselves'

So he spake, and again poured into the same bowl wherein
41 he had mixed the soul of the universe what was left of his former materials These he mingled in much the same fashion, yet not in the same purity, but in the second and
42 third degree When he had wrought the whole mass, he divided it into souls of equal number with the stars, assigning each several soul to its several star Mounting them on these, as it were on chariots, he displayed the universe before them and declared the laws of their destiny For all there was to be one and the same appointed first birth, that none of them might come short at his hands they were to be sown each in the instrument of time assigned it
43 and be born as that creature which, of all creatures, most fears God, and since mankind is of two sexes, the better is that which should hereafter be called man. When they should have of necessity been implanted in bodies, and there should be processes of accretion of portions to and discretion of portions from their body, there must necessarily arise in them all, first the same natural sensibility to violent

impressions, next, lust with its mingling of pleasure and pain, and moreover, fear and wrath and all passions which attend on these or are their natural opposites If they
b should master these, their life would be righteous, but if they should be mastered by them, wicked. And he that should live his appointed time well, should return to the abode of the star his fellow and there live in felicity in converse with it He who should fail in this should be transformed in his
c second birth into a woman, if even so he ceased not from his wickedness, according to the manner of his sin, in answering manner he should ever be transformed into some beast and have no rest from change and torment until he should subdue [1] to the revolution of the Same and uniform within himself all that medley of fire and water and air and earth that had grown about it later, mastering its turbulence
d and disproportion by discourse, and so return to his first and best estate When he had delivered all these ordinances to them, to the end that he might be guiltless of their after several wickedness, he sowed them, some in the earth, some in the moon, some in all the other instruments of time After this sowing, he left it to the new-made gods to mould mortal bodies, to fashion and rule over all that must yet accrue to a human soul, with whatsoever is incidental to these tasks, and to govern the mortal creature right
e fairly and well, save in so far as it should be a cause of ill to itself

When he had disposed all these matters thus, he returned to his wonted rest, and while he rested, his sons marked his bidding and obeyed it Receiving the immortal principle of a mortal creature, they fell to copying their own
43 maker, borrowing from the world portions of fire and earth, water and air, as loans to be one day repaid, and welding their borrowings together, not with those indissoluble bonds wherewith they were themselves compacted, but with a multitude of rivets too minute to be seen Thus they

[1] *συνεπισπώμενος* 42 *c* 5 The returning sinner has a burden to drag with him This is ignored by the reading of some inferior MSS, adopted by Stallbaum, Martin, Archer-Hind, *συνεπισπόμενος*

fashioned for each creature one body of many parts, and in it they bound the orbits of the immortal soul, as in a current flowing in on them and flowing off Thus, being bound in a mighty river, they neither prevailed nor were prevailed on, but caused and suffered perturbation, in such fashion that
b the whole creature moved indeed, but moved at hazard, with no order nor proportion in its gait, having all the six motions ; they went forward and backward, and anon right and left, down and up, straying every way in the six senses There was a mighty torrent, sweeping over it and flowing away again, which ministered its nutriment, but yet graver disorder was caused by the qualities of things encountered,
c when a creature's body was impinged upon by fire not its own from without, or a solid mass of earth or moist and slippery waters, or overtaken by the blast of driving winds, and the motions thus caused passed through the body to the soul and smote upon her ('Tis for this very reason they were later called, as a class, and even to-day are called *sensations* [1]) At the time we speak of, above all, they caused numerous and violent instant motions, as they
d joined with the ever-flowing current to move and furiously shake the revolutions in the soul That of the Same they brought utterly to a stand, staying it from control and advance by flowing counter to it, and that of the Other they perturbed Thus, though the three pairs of intervals of the double and triple, and the middle terms and links of the ratios of three to two, four to three, and nine to eight were not utterly dissoluble except by him who had joined
e them together, they were twisted in all manner of ways, and all possible infractions and deformations caused in the circles They barely held together and, though they moved, their movements followed no law , now they were reversed, now oblique, anon inverted It was as though a man should rest his head on the ground and support his feet on something above him ; in such a case, the right side of subject or spectator seems to be his left, and his left his

[1] There is a concealed allusion to some playful etymology of the word *αἴσθησις* Perhaps it is taken to be connected with *ἀίσσειν*

right, to the other party. Since the circles, then, are gravely affected by this and other the like confusions, when they impinge on aught of the Same or the Other without
44 themselves, they pronounce it the same with this and different from that contrary to the true facts, and so become false and foolish, at such times there is no governing and directing revolution in them But when sensations from without break in upon them and draw the whole volume of the soul after them, then the circles, though seeming to prevail, are prevailed against 'Tis because of these affections that to-day, as in the beginning, a soul becomes unintelligent when it is first chained in a mortal body But
b when the vehemence of the current of growth and nutriment remits, and the circles, profiting by the calm, go in their true paths, with regularity increasing with the advance of time, then, and not till then, are their orbits corrected into their primary form, pronounce rightly concerning different and same and frame their possessor to intelligence. If a
c right nurture is further seconded by education, such a man recovers of his deadly disease and becomes altogether sound and without blemish, but if he is neglectful, his pilgrimage through life is but halting and he returns to Hades at its end imperfect and foolish Yet this is a later story, our present topic calls for our more precise investigation, and its preliminaries, the causes and providential purposes of the piecemeal fashioning of body and soul, must now be related
d with all adherence to the most likely account

Copying the figure of the universe, which was round, the gods bound the two divine revolutions in a spherical body, that we now call our head, our divinest member and sovereign of all the rest Perceiving that it would partake of all motions that were to be, they assembled the whole body and bestowed this upon it for its service That it might not roll on the earth, with its multitude of heights and
e hollows, unable to climb the one or evade the other, the body was given it as a vehicle or conveyance This is why our body was elongated and put forth four limbs, tensile and flexible, God contriving thus for its transit. With these

members it could cling to a support or plant itself upon
one and so make its way through all regions, carrying the
45 abode of our divinest and holiest part at our summit These,
then, are the reasons why all have been endowed with legs
and hands, also, judging the front part more worthy than
the back to be in honour and to command, the gods made
us to travel, for the most part, in that direction The front
of man's body had therefore to be distinguished from the
back and unlike it. So they first annexed the face to the
orb of the head on that side, and fixed in it organs for the
b soul's whole forethought, appointing this, our natural front
part, to take the lead in us The first organs they fabricated
were eyes to give us light, which they fixed in us in this
manner They fashioned into a body such fire as had the
property not of burning, but of providing a gentle light,
proper to-day For they caused the fire within us akin to
this to flow through the eyes in a fine stream, first compact-
ing the whole, but more specially the middle, of the eye to
be smooth and dense, so that it kept in everything of coarser
c texture, but let this fire filter through pure by itself Hence
when there is daylight round about the visual stream, it
issues forth, like to like, coalesces and forms a single uniform
body with the light in the direction of the line of vision in
which the ray emitted strikes upon the external object it
encounters. So the whole, in virtue of its uniformity, is
affected uniformly when it has contact with another thing
d or another thing with it, transmits the motions of that thing
through all the body to the soul, and causes the sensation
we call vision But when the kindred fire has withdrawn
into night, the visual ray is cut off, it issues out into the
unlike and itself suffers alteration and is so quenched, no
longer coalescing with the adjacent air, seeing that this
contains no fire So it ceases from seeing and further
induces sleep For when the eyelids, which the gods devised
e for a protection to the eye, close, they confine the fire within
them, and it diffuses and tranquillizes the motions within.
When the calm resulting from the tranquillization is pro-
found, we are overtaken by sleep with but few dreams, but

if more considerable motions remain, images are formed within and remembered without on waking, answering in character and number to the motions and the regions in
46 which they persist It will now be easy to understand the facts about the formation of images in mirrors and those about smooth reflecting surfaces in general From the combination of the one fire with the other, of that within with that without, and the formation in this case also, at the smooth surface, of a single fire, which is deformed in various
b ways, all such reflections necessarily arise as the fire of the figure seen [1] coalesces with the fire of the beholder's eye at the smooth bright surface The left side of the figure appears its right because opposite parts of the visual ray come into contact with opposite parts of the figure, contrary to the normal rule of contact [2] On the other hand right appears right and left left when the visual ray has changed
c sides in the act of coalescing with that with which it coalesces, as happens when the smooth surface of the mirror, having an elevation at either side, shifts the right side of the visual ray to the left and the left to the right But when the curvature is lengthwise to the figure, this same cause makes it appear inverted, shifting the under side of the visual ray upwards and its upper downwards [3]

d All these, then, are but some of the accessory causes whose ministry God employed to achieve the best, as far as may be, though the more part hold them not for accessory causes but for true causes of all things, working by heating and cooling, solidifying and liquefying and in other like

[1] *τὸ πρόσωπον* 46 *b* 2 means any object seen 'in the glass', not necessarily the reflection of the beholder's own features

[2] I e the contact is between the visual ray and the side of the object opposite to that with which the contact takes place in normal direct vision

[3] The three cases of reflection considered are thus (1) reflections in a plane mirror, (2) reflections in a hemi-cylindrical mirror with horizontal curvature, (3) reflections in a hemi-cylindrical mirror with curvature vertical (1) gives an image with right and left interchanged, (2) an image seen as if in direct vision, (3) an inverted image

ways, whereas they can have no discourse nor understanding at all For that to which, sole of things that are, it pertains to get understanding we must call *soul*—it is unseen, whereas fire and water and earth and air are all visible created bodies —and a lover of understanding and science must needs seek
e causes of the intelligent sort first, such as arise when one thing is moved by another and itself of necessity moves yet another, second Whence we too must do thus, we must speak of causes of both sorts, but mark the distinction of those that with understanding fashion the beautiful and good from those that, void of intelligence, achieve their sundry casual and random effects As to the accessory contributing causes whereby the eyes got the faculty they now possess, let this much suffice; next we must speak of that supreme blessing they confer, for the sake of which
47 God has given them to us Sight, then, as I hold, is the cause of our chiefest blessing, inasmuch as no word of our present discourse of the universe could have been uttered, had we never seen stars, sun nor sky As it is, the vision of day and night, months and circling years, equinoctials and solstices, has created number, given us the notion of
b time and moved us to search out universal nature, hence we have derived philosophy, than which no greater boon has been, nor ever shall be, bestowed by heaven on mortality This, then, I say is the chiefest blessing of eyesight, why should we harp on the minor boons for which one who loves not wisdom would make unavailing lament, if he lost them by blindness? For ourselves, let us say that the cause and purpose of vision is this God invented it and bestowed it on us that we might perceive the orbits of understanding in the heavens and apply them to the revolu-
c tions of our own thought that are akin to them, the perturbed to the imperturbable, might learn to know them and compute them rightly and truly, and so correct the aberrations of the circles in ourselves by imitating the never erring circles of the god The same is to be said once more of voice and hearing, they have been granted by the gods to this same purpose and end. For speech has been

appointed for this very purpose and contributes most of all
d to it, as also all vocal music which has been given us that we might listen to it for the sake of melody [1] And melody, with its movements akin to the revolutions of the soul within us, has been given by the Muses to him who uses their company with understanding, not for foolish pleasure, which is thought to-day its function, but as an ally for the revolutions of the soul within us that has been put out of tune, to bring it back to order and consonance with itself Rhythm also was granted us to the same end by the same givers for our help, by reason of the want of measure and grace
e that has come to be in the habit of soul of the most of us

Now what we have said thus far, save for a few things, has displayed the creations of understanding, but our discourse must also set by their side [2] the effects of necessity
48 For indeed the generation of this our world came about from a combination of necessity with understanding, but understanding overruled necessity by persuading her to conduct the most part of the effects to the best issue, thus, then, and on this wise was this universe compacted in the beginning by the victory of reasonable persuasion over necessity, whence if a man would tell the tale of the making truly, he
b must bring the errant cause also into the story, so far as its nature permits So we must go back on our own traces thus, we must once more find a second proper starting-point for this special theme and begin with it again from the beginning, even as we did before We must, I say, consider what fire, water, air and earth are in themselves, before the making of the heavens, and what went before this, until now, no one has explained their origin, we talk of them as though our hearers knew what fire and the rest are, and take them for an alphabet of nature, whereas they should
c not so much as be compared with syllables by one who has

[1] *ἁρμονία*, i e 'tuning', *not* 'harmony'

[2] *παραθέσθαι* 47 *e* 5 The word *may* mean 'serve up', with an allusion to the metaphor of the 'banquet' of discourse introduced at the opening of the dialogue

wit, be it never so little For ourselves, then, we will state our present purpose thus Of the universal beginning or beginnings of things—be they what they may—we shall not speak now, and that for the single reason that it were hard to explain our convictions by our present method You are not, then, to expect the explanation from me, even as I am unable to convince myself that I should do right to attempt a task of that magnitude Mindful of what I said at first
d of the character of probable discourse, I shall endeavour to make a statement in each point and all not less but more probable than what has been said from the beginning of our discourse until now Let us, then, make a fresh start in our discourse, with a second appeal to God at the outset to
e grant us safe passage through a strange and novel argument to a probable conclusion

To proceed our new cosmological starting-point requires a more elaborate distinction than our old; we began, in fact, by a distinction between two terms, but have now to call attention to a third For the purpose of what we have hitherto said, it was enough to distinguish between two things, our postulated intelligible and perpetually self-same
49 model in the first place and its transient visible copy in the second In our original distinction we introduced no further third term, as we supposed that these two would suffice us, now, it seems, our discourse compels us to attempt the exposition of a perplexed and obscure concept What quality and nature, then, must we ascribe to it? Something of this kind that it is the receptacle, the foster-mother as I might say, of all becoming But true as this statement is, the point needs to be expressed more clearly, and to do this is difficult, more particularly because it requires
b the raising of a preliminary question about fire and the other things which have the same status It is difficult, in fact, to say which of these we ought to call really water rather than fire, or, indeed, to call by any one of these names rather than by all and each, that is, if our language is to be at all confident and certain Now what is our preliminary problem about these bodies and how may we give it a plausible

expression? To begin with, consider what we have currently named water, we see it, as we fancy, becoming stones and earth by solidification, and again wind and air by liquefac-
c tion and disgregation, air becoming fire by inflammation and fire, in its turn, taking the form of air again by coalescence and extinction and air, once more, as it closes together in condensation becoming cloud and mist, water distilling from them, as they are 'felted' still closer, and earth and stones coming from water again, and all these, as it seems, passing into one another by cyclical transformation Then,
d since none of them thus wears a constant aspect, of which of them can one say with confident assurance that it is *this* same thing and no other, without blushing for himself? Of none of them all, far the safest rule in speaking of them is the following Whenever we see a thing changing, fire for example, we must, in every case, call fire not *this* but *this-like*, and water again, not *this* but always this-*like*, nor yet may we use the word *this* of any of the things we fancy we are
e indicating when we point them out by the use of the words *this* and *that*, as though any of them had a permanent being They will not face a trial, but evade the issue of the impeachment of being *this* or *that* or *thus*,[1] or any indictment of permanence None of these expressions should be used, in each case and in all, the name[2] should be given to the *this like* which ever recurs as similar Thus, for example, we should give the name 'fire' to that which is uniformly of such-and-such quality, and so with all names for what becomes that, and that only, wherein all are ever appearing and whence all vanish again should be called by the
50 names *this* and *that*, that which is of any quality—hot or cold, or any of the opposites, or their derivatives—should receive none of these names But I must try to explain the point once more, more clearly. Conceive that a man had fashioned figures of all kinds in gold and were never to cease transforming each of them into all the rest, if one

[1] *τὴν τῷδε* 49 *e* 3 if sound should mean 'being *for this* percipient', I suspect the true reading is *τὴν τοῦδε* or *τὴν τοῦ ὧδε* (Cook Wilson).
[2] I e the names 'fire', 'water', and the like.

should point to one of them and ask what it was, far the
b safest answer in point of truth would be to say 'gold' and never to speak of the triangles and other figures that appeared in the gold as *being*, since they would actually be changing while the words were uttering One should rather be content if they so much as admit of the designation *such-like* with any certainty Now the same thing must be said also of that which receives all bodies It must be called ever self-same, for it never departs from its own quality (For it is always receiving all things and has never
c anywhere a shape in any way like any of the things that enter it For it is there as a natural matrix for all things, moved and variously figured by the things that enter it, but through their agency takes on divers appearances at divers times) But the things that enter and leave it are copies of the eternal things, moulded upon them in an obscure and wondrous fashion which we will pursue on another occasion For the present, meanwhile, we must conceive three terms, that which becomes, that wherein it
d becomes, that on the model whereof that which becomes comes to be We may further properly compare the recipient with a mother, the model with a father, that which arises between them with their child, and may reflect that if there is to be a casting exhibiting all manner of diversities, the vehicle wherein it is cast will not have been duly prepared unless it is devoid of all those forms it is to receive from elsewhere. Were it like anything that enters into it,
e when things of opposite or wholly different character came to it and were received in it, it would reproduce them amiss, as its own features would shine through Therefore also that which is to receive all kinds in itself must be bare of all forms, just as in the manufacture of fragrant ointments the artist first contrives the same initial advantage, he makes the fluids which are to receive his perfumes as scentless as he can. So, too, those who essay to model figures in some soft vehicle permit no figure whatsoever to be already visible there, but first level the surface and make it as
51 smooth as they may In like fashion, too, that which is to

receive duly in all its regions repeated copies of the [1]
and eternal things ought to be itself bare of all the forms
This, then, is why we are not to call the mother and recep-
tacle of creation visible and sensible generally earth, nor air,
nor fire, nor water, nor any of their compounds nor con-
stituents, but if we say it is a somewhat [2] invisible and
b formless, all-receptive and partaking of the intelligible in a
manner most puzzling and hard to grasp, we shall not be
wrong So far as its character may be discerned from what
we have premised, the truest account of it would be as
follows, that such part of it as is ignited appears from time
to time as fire, such as is liquefied as water, or as earth and
air, so far as it receives copies of them To state the issue
more precisely, we must decide the following question about
them is there such a thing as fire which is 'just fire by
c itself', or any other of the things of which we are so often
saying that each of them is 'just itself in itself'? Or are
there only the things we see and perceive by our bodily senses
generally, with a reality to match themselves,[3] and nothing
else whatsoever? Are we talking insignificantly whenever
we speak of the existence of various intelligible forms, and do
our words prove to be nothing but verbiage? Well, it would
be as improper to make a confident assertion without bring-
ing our present issue to examination and judgement as to
insert a long digression in an already lengthy discourse, if
d we find we can determine a grave question in few words,
that will be the most timely procedure My personal judge-
ment, then, I deliver in this sense If understanding and true
opinion are two, these forms, which we cannot perceive by
sense but only think of, assuredly exist in themselves, but if,
as is held by some, true opinion is in no way different from
understanding, then whatever we apprehend by bodily sense

[1] *τῶν πάντων ἀεί τε ὄντων* 51 *a* 1 is the reading of all MSS, but *πάντων*, which I have left untranslated, is pretty clearly corrupt The sense demanded would be given by *νοητῶν*, 'the intelligible and eternal things'

[2] *εἰδός τι* 51 *a* 7

[3] In 51 *c* 2, 3 I would punctuate *μόνα ἔστιν, τοιαύτην κτλ*

e must be assumed to be our most certain reality. And the two must, of course, be pronounced two, since they are diverse in origin and unlike in character For the one is produced in us by instruction, the other by persuasion, the one is always attended by true discourse, the other by none, the one cannot be shaken by persuasion, the other can, the one, we must admit, belongs to all mankind, but understanding to gods and a very few men And since all
52 this is so, we must confess that the form is one thing, self-same, never born, never perishing, neither receiving anything else into itself from without nor entering anywhere into anything else, invisible and imperceptible to any sense, it is that, in fact, which it is the function of thinking to contemplate. A second thing is that which bears the same name and is like the first, but is perceptible to sense, is born, is continually in motion, comes to be in a place and again vanishes out of it, is apprehended by opinion based on sense Our third term, once more, is, in every case, *space* which
b never perishes but provides an emplacement for all that is born, it is itself apprehended without sensation, by a sort of bastard inference, and so hard to believe in 'Tis with reference to it, in fact, that we dream with our eyes open when we say that all that is must be in some place and occupy some space, and that what is neither on earth nor yet in the heavens is nothing Thus this same dream hinders us from waking and drawing all the aforesaid and other the like distinctions even in respect of true waking reality
c and so declaring the truth that for a likeness, inasmuch as 'tis not even that it is fashioned to be of itself,[1] but always a shifting reflection *of* some other thing, it is fitting to be fashioned *in* another thing, and thus lay such claim as it may to being, or else to be nothing at all, but for that which indeed *is*, true scientific discourse supports the plea that so long as this is this and that that, neither can ever come to
d be in the other so that they become at once one and two.

Let this then, be taken, in sum, for the doctrine, for

[1] I e a likeness or image is never an image or likeness of itself, but always of something else

which my own judgement is given even before the birth
of a heaven, there were these several three, being, space,
becoming Hence as the foster-mother of becoming was
liquefied and ignited and received the shapes of earth and
air and underwent further affections consequent on this,
e she took on many motley guises And since the forces with
which she was filled were neither alike nor equipoised, there
was no equipoise in any region of her, she was swayed and
agitated with utter irregularity by these her contents, and
agitated them in turn by her motion In virtue of these
motions, the contents were incessantly disgregated and
carried in different directions, just as when matters are
agitated and winnowed in sieves and implements for the
53 purification of grain, the dense and heavy move to one
quarter and settle there, the rare and light to another
Even so at that time, as the four kinds were agitated by
the receptacle, which itself had the motion of a vibratory
implement, it separated the most unlike of them furthest
from one another but forced the most like closest together,
hence they got each its different region, even before the
ordered universe was fashioned from them And until that
time they all were naturally without ratio or measure, but
b when the ordering of the universe was set about, God first
began by laying out by figure and number the patterns of
fire and water and earth and air, which heretofore, though
showing some vestiges of their structure, were altogether in
such state as might be expected when God is absent That
He shaped them to be, as they had not been before, wholly
beauteous and good, as far as might be, we must presuppose
throughout as our standing principle, what I have now to
attempt to disclose to you is the particular structure and
origin of them each and all The argument will be novel,
but you have been schooled in the branches of knowledge
c needed for the explanation of my propositions, and so will
be able to follow

First then, it must be obvious to any one that fire, earth,
water and air are bodies, and all body has volume Volume,
again, is necessarily enclosed by surface, and rectilinear

surface is composed of triangles. All triangles are derived
d from two, and each of these has one right angle and two
acute One of them has, on either side, half a right angle,
subtended by equal sides, the other unequal parts of a right
angle, subtended by unequal sides So we postulate this
as the source of fire and the other bodies, as we follow
our argument which combines necessity with probability
What still more remote sources there may be is known to
God and such men as God loves We have to say then
e what would be the four most beautiful bodies which are
unlike one another though some of them can be generated
from one another by resolution In the answer to this
question we have the truth concerning the generation of
earth and fire and their mean proportionals For we shall
concede to no man, I take it, that there are more beautiful
visible bodies than these, each in its kind We must do
our endeavour, then, to construct the four bodies of excel-
f lent beauty and assert that we have thoroughly understood
their character Well, of our two triangles, the isosceles
54 admits only a single variety, but the scalene an endless
number. So, once more, out of this infinity we must give
our preference to the most beautiful, if we are to make a
beginning to our mind So, if a man can tell us of a selec-
tion for the construction of these bodies more beautiful than
our own, his triumph will be that of a friend, not an enemy,
but, for our own part, we postulate as the most beautiful
of all these triangles, one type, to the exclusion of the rest,—
that whereof a pair compose an equilateral triangle The
b reason why is a lengthy story, but if a man will examine the
point and discover that it is not[1] so, the palm shall be
yielded without a contest Let us, then, presume that we
have selected two triangles as those from which fire and the

[1] 54 *b* 2 *ἀνευρόντι μή* is a conjecture of Hermann All the best MSS read *δή* without a negative, and this is the text of Burnet and Rivaud Earlier editors give *δὴ μή*, found in inferior MSS, or with Hermann, *μή* In spite of the MSS consensus, I feel that the negative should be in the text It has just been said, in the same spirit, that if any one can give a better account than our own, we shall look on his triumph as that of a friend

other bodies have been constructed, the one isosceles, the other having the second power of the greater side always triple that of the less. Accordingly we must now be more precise on a point we had previously treated inaccurately It appeared that all four kinds of bodies pass through one another into one another, but this appearance is misleading For the triangles we have selected give rise to four varieties, three constructed from that which has unequal sides, the fourth, and only the fourth, from the isosceles Hence not all the four can be resolved into one another by the union of many of the smaller to form fewer of the greater and *vice versa*, but only three of them These have all one origin, and thus when the greater are broken up, many smaller will be formed of the same constituents, receiving their appropriate shapes, and again, when many of the smaller are dissolved into their triangles, they may be fashioned into a numerically single volume and constitute a single fresh larger body So much, then, may suffice concerning their transition into one another, we have next to say what is the figure of each and from what number of components it arises We will begin, accordingly, with the construction of the simplest and smallest body Its unit [1] is the triangle which has its hypotenuse double in length of the lesser side, if a pair of these are placed diametrically opposite one another, and this is done thrice over, the diameters and shorter sides coinciding in the same vertex, the six give rise to one equilateral triangle Four equilateral triangles whose plane angles meet by threes create a single solid angle, that which comes after the most obtuse of plane angles, and by the formation of four such angles is constructed the simplest solid figure,[2] which divides the surface of a sphere into equal and similar regions A second arises from the same triangles, when they have been combined to form eight equilateral triangles and have yielded a single solid angle by the meeting of four plane, with the production of six such solid angles the second body[3]

[1] στοιχεῖον, 54 *d* 6, *elementum*, literally 'a letter of the alphabet'
[2] The regular tetrahedron. [3] The octahedron

was completed The third [1] arises from a combination of one hundred and twenty such units, or twelve solid angles, each enclosed by five plane triangles, and has twenty
b equilateral triangular faces And with this the first unit had begotten its progeny and received its discharge, but the isosceles triangle went on to beget the fourth body, yielding a single equilateral quadrangle from the combination of four units with their right angles meeting at a common vertex The composition of six such figures produced
c eight solid angles, each constructed by the meeting of three plane right angles, and thus the shape of the resultant body was the cube, which has six quadrangular equilateral plane faces There was still one combination left, the fifth,[2] and for this God found a use in embroidering the universe with constellations

Now if one who duly perpends all this should ask himself whether the number of worlds should be called infinite or
d finite, he would judge that to call it infinite is, in very deed, the doctrine of one unversed in the matters wherewith he ought to be conversant, but whether there should be said to be in reality one or five,—there is the point where he might more plausibly stop and raise a doubt Our own sentence, in fact, declares the god [3] to be one, according to the probable account, but another, who looks to different considerations, may be of the other opinion With him we must not dispute, but must assign the various structures we have now generated in our story to fire, earth, water and air To earth,
e then, we may give the cubic figure, since earth is the most inert of the four and the most viscous of these bodies, and that which has the most stable faces must necessarily be most completely of this kind But in the triangles of our initial postulate, the face with the equal sides is naturally more stable than that with the unequal, and again, of the

[1] The icosahedron

[2] I e the dodecahedron, which has twelve pentagons as its faces It is meant that the sky may be divided into twelve pentagonal regions for the purpose of charting the constellations

[3] Viz the universe, which is a 'created god'.

plane figures constructed from either, the equilateral quadrangle necessarily, in its parts and as a whole, stands more surely than the triangle Thus we shall preserve the prob-
56 ability of our story if we assign this figure to earth, the next most immobile figure to water, the most mobile to fire, and the intermediate figure to air, and likewise the smallest body to fire, the largest to water, that which is intermediate to air, and, once more, the most angular to fire, the second in this respect to air, the third to water Of them all, then, that which has the fewest faces must be the most mobile, as also the most penetrating and angular as well as the
b lightest, since it is composed of the least number of the same parts, the second must hold the second place in these respects and the third the third. Hence we may, with as much plausibility as truth, take the pyramid we have constructed as the unit and seed of fire, the figure we constructed second we will call that of air, the third that of water Accordingly we must think of all as so small that
c the individual body of each variety is wholly invisible to us from its minuteness, though their masses become visible when large numbers are aggregated together In especial, as to the proportions between their numbers, their motions and their characters in general, we are to think that God elaborated them with all the precision permitted by the willing consent of necessity and adjusted all with due proportion
d On the whole account, then, the things whose kinds we have named in all probability behave as follows When earth meets with fire and is resolved by its sharp angles, whether the resolution takes place in a medium of fire itself, of air, or of water, it will drift loose until its fragments encounter one another, coalesce and become earth again, as they will never assume a different figure When water is reduced by fire, or again by air, decomposition may give rise to one corpuscle of fire and two of air. When one particle of air is
e resolved, it may give rise to two corpuscles of fire Again, when a little fire is enveloped by a considerable aggregate of air or water, or, it may be, earth, moves within this drifting mass, has its resistance overcome and is shattered

into fragments, two corpuscles of fire will coalesce into a unit of air Or if air is overpowered and fractionized, one whole unit of water will be compounded from two and a half of air So we may reword the account as follows when one of the other kinds is surrounded by fire and divided by the
57 sharpness of its angles and edges, if it is recombined in the shape of fire, the division comes to an end, as none of them can effect any change in a third uniform and identical with itself nor be itself affected by that which is uniform and similar with itself, but so long as it is in transformation and offers resistance to the more powerful mass, its resolution is unending On the other side, when a few of the smaller particles are enveloped by more of the larger and in process
b of extinction by disintegration, if they consent to coalesce into the figure of the prevailing mass, the extinction comes to an end, from fire they become air, and from air water but if they come to terms [1] and one of the other kinds joins battle with them, their dissolution does not end until either they are wholly resolved by the thrusting and make their escape to their kindred, or are overcome, form one aggregate uniform with the victorious mass, and keep house with it
c And 'tis to be noted that throughout these processes all are exchanging their regions For though, in virtue of the motion of that which receives them, the great masses of the several kinds have each its own separate place, the portions which become unlike themselves and like other things are steadily borne by the swaying motion to the place of those to which they have become like

These, then, are the causes of the making of the uncompounded primary bodies But whereas there are several varieties within their kinds, the reason of this is to be found in the structure of either unit,[2] to wit that God did not in the beginning create either triangle of one magnitude only, he

[1] *ἐὰν δ' εἰς ταὐτὰ ἔῃ* (Burnet, *ταυτὰ* Γ, *ταῦτα* WY) The *αὐτὰ* of A and earlier editors would mean, I suppose, if anything, 'if they take the field against them'

[2] *τὴν ἑκατέρου τῶν στοιχείων σύστασιν* 57 *c* 9 The two *στοιχεῖα* are the two types of primitive triangle described at 53 *d*.

d made them greater and lesser, and the number of these differences is the same as that of the varieties within the kinds Hence the endless complexity of their combinations with themselves and each other, which must consequently be contemplated by him who is to discourse of nature with probability

Concerning motion and rest, then if we are not agreed how and in what conditions the twain arise, our further reasoning will be under a grave impediment Now in part *e* we have spoken of them already, but to what was then said we may add this motion will never be present in the homogeneous For it were difficult, or rather impossible, that there should be moved without mover or mover without moved, without both there can be no motion, and that they should be homogeneous is a flat impossibility. Hence we will assume that rest is found always in the homogeneous, *58* motion in the heterogeneous Again, the cause of heterogeneity is inequality The origin of inequality we have indeed described, but we did not say how it is that things have not been separated out into their kinds and so come to an end of their translation through one another We will repeat our statement, then, in this form • The compass of the universe, which envelops all the kinds, is spherical and tends naturally to return into itself, thus it clips them all round and is fain to leave no empty space Hence fire has the widest extension of them all, and air next to it, even as *b* it is second in rarity, and so with the rest, those with the largest particles leave the greatest empty gaps in their texture, those with the smallest the least Accordingly, the process of 'felting' thrusts the smaller particles into the interstices between the larger Hence, as the small are juxtaposed with the large, the greater separated by the lesser and the lesser brought together by the greater, all are carried in every direction to their own regions For each, as it changes its magnitude, changes also the *c* situation of its region Thus in this way there is a perpetual safeguard for the occurrence of the heterogeneity which provides these bodies with perpetual and unending motion.

We must next observe that of fire there are several varieties flame, that which is given off by flame and supplies the eyes with light, though it does not burn, that which is left behind
d embers after the extinction of flame So again with air, there is the brightest variety, called ether, the most turbid, which we call mist and darkness, and others which have no names, all due to the inequality of the triangles In the case of water, there are two primary varieties, the liquid and the fusible The liquid is composed of varieties of water which are minute and unequal, and so is readily set in motion from within or without because of its heterogeneity and the figure of its shape That which is composed of
e large homogeneous particles is more stable and frozen hard by its homogeneity, but when fire makes its way into it and dissolves it, it loses this homogeneity and becomes more mobile, being now readily mobile, it is thrust against by the neighbouring air and distended over the ground, the process of reduction in bulk [1] receiving the name of *melting*, that of distention over the ground the name of *flowing* As the fire, on being expelled again, does not escape
59 into a void, the neighbouring air receives a thrust, forces the still mobile liquid mass into the places left by the fire and mingles itself with it, the latter, being thus thrust together, recovers its homogeneity, by reason of the departure of the fire which caused the heterogeneity, and returns to its old condition The name *refrigeration* has been given to the escape of the fire, that of *solidification* to the contraction which follows on this escape Among these various
b fusible forms of water, as we have called them, the densest, a unique variety, formed of the finest and most homogeneous particles, of gleaming ruddy hue, is gold, the treasure of opulence; it is frozen solid by filtering through rock The core of gold, which by reason of its density is supremely hard and has a deeper hue, has been named adamant That which has particles like those of gold, but more varieties than one, and in point of density is denser than gold and

[1] The 'reduction in bulk' meant is the alleged splitting of the icosahedra of the 'water' under the action of fire

harder, since it contains a small quantity of fine earth, but
c weighs lighter by reason of the large empty interstices
within it,—this formation is copper, again a variety of bright
and frozen water As for the earth in it, when the two
substances are separated again by the action of time, it
appears on its surface, and is then called verdigris It
would now be a simple matter to go through the list of the
rest of these bodies And when it is for his relaxation that
a man lays aside the laws of eternal being and gets innocent
d pleasure from the contemplation of the probabilities of
becoming, 'tis a modest and reasonable pastime he brings
into his life So we will give it rein now, and proceed
further with probabilities on the subject as follows Water
with an admixture of fire, which is fine and liquid by reason
of its motion and the rolling course along the ground which
gives it this name of 'liquid',[1] and also soft, because its
faces are less stable than those of earth and so are yielding,
—water, as I say, when cut off and isolated from fire and
air, becomes more homogeneous, but is made to contract
e and solidified by the particles which are leaving it When
it suffers this change well above the earth's surface, it is
called hail, when at the earth's surface, ice, when the
change is partial and leaves it only half-solidified, we call
the result snow in the higher region, but rime when it arises
from the freezing of dew on the earth's surface Most of the
forms of water, when intermingled—the group as a whole,
60 being filtered through plants, are known as saps—and
diversified by the mixture, present a large number of varie-
ties without names, but the four kinds which contain fire,
being specially conspicuous,[2] have received names, that
which warms soul and body together is known as wine, that
which is smooth and divides the visual ray and is conse-
quently bright, gleaming and glossy to the eye, as the class
of oils, pitch, castor-oil, olive-oil itself and all substances

[1] A playful suggestion that the word ὑγρόν, liquid, is actually derived from ὑπέρ, γῆ, ῥεῖν

[2] Or perhaps, though less probably, 'transparent' or 'lucid', but this hardly suits pitch

b of the same quality, that which dilates the gustatory passages to their normal condition, yielding by this action a sweet taste, has obtained the general designation honey, that which corrodes flesh, a frothy substance secreted from all saps, men have named verjuice

As for the sorts of earth, that which has been strained through water becomes stone in the following way When the water commingled with it is broken up in the process of mingling, it becomes air, now that it has become air, it *c* rushes upward into its own region But as there was no void above it, it, of course, impinges on the contiguous air This, being heavy, when so impinged upon and diffused round the mass of earth, compresses it violently and forces it into the places from which the newly-formed air has ascended, and from earth thus forced by air into indissoluble conjunction with water are formed stones, the precious being of the transparent kind with equal and uniform particles, the base of the contrary sort That which has *d* been despoiled of all its moisture by a rapid fire, a formation more brittle than the other, is what we have named brick Sometimes when some of the moisture is left and the earth has been fused by fire, on its cooling that which has a black colour becomes stone [1] There are, moreover, a pair of substances formed in the same way by the subtraction of a large quantity of water after the commingling, but with finer particles of earth and a salty taste, these are only half-solid and can be resolved again by water that which cleanses from grease and dirt is soda, that which enters *e* agreeably into blends of flavours, salt, a body traditionally [2] acceptable to heaven As for the compounds of the two [3] which are not soluble by water, but only by fire, the reason

[1] *γίγνεται τὸ μέλαν χρῶμα ἔχον λίθος* 60 *d* 4 I have translated the best accredited reading, that of FW Y, on the assumption that it may be correct but for the loss of an adjective explaining what kind of stone is meant But I have no confidence that the words may not be corrupt in a way which defies certain restoration What stone is meant is quite uncertain

[2] In 60 *e* 1–2 I would read *κατὰ νόμον* for the MSS *κατὰ λόγον νόμου*.

[3] I.e. of earth and water

why they combine so is this Fire and air will not decompose a mass of earth, since their particles are smaller than the empty interstices within it, hence it gives them ready passage, and they exert no force upon it, and consequently leave it unresolved and undecomposed But the particles of water are larger and their passage through the earth forcible, and thus they resolve and decompose it Yet
61 though when earth is not violently compressed it is soluble only in this way by water, if it is so compressed it can be resolved by nothing but fire, since no possibility of entrance is left for anything else Water under extreme compression can be dissolved only by fire, but under less extreme pressure by both fire and air, the latter resolving it at its interstices, the former actually into its triangles Air forcibly compressed is resoluble by nothing except into its units, and when not so compressed, is only to be decomposed by fire So in these compounds of earth and water, so long
b as water occupies the interstices of the earth, close packed though they are, the particles of water arriving from without have no ingress but diffuse themselves round the whole mass and leave it undecomposed, but the particles of fire make their way into the interstices of the water and act upon it as water itself acts on earth,[1] thus they, and only they, can decompose the compound and cause it to melt Of these compounds some contain less water than earth, and these are glass of all kinds and all the stones we call fusible, others,
c however, contain more water, viz all sorts of wax and spices We have now, I take it, completed our review of the varieties due to the shapes of the several substances, their combinations and their reciprocal transformations, and must try to explain the reasons of their qualities Accordingly we must take it as a primary presupposition that we are treating at every point of something which is sensible, though we have not at present described the formation of flesh and its accompaniments nor of the mortal components of soul In point of fact, while this subject cannot be adequately dis-
d cussed without reference to sensible qualities nor they with-

[1] 61 *b* 5 read *πῦρ* ⟨*ὕδωρ*⟩ with Cook Wilson

out reference to it, it is quite impossible to deal with both at *once*, hence we shall have to begin by postulating one of the two sets of facts and return to our postulate in the sequel So, in order to proceed directly from the consideration of the varieties of our particles to their qualities, we may presuppose the existence of soul and body First of all, then, we may see why we call fire hot if we consider the
e severing and cutting it effects in our own bodies We all, of course, perceive by sense, that this effect is piercing, if we recall to mind the construction of its figure, we can infer the fineness of its edges, the acuteness of its angles, the
62 minuteness of its particles, the rapidity of their movement—all characters in respect of which it is violent and cutting, and so always makes a sharp cut in whatever encounters it—and may then conclude that it, more than any other substance, by the fine divisions and lacerations it causes in our bodies, has naturally made us acquainted with the quality we now call heat, and with the word itself [1] The contrasted quality, though obvious, shall not be left undescribed Larger particles of surrounding fluids make their way into the body and displace the smaller, as they cannot insert themselves in the places left by these latter,
b they compress the moisture of the body, which had previously been non-uniform and in motion, arrest its motion by this compression and the consequent uniformity, and thus solidify it This abnormal construction it resists by a normal pressure in the opposite direction Shuddering and shivering are the appellations given to this convulsive resistance, the effect as a whole and its agent have received the name cold Hard is the name given to things to which our flesh yields, soft to those which yield to our flesh, things are called hard and soft relatively to each other on similar grounds That is yielding which is supported by a small
c surface, the figure with square faces, being very firmly supported, is most stubbornly unyielding, as is also everything which is highly resistant, in virtue of compression to

[1] It is suggested that the original form of the word θερμός was κερμός, and that it is thus connected with κείρω, κέρμα

maximum density The meaning of heavy and light will be most certainly grasped if we consider it in conjunction with that of the expressions up and down It is, in fact, wholly erroneous to maintain that there are just two naturally distinct and directly opposite regions, down, the direction of motion of everything which has corporeal volume, and up, the direction in which nothing moves except by con-
d straint For since the heaven as a whole is spherical, all its extreme points, being at the same distance from its centre, must be equally real extremities, while the centre, having the same measure of distance from all the extremes, must be held to be directly opposite each and all Since then this is the structure of the world, which of the regions we have named could one pronounce to be up or down without being deservedly held to be using wholly inappropriate words ? Its central region has no right to be called really either up or down, but merely central , the circumference, again, is, of course, not in the centre, nor does any part of it differ at all from any other, relatively to the centre or to anything ' opposite ' itself But when a thing is everywhere uniform, what names of contrasted sense can be applied to it, or how are they to be applied, in discourse we could commend ? Were there an actual solid equipoised in the centre of the universe, it could never move towards any
63 of the extreme points, seeing that all are wholly uniform ; nay, more, if one travelled round the circumference of such a body, he would repeatedly call the same region of it up and down, since he would so often be standing at his own antipodes The universe, then, being spherical, as we have just said, no thinking man can call one region in it down and another up , whence these designations have been derived and what are the real subjects by transference wherefrom we cus-
b tomarily apply the distinction to the heaven as a whole, we may explain by the following presupposition Suppose a man stood in the region of the universe where there is the main body of fire, the great aggregate, in fact, towards which fire tends to move , suppose, I say, one who were stationed there and had the requisite force were to detach

parcels of the fire and weigh them in scales, raising the balance and so forcibly lifting the fire with it into the unlike
c region of air, plainly a lesser bulk would yield to this compulsion more readily than a greater,[1] since if two such masses are both raised by a single force, the lesser necessarily follows the constraint more readily, the greater, from its resistance, less readily, and thus the great mass is inevitably said to be heavy and to tend downwards, the small to be light and to tend upwards Accordingly we ought to detect ourselves in the act of doing the like with reference to our own region When we stand on the earth and weigh earthy substances, or, it may be, uncompounded earth, we are lifting them into an unlike region, the air, forcibly, against their natural tendency, and in either
d case,[2] they cling to their own kind, but the lesser bulk is more readily overpowered by the constraint than the greater and follows it more quickly into the unlike region Hence we have come to call such a bulk light and the region to which we constrain it up, and the opposite effects heavy and down Consequently these determinations must be variable and relative, since the aggregates of the various sorts of body occupy opposed regions (In fact, we shall
e discover that all manner of relations of direct opposition, inclination, difference, arise and persist between the light in one region and the light in the opposite region, the heavy and the heavy, the down and the down, the up and the up) But there is at least one point we must understand in all cases the path of each sort of body towards the kindred aggregate gives the name heavy to the moving body, and down to the direction of its movement , the opposite facts occasion the opposite designations So let this suffice as

[1] The rendering here assumes that *βιᾶται*, 63 *c* 1, is passive and that a comma should be placed after *βιαζόμενος*, 63 *b* 6 With the punctuation of the editors *βιᾶται* will be active in sense and we must render ' as he raises the balance and so forcibly lifts the fire plainly he will constrain a lesser bulk more readily than a greater '

[2] *ἀμφότερα*, 63 *c* 8, means apparently both the greater and the smaller bulk mentioned in the next clause So Martin, Rivaud.

an account of the causes of these characters As for those of smooth and rough, their cause, I take it, can be perceived and expounded by any man The second, in fact, is due to
64 the combination of hardness with unevenness, the first to that of evenness with density

There still remains a supreme problem connected with the affections common to the body as a whole, that of the cause of the pleasantness and painfulness of the qualities we have just examined and of all those which are apprehended by sensations received from our members and attended by inherent pains or pleasures Let us, then, conceive the causes of all affections, sensible or insensible, in the following
b manner, bearing in mind that we have already drawn a distinction between the readily mobile and that which is only moved with difficulty For it is on such lines [1] that we should pursue every proposed investigation The naturally readily mobile, if affected by even a slight modification, sets in action a circle of parts each affecting another in the same way until they reach intelligence and inform it of the quality of the agent, whereas what is of the opposite character, being stable and giving rise to no such circle, merely
c receives a modification without setting any neighbouring part in motion, hence, as the initial modification is not transmitted from one part to another, and leaves the organism as a whole unaffected, the subject remains insensible This is the case with bones and hair and such other parts of our frame as are composed chiefly of earth, the first-mentioned case is that above all of the organs of sight and hearing, since in them fire and air play the principal part Accordingly we must conceive pleasure and pain as follows A process of disturbance of our normal state, if
d sudden and considerable,[2] is painful, but the return to the normal, on the contrary, when sudden and considerable,[2] pleasant, a gentle and inconsiderable process is imper-

[1] I e by starting with a complete logical division on a relevant *fundamentum divisionis*, like that of the last sentence

[2] *ἀθρόον* 64 *d* 1, 2 demands representation in English by the double epithet

ceptible, but its opposite perceptible. And any process which runs its course with facility is eminently perceptible, but unattended by pain or pleasure, as, for example, those which occur in the actual visual ray, which, it will be remembered, we have already stated to be a body which adheres to our own in the daylight No pain, in fact, is caused to this ray by cuts, burns and other modifications to which it is subject, and no pleasure by the return to its
c former condition There are only intense and confident perceptions corresponding to its various affections and the objects with which it comes into contact This is because its division and reunion involve absolutely no violent disturbance But bodies with larger particles, which submit to an agent with reluctance and transmit the motions thus occasioned to the whole to which they belong, are subject to pleasures and pains, to pains when diverted from the normal state, to pleasures as they are restored to it And those in
65 which the process of depletion and evacuation is gradual but that of repletion sudden and on a large scale are insensible of the evacuation but sensible of the repletion, and thus contribute to the mortal constituent of soul intense pleasures with no pain , an obvious example is found in the case of agreeable odours Those, on the contrary, in which the diversion from the normal is sudden but the return to it
b gradual and difficult show contrary results , this again has a palpable illustration in the facts about burns and lacerations in the body

We have now given a fairly full account of the affections common to the body as a whole and the names which have been bestowed on their several agents we have next to offer, if we can, some account of the special affections of particular parts as well as the causality of their agents.
c First then we will try to throw what light we can on a matter we passed over earlier in our account of tastes, viz., the special affections of the tongue These too, as indeed most other special affections, appear to be due to constrictions and dilatations, but also to depend more than other affections on variations in roughness and smoothness.

When particles of earth make their way in at the vessels (the test-tubes as we might call them) which extend from
d the tongue to the heart, come into contact with the moist and tender flesh, melt, and in doing so constrict and dry up these vessels, they appear to us, if markedly rough, astringent, if less rough, 'dry' Substances which rinse these vessels, and detergents of the tongue as a whole are all known as bitter, if they produce this effect in an extreme degree and with such violence as to dissolve some part of the substance of the organ, as is the case with the action of soda, those
e which are less active than soda and only moderately detergent appear to us saline, free from any harsh bitter flavour and agreeable rather than otherwise But those which have absorbed warmth from the mouth and are softened there, being themselves converted into fire and in turn burning that which has heated them, mount upwards, in virtue of their levity, towards the sense-organs in the head and lacerate
66 whatever they encounter, from these properties all such substances have come to be called pungent But those which have been refined by decomposition before they make their way into the narrow vessels and have a due proportionality with the particles of earth and air in the composition of these passages such that they agitate and jostle them, thus causing them to change their positions, taking up new ones and leaving others vacant, as they globe themselves round the intruding particles—(they thus form round
b hollow drops of water, vessels of moisture pure or mixed with earth as the case may be, containing air by the formation of a hollow moisture round the air, those made of pure water surround the air transparently and are called bubbles, but those in which the water is mixed with earth which effervesces as it rises are spoken of by the names of seething and fermentation)—the cause of these effects, I say, is called acid [1] There is also an effect opposed to one and all

[1] On the grammar of this involved and difficult sentence see my *Commentary* in loc There may be some verbal corruption, not affecting the general sense, but the corruption, if there is one, is too deep-seated for confident correction

of those we have described and due to an opposite cause
When the composition of substances which enter the mouth
c in a liquid, being conformable to the structure of the tongue,
sleeks and mollifies its roughnesses, dilating the abnormally
contracted or contracting the dilated, and thus effectively
re-establishes the general normal condition, all such processes
act as cures for enforced affections and are called sweet
So much then on that head in the case of olfactory
d sensations, no patterns are to be detected An odour is
always, in fact, something only half-formed, no pattern has
the proportions demanded for the acquisition of an odour
The vessels of this sense have a structure too narrow for the
varieties of earth and water, too broad for those of fire and
air Hence no one has ever perceived any odour in any of
these substances, all arise from matters in process of
saturation, decomposition, liquefaction, or evaporation.
e Odours arise, in fact, as water passes into air or air into
water, in the intermediate stages, and as a class are all
smoke or mist, those due to the passage of air into water
being mist, those due to the passage of water into air smoke.
Consequently the whole class are rarer than water, grosser
than air This is plainly seen when a man inhales vigor-
ously, first having obstructed the respiratory passage,[1] in
such a case, no odour filters through with the air inhaled,
67 only air passes through, devoid of all odours Thus their
varieties fall into two sets which have no names and exhibit
neither numerous nor regular patterns, we speak simply of
the pleasant and the painful, the only two conspicuous
types The latter roughens and does violence to the whole
cavity which extends from the crown of our heads to our
navel, the former soothes it and effects a welcome restora-
tion of its normal condition

We have now to consider a third organ of sensation, that
b of hearing, and to give the reasons for its affections In a
general way we may define sound as a stroke given by the

[1] There is no reference, as Martin and others have strangely supposed, to the grotesque experiment of inhaling *another's* breath through a cloth See Theophrastus, *de Sensu*, 85

air through the ears to the brain and blood, continued to the soul, and hearing as the motion due to this stroke, which begins at the head and ends in the quarter of the liver When the motion is rapid, the sound heard is of high pitch, when it is slower, of lower pitch If the motion is regular, the sound is uniform and smooth, in the opposite case it is
c harsh, if it is voluminous, the sound is loud, if it is not, it is faint Consonance of sounds we shall have to treat of at a later stage of our discourse There still remains a fourth class of sensations, and these we shall have to subdivide, as they exhibit numerous varieties, their name as an aggregate is colours They are flames emitted from various bodies with particles so proportioned to the visual ray as to produce sensation, the bald facts about the origin of this visual ray have been already stated Concern-
d ing colours, then, the most probable and reasonable account would run as follows The particles which stream from other bodies and impinge upon the visual ray are in some cases smaller, in others larger, than the particles of the ray itself, in still other cases, equal to these Now the equal particles are imperceptible, in fact, as we say, transparent, but the greater and smaller, which respectively constrict and penetrate the ray, are analogous with what is cold or hot to the flesh and, again, with what is astringent or heat-
e ing and, as we call it, pungent to the tongue, and their effects, white and black, are really identical, though they occur in a different matter [1] and for that reason seem to be different. Accordingly we should assign these colour-appellations as follows That which penetrates the visual ray is white, and its opposite black When the visual ray is impinged upon by a different variety of fire with a higher velocity, and penetrated right up to the eyes them-
68 selves, the actual passages in the eyes violently dilated and dissolved, and a considerable volume of fire and water—

[1] *ἐν ἄλλῳ γένει* 67 *e* 3 means that e g the compression of the flesh is not seen to be analogous with that of the fire of the visual ray, because the stuff of which flesh is made is not fire but something else

a tear, as we call it—expressed by the agency of what is itself a fire advancing in the opposite direction, so that one fire leaps from the eye like a flash of lightning as the other is entering it and being extinguished amid its humours, and a medley of all colours arises in this confusion, we call the effect dazzling and to that which causes it we give the names bright and glistening That which is intermediate between
b these is, again, a variety of fire, which makes its way to the humours of the eyes and mingles with them, but does not glisten , [1] to the gleaming of the fire through the moisture with which it is mingled, which displays the colour of blood, we give the name red Bright mixed with red and white yield yellow , to say in what measures each mingles with each would be unwise, even if one had the knowledge, seeing one could allege no necessity, nor even a reasonable prob-
c ability Red blended with black and white presumably gives crimson, or, if these ingredients are first well burnt and then more black added, violet (?) Orange arises from the blending of yellow with buff, and buff from the mingling of white and yellow If white is combined with bright and then imposed upon a saturated black, the resulting colour is indigo (?) , if this is then blended with white, the result is sea-green, and if orange is blended with black, leek-green
d These examples will make it reasonably clear to what mixtures we must attribute other colours, if our story is to retain its probability But to put these speculations to an experimental test would be to ignore the difference between humanity and deity, which lies in this, that though God has in their fulness all the knowledge and all the power required to blend multitude into unity and dissolve unity again into multitude, no son of man has now, nor ever will have, the competence for either task
e All these, then, were of old the works of necessity and were taken over from her by the artificer of the most beauteous and best of things that come to be, when he was bringing the self-sufficient and perfect god to the birth , their

[1] The MSS text yields a satisfactory sense, on the condition that no comma is placed after *παρασχομένῃ* 68 *b* 4

causality he used to minister to his purpose, but the good he interwove in all that comes to be with his own hands Therefore we must distinguish two sorts of cause, the necessary and the divine, the divine we should inquire after in
69 all things for the sake of achieving such happiness as our nature admits, but the necessary for the sake of the other, bethinking ourselves that without and apart from this that other on which our hearts are set cannot be perceived, apprehended nor in any wise attained

The timbers for our carpentry—I mean the two types of cause—are now sorted out ready to our hands, and we are to weave the rest of our discourse from them Let us, then revert briefly to our starting-point, rapidly retracing the path which has led us thence to our present position, and then set ourselves to end the story by crowning it with a
b capital in keeping with all that has preceded Well, as we said in fact at starting, all these things were in disorder until God infused in them all measure of every kind in respect whereof it was possible for them to be proportional and commensurate, each with itself, and all with each other For at first no traces of this were to be found, except by pure hazard, and there was absolutely nothing to speak of that could be called by the names now in use—fire, water,
c and the rest 'Twas he who first set all these in order and then constructed from them this our universe, a living creature enfolding within itself all living creatures, both mortal and immortal The divine he fashioned with his own hands, the task of fashioning the mortal creation he enjoined on these his children And they, when they had received from him the immortal principle of soul, in imitation of him, next orbed her round with a mortal body, gave her this whole body for a chariot and went on to build on to her within it a second pattern of soul, the mortal, subject to dread and inevitable passions first pleasure, evil's
d most potent lure, then pains which scare us from good, temerity and fear likewise, witless counsellors both; wrath that is hard to entreat, and fancy, lightly led astray These they mingled with irrational sense and dare-devil lust

and thus perforce compounded our mortal element For
this cause, I take it, because they were loath to pollute the
divine, save when it might not be helped, they housed the
mortal apart from the better element, in a different abode
e within our body, setting the neck as a party-wall between
the head and the breast, to make the severance In the
breast, then, and that which is called the trunk they bound
the mortal part of the soul. And seeing that there is better
and worse within this, they built a second party-wall across
the cavity of the trunk, dividing, as it were, a lodging of
70 women from a lodging of men by setting the midriff as a
partition between them So that part of the soul which has
valour and mettle and is emulous of victory they lodged
nearer the head, between midriff and neck, that it might be
within earshot of discourse and combine with it in enforced
constraint of the desires, whensoever they should refuse
willing obedience to the word of command from the citadel
b The heart, that tie of the veins and fountain of the blood
that circles so lustily through the members, they
stationed in the guard-room, with intent that when mettle
should boil in its might at a signal from discourse that wrong
is being wrought on them [1] from without, or else by desire
from within, whatsoever of the body is endowed with per-
ception, might quickly, through all the alleys, have percep-
tion of command and menace, hearken and obey utterly and
c so permit the best to be captain of them [1] all For the
bounding of the heart in apprehension of danger and stirring
of anger, inasmuch as they had foreknowledge that all such
swellings of wrath would be attended with fire, they devised
the lung and grafted it upon her for her defence, making it
soft and bloodless and penetrated besides with cavities like
a sponge, that it might cool her by reception of breath and
d drink and so provide refreshment and ease in this burning.
To this end they cut to the lung the conduits of the wind-
pipe and set it [2] about the heart like a cushion, that when
mettle waxed great within her, she might bound upon

[1] 'Them', *αὐτὰ* 70 *b* 4, *αὐτοῖς b* 8, = the 'members'.
[2] The lung (not the wind-pipe)

somewhat soft and be refreshed, and so with the less distress do better service to discourse by her mettle

As for that in the soul which is desirous of meat and drink and all else it needs for the body's sake, they lodged
e it in the region between the midriff and the boundary at the navel, building through all this region, as it were, a crib for the body's victuals Further they tethered the creature there like an untamed brute that must needs be nourished with the rest of us, if ever a mortal race was to be So, that it might be ever feeding at its crib, vexing the counselling part least, by reason of its lodgment at the furthest remove from it, and thus leaving our sovereign part to take
71 counsel in peace for the good of all jointly and severally, to these ends, I say, they appointed its station so And for that they knew that the creature would never comprehend discourse of reason, or that if it should so much as come by some sense of such discourses, it was not in its nature to give any heed to them, whereas it would be much under the spell of phantoms and visions by night and by day, God, as
b I think, lay in wait for this same weakness So he formed the liver and set it in the creature's dwelling-place, cunningly making it dense, smooth, glistening and endowed with both sweetness and bitterness His purpose was this. The influence of thoughts, proceeding from understanding, was to cast prints and images upon it as upon a mirror When it should advance stern and threatening, it was to strike terror, availing itself of some measure of this congenital bitterness, quickly infused all through the organ, to throw bilious colours upon it, corrugating it everywhere into wrinkles and roughnesses, and causing pain and nausea
c by its action on lobe and portals, flexing and corrugating the one and blocking and closing the others But when, on the other side, some genial inspiration from the mind should limn pictures of the other sort, quieting this bitterness by refusal to arouse it or have dealings with a quality opposed to its own, but availing itself of the organ's innate sweetness
d to correct it everywhere into straightness, smoothness and freedom, it was to make the part of soul lodged in the liver

gracious and gentle [1] and its nights acceptable by divination in dreams, seeing it had no part in discourse nor understanding For they that fashioned us were mindful of their father's behest which enjoined that the mortal creation must be made as wholly good as might be, wherefore, as
e we deem, they set the seat of divination in this member, thus doing the best even for our baser part, that it might have some contact with the real That divination is a gift of God to the witless in man we have abundant proof. No man, in fact, attains to inspired and true divination in his full senses, but only when understanding is fettered by sleep or distraught by disease, or, it may be, by possession 'Tis for one in his wits to recall and understand the deliverances of divination and possession, waking or sleeping, and
72 to discern the significations of all their visions, what evil or good, past, present or yet to come, they figure and to whom, but 'tis no work for him who has been distraught and is yet in that case to judge of that which he sees or utters, rather, the old saying is well said, that to do his own business and to know himself belong only to the sober Whence also our usage sets prophets over the deliverances of inspired divina-
b tion Some call these men themselves 'diviners', all-unknowing that they are interpreters of the riddling speech and vision and should most rightly be called not 'diviners' but *spokesmen* (προφῆται) of divination

The liver, then, was made such as it is and set in the region we have said for this reason, to serve the ends of divination While a man is still alive, its indications are more palpable, but when life has departed from it, it is blinded and its oracles too dim to signify anything certain. As for the neighbouring organ, its structure and its situation—to the left—are for the liver's good, to keep it continually bright and clear, as a clean napkin is ever laid ready by the side of

[1] εὐήμερον 71 *d* 2 The regular meaning is 'happy', 'fortunate' (from ἡμέρα), but I have preferred a non-committal rendering from the suspicion that, by a deliberate pun, Timaeus means to suggest the sense 'tame', 'domesticated' (from ἥμερος), with allusion to the metaphor of the 'unbroken creature' (θρέμμα ἄγριον) of 70 *e* 4

a mirror. Hence also, when impurities arise in the liver from diseases, they are purged away and received by this spleen, whose texture is hollow and bloodless and therefore
d rare, consequently, as it is filled with these impurities, it becomes swollen and ulcerated, but subsides and is reduced to its first condition when the body has been purged

Of the soul, then, what in her is mortal and what divine, where, in what company and wherefore the two have received separate lodging,—that our account of this has been the true one we could only affirm if we first had God's confirmation, that it has been probable we may venture to say now, and still more confidently on reconsideration, we
e will therefore take it as said We have now to pursue on the same lines the problem next arising, it remains, as we said, to deal with the making of the body, and this, I take it, may most fittingly be conceived to have been constructed for the purpose I shall now explain They who framed our kind knew what would be our incontinence in the matter of meat and drink, how greed would move us to consume much more than need and due measure call for Since, then, they foresaw this, to the end that diseases might not bring
73 us speedy destruction and mortality perish forthwith without coming to maturity, they appointed what is called the abdomen to be a receptacle for the future surplus of meat and drink and made the guts wind and coil within it, lest quick transit of nutriment through them should force the body to crave fresh nutriment too quickly, make it ravenous and so render the whole tribe of us, through gluttony, incapable of philosophy and music, deaf to the voice of our divinest part

b With bones, flesh, and their like, the case stood thus The starting-point for all was the formation of the marrow For the vital bonds which knit soul to body and are the roots of the mortal creature were fastened there And the marrow is itself formed from other substances For such of the primary triangles as, being unwarped and smooth, could furnish fire, water, air, earth in most finished precision, God separated out from their respective kinds and

c mingled together in due proportions, thus he devised a universal seed for all mortality, fashioning the marrow from these Next he implanted the varieties of soul in it and bound them fast there, also in the first original distribution he divided the marrow itself into shapes answering in number and quality to the several varieties [1] The ploughland, as we may call it, which was to contain the divine seeds he made spherical and named the portion of the marrow 'brain', signifying that when a creature was com-
d pleted, the vessel which held this should be its head, [2] that which should retain the rest of the soul, its mortal part, he divided into shapes at once rounded and elongated, naming them all marrow To these, as it were to anchors, he made fast the bonds of every soul, and then went on to fashion our whole body round the soul, first giving it all
e round a hard covering of bone And bone he constructed as follows He first sifted earth pure and smooth and kneaded it and steeped it in marrow, then he plunged the mass into fire, next giving it a bath of water, then another of fire and a second of water by this repeated transference from one element to the other he made it insoluble in both. So he used it to model a sphere of bone round the actual brain, and left only a narrow egress, besides this, he made
74 from the same substance vertebrae, to serve as pivots, which he placed along the marrow of the neck and spine through the length of the whole trunk, beginning at the head Thus he gave the whole seed the protection of a kind of stone fence, and in this he made articulations for the purposes of movement and flexion, employing the quality of otherness as an intermediary Again, he bethought himself that the
b constitution of bone is something more brittle and inflexible than it should be, as also that, as it became fiery hot and cooled again, it would splinter and wreck the seed within it. For these reasons he devised the sinews and flesh and bound all the limbs with the former, that by their tension and

[1] Sc the different 'patterns' (εἴδη) or 'parts' in the soul

[2] He called the brain ἐγκέφαλον (from ἐν and κεφαλή) because it was to be 'in the head'.

relaxation he might make the body capable of stretching and flexible about its pivots The flesh he meant to be a protection against heat and cold, as well as against falls
c It was to yield to bodies softly and gently, like a covering of felt,[1] in the summer, in virtue of its possession of an internal warm moisture which exudes and moistens its surface, to provide the whole body with a coolness of its own, but in winter-time, on the contrary, in virtue of this same fire, to be a fair defence against attack and envelopment by frosts from without With this end in view, he that moulded us made a mixture and composition with water, fire and earth, compounding a ferment of acid and
d brine by mingling these ingredients, and so produced flesh, juicy and soft The sinews he made of bone and unfermented flesh—a single compound from two constituents with a quality intermediate between these—and added a
e yellow colour Thus sinews are in quality more rigid and tougher than flesh, but softer and more pliant than bone God wrapped them round bones and marrow, which he fastened together with sinews, and then covered the whole on the outside with flesh So to the bones which contained
e most soul he gave the scantiest wrapping of flesh, to those in which there was least soul, the amplest and thickest Moreover he caused but little flesh to grow at the junctions of the bones, save in so far as sentence of reason declared that flesh should be there, that it might not hamper the bending of the limbs and make our bodies awkward and by consequence ponderous in their movements, nor yet, lying packed in numerous dense layers, blunt the sensibility by its solidity, and make the mind slow of recollection and dull of apprehension Hence our thighs, calves, hips, upper and
75 lower arm and other bones which have no joints, and all such as are devoid of understanding from the scantiness of soul in the marrow, have all been well furnished with flesh, but such as are endowed with understanding, more sparingly,

[1] I own to a suspicion that *ἔσεσθαι κτήματα* 74 *b* 8–*c* 1 is a 'primitive error' for *ἐσθήματα*, a tragic word used by Thucydides In that case I would render 'a quilted garment'.

—save, indeed, in so far as God fashioned flesh itself thus for purposes of sensation, as in the case of the tongue, though for the most part it is as we said For the substance which of necessity is born with us and grows with us in no wise
b permits thickness of bone and abundance of flesh to be accompanied by quick sensibility If the two would combine, they would be found most of all in the structure of the head, with such a strong, fleshy and sinewy head on their shoulders, mankind would have enjoyed twice and much more than twice the present term of life, better health and greater freedom from pain As it was, the makers of our race considered whether they were to produce a more long-lived and worse creature or a more short-lived and better,
c and agreed with one accord that on every ground and for every creature briefer and better life is to be preferred before longer and sorrier So it was that they roofed in the head with a thin bone, but with no flesh nor sinews, inasmuch as it has no articulations For all these reasons, then, a man's head, though more quickly sensitive and more intelligent, is much frailer than the body to which it was added And for the reasons and in the manner we have said, God brought
d the sinews round the bottom of the head, at the neck, fastening them with the solder of symmetry, and bound the extremities of the jaws below the face with them, the rest he dispersed throughout the members, so linking joint with joint As for our mouth, its actual equipment with teeth, tongue and lips was ordered by those who did the work
e with a view at once to the necessary and the good, being devised as an entrance for necessary purposes, but an exit with an eye to the good For all that enters it to sustain the body is no more than a necessity, whereas the stream of discourse which flows out from it and subserves intelligence is of all streams the fairest and best Further, the head could not be left a mere thing of bare bone, in view of the extremes of climate in either direction,[1] nor yet could it be suffered to be thatched with a load of flesh and so become dull and

[1] I e the extremes of heat in summer and cold in winter Cf. *supra* 74 *c*.

76 insensitive So a looser rind—we now call it skin—formed round the flesh and detached itself from it, though without the desiccation of this latter Under the action of the moisture of the brain, this rind closed on itself, grew all round the head and formed a covering for it The moisture then made its way up under the sutures, damping the skin, and closed it up in a knot at the crown and the sutures suffered very various modifications under the action of the
b circles [1] and the nutriment, being more numerous where the contention between these influences is more, fewer where it is less intense Now the whole extent of this skin was, of course, exposed to the pricking of the fire of the divine part, [2] so the moisture made its way out through the consequent punctures, the pure liquid and heat made their escape, but the compound of them—they were, in fact, the ingredients of the skin—though raised upwards by this motion and spun into a long thread with a fineness equal to that of the puncture, was thrust back owing to its low velocity, by the surrounding external air, twisted back again under the skin and took root there This is the process by
c which hair was formed on the skin, it is a system of threads of the same character as the skin itself, but harder and denser in virtue of the process of refrigeration and consequent 'felting' undergone by the several hairs as they detach themselves from the skin The creator, we see, has made our heads shaggy with it, the means he employed have just been stated, but his purpose was it should serve
d as a light covering to protect the brain, providing adequate shade in summer and shelter in winter, without offering any impediment to quick sensibility Also, where sinew, skin and bone are twisted and commingled together on our fingers and toes, the whole three formed one dried and hardened skin The subsidiary causes of its making were those we have given, but its purpose and principal cause had reference to what was to be yet later They who fashioned us, indeed,

[1] I e the two 'circles in the head' Cf *supra* 43 *c* ff

[2] I e the brain, of which fire, as we have been told, is an ingredient.

knew well that women and the beasts would one day be born from men, in particular they understood that many of these creatures would have need of talons for divers pur-
e poses, and therefore designed the rudiments of them in mankind at their first making This, we may say, was the purpose and these the causes by reason of which they made skin grow into hair and nails at the extremities of our limbs
77 Now that all parts and members of the mortal creature had been assembled into one living whole, which was of necessity to live amidst fire and winds and by consequence to be wasted and emptied by them and so brought low, the gods devised reinforcement for him They blended and planted a substance coaeval [1] with man's but with other form and other senses, so that it was a living creature of a different kind I mean trees, plants and seeds, which we have now schooled by husbandry and tamed to our purposes and so call *domesticated*, though there were at first only the
b wild sorts, which are the earlier of the two Now all that has life may with perfect right and propriety be called a living creature,[2] but we must note that that whereof we are now speaking has only the third sort of soul, the sort which is said to have been seated between midriff and navel and has only sense of pleasure and pain with attendant appetites, but no part in reasoned conviction or understanding 'Tis indeed, always wholly passive, since its formation has not
c permitted it, in course of kind, to perceive and reflect at all upon itself, revolving about itself with a native motion of its own and repelling movement from without Hence it comes that it has indeed life and is no other than a living creature, but is stationary, rooted to its place and rigid, because it has been denied self-movement

[1] *συγγενῆ* The word seems to be used in the literal sense, 'born at the same time with' The point is that there were both men and plants before there were either women or brutes

[2] This is simply intended to explain that a plant is a *ζῷον*, a living thing, as much as an animal and, therefore, equally with an animal has a *soul* of some kind, though in common parlance the name *ζῷα* is not given to plants.

So when our lords had planted all these kinds to be sustenance for us their subjects, they cut channels through our body, like the runnels in a garden, that it might, as it were, be watered by a stream let in upon it And first
d of all they cut two vessels along the back, like covered conduits, under the commissure of skin and flesh, even as the body is a double thing with right side and left These they conducted along the spine, inclosing it with its generative marrow between them, that this might be kept in the prime of vigour and also that the further course of the channel might be downhill and therefore easy, and the ensuing irrigation uniform Then they split these vessels in the region of the head, interwove them and passed them
e through one another in opposite directions, sending those trenches which came from the right of the body to the left, those from the left to the right The purpose was partly that they might assist the skin in binding the head to the body, for that part had not been wrapped round at the crown with sinews, but more particularly that perceptions coming from either side might be revealed to the whole body Then finally they elaborated their system of irrigation much in the following fashion But we shall understand it more readily if we first agree on a principle now
78 to be stated Any complex of smaller particles is impervious to larger corpuscles, but complexes of the larger are not impervious to the smaller, now fire is composed of smaller particles than any other body; it can therefore pass freely through water, earth and air and their compounds, and nothing is impervious to it So we must understand the same thing concerning the human trunk [1] when meat and drink enter it, it keeps them in, but cannot
b do the same for wind or fire, because they are composed of smaller particles than itself God accordingly availed himself of this to effect an irrigation of the blood-vessels from the trunk He wove a meshwork of air and fire, after the fashion of a fish-trap, with two pouches at its mouth, and

[1] The κοιλία of 78 *a* 6, *b* 3, as the sequel shows, means not the 'belly', but the whole cavity of the trunk

one of these pouches, again, he made with a double outlet of its own, then he stretched cords, as it were, all round from the pouches to the outside of the contrivance Now
c the contents of the network he made entirely from fire, but the pouches and their envelope of air, and this structure he took and put round the living creature he had formed in the following manner The pouch-contrivance he inserted into its mouth, and whereas this contrivance had two parts, he let the one down by way of the windpipe into the lung, but the other into the belly alongside the windpipe, the first pouch he split and granted both its parts in common an outlet by the channels of the nose, in such wise that when the one part was not working by way of
d the mouth, all its currents too might be replenished from that source The envelope of the trap in general he set round the whole cavity of our body, contriving in such fashion that at one time the whole of this flows gently into the pouches —seeing that they are of air,—at another, the pouches flow the other way, the network thus passing alternately in and out through the body—since the body is of rare consistency —and the rays of fire which stretch through the interior of the network following the movement of the air in either direction, this process he caused to continue without inter-
e mission so long as the mortal creature holds together This, as we see, is the procedure to which we say that the giver of appellations has assigned the names *inspiration* and *expiration*, and 'tis in virtue of this whole action and passion that our body comes to be nourished and live by irrigation and refrigeration For when the fire within the envelope, in virtue of its connections, follows the respiratory current in and out, ever and anon entering the belly with a surge and laying hold of the meat and drink within it,
79 it doubtless dissolves them and cuts them up into small portions, driving them through the exits in the direction of its advance, and forcing them into the blood-vessels, like water from a spring into runnels, thus causing the currents of these vessels to flow through the aqueduct of the body.

Let us, however, consider once more the causes from

which the process of respiration is what it actually is We
b may state the case, then, thus Since there is no void
which a moving body can enter and our breath is expelled
outwards, the conclusion is plain, that it is not expelled
into a void, but displaces a neighbouring body, the body
thus impelled regularly extrudes that which is next to it,
and all is thus necessarily driven round to the region whence
breath had been expelled, enters there, accompanying the
breathing, and fills it up again, the whole wheel, as we may
c call it, coming full circle instantaneously, because there is
no void Consequently, in the very act of discharging the
breath, the chest and lung are filled again by the air round
the body, as it enters through the porous flesh and is driven
round On the other side, when the air is diverted and
escapes through the body, it pushes inspiration round to
the channel of mouth and nostrils The cause which sets
c these processes going we may assume to be this In every
d living creature the internal blood and blood-vessels are the
hottest part, they are, so to say, an interior well-spring of
fire It was this, of course, that we likened to the network
of our fish-trap, when we said that from the centre outwards
it was constructed of fire, whereas its external parts were
of air Accordingly we must admit that this heat moves
outward to its kindred element in its own region, also that,
since there are two exits, one through the body, the other by
e the mouth and nose, as it takes either it drives air round
to the other, that which is thus forced round falling into the
fire and being heated, while that which is escaping is cooled
But as the heat shifts its position and the parts about the
other exit become the warmer, the more heated matter tends
in turn to take that path towards its own substance and
drives air round to the first entrance This regularly suffers
the same effects and reacts in the same way, thus under the
double impulsion the wheel is made to sway first this way,
then that, and so gives rise to inspiration and expiration

We may use the same principle to explain, for example,
the physician's cupping appliances, deglutition, and
80 the behaviour of projectiles shot into the air or along

the earth's surface, as also why tones of high and low velocity—acute and grave as they appear to be—are sometimes dissonant, when the motion they create in us as they travel is irregular, sometimes consonant, when it is regular The slower motions, in fact, catch up with those of the earlier and more rapid tones, when these are already dying away and have come to a uniformity [1] with those which
b they [2] subsequently communicate to them [3] as they advance, when they thus overtake them, they do not perturb them by the superposition of a fresh motion, but supply the beginning of a slower motion uniform with the more rapid, which is ceasing, and so produce a single effect, blended of acute and grave Hence they give to fools pleasure, but to the wise delight by this reproduction of divine melody in perishable motions For further illustra-
c tion take the flowing of water, the fall of thunderbolts, the strange 'attraction' of amber and the Heraclean stone [4] In none of these cases does attraction play any part, if one only investigates them as one should, it will be apparent that there is no void, that the things in question exert a circular pulsion on one another, that bodies move by aggregation and disgregation to their various regions in ways which, by reason of these complications, seem magical
d In particular it is in this way and by these means, as has been already said, that respiration itself, with which this digression began, is effected The fire cuts up our victual, also, as it is swayed up and down in the body with the motion of the current of breath, its oscillations fill the blood-vessels from the belly, flooding them with the mince from that source. Thus it is that the streams of nutriment incessantly permeate a creature's whole body As this mince is fresh and is made from the fruits or grains, coaeval

[1] I think it on the whole advisable to remove the comma after *ἐληλυθυίας* 80 *a* 7, and translate accordingly With the comma the sense seems to be that the slower,' notes catch up the 'more rapid', which 'are already dying away and have become uniform, by means of the motions, etc'

[2] I e the 'slower' notes [3] I e the 'faster' notes.

[4] The loadstone

with man, planted by God to this very end that they should
e be our sustenance, it assumes very various colours, from the intermingling of its materials, but the pervading hue is red, the quality produced by fire as it cuts up a moist material and imprints itself thereon Hence that part of the fluid in the body which we call blood took on the colouring we have described, 'tis the pabulum of flesh and the body as a
81 whole, all the tissues, as they are irrigated with it, repair their losses by evacuation The character of this depletion and repair is the same as that of the movement in the universe whereby all things move towards their own kind In fact, as the environment without us is ever wasting and dissipating us, scattering our various constituents to their kind, so the contents of the blood, in their turn, being broken up within our frame into tiny fragments and encompassed
b by the organism as by a heaven, are forced to imitate the motion of the universe, hence each of the fragments within us is carried to its likes and repairs their waste And when the loss is greater than the fresh accessions, naturally all things decrease in bulk, when it is less, all increase Hence so long as a creature's constitution is still youthful, and the triangles of its constituents, so to say, fresh from the slips, they are locked firmly together, though the mass as a whole is soft, since it has been but recently formed from marrow
c and fed upon milk So, as the intruding foreign triangles contained in the system and supplied by its meat and drink are older and feebler than its own, which are fresh, it succeeds in cutting them up, the organism is sustained by an abundance of triangles like its own and waxes great But when the root of the triangles is started by reason of
d buffetings endured from many a storm for many a year, they can no longer cut up the triangles of the food as they enter the body into their own likeness, but are themselves easily divided by the intruders So all creatures at this period fail and dwindle, and the condition is called age Finally, when the attachments of the triangles of the marrow no longer hold out but part under the tempest, they, in their turn, relax the bonds of the soul, she comes to her

natural release and takes her flight with pleasure For while unnatural processes are always painful, the natural
e are always pleasant Death itself, on this principle, is painful and contrary to nature when it follows on disease or wounds, but when it comes in age as the end of a natural process, it is the easiest of all deaths and is attended rather by pleasure than by pain

82 As for diseases, their origin should, I take it, be obvious. Since the body is compacted of four ingredients, earth, fire, water, air, disorders and diseases arise from abnormal usurpation or deficiency of these ingredients, or from their transportation from their own to a foreign place, or, again,—since there are several varieties of fire and the rest—from the reception in the system of an inappropriate variety, and from similar causes For when there is abnormality in the formation or location of any of these ingredients, parts which
b were formerly warmed are chilled, the dry become damp—(it is the same, of course, with the light and the heavy)—and all are exposed to all kinds of changes My thesis, in fact, is this only when same accedes to, or is withdrawn from, same by self-same, uniform, proportional rule—only then will a thing be left self-same, intact and sound, a false note struck by accession or withdrawal beyond these limits will occasion manifold degeneration, and endless diseases and corruptions

Once more, since secondary formations exist in nature,
c there is a second class of diseases to be noted by all who would understand Since, in fact, marrow, bone, flesh, sinew are all compacted of the substances already named, while blood, also, is formed of the same ingredients, though in a different fashion, though most disorders have the same causes as those already mentioned, the gravest maladies of all afflict us from another cause the formations just specified suffer corruption when the order of formation is inverted. In the normal order, in fact, flesh and sinews are formed from blood, sinew from the fibrine, with which
d it is cognate, flesh from the coagulation of the residuum left when the fibrine is removed The viscous and oily product given off by sinews and flesh, in its turn, not only glues the

flesh to the bones, but feeds the growth of the bone enclosing the marrow, finally, that which percolates through the dense substance of the bones, smooth and oily in extreme degree, with triangles of superlative refinement, drops and trickles from the bones and waters the marrow When this order is observed in the several processes, the regular
e result is health, but disease, if the order is inverted Thus when the decomposing flesh infects the blood-vessels with the decomposition, against natural order, these vessels contain abundant blood mixed with air, this exhibits a great variety of colours and bitter tastes, to say nothing of acid and briny characters, and develops divers forms of bile, serum and phlegm These perverse and corrupted secretions begin by poisoning the very blood, and are carried in the
83 blood-vessels all over the body, no longer providing it with nutriment nor observing any orderly natural period, at strife
a among themselves, since they have no joyaunce of each other, and at open war with such elements of the body as support the constitution and abide at their posts, spreading destruction and decomposition Now when the flesh which is decomposed is of very ancient formation, it proves hard of concoction, and turns black under its long exposure to
b inflammation, and the bitterness due to its thorough corrosion makes it a grave danger to all such parts of the body as are still uncorrupted Sometimes the black colour is attended by acidity rather than bitterness, when the bitterness has been somewhat diluted, in other cases, the bitterness is suffused with blood and acquires a reddish, or, with an interfusion of black, a greenish tint Or a yellow colour may be conjoined with this bitterness when the flesh decomposed by the fire of the inflammation is of recent formation The name common to all these varieties, *bile*,
c may have come from physicians, or possibly from one who was capable of contemplating the many and unlike and discerning in them all a single type deserving of a name [1]

[1] That is, from a 'dialectician', or philosopher, one who was something more than a 'working medico' It is hinted that the classification was the work of Pythagoreans

The other currently recognized forms of bile are defined by their specific colours As to serum, that of blood is a gentle lymph, that of black and acid bile, when rendered saline by heat, a virulent lymph which is known as acid phlegm But as for that which results from the decomposition of soft young flesh, in combination with air, (the said substances being understood to be inflated by wind and en-
d veloped by liquid, and thus to form bubbles, individually too minute to be visible but collectively having a visible bulk and a white colour due to the production of froth),—all this decomposition of soft flesh combined with air we call *white phlegm* The lymph of freshly forming phlegm itself is sweat,
e tears and other bodies of that kind which are daily exuded as purgations All these materials naturally become instrumental to disease when the blood is not replenished in normal fashion from meat and drink, but augments its bulk from the contrary quarter against nature's usage Now when the sorts of flesh are, indeed, mangled by disease but their several foundations remain firm, the misfortune is only at half its height, for there is still room for ready recovery But when that which binds flesh to bone is itself
84 diseased and no longer secreted from them (?) [1] to feed the bone and bind the flesh to it, but has its gloss, smoothness and viscosity converted by bad regimen into roughness, brine and squalor, then the whole substance so affected crumbles away beneath flesh and sinews, and separates from the bones,
b while the flesh is loosened from its roots, and leaves the sinews exposed and charged with brine, falling itself back again into the circulating blood, where it aggravates the maladies already mentioned. But grave as such a state of body is, still graver are those which originate deeper down, when bone is denied adequate ventilation owing to over-

[1] *ἐξ ἐνῶν αἷμα*, apparently the archetypal text in 84 *a* 2 must be corrupt, as it yields an impossible sense, but certain correction seems impossible As a stop-gap, which gives what must be approximately the true sense, I adopt *ἐκείνων* (WY) for *ἐξ ἐνῶν*, and *ἅμα* (Stallbaum) for *αἷμα*, though I do not think it likely that *ἅμα* is what Plato wrote

density of flesh Such a bone becomes mouldy and over-
c heated, splinters, and rejects its nutriment, crumbling once more into it, against the natural order This substance is then resolved into flesh, and the flesh falls into the blood and renders all these maladies more dangerous than the first-named The most desperate case of all is that in which the very substance of the marrow suffers by defect, or possibly excess, thus are caused the gravest and most infallibly fatal of diseases, in which the whole normal functioning of the body is forcibly reversed

Once more, we have to consider a third type of disease,
d which may originate in three different ways, from wind, from phlegm, or from bile When the lung, the body's steward of winds, is blocked by rheums and presents no clear passage, the wind does not reach some parts at all, and enters others in more than due measure The parts
e which get no ventilation then suffer decomposition, in other parts, the wind forces its way into the blood-vessels,
e contorts them, dissolves the body and is intercepted in its central region where the party-wall is located This causes a great number of painful disorders, often accompanied by copious sweating Often again, when a cavity has been formed in the body, wind gets in, is unable to escape and occasions the same distress as if it had entered from without the frame The suffering is worst when the wind besets the sinews and the connected blood-vessels, swells the 'back-stays'[1] and the sinews continuous with them and gives them a backward curvature. From this symptom of tension such disorders have naturally received the names *tetanus* and *opisthotonus* A cure, too, is difficult, in fact, these troubles are most commonly brought to a solution by the
85 supervening of a fever White phlegm may be serious if intercepted within the body, but is milder if it finds passages for escape, though it disfigures us by producing blotches, scabs and similar complaints But when it combines with

[1] The sinews meant are, no doubt, those of the shoulder and arm, but the precise anatomical significance of the word used by Timaeus, *ἐπιτόνοι*, in the fifth and fourth centuries B C, appears to be unknown.

black bile to diffuse itself over and confound the divine circles in the head, the visitation, though comparatively
b mild if it occurs during sleep, is more difficult to escape when it attacks the waking As the disorder affects a holy substance it fully deserves its name of 'holy disease'[1] Acid and briny phlegm is the fount of all defluxionary disorders, though the names which have been given to them are as various as the parts towards which the defluxion is directed. But inflammations of the various parts, so called from the burning and heat which attend them, are one and all caused by *bile*[2] When this bile finds an outward vent it
c bubbles up in superficial abscesses, but if confined within the body, causes a variety of acutely inflammatory diseases The gravest case is when it mingles with pure blood and disturbs its fibrine in its appointed function That substance was dispersed through the blood to ensure a proper proportion in the matter of rarity and density, so that the blood should neither, from its fluidity, escape when heated through the porosities of the body, nor yet, from over-
d thickness, be sluggish and slow of circulation in the vessels The right balance in this matter is preserved by the fibrine, when it is produced in the normal way, even in the case of blood from a corpse, which has lost its warmth, if the fibrine is collected, what is left of the blood liquefies, whereas if it is left in position, the blood is soon congealed by the fibrine and the cold environment acting together Accordingly, since fibrine acts in the blood in this fashion, when bile, a product of old blood which is returned to the blood from decomposing flesh, begins to enter it, hot and liquid and in small quantity, it congeals under the action of the fibrine, and
e this congelation and unnatural loss of heat occasion internal distress and shivering When the influx of bile is more copious, its heat boils up, overpowers the fibrine and throws its action into disorder, and if powerful enough to retain the upper hand permanently, penetrates to the marrow, where it,

[1] *Morbus sacer*, epilepsy

[2] A caution against a possible inference from the similarity of the words *φλέγμα* and *φλεγμονή*

so to say, forthwith burns through the soul's mooring-cables and sets her at liberty If there is less of it and the body resists dissolution, it is itself overpowered and either completely expelled from the whole body [1] or forced through the blood-vessels into the stomach or abdomen, when it causes
86 diarrhœas, dysenteries and the like disorders, much like a factionary in process of expulsion from the community after a civil tumult And note that disorder due to excess of fire in the system causes continuous heat and fever; excess of air, quotidians, and of water, tertians, that element being more sluggish than air or fire As earth is the most sluggish of the four, excess of it requires a fourfold period for its purgation, and consequently produces quartans which are difficult to shake off [2]

b So much, then, for the causation of disorders of body, disorders of soul are caused by bodily condition in the following way We shall admit, of course, that disease of soul is the same thing as mindlessness, and of this there are two varieties, frantic madness and stupidity Consequently, any condition which involves either is to be called disease, and we must pronounce that the gravest of all these diseases of soul are excessive pleasures and pains Indeed, when a man is transported by delight, or its contrary, distress, in his haste to grasp the pleasure or escape

[1] The meaning is that the disorder may go off in a general copious body-sweat through the pores of the skin

[2] The upshot of this long excursion into pathology, then, is the following classification of diseases

(*a*) Disorders directly connected with the four 'roots' (the Empedoclean 'elements'), caused by (1) having too much or too little of a 'root' in the body, or (2) by having it in the wrong place, or (3) having a wrong sub-variety of it,

(*b*) Disorders of the 'secondary formations', or 'tissues' (marrow, bone, sinew, flesh),

(*c*) Disorders due to the formation of 'morbid' secretions (wind, phlegm, bile).

In my *Commentary* on the dialogue (p 599) I have given reasons for holding that the theory is not carried through quite consistently and possibly arises from an attempt to combine the doctrines of divergent medical 'authorities'.

c the pain unseasonably he can neither see nor hear aright; for, the time being, he is in a frenzy and all but incapable of reflection And when the seed in a man's marrow is copious and turbid—a condition like that of a tree yielding far more than the due proportion of fruits—his appetites and their consequences bring with them many a specific pang of pain, but also many a thrill of pleasure, so he passes most of his
d life in a frenzy of passionate pleasure and pain, with a soul diseased and mindless by the fault of its body, and is commonly held not for a sick man but for one deliberately vicious. But in plain fact, sexual incontinence is, for the most part, a malady of soul caused by a turbid and over-moist condition of one of the constituents of the body, due to porosity of the bones And so, speaking more generally, the charges of incontinence in pleasures which are brought against the vicious, as though their conduct were voluntary, are not really deserved No man, in fact, is deliberately vicious, those who are vicious become so from bad habit of body and
e unskilful nurture, both of them unwelcome conditions which come to a man against his will So, too, on the other side, the soul contracts a great deal of vice in the matter of pains from the body When acid and saline phlegmatic or bitter bilious humours roaming through a man's body can find no vent, but collect within and their commingled vapours
87 interfere with the revolutions of the soul, they occasion a great variety of disorders of soul, more or less severe and extensive As the vapours reach the three regions of the soul, according to the region they invade, they give rise to manifold types of irritable temper and low spirits, rashness and cowardice, or, finally, forgetfulness and slowness in learning And when, on the top of all this, men with so
b vicious a composition form vicious societies and vicious discourses are held in their societies by private or public persons, and, finally, no sciences which might remedy the disease are studied from early years—that is how all of us who are vicious acquire our vices, through two causes utterly independent of our own will The blame must be laid on those who beget rather than on those who are begotten,

on those who bestow nurture rather than on those who receive it, still a man must do his utmost endeavour, alike by regimen, by daily practice and by study, to shun vice and embrace its opposite But that belongs to another story

c It is but reasonable and proper next to exhibit the reverse of the picture, a view of the treatment by which body and mind may be kept in health, for it is only right to let our discourse dwell on good rather than on evil The good is, of course, always beautiful, but without measure there can be no beauty A creature, then, that is to be either must have its proper proportions Yet though we discern and collect minor proportionalities, we are out in our

d reckoning of the principal and chief of all There is no proportionality more effectual for health or disease, virtue or vice, than that of soul itself to body itself Yet we leave it unconsidered, not reflecting that when the bodily frame is too feeble and puny for the great and vigorous soul it must support, or again, when the pair are mismatched in the contrary way, the creature lacks beauty as a whole, being ill-proportioned just where proportion is of supreme moment Whereas the contrary spectacle is of all others the most beautiful and lovely to the eye that can discern it

e Thus, as a body that has its legs too long or is out of scale with itself from some other abnormal development is not merely uncomely, but further occasions itself endless troubles in its concerted exertions, in the forms of repeated fatigues, jerkings and clumsy falls, so we must conceive it to be with the complex we call the living creature When its

88 soul is too mighty for her body, if she swell with passion, she shakes it to its base and fills it with sickness from its centre, when she throws herself into severe study and inquiry, she wastes it away, or if she give herself to teaching and controversy, public or private, she chafes it to red-heat by the ensuing contentions and emulations and brings on rheums which delude the most part of physicians so styled into laying the blame for them on the unoffending part On the other side, should nature couple a huge body, too large for its soul, with a puny, feeble mind, whereas there are two hungers

b native to man, hunger after victual for the body, after wisdom for our diviner part, the motions of the stronger part prevail and feed that part, but afflict the soul with the worst disease, stupidity, making it dull, slow to learn and quick to forget There is but one safeguard against both dangers, the soul must not be stirred to action without the body, nor yet the body without the soul, that so each may be *c* equipoised with the other and both may be sound So he that applies himself to science or other severe discipline for the mind must likewise give the body its proper motion, and cultivate gymnastic, while he that devotes his care to the moulding of the body must give the soul her rightful motions and make himself conversant with music and philosophy at large, if either is to have full right to the double appellation beautiful and good A man should further tend his several members on these same principles, copying in himself the *d* frame of the universe For, seeing that our body is internally heated and cooled by the matters that enter it and also dried and wetted by its external environment and affected by both these motions [1] with the various effects consequent upon them, when one passively surrenders his body to all these motions, it is overpowered and destroyed But if he will copy that we have called the universal foster-mother or nurse, if he will, never, so far as lies in him, leave his body passive, but set it in motion, ever compensating these internal and external motions, in the right and natural way, *e* by the agitations he produces from time to time in himself; if by such measured agitation he will reduce the affections and particles that roam about his body according to their affinities to order and system, in the fashion we have attributed to the universe, then he will not be leaving foe ranged by foe to generate war and disease in his body; he will have ranged friend by friend, and health will be the *89* result Further, the best of motions is that produced in self by self, which has most affinity with the movement of thought and of the universe as a whole Motion produced

[1] I.e disturbances in the 'external environment' and internal disturbances.

by another is worse, but worst of all that in which the body lies passive and its several parts are set in movement by other agents [1] By consequence, of ways of purging and rebuilding the body the best is by active exercises, the next best by the vibratory motion of a sailing-ship or other conveyance in a vehicle that is not fatiguing A third type of motion has its uses in the case of extreme necessity, but
b must never be admitted without such necessity by a man of sense, I mean medicinal employment of purgative drugs Indeed, unless it involves serious risks, a disorder should never be irritated by drugs For the course of a malady in a manner resembles the life of an organism In organisms there is, in fact, a set duration of life for the whole species, and the individual creature is born with its ap-
c pointed term of life fixed, apart from inevitable accidents For in its first formation the triangles are equipped with the power to hold out for a certain length of time, and beyond that date no man may continue to live Now it is even so with the course of a disorder If the course is deranged by drugging in disregard of the appointed period, the consequence commonly is that a grave malady is substituted for a light, or a complication of disorders for a simple disease So far, then, as our occupations permit,
d complaints should be humoured by regimen; the temper of the disorder must not be irritated by drugging

So much, then, must suffice with regard to the living creature as a whole, its bodily component and the plan of life whereby a man may most consistently be regulator of and regulated by himself But the more momentous and prior point is doubtless to give the regulating factor itself the best and fittest preparation for this its regulating
e work To treat this subject with exhaustive precision would be of itself a considerable independent task, but it may not be out of place to conclude our discourse with the following

[1] The second of the three 'motions' is what we call 'passive exercise' of the body as a whole The third might include 'massage', but the context shows that the immediate reference is to the case of a man who takes a drug and lies in bed waiting for it to 'act'

incidental observations, consequent on what has gone before. We have already said more than once that there are housed in us three several components of soul, each with its own motions Conformably with this, we will now remark in few that whichsoever of these is left inert and without its proper movements must needs grow most enfeebled, whichsoever is cultivated by exercise most robust Hence care
90 must be taken that their several movements be duly proportioned one to another And of the sovereign component of soul we are bound to conceive thus 'Tis to each of us his true guardian spirit, bestowed by God Its domicile, we are wont to say, is in the high place of the body, and it lifts us on high from earth to our kindred above, like plants whose roots are in heaven, not in earth, and most right we are to say so , for 'tis by suspending our head and root from
b the region whence the soul first took her birth that deity gives the whole body its erection Hence when a man is engrossed in cupidities and ambitions and spends himself in the tilling of that soil, all his thoughts must be thoughts of mortality , in sum, so far as 'tis possible for him to become utterly mortal, he can come no whit short of that mark, for such is that which he has fed fat But if he gives his heart to love of learning and true wisdom and exercises that part in himself in thinking thoughts immortal
c and divine, by equal necessity, if he but attain truth, so far as 'tis given to humanity to achieve immortality, he can fall nothing short of that goal , seeing he is ever giving tendance to the divine and keeps the guardian spirit that dwells with him ever in good trim, he must be blest beyond all others [1] Now there is but one way of tending anything, whatever it be—to give it the victual and the motions proper to it. And the motions akin to the divine within us are the
d thoughts and revolutions of the universe So it is they to which each of us must conform ; he must correct the orbits in the head which were corrupted at our birth, by learning

[1] It is hardly possible in English to preserve the allusion to the etymology of the word *εὐδαίμων*, happy (literally one who has a good *δαίμων* or ' luck ').

to discern the melodies and revolutions of the universe, bring percipient into the likeness of perceived, as it was
b at its beginning, and so come to the fruition of that best life set before men by gods for the time that now is and the time to come.

And with this our original programme for to-day of a narrative about the universe down to the creation of man has, I take it, been fairly executed For as to the creation of the other animals, brief mention will be enough where there is no necessity to expatiate, so and not otherwise shall we judge our statements on the matter to be kept within proper bounds Let us then give the following account of it. Those of the men first created who led a life of cowardice and injustice were suitably re-born as women in the second generation, and this is why it was at that par-
91 ticular juncture that the gods contrived the lust of copula-
a tion, fashioning an animated living creature within us, and the like in women The manner of the making of either creature was this They gave the conduit of our drink, at the place where it receives liquid which has descended from the lung by the kidneys to the bladder and ejects it under the compression of air, an opening into the condensed
b marrow which passes from the head, down the neck, and along the spine and has, in fact, been called 'seed' in our former narrative As this substance is full of soul, when it got a vent at the place we know of, it caused there a vehement appetite of emission and thus gave rise to the lust of generation [1] Whence in the male the privy member is mutinous and self-willed, like a beast deaf to the voice of discourse, and fain to carry all before it in frenzied passion, while in women, for the same reason, the so-called matrix or
c womb, a living creature within them passioning for procreation, if left long unfructified beyond the proper season, chafes furiously, straying about the body, occluding the conduits of breath and inflicting extreme distress by imped-

[1] Or alternatively, 'When it got this as a vent, it created lust of generation by causing in it an appetite for discharge at the place where it found the vent'.

ing respiration, besides causing manifold other disorders, until the passion and lust on either side bring the parties
d together, pluck the fruit, as it were, from the tree, sow the plough-land of the womb with living creatures invisible from their minuteness and still unformed, then articulate them, nourish them within to bigness, and finally bring them to light and so complete the generation of an animal Women, then, and femininity in general, originated as we have said. Birds sprang, by a change of form—the growing of feathers in place of hair—from harmless but light-witted men who minded the 'things aloft' but in their simplicity supposed
e that the surest evidence in these matters is that of the eye Footed beasts came from men who were wholly unconversant with philosophy and had never gazed on the heavens because they had ceased to concern themselves with the circles in the head and followed the guidance of the part of the soul in the breast So by reason of these practices their anterior limbs and their heads were drawn down to earth by natural affinity and rested there and their skulls grew elongated and of varied shapes, according to the deformations
92 produced in their several circles by inactivity From the same cause their kind grew four feet or more, God propping the more witless with more supports, that they might be the more drawn down to the earth For the most witless of all, who stretched the whole length of their bodies entirely on the ground, as no longer having any need for feet, they
b made them footless, crawlers over the ground The fourth kind, whose habitat is water, came from the most utterly mindless and stupid sort These the artificers of this transformation deemed no longer worthy to breathe a pure air, as they had their souls polluted by all manner of transgression, they thrust them down from pure and delicate air to breathe deep and muddied water Hence came fishes, all crustaceans and whatsoever lives in the waters; their dwelling-place in the depths is assigned them in judgement
c on the depth of their stupidity These, methinks, are the laws by which all living creatures pass to-day, as they passed at first, into one another, changing their

shapes according as they lose or win understanding and folly

And here we may say our discourse of the universe has at last come to its end For with this this our world has received its full complement of living creatures, mortal and immortal, and come to be in all its grandeur, goodness, beauty and perfection,—this visible living creature made in the likeness of the intelligible and embracing all the visible, this god displayed to sense, this our heaven, one and only-begotten

INTRODUCTION TO THE 'CRITIAS'

LITTLE needs to be said by way of Introduction to the fragment *Critias*. It purports to contain the full narrative, promised at *Timaeus* 26 *e*–27 *a*, of the ancient world-war in which Athens had been the protagonist on one side, the confederacy of the ten 'Atlantic' kings on the other. In fact, however, the actual contents cover only a preliminary sketch of the geographical, economic and moral situation on both sides, the MSS breaking off in the middle of a sentence just as the actual story is on the point of beginning. There is no reason to suppose that Plato ever carried the work further, the singular grammatical difficulties of the fragment, some of which have been mentioned in the notes to the present version, are not of a kind to be readily explained by transcriptional corruption, they point rather to the view that what we have before us is an unfinished *Konzept*, or rough sketch, never put into final form by its author, and most probably circulated without editorial revision after his death. Since there is no reasonable doubt that *Timaeus* and *Critias* are among the productions of an old age prolonged to over eighty, we may account for Plato's failure to finish his story in more than one way. He may, conceivably, have turned away from it because he found his interest flagging, or his powers failing, or because he was anxious to devote his last years to the completion of the *Laws*, or he may actually have meant to the last to complete the work sooner or later, and death may have prevented him. In any case, since the language of *Timaeus*, with all its difficulties, exhibits every sign of careful revision for circulation, I think we may safely infer that the *Critias* was probably separated from the *Timaeus* by an interval of at least some years, just as the *Timaeus*

itself was separated by a longer interval from the *Republic* to which it is made to appear a sequel This may account for the presence of what looks like a curious discrepancy between the two The famous passage (*Timaeus*, 40 *b* 8 ff) of the former dialogue dealing with the position of the earth in the universe is only intelligible if we take it to mean that the earth executes some kind of rectilinear excursions about the ' centre of the world ', which must therefore be assumed to be unoccupied (See the full discussion of the passage in my own *Commentary*) But at the end of the fragment of the *Critias* (121 *c*), Zeus is described as calling a general synod of the gods in ' his most honourable residence ', which is said to be situated ' at the middle of the world ' It is impossible not to see here an allusion to the doctrine of those Pythagoreans who taught the doctrine of a ' central ' fire or luminary, which, as we know, was called among other things the ' house ' and the ' watchtower ' of Zeus Critias, then, unlike Timaeus, apparently agrees with what we know from Theophrastus to have been the final conviction of Plato himself, that the ' centre of the universe ' is neither empty nor filled by the earth, but occupied by ' a worthier body ' The discrepancy might be intentional, since there is no reason why Timaeus and Critias should be represented as wholly agreed on such matters, but it is more natural to account for it as involuntary and due to the lapse of an interval between the composition of the two works There is also one other less striking discrepancy of the same kind which points to the same conclusion, the statement of *Critias* 110 *d* 4 that he had already mentioned the boundaries of prehistoric Attica (Nothing is actually said on the matter in the *Timaeus*)

It is not necessary to say much about the ' sources ' of the account given of the institutions of Attica or Atlantis There is no reason to suppose that Plato had anything to draw upon except his own fertile imagination It is made fairly clear all through that the reconstruction of the geological and economic conditions of Attica is based on

intelligent induction from closely observed facts of the existing situation. The main interest of the narrative is that it, more than anything else in the dialogues, reveals a side of Plato's genius which is often forgotten, it shows him as a singularly acute observer of the details of natural processes and a sober interpreter of his observations His account of the geological peculiarities of the Attica of his own day and their economic consequences is excellent The interpretation given to the facts suggests two criticisms, that he tends to ascribe to catastrophic convulsions of ature consequences which a modern inquirer would be more likely to explain by the continuous operation of less sensational agencies through a vast period of time, and that, as M. Rivaud has said, some of the effects traced to natural agencies, for instance, the destruction of primitive forests, are really due in the main to human recklessness. It is more important to observe that the *Critias* gives even less reason than the *Timaeus* to look for any traditional historical information as the source of the account of Atlantis In the *Critias* (113 *b* 2–4) we actually hear of 'papers of Solon', represented as heirlooms in the family of Critias—that is, in Plato's own family—as the authority for the details of the story We could not be told much more plainly that the whole story of Solon's conversation with the Egyptian priests and the account of the lost island which he learned from them is a pure fiction It is just because it is fiction and intended to be read as fiction that Plato amuses himself with a pretended 'documentation' by manuscripts of which no one outside his own family has heard. The imaginary 'old manuscript' has been used in the same way, with great effect, by a whole tribe of modern romance-writers from Horace Walpole to our own contemporaries, and it is interesting to find that Plato had anticipated the device [1] Of course, his imagination must have had something to work on, and Dr P Friedlander

[1] Note also that the reference to the 'papers' is brought in as part of an explanation of what Critias admits to be the curious fact that the 'barbarians' of the story all have Greek names We are

is fully justified in his suggestion that the account of the regular mathematical form of the Atlantic city and the plain in which it stood, and the description of the gigantic irrigation-system of the mythical kings, owe much of their inspiration to accounts of Babylon I venture also to think that Plato got a hint for what he has to say of the great naval works of Atlantis from his own personal observation of the transformations effected at Syracuse by Dionysius I

The basis of the account of the *moral* of the two opposing parties in the world-war is equally obvious Given the assumption that Attica was once a much more fertile and populous district than it is at present and had a flourishing history for centuries, the conclusion is natural that the *moral* and political institutions of the inhabitants were remarkably sound When this thesis is combined with one on which all the parties to the conversation are agreed, that the foundations of a sound public and private *moral* are the principles advocated by Socrates in the *Republic*, it follows at once that the life of the prehistoric Athenians must have been much what Critias asserts The account of the institutions of Atlantis admits of an equally simple explanation The moral of the story is to be that a morally sound public and private life will secure a nation against the greatest superiority in numbers and technical science on the part of its adversary To make the point the Atlantic confederacy must be described as equipped with all the advantages of vast numbers, immense material wealth and marvellous technical skill, but inferior in morality, and particularly in voluntary devotion to free institutions With all their high material civilization, they must be infected by the poison of what we to-day loosely call 'Orientalism', must be the hordes of a 'Sultan' This necessary flavour of 'Orientalism' is secured by a host of

not to be surprised, since Solon made a point of translating all the proper names of the tale! This rather farcical explanation should be enough to show that we are not meant to take the 'manuscripts of Solon' seriously

adroit touches The kings have, apart from an exception in favour of members of their own families, an arbitrary power over life and death (119 *c*), and are surrounded by a great army of personal body-guards (117 *d*), the basis of the military organization is the un-Hellenic war-chariot (119 *a*), even the great temple of Posidon has 'something not Hellenic' in its character, and there is probably a touch of irony in the account of the colossal size of the god's statue (119 *e*) Plato dwells on the size and splendour of this temple and its adornments, but we may note that he does not commend their beauty by a single word If, as is probable, he had seen works of this kind for himself in Egypt, we may conjecture that his verdict was that they were more impressive than really beautiful It is a little singular that the popular imagination which has been fascinated by this tale of Atlantis has always overlooked its central point These 'Oriental' invaders were splendid barbarians, but barbarians at heart in spite of their splendour, and moreover, the time of their greatest external splendour was the very period at which their innate barbarism had at last got the upper hand over what was best in them (121 *b*) Their great bid for *Weltmacht* was only a visible symptom of *Niedergang*

How the story was to have been continued we do not know We are told that Zeus was preparing a severe reverse for the haughty and self-confident nation, 'that they might be brought back to tune by the discipline' We know that the end of the tale was to be their complete annihilation It is not obvious how the two points of view were to be brought together Were the Atlantids to harden their hearts, like Pharaoh, and thus prove themselves 'incurables'? I should conjecture, from the prominence given to Posidon in the fragment, that this god, in any case, had a part to play in the story Did the kings end by estranging even their own *θεὸς πατρῷος*, and was the 'wrath of Posidon', a familiar motive in the Odyssey, to bring about the great deluge and earthquake? We can ask such questions, but have no means of answering them

The discourse is apparently feigned to be delivered on the day after that of Timaeus We might, indeed, suppose it to be uttered later on on the same day, since three such dialogues as the *Timaeus* would be together shorter than the *Republic*, and we must suppose this if the words of 110 *d* about what was said 'yesterday' be taken as an allusion to the *Republic* They may however, equally well refer directly to the recapitulation of the regulations of the *Republic* with which the *Timaeus* opens, and seem intended actually to recall *Timaeus* 26 *d* If the two discourses are meant to belong to one day, are we to assume that there has been 'an interval for luncheon'?

CRITIAS

TIMAEUS, CRITIAS, SOCRATES, HERMOCRATES

St III

106 TI Well, Socrates, at last I am barely in port after my voyage on the seas of discourse, and with what a sense of relief! I feel like some traveller at the end of a weary journey So I make it my prayer to the god [1] who has been born but now in our tale, though so long ago in fact, that he *b* will of his grace vouchsafe us retention of what has been spoken to purpose and visit us with the proper penalty for any false note we have unwittingly struck in our treatment of these matters Now the right penalty is that he who strays from tune should be brought back to it To the end, then, that our discourses of the making of gods may be rightly uttered hereafter, I call on him to grant us that surest and best of medicines, knowledge, and with this prayer I hand over the further continuance of the tale to Critias, as we agreed I should do

CRI Ay, Timaeus, and I accept the task But I, too, must once more make the same request you yourself *c* advanced before me: [2] I must crave indulgence on the score of the magnitude of the subject, and I think I have an *107* even better claim than yourself to a still further measure of consideration for what yet remains to be told To be sure, I am well aware that my request will seem vastly presumptuous and unduly tactless, yet made it must be. What man in his sound senses, indeed, could venture to dispute the excellence of your exposition? What I must try to show, as I can, is that the theme still to be expounded is more difficult to handle and consequently calls for yet

[1] I e the *οὐρανός*, which is itself a 'god', *Tim* 34 *b* 8, 92 *c* 7, *al.*
[2] *Tim* 29 *c*.

more generous allowances. In fact, Timaeus, upon an audience of human beings it is easier to produce the impression of adequate treatment in speaking of gods than in discoursing of mortals like ourselves The combination of unfamiliarity and sheer ignorance in an audience makes the task of one who is to treat a subject towards which they are in this state easy in the extreme, and in this matter of gods, we know, of course, how the case stands with us But to make my meaning still clearer, kindly follow an illustration All statements made by any of us are, of course, bound to be an affair of imagery and picturing Now, suppose we consider the ease or difficulty with which an artist's portraiture of figures divine and human respectively produces the impression of satisfactory reproduction on the spectator We shall observe that in the case of earth, mountains, rivers, woodland, the sky as a whole and the several revolving bodies located in it,[1] for one thing, the artist is always well content if he can reproduce them with some faint degree of resemblance, and, for another, that since our knowledge of such objects is never exact, we submit his design to no criticism or scrutiny, but acquiesce, in these cases, in a dim and deceptive outline But when it is our own human form that the artist undertakes to depict, daily familiar observation makes us quick to detect shortcomings and we show ourselves severe critics of one who does not present us with full and perfect resemblance Well, we should recognize that the same is true of discourses where the subjects of them are celestial and divine, we are satisfied by mere faint verisimilitudes, where mortal and human, we are exacting critics So with our present unrehearsed narrative, if we do not succeed in reproducing the proper touches perfectly, allowances should be made In fact, we ought to understand that to depict human life impressively is hard, not easy It is to remind you all of this, Socrates, and to plead

[1] These *magnalia naturae* are contrasted with the human form as examples of 'divine' bodies Critias is making the double point that *artists* are content to indicate them in vague outline, and that this is all the *public* look for

for a greater, not a lesser, measure of indulgence for what I am now to relate, that I have made this long speech. If you all feel that my appeal for this favour is justified, pray grant it without demur

So To be sure we will, Critias What is more, the same favour may be taken as granted by anticipation to Hermocrates after you. For I see plainly enough that by and by, when it comes to his turn to speak, he will make the same
b request as his precursors As I would have him cast about for a fresh exordium and not be driven to repeat the old one, he may make his speech with the assurance that consideration is guaranteed him when the time comes Still, I would warn you, my dear Critias, of the temper of your auditory, the composer who preceded you made a wonderfully favourable impression, and you will need the most generous indulgence if you are to prove equal to succeeding him.[1]

HERM That, Socrates, is a warning as much to me as to our friend. Still, Critias, 'faint heart never yet set up
c trophy', so you must launch out into your narrative like a man, calling Paean and the Muses to aid you in displaying and lauding the worth of your fellow-Athenians of ancient days

CRI Ah, my dear Hermocrates, your post is in the rear rank, under cover of another, that is why your spirits are still undashed Well, you may very possibly discover what the situation is like for yourself, in the course of events, meanwhile I must, at any rate, follow your encouraging advice and invoke the gods at large, including those you
d have mentioned, but above all Memory She is the power on whom the whole fortune of my discourse most depends If I can only sufficiently recall and repeat the story as it was once told by the priests and brought home to this

[1] Socrates compares Timaeus, Critias and Hermocrates with dramatists competing at the Dionysia before an auditorium (*θέατρον*), which, in fact, means himself, the party for whose entertainment their discourses were to be delivered (*Tim* 17 *a*, 20 *b–c*) The audience, he says, is already strongly prepossessed in favour of the first performer, Timaeus.

country by Solon, I am confident that my present audience will pronounce me to have discharged my task with reasonable credit Well, I must proceed to the story itself at once, without further delay

e In the very first place, let us remind ourselves that it is in all nine thousand years since a general war, of which we are now to relate the course, was declared between those who dwelt without and those who dwelt within the pillars of Heracles The command of the latter was taken, and the war conducted throughout, as the story ran, by our own city, the leaders of the other party were the kings of the island of Atlantis Atlantis, as you will recollect, was once, we said, an island larger than Libya and Asia together, it has now been engulfed by earthquakes and is the source of the impassable mud which prevents navigators from this
109 quarter from advancing through the straits into the open Ocean As for the mass of the barbarian peoples and the Hellenic communities of those days, the various details will become plain on occasion as the course of the narrative unfolds But we shall have to begin with a preliminary review of the respective resources and polities of the Athenians of the time and the antagonists against whom the war was waged, and of the two parties we must give the precedence to our own countrymen

b Of old, then, the gods distributed the whole earth by regions, and that without contention (That gods know not their several dues, or if they know them, yet some seek by contention to engross to themselves what more properly belongs to others[1]—these are perverse imaginations) They apportioned to each his own by righteous allotment, settled their territories and, when they had settled them, fell to feeding us, their bestial and flocks there, as herdsmen do their cattle Only they would not coerce body with body
c in the fashion of shepherds who drive their flocks to pasture with blows, they set the course of the living creature from that part about which it turns most readily, its prow, con-

[1] The polemical reference is particularly to the famous story of the contention of Posidon and Athena for the possession of Athens

trolling its soul after their own mind by persuasion as by a rudder, and so moving and steering the whole mortal fabric [1] Thus divers gods received divers districts as their portions and reigned over them But Hephaestus and Athena, as they had one nature, being brother and sister by the same father, and at one, moreover, in their love of wisdom and artistry, so also obtained one lot in common, this our land, *d* to be a home meet for prowess and understanding They produced from the soil a race of good men and taught them the order of their polity, their names have been preserved, but their deeds forgotten by reason of the destructions of their successors and the lapse of time. For the remnant of survivors, as has, indeed, been already said, was ever left unlettered among its mountains, and had heard no more than the names of the country's rulers and a few of their *e* deeds. So they were well pleased to give the names to their sons, but as for the virtues and laws of older generations, they knew nothing of them beyond some dim reports, but were, for many generations, themselves and their children, in want of bare necessaries So they gave their minds to their own needs and made their discourses of them, *110* forgetting the story of far-away early days For legendary lore and inquiry into ancient things both visit cities in the train of leisure, when they see men already provided with the necessaries of life, and not before Thus it has come about that the names of the ancients have been preserved without any memorial of their deeds. My warrant for what I say is this · Cecrops, Erechtheus, Erichthonius, Erysichthon, and most of the recorded names before Theseus *b* are, in the main, the very names given, as Solon said, by the priests in their tale of that distant war, as are also the names of the women And in especial, the figure and

[1] We are God's flock, but there are three ways in which his treatment of us differs from that of the shepherd of sheep He uses persuasion, not force, he acts on the mind, not on the body, and his superiority is mental, not physical In *c* 4 I take *πᾶν τὸ θνητόν* to mean 'the whole composite of body and (mortal) soul' rather than 'the whole human race'.

image of the goddess, whom they of old set up in armour, according to the custom of their time, when exercises of war were common to woman and man alike,[1] signifies that
c in all living creatures that company together female with male, nature ever grants it to both to practise the excellence proper to their kind

Now, at that time most sorts of citizens who dwelt in this land were busied with handicrafts and tillage of the soil, but the fighting sort had been set apart at the first by godlike men and dwelt by themselves, furnished with all that was proper for their sustenance and training None of them had any private possession of his own, they looked on all
d things as the common store of all, seeking to receive from their fellow-citizens nothing beyond sufficient sustenance, in short, they followed all the practices we spoke of yesterday[2] when we talked of those feigned guardians In particular, there is truth and credibility in what we said of the territory, as first that its boundaries were then drawn at the
e Isthmus and, on the side of the mainland, at the summits of Cithaeron and Parnes, and its borders came down to the sea with Oropus[3] on the right, and the Asopus shut out on the left, again, that the soil far surpassed all others, which, indeed, is why the district could then maintain a great army exempt from all tasks of husbandry And here is good evidence of its excellence, the remnant now left of it is a match for any soil in the world in the variety and quality
111 of its harvests and the pasturage it yields to all sorts of cattle But of old its yield was most copious as well as

[1] On the construction see Stallbaum's note. As he points out, *ὡς κοινά—τοῖς τότε* is an epexegesis interjected in the main enunciation

[2] The reference is probably not to the *Republic*, but to *Tim* 17 *d* ff, as it is hardly to be supposed that Timaeus and Critias are imagined both to be speaking on the same day The statement that the boundaries of prehistoric Attica had been already mentioned is an oversight

[3] The boundaries are thus those claimed by Attica at its most prosperous, under Pericles They represent what Critias regards as the 'legitimate claims' of his state.

excellent What proof is there of this, and why are we right to call it [1] a remnant of the land of those days? It is one long projection running out from the main body of the continent into the open sea, like a headland, and, as we know, the marine basin that borders it is extremely deep. So, while there have been many formidable deluges in the course of the nine thousand years—that is the interval
b between the date we are speaking of and the present—the soil washed away from the higher levels in these periodical convulsions does not deposit any notable sediment, as in some other regions, but is regularly carried off and lost in the depths [2] Consequently that has happened which happens in little islets, by comparison with the original territory, what is left now is, so to say, the skeleton of a body wasted by disease, the rich, soft soil has been carried off and only the bare framework of the district left At the
c time we are speaking of these ravages had not begun, our present mountains were high crests,[3] what we now call the plains of Phelleus were covered with rich soil, and there was abundant timber on the mountains, of which traces may still be seen For some of our mountains at present will only support trees, but not so very long ago trees fit for the roofs of vast buildings were felled there and the rafters are still in existence [4] There were also many other lofty cultivated

[1] Sc Attica as it now is, the subject of the last sentence of 110.

[2] The thought, then, is that it is the depth of the Aegaean in the neighbourhood of Attica which accounts for the process of denudation Were the sea shallower, the effect of the periodical deluges would be merely to raise the level of its bed and to leave an alluvial deposit along its margin

[3] I.e what are now ὄρη, bare rocks and crags, were then hills covered with fertile soil

[4] There is something wrong with the sentence, but the true text cannot be certainly restored, though the sense is as given above. The alternatives are to 'emend', though no emendation seems very probable, or to suppose the loss of a few words Thus Cobet supplies after *δένδρων*, III *c* 5, some such clause as *μεγάλων τε καὶ ὑφηλῶν ἦν, μεστὰ πάντα καὶ ἐκ τῶν ξύλων τῶν*, 'they were all full of huge high trees, and rafters of the beams felled there, suitable for the roofs of vast buildings, are still in existence'.

trees which[1] provided unlimited fodder for beasts[1] Besides, the soil got the benefit of the yearly 'water from Zeus',[2] which was not lost, as it is to-day, by running off
d a barren ground to the sea, a plentiful supply of it was received into the soil and stored up in the layers of non-porous potter's clay. Thus the moisture absorbed in the higher regions percolated to the hollows and so all quarters were lavishly provided with springs and rivers Even to this day the sanctuaries at their former sources survive to prove the truth of our present account of the country
e This, then, was the natural condition of the district at large, and it had received cultivation such as might be expected from true husbandmen with no other vocation who were also lovers of all that is noble and men of admirable natural parts, possessed of an excellent soil, a generous water-supply and an eminently temperate climate.
e As for the town, its plan at that time was as follows. To begin with, the Acropolis was not then as it is now At
112 present it has been washed bare of soil by one night of extraordinary floods in which an earthquake and the third terrible deluge before that of Deucalion befel together But in other and earlier days it was so large that it reached to the Eridanus and Ilissus, enclosing the Pnyx and bounded on the side facing it by Lycabettus, the whole was covered with soil and, save here and there, the surface was level Without, directly under its slopes, were the dwell-
b ings of the craftsmen and the husbandmen who tilled the adjoining fields, higher up the fighting force had its abode by itself round the temple of Athena and Hephaestus, girdled by a single wall, like the garden of one house On the northern side they had fashioned their common dwelling-houses and winter mess-rooms, with all that was proper for
c their mode of life in common in the way of buildings for themselves and temples, but no gold nor silver, for they made no use of these metals for any purpose They aimed

[1] Or 'and it (the soil) provided' But I believe Plato is thinking of acorns, and that the 'beasts' are pigs

[2] The rain-supply

at the mean between splendour and meanness, dwelling in decent houses where they grew old, themselves and their children's children, each succeeding generation leaving them to another like itself. As for the southern side, in the summer, as was natural, they forsook their gardens, gymnasia and mess-rooms and used it for these purposes. There was
d only one fountain, on the site of the present Acropolis. This has been choked by the earthquake and to-day only shrunken rills remain in the vicinity Then it provided all with an abundant supply of water equally wholesome in winter and summer Such was their manner of life, then, they were at once guardians of their fellow-citizens and freely followed leaders of the Hellenes at large, the number of both sexes already qualified and still qualified to bear arms [1] they were careful to keep, as nearly as possible, always the same,
e roughly some twenty thousand

With such personalities and such a standing method of administering Hellas and their own commonwealth in righteousness, they were famous throughout Europe and Asia alike for the comeliness of their persons and for every virtue of the soul, and had the greatest name of the time. As for the condition and early history of their antagonists, if my memories of the tale I heard as a boy do not play me false, I will now impart the story freely to you as friends [2]
113 But before I begin my narrative, I must make a brief explanation, or you may be surprised to hear of so many barbarians with Hellenic names So I will give you the reason for this Solon had a fancy to turn the tale to account in his own poetry, so he asked questions about the significance of the names and discovered that the original Egyptian authors of the narrative had translated them into their own speech In his turn, as he learned the sense of a
b name, he translated it back again, in his manuscript, into our own language His actual papers were once in my

[1] I e the number of those neither under the lower nor above the higher limit of the military age

[2] An allusion to the saying of Pythagoras, *κοινὰ τὰ τῶν φίλων*. 'What belongs to friends is common good'

father's hands, and are in my own, to this day, and I studied them thoroughly in my boyhood So if you hear names like those of our own countrymen, you must not be surprised, I have given you the explanation Well, then, the story—and a long story it is—began much in this fashion. As we said before, when we were speaking of the 'lots', the gods divided the whole earth into lots, some larger, some smaller, *c* and established their temples and sacrifices in them Poseidon, then, thus receiving as his lot the isle of Atlantis, settled his sons by a mortal woman in a district of it which must now be described By the sea, in the centre of the island,[1] there was a plain, said to have been the most beauteous of all such plains and very fertile, and, again, near the centre of this plain, at a distance of some fifty furlongs, *d* a mountain which was nowhere of any great altitude. In this mountain lived one of the original earth-born men of that region, named Euenor, with his wife Leucippe The pair had an only daughter Clito, who was just husband-high when her mother and father both died Poseidon desired this damsel, had to do with her and fortified the hill where she had her abode by a fence of alternate rings of sea and land, smaller and greater, one within another He fashioned two such round wheels, as we may call them, of earth and *e* three of sea from the very centre of the island, at uniform distances, thus making the spot inaccessible to man, for there were as yet no ships and no seafaring The island left at their centre he adorned with his own hand [2]—a light enough task for a god—causing two fountains to flow from underground springs, one warm, the other cold, and the soil to send up abundance of food-plants of all kinds. He then begat five twin births of male offspring and divided the *114* whole isle of Atlantis into ten parts On the earliest born of the first pair he bestowed their mother's dwelling-place

[1] I e in the centre of its greatest length

[2] As M Rivaud notes, an antithesis is intended between the natural advantages of the island, which are ascribed to Poseidon, and the great engineering works, yet to be described, constructed by the inhabitants themselves

with the lot of land surrounding it, the best and largest of all, and appointed him king over his brethren. The rest he made princes, granting each of them the sovereignty over a large population and the lordship of wide lands. Further, he gave names to them all. Their king, the eldest, received a name from which the Ocean, as well as the whole island, got its designation, it is called Atlantic, because the name
b of the first king of old times was Atlas His younger twin-brother, to whose share fell the extremity of the island off the pillars of Heracles, fronting the region now known as Gadira,[1] from the name of his territory, was called in Greek Eumelus, but in the language of his own country Gadirus, and no doubt his name was the origin of that of the district One of the second pair was called Ampheres, the other Euaemon, the elder of the third Mneseus and his junior
c Autochthon, the elder of the fourth Elasippus, the younger Mestor, Azaes was the name of the elder of the fifth pair, that of his brother Diaprepes All these and their descendants for many generations reigned as princes of numerous islands of the ocean besides their own, and were also, as has been already said, suzerains of the population of the hither or inner side of the straits, as far as
d Egypt and Tyrrhenia Now from Atlas sprang a prolific and illustrious house which retained the throne for many generations, the eldest being always king and transmitting the succession to his eldest descendant They possessed wealth such as had never been amassed by any royal line before them and could not be easily matched by any after, and were equipped with all resources required for their city and dominions at large Though their empire brought them a great external revenue, it was the island itself which
e furnished the main provision for all purposes of life. In the first place it yielded all products of the miner's industry, solid and fusible [2] alike, including one which is now only a

[1] I e Cadiz and its neighbourhood, the country of the Gaditani

[2] The 'solid' products here mean stone from the quarries (marble, etc), the 'fusible' (τηκτά) metals from the mines, metals being regarded, as in the *Timaeus*, as liquids with a high 'freezing-point'.

name but was then something more, orichalc, which was excavated in various parts of the island, and had then a higher value than any metal except gold It also bore in its forests a generous supply of all timbers serviceable to the carpenter and builder and maintained a sufficiency of animals wild and domesticated; even elephants were plentiful There was ample pasture for this the largest and most voracious of brutes, no less than for all the other creatures of marsh, lake and river, mountain and plain
115 Besides all this, the soil bore all aromatic substances still to be found on earth, roots, stalks, canes, gums exuded by flowers and fruits, and they throve on it Then, as for cultivated fruits, the dry sort which is meant to be our food-supply and those others we use as solid nutriment [1]—we
b call the various kinds pulse—as well as the woodland kind which gives us meat and drink and oil together,[2] the fruit
c of trees that ministers to our pleasure and merriment and is so hard to preserve, and that we serve as welcome dessert to a jaded man to charm away his satiety,[3]—all these were produced by that sacred island, which then lay open to the sun, in marvellous beauty and inexhaustible profusion So

As orichalc is mentioned by Plato only in the *Critias*, it is impossible to say what he meant by the word, or even whether he meant anything that has ever really existed

[1] As I understand, the distinction is between the cereals, regarded as our natural 'staff of life,' and 'pulse' of various kinds which we employ in addition to these (*προσγρώμεθα*, 115 *a* 7) M. Rivaud renders, 'the grains which have been created to nourish us and from which we get flours' But this involves overlooking a distinction clearly marked in the Greek and mistranslating *ὄσπρια*, 'pulse', in 115 *b* 1, by 'cereals'

[2] *ὅσος ξύλινος*, 115 *b* 1, can hardly mean anything but fruit growing on trees (as contrasted with cereals and pulse) As it is apparently opposed to *ἥμερον καρπόν* (115 *a* 6), 'wild-fruit' seems to be what is in the writer's mind (So L and S) But the antithesis is a false one, since Plato cannot have meant to suggest that the 'Atlantids' did not cultivate, e g, the vine or the olive The *Critias* has all the marks of being an unrevised as well as an unfinished sketch

[3] It is not clear precisely what fruits are meant, I doubt if Plato could have specified them more exactly himself

the kings employed all these gifts of the soil to construct and
c beautify their temples, royal residences, harbours, docks and domain in general on the following plan

They first bridged [1] the rings of sea round their original home, thus making themselves a road from and to their palace. This palace they originally built at the outset in the dwelling-place of the god and their ancestors, and each monarch, as he inherited it in his turn, added beauties to its existing beauties, always doing his utmost to surpass his
d predecessor, until they had made the residence a marvel for the size and splendour of its buildings They began on the sea side by cutting a canal to the outermost ring, fifty furlongs long, three hundred feet broad, and a hundred feet deep ; the ' ring ' could now be entered from the sea by this canal like a port, as the opening they had made would admit the largest of vessels Further, at these bridges they made openings in the rings of land which separated those
e of water, just sufficient to admit the passage of a single trireme, and covered the openings in so that the voyage through them became subterranean, for the banks of the rings of earth were considerably elevated above the sea-level The breadth of the largest ring of water, that to which the canal from the sea had been made, was three furlongs and a half, and that of the contiguous ring of land the same. Of the second pair, the ring of water had a breadth of two furlongs and that of land was once more equal in breadth to the water outside it, the land which immediately surrounded the central islet was in breadth one
116 furlong, the islet on which the palace stood had a diameter of five furlongs. So they enclosed this islet with the rings and bridge, which had a breadth of a hundred feet, completely by a stone wall, building towers and gates on the bridges at either end [2] of each passage for the sea-water.

[1] Here we begin the account of what was done for Atlantis by human ingenuity On the details of the town-planning and engineering see Friedländer, *Platon*, Excursus II, with his useful Plates II and III

[2] ἑκαστα χόσε, 116 *a* 6, or the word may mean, as Friedländer says, ' to right and left of '

The stone, black, white and red, they quarried beneath the
b whole central islet and outer and inner rings, thus, by the same process, excavating a pair of interior basins[1] for shipping with a roofing of native rock Some of their buildings were of a single colour, in other cases they entertained themselves by intermingling the stones to produce variegated surfaces of an inherently agreeable character The whole circuit of the outermost wall they covered with a coat, a ceruse, as one might say, of copper, the inner with
c melted tin, and the wall of the actual acropolis with orichalc which gleamed like fire

Within the acropolis was the palace with the following design In the very centre, surrounded by a golden railing, which it was forbidden to enter, was an untrodden sanctuary sacred to Clito and Posidon, the very place where the race of the ten princes had been first conceived and begotten, there, too, the seasonable offerings were made yearly to
d each of them[2] from all the ten lots Posidon himself had a temple, a furlong long and half a furlong broad, with a proportionate height, but something un-Hellenic in its aspect. The whole exterior of this temple was coated with silver, except the figures on the pediments, these were covered with gold. Within, the roof was throughout of ivory, ornamented with gold, silver and orichalc, and all the rest, walls, columns, pavement, were covered with orichalc. It contained golden statues of the god standing in a chariot
e drawn by six winged horses, and on such a scale that his head touched the roof, and of a hundred Nereids round him riding on dolphins, for that was then believed to be the number of the Nereids It also contained many other statues dedicated by private persons Outside the temple there stood golden statues of all the wives of those who had been of the number of the ten kings and

[1] Does ἐντός, 116 *b* 2, mean, as M Rivaud assumes, that these basins were on the coast of the central islet, or may it only mean that they were in the 'inner ring'?

[2] I e to each of the original ten princes, who would receive worship from their descendants, not to Posidon and Clito

of themselves,[1] and many other great statues, dedicated by kings and private persons of the country itself and the foreign nations over whom they were suzerain There was an altar of size and workmanship to match the edifice, the palace, too, was no less worthy of the grandeur of the empire and the magnificence of its temples Uses were found for the waters of the two springs, the cold and the warm The supply from both was copious and the natural flavour and virtues of their waters remarkable[2] So they were surrounded by buildings and plantations of appropriate trees as well as with a number of basins, some open to the air and others, which were used as warm baths in winter, covered Of these there were several sets, for the kings, for private citizens and for women, and yet others for horses and other beasts of burden, each set with its own appropriate equipment The waste from them was conducted to the grove of Poseidon, where the trees were of every kind and, thanks to the excellence of the soil, of incredible size and beauty, and then let into the outer rings of water by conduits at the bridges Here, besides numerous temples to different gods, they had constructed a variety of gardens and gymnasia Some of the last were for men, there were others on each of the two islands formed by the rings, specially for horses In particular, they had a space reserved as a racecourse in the centre of the larger of these islands, its breadth was a furlong and the whole length of the circumference was left free for the contests Round this

[1] M Rivaud takes *αὐτῶν δσοι τῶν δέκα ἐγεγόνεσαν βασιλέων* to mean 'all who were descended from the ten kings' This, I think, would make the number of golden statues fabulous, and if it is Plato's meaning, it is odd that he should have said nothing about statues of the kings themselves Nor do I quite see what would be the point of the *αὐτῶν* with this rendering

[2] The structure of the words *ταῖς δὲ δή—ἐχρῶντο*, 117 *a* 4–6, defies formal grammar There may be some minor error in transcription, e g possibly in *a* 6 *πρὸς ἑκατέρου* should be *ἑκατέρου πρός*, but we are probably dealing with a sentence which had never received definite form from its author.

race-course on both sides were barracks for the main body of the bodyguards, a number of the more trusty were
d stationed in the smaller ring, nearer the citadel, to the most eminently trustworthy of all quarters were assigned within the citadel about the persons of the kings The dockyards were filled with triremes and their appropriate equipments, all in excellent order So much, then, for the appointments of the royal residence When one had passed the three outer harbours, a wall ran all round, starting at
e the sea, at a uniform distance of fifty furlongs from the greatest ring and its harbour, returning on itself at the mouth of the canal from the sea [1] This wall was completely filled by a multitude of closely set houses, and the large harbour and canal were constantly crowded by merchant-vessels and their passengers arriving from all quarters, whose vast numbers occasioned incessant shouting, clamour
a and general uproar, day and night

I have now given you a pretty faithful report of what I once [2] learned of the town and the old palace, and must
118 do my best to recall the general character of the territory and its organization To begin with, the district as a whole, so I have heard, was of great elevation and its coast precipitous, but all round the city was a plain, enclosing it and itself enclosed in turn by mountain ranges which

[1] Here again there are difficulties probably created by the unrevised state of the text As it stands *συνέκλειεν*, 117 *e* 3, must be rendered intransitively, 'closed in', 'returned on itself', and there is apparently no parallel for this use before Hellenistic times Hence Stallbaum's proposal to omit the first *πρός* in the line and to emend the *τὸ* before *πρὸς θαλάττης* to *τῷ*, with the sense that the wall 'enclosed together the mouth of the canal and the opening of the sea' But the canal is that described at 115 *d* 3 Hence its 'mouth' is surely the same thing as the 'opening of the sea'

[2] *ὡς τότ' ἐλέχθη*, 117 *e* 10 *τότε*, 'then', refers, as the tense shows, to the occasion when Critias heard the story from his grandfather (*Tim* 21 *a* ff) Contrast the tense of *τότε ὑμνεῖτο*, 118 *b* 3, where *τότε* means 'in the days of the Atlantids' The *ἐλέγετο* of 118 *a* 2 refers to the same occasion as *ἐλέχθη* here, but *λέγω* is one of the few verbs whose imperfects can be used in this aoristic sense

came right down to the sea The plain itself was smooth, level, and of a generally oblong shape, it stretched for three thousand furlongs in one direction, and, at its centre,
b for two thousand inland from the coast All through the island this level district faced the south and was thus screened from the cold northerly winds In those times it was famous for its encircling mountains, which were more numerous, huge and beautiful than any that exist to-day These mountains contained numerous villages with a wealthy population, besides rivers, lakes and meadows which provided plentiful sustenance for all sorts of animals, wild or domestic, and timber of different kinds in quantities amply sufficient for manufactures of
c every type Well, this plain, in consequence partly of its original structure, partly of the long-continued exertions of a succession of kings, had assumed an aspect which I shall now describe From the first, it was naturally quadrangular, oblong and nearly rectangular, departures from that shape had been corrected by the carrying of a fosse round it As to the depth, breadth, and length of this fosse, it sounds incredible[1] that any work of human hands should be so vast by comparison with other achievements of the kind, but I have to tell the tale as I heard it It had been dug to the depth of a hundred feet, had everywhere a furlong in breadth, and, as it was carried
d completely round the plain, its length came to ten thousand furlongs[2] It received the watercourses which came down from the mountains, made the tour of the plain, meeting the city in both directions, and was thence allowed to discharge into the sea[3] Beyond the city,[4] straight canals

[1] I translate the reading of F, *λεχθέν* in 118 *c* 5 With the *τὸ λεχθέν* of A the rendering is 'What was told me is incredible, viz that any work, etc'

[2] With what follows compare again Friedlander, *Platon*, Excursus II, and the annexed Plate II

[3] I e the line of the fosse touched the circular outer wall of the city at the point where the canal already described had its outlet.

[4] *ἄνωθεν ἀπ' αὐτῆς*, 118 *d* 5 *ἄνωθεν* means further back from the sea, higher up towards the inland line of mountains *αὐτῆς*

of some hundred feet in width, terminated once more at the fosse on the sea side, were drawn across the plain, with a distance of a hundred furlongs between every two They were used for the floating of timber down to the
e town from the mountains and the conveyance by boat of natural produce generally, oblique channels of cross-communication being cut from these canals to one another and the city There were actually two harvests in the year, in the winter the husbandmen trusted to the sky for their irrigation, in the summer they looked to the earth, and released the waters of the canals As to their numbers,
119 each allotment of land was under an injunction to furnish one leader of a military detachment, the area of the allotment was ten furlongs by ten, and the total number of these allotments mounted to sixty thousand The number of units supplied by the mountains and the territory at large was said to be enormous, and all were regularly assigned to the different allotments and leaders according to their districts or villages Each leader was then enjoined to furnish the army with the following contribution one sixth part of a war-chariot, up to the full complement of ten thousand such chariots, two chargers with their
b riders, a pair of horses without car but supplied with a dragoon with light shield and a driver for the pair, to stand behind the combatant,[1] two hoplites, a pair of archers and the same number of slingers, three light-armed throwers of stones and the same number of javelin-men, four marines, up to the full complement of twelve hundred

plainly means the *city*, not the *fosse* (as M Rivaud renders by some oversight) The city wall is a circle to which the seaward side of the fosse is a tangent the side parallel to this lies back towards the mountains

[1] *μετ' ἐπιβάτην*, 119 *b* 2 It is odd that Plato only mentions the fully-armed fighter whom this pair of horses is intended to carry into the fight in this incidental way M Rivaud's version identifies combatant and driver, but only by neglecting the *μετά* We might take *μετεπιβάτην* as one word, 'as an auxiliary combatant', but the compound looks dubiously sound, and the driver would *not* = combat'

vessels. This was the war equipment of the royal city; in the other nine there were various arrangements which would take much time to describe

c The distribution of power and prerogative was, and had from the first, been this Each of the ten kings was, in his own territory and government, supreme over persons, and, for the most part, over the laws, and could chastise and put to death at his pleasure But their authority over and intercourse with one another was regulated by the commands of Posidon, as they were informed by the law and by an inscription left by the earliest kings on a column of orichalc *d* preserved in the sanctuary of Posidon in the centre of the island Here, in fact, they were accustomed to assemble at alternate intervals of four and five years, thus showing equal respect for even number and odd, in these sessions, they deliberated on their common affairs, made inquiry whether any of them were transgressing the law, and pronounced judgement When they were to give judgement, they first exchanged pledges in this fashion. In the sanctuary of Posidon consecrated bulls roamed at large. So the ten came unattended and made prayer to the god *e* that they might capture the victim of his preference. Then they gave chase with wooden clubs and cords only, but no implement of iron, what bull soever they took they brought him to the column and slew him over it, wetting the inscription with his blood [1] Now there was written on the column, besides the laws, an oath calling down grievous curses on the disobedient So when they had offered sacrifice after their own ritual and were devot-
120 ing [2] all the bull's members, they would mingle a bowl of wine,[3] casting in one clot of the blood for each man,

[1] *κατὰ τῶν γραμμάτων*, 119 *e* 3 The bull's throat was cut over the column, so that the blood flowed down on the inscription

[2] *καθαγίζοιεν*, 120 *a* 1, implies destruction of the victim by *burning* Hence the immediate mention of the 'fire'

[3] The bowl contains wine, in which is mingled a single clot of the victim's blood for each of the ten kings The clots are not for 'aspersion', but to be drunk in the wine I mention this because

the rest of the blood they cast into the fire, first cleansing the column Then they drew the wine from the bowl in golden beakers, made a libation over the fire and swore on oath that they would give judgement according to the laws upon the column, would chastise any who had heretofore transgressed and hereafter transgress none of these ordinances wittingly, neither giving nor obeying command-
b ment save according to the laws of their father When each had taken this vow for himself and his house after him, he drank and dedicated his beaker in the god's sanctuary, and so betook himself to the banquet and necessary business When dark fell and the fire of the offerings was burnt down, all vested themselves in fair robes of deep blue, and seated themselves so by the embers of their sacrifice, on the bare earth, and by night, quenching all
c fire in the sanctuary Thus they gave and received judgement, if any charged any with transgression Judgement given, when the morning came, they wrote the judgements on a plate of gold and dedicated it and their robes for a memorial Now there were many more special laws concerning the rights of the several kings, but the chief of these were that they should bear no arms one against another and that if any should essay to overthrow the royal house of any city, all should come to its help—but
d ever in accord with the rule of their ancestors, they should take counsel[1] in common for war and all other affairs, and the chief command should be given to the house of Atlas Also, the king[2] should have no power over the life of any

M Rivaud has unfortunately quite mistaken the character of the ceremony The *drinking* of the blood mingled with the wine is its central ritual act The banquet mentioned below is, of course, not furnished by the body of the bull That was made a 'whole burnt-offering'

[1] *βουλευόμενοι*, 120 *d* 1 Here, again, formal grammar completely breaks down, probably rather because the text is an unrevised 'first draft' than from any corruption in transmission

[2] *τὸν βασιλέα*, 120 *d* 3, is the descendant of Atlas who, according to the story, is always the suzerain of the other nine monarchs That, except for this privilege of the blood royal, the monarchs

of his kinsmen, save with the approval of more than half of the ten.

Now this mighty and wondrous power, which then was in that region, the god [1] arrayed and brought against this our own region, the cause, as the tale goes, being this
e For many generations, while the god's strain in them was still vigorous, they gave obedience to the laws and affection to the divine whereto they were akin They were indeed true-hearted and great-hearted, bearing themselves to one another and to their various fortunes with judgement and humbleness They thought scorn of all things save virtue and counted their present prosperity a little thing So
121 they found the weight of their gold and other possessions a light load Wealth made them not drunken with wantonness, their mastery of themselves was not lost, nor their steps made uncertain They perceived with the clear vision of the sober that even these things all receive increase from virtue and mutual love, whereas where the first are sought and held in honour, they decay themselves and the others perish with them So by reason of such thoughts and the divine strain that persisted in them, their wealth in the things of which we have told was still further increased But when the god's part in them began to wax
b faint by constant crossing with much mortality,[2] and the human temper to predominate, then they could no longer carry their fortunes, but began to behave themselves unseemly To the seeing eye they now began to seem foul, for they were losing the fairest bloom from their most precious treasure, but to such as could not see the true happy life, to appear at last fair and blest indeed, now

should have an arbitrary power of life and death is one of the deliberate touches by which Plato gives us to understand that there is all through something 'Oriental' about the splendours of Atlantis

[1] 'The god' may be Zeus, or 'deity' without more special reference But a comparison with *e* 1 below suggests that probably Zeus is meant

[2] I e the 'divine' strain grew feebler in each successive generation, from the introduction of a fresh human mother

that they were taking the infection [1] of wicked covetousness and pride of power Zeus, the god of gods, who governs his kingdom by law, having the eye by which such things are seen, beheld their goodly house in its grievous plight
c and was minded to lay a judgement on them, that the discipline might bring them back to tune So he gathered all the gods in his most honourable residence, even that that stands at the world's centre and overlooks all that has part in becoming, and when he had gathered them there, he said [2] .

[1] *ἐμπιμπλάμενοι*, 121 *b* 7, may, of course, simply mean 'swelling', but the other sense is common and I think called for by the metaphor which dominates the passage The thought seems to be that the dull eye may mistake symptoms of an infectious disorder, such as heightened colour and sparkling eyes, for the bloom of exceptional health and vigour In our own literature a similar metaphorical use has often been made of the deceptive high colour of incipient 'decline'

[2] The passage has sometimes been compared with the curious view of the *Cypria* that Zeus caused the Trojan War with a view to reducing over-population The motive suggested by Critias is on a higher moral plane Zeus plans a disastrous war in which the Atlantids are to be overthrown as a moral discipline for the vanquished It does not appear whether any wholesale destruction of the inhabitants of Atlantis was part of this 'purpose of Zeus' or not, since we do not know how Critias would have continued his story

APPENDIX I

ADDITIONAL NOTE ON 'TIMAEUS' 54 *b* 2

Timaeus 54 *b* 2, *τῷ τοῦτο ἐλέγξαντι καὶ ἀνευρόντι δὴ οὕτως ἔχον κεῖται φίλια* (or *φιλία*) *τὰ ἄθλα* In this phrase *δή* is the reading of all the best MSS (one inferior MS having *δή μή*) But does the text make a satisfactory sense? The statement referred to as *τοῦτο* is that which has just preceded, that the 'fairest' of all scalene triangles is that which is half an equilateral triangle (i e a triangle with the angles 30°, 60°, 90°). Why it is so fair, Timaeus says, is a longer story, but 'to him who tests the statement and finds it so (*δή*) the prize shall be awarded with our good will' (or, if we read *φιλία*, 'the prize of our friendship shall be awarded') If we are to take this utterance seriously, Timaeus is saying that he will confess the profound accomplishments of any man who can give the reason for the beauty of this particular triangle, i e he is saying that such a man is a 'distinguished mathematician'. Now we know, as I have pointed out in my *Commentary* ad loc., what was the special merit of this triangle in the eyes of the Pythagoreans, it was that its angles are in the ratios 1 2 3 To perceive this, we have only to be aware of two very elementary propositions, (*a*) that the sum of the three angles is two right angles and (*b*) that each angle of an equilateral triangle is therefore two-thirds of a right angle Since, then, one of the angles of Timaeus's figure is by construction a right angle and a second an angle of an equilateral triangle, it only requires a simple subtraction to see that the remaining angle must be one-third of a right angle. I cannot believe that Timaeus seriously means to praise the mathematical attainments of every one who can follow this elementary piece of reasoning. And we cannot take the words as a jest, because they would be merely pointless if understood so.

If we read *μή*, on the other hand, we get a sentence which is intelligible 'if a man can prove that this is *not* so,' says

Timaeus, 'I will not dispute the prize with him' Presumably this is a jest the man who can find three integers with simpler ratios than 1, 2, and 3, in fact, 'is too profound a mathematician' for him to compete with (Less probably, the words might be taken seriously and would still yield a respectable sense, they would then mean that there may be a triangle with some property even more elegant than this of having its angles respectively one-third, two-thirds, and three-thirds of a right angle, but if there is, it must be a property which it takes a deep mathematician to discover) The reading *μή* for *δή*, then, seems to me to give the sense required I can think of only one way of getting a satisfactory sense without it, and that is to suppose that the *ἀνα-* of *ἀνευρόντι* itself has the sense of *retro*, so that *ἀνευρόντι δή* would actually itself mean 'finds that it is *otherwise*' But though *ἀνευρίσκειν* is not an uncommon word, no instance, I believe, can be found in which it means anything but simply 'to discover' Until some one can produce an example of the sense 'to find otherwise', it seems safest to suppose that the *δή* of AFWY, etc, is a corruption of *μή*,—unless it is an actual deliberate 'correction' by scribes whose standard in mathematics was lower than Plato's ?

APPENDIX II

THE STORY OF ATLANTIS

It is as certain as such a thing can be that the whole story of Atlantis, including the statement that Solon had met with tales about the island in Egypt is one of Plato's imaginative fictions, though Proclus tells us that Crantor, who was a member of the Academy about 300 B C, took the narrative as history Strabo the geographer, who disbelieves the story himself, relates (II, 2) that it was credited by the famous Stoic polymath of the first century B C, Posidonius Even Pliny (*N H* II, 92) is sceptical At a later date Ammianus Marcellinus (XVII, 7), the historian and friend of the Emperor Julian, is a believer The great critic of the third century A D, Longinus, regarded the whole narrative as a fanciful 'literary ornament' Many of the Neo-platonists treated it as allegory, though they were not agreed about its interpretation. The less critical among them, Iamblichus, Syrianus and others, took it for history, and Proclus thinks it due to Plato's character for veracity to hold that view The early Byzantine geographer Cosmas Indicopleustes tries to fit Atlantis into his scheme of cosmography based on scripture The Middle Ages are said to show no interest in the matter, but the belief was revived in Renaissance times, partly by the rekindling of devotion to Plato, partly by the discovery of America, though the soundest scholars and geographers were mostly incredulous Bacon speaks in his own *New Atlantis* as though he admitted the former existence of the island, while regarding everything else as Plato's invention, but one cannot be sure how far he is in earnest Even Stallbaum, in the Introduction to his edition of the *Critias* (1838), suggests that Plato may have heard in Egypt some vague report of the existence of America From the sixteenth to the eighteenth century attempts were made to find traces of the lost island in many quarters, America, Ireland, the Azores, even

Australia and New Zealand On all these wild speculations much information will be found in the dissertation on the subject which forms *Note* 13 in T H Martin's edition of the *Timaeus* (*Études sur le Timée de Platon*, I, 257–333) The narrative of the foundation of the Atlantid kingdom was sometimes supposed to be a distorted echo of the Biblical traditions of the antediluvians, the learned Swede Olaus Rudbeck (1675), on the contrary, found the city described in the *Critias* in Upsala, and made the discovery part of his theory that Scandinavia was the original home of all the peoples of Europe and Asia Finally, in the late eighteenth century the unfortunate *savant* J S Bailly, in his *Lettres sur l'origine des sciences* (1777) and *Lettres sur l'Atlantide* (1779), identified Atlantis with Spitzbergen, which he made the original home of an extinct race who conquered Asia and invented all arts and sciences (This last point is altogether foreign to Plato His Atlantids, who were all swallowed by the sea 'in a day and a night', could clearly not be imagined to be the originators of still existing sciences)

Fancies of this kind have long disappeared from serious history and ethnology, though they still seem to have a curious fascination for the imperfectly educated No competent historian now doubts that the sciences of the Mediterranean peoples were an indigenous development, started by observational knowledge picked up through contact with Egypt and Babylon It is certain that neither Solon nor Plato could have learned anything in Egypt about the remote prehistory of Athens, and our increasing acquaintance with Egyptian records has done nothing to make it credible that the Egyptians had any cognizance of the existence of America

Where Plato really got the materials for his story, the story itself will tell us, if we read it with attention We still see in the *Critias* the train of reasoning by which he arrived at his conception of the physical geography of prehistoric Attica To endow its inhabitants with the characteristic institutions of the early books of the *Republic* is, as he as good as tells us, a stroke of his own imagination.

The marvellous wealth and engineering skill with which he credits their antagonists are demanded for the moral of his story, and the details given of the great hydraulic works of their monarchs and the incredible fertility of their territory are, as Mr Friedlander has observed, strikingly reminiscent

of Babylon and the Babylonian plain, of which Plato would get his knowledge from Herodotus, Xenophon and Ctesias To make the invaders come from the west is an idea probably suggested by the fact that the hosts of Xerxes, who are, no doubt, in Plato's mind, came from the opposite quarter, to put their capital on an island is natural to a thinker who held, as Plato does in the *Laws*, that the possession of naval superiority is a dangerous temptation to ungodly lust of domination Add a sailor's tale or two, coming in the end probably from Carthaginian seamen, of the existence of islands in the North Atlantic, and of the state of the seas west of the Straits of Gibraltar, and we have all the materials for the account of Atlantis Since the island does not exist now, it has to be removed by a catastrophe, and the peculiar character of this catastrophe, the combination of an earthquake and a great tidal wave, would be readily suggested by the fact that in Plato's own middle age (373 B C) the coast of Achaea was visited by precisely such a disaster, of which interesting notices have been preserved by Aristotle (*Meteorologica*, 343 *b* 1 ff., 368 *b* 6 ff), and Pausanias (VII, 24)

I have already, in a note to the translation of the *Critias*, given reasons for holding that even the statement that the tale was told to Solon by the Egyptian priests is a part of the fiction Would it be possible that it was actually heard in Egypt, not by Solon, but by Plato himself? I think not, I can believe that a bragging Egyptian priest might tell an Athenian traveller strange tales about wholly unknown or imaginary lands, but hardly that he would pretend to be able to give him information about the early history of Attica

It would be irrelevant to connect the story of Atlantis with the teachings of modern geology about the distribution of land and water in immensely remote times We are told that in the Tertiary Period there was a land-bridge across the North Atlantic, as there were several across the Mediterranean. But it is, of course, obvious that Plato could know nothing about this The general conception underlying *Tim* 25 *a* is that the seas known to the Greeks all open into one great ocean, which is, in its turn, ringed round by a land which is, to us, *terra incognita* The source of this representation is simply the old Homeric belief in the 'river' Oceanus, which girdles *our* known 'earth'.

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