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ARISTOTLE'S PSYCHOLOGY

IN GREEK AND ENGLISH,

WITH

INTRODUCTION AND NOTES

BY

EDWIN WALLACE, M.A.,
FELLOW AND TUTOR OF WORCESTER COLLEGE, OXFORD.

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PREFACE.

This edition of Aristotle's Psychology will, it is hoped, make the work more easily accessible to English readers. Trendelenburg's Commentary, especially with Belger's additions, is an admirable book of its kind, and without it the present work would never have been possible. But its somewhat obscure Latin and its tedious extracts from Simplicius and others probably repel many students. It seemed desirable besides, to test the value of Torstrik's criticisms in regard to several portions of the text. Without denying the existence of repetition and disorder in much that Aristotle wrote, or rather left in notes, I have tried in several passages to maintain the general correctness of the ordinary text against Torstrik's objections and 'emendations.'

Explanation however, rather than textual criticism, has been the end which I have set before myself. A few various readings have been given, but they are only a selection from the fuller list given in Trendelenburg and Torstrik. It seemed, in fact, useless to encumber the volume with lists of trifling variations—
some of which (especially in S) are evidently nothing but stupid and careless blunders. But I trust I have managed to pick out the more important deviations which the MSS. present. In annotating, my chief aim has been to trace the sequence of ideas in my author. Particularly I have tried to shew that some passages on which Torstrik supports his theory of a double recension of the text are not the mere duplicates he supposes.

The Introduction is intended to bring out the real value of Aristotle's psychological investigations and to connect them with his other writings. The importance of these psychological results is probably too fully recognised to make it necessary to insist upon them here. I have tried especially to shew that Aristotle's theory of soul as the truth of body gets over in many ways the dualism of popular psychology, and that his theory of creative reason, as the faculty of the a priori conditions of experience, solves to some extent the contradictions of his philosophy.

The translation seeks to be as literal as the Greek of Aristotle renders practicable. But in dealing with a writer whose works are of so fragmentary a nature as Aristotle's are, leave must be given to supply the links of thought by which his notes are to be connected and to expand at times a single particle into a sentence.
I have appended a list of some of the chief recent works dealing with Aristotle’s Psychology—most of which have helped me in some way or other in arriving at my conclusions. The list allows of abbreviated references in the Introduction and Notes, and may be useful to some readers. I am indebted to my friend, Mr J. Cook Wilson, Fellow and Tutor of Oriel College, for many valuable hints in connection with the Introduction; and to my brother, Mr William Wallace, Fellow and Tutor of Merton College, for various suggestions in the Translation. My special thanks are due to the Syndics of the Cambridge University Press for their liberality in undertaking the publication of the volume. Would that I could thank particularly a late member of their body—the Rev. W. M. Gunson, of Christ’s College—for the care he took in arranging preliminaries for me. His melancholy end made it impossible for me to consult him on some points where his shrewd insight would have been invaluable.

Oxford,
May, 1882.
MANUSCRIPTS OF THE PSYCHOLOGY.

E, cod. Parisiensis 1853.
L, " Vaticanus 253.
S, " Laurentianus 81, 1.
T, " Vaticanus 256.
U, " Vaticanus 260.
V, " Vaticanus 266.
W, " Vaticanus 1026.
y, " Parisiensis 2034.
RECENT WORKS RELATING TO THE PSYCHOLOGY OF ARISTOTLE.


Hertling (G. F. v.): Materie und Form und die Definition der Seele bei Aristoteles. Pp. 178, Bonn, 1871.


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INTRODUCTION.

I. The Psychological Treatises of Aristotle and their Relation to his other Works.

Psychology is not the science which the name of Aristotle most immediately suggests. We think of him as the author of that exhaustive analysis of thought and reasoning which we know as Logic, as the encyclopædic worker who first mapped out with any definiteness the limits of first philosophy or metaphysic, or as the writer of that most suggestive text-book of the moralist—the Nicomachean Ethics. But, if psychology be not so directly associated with the name of Aristotle, there can be no doubt but his labours first gave a satisfactory basis for a science dealing with the problems which we now describe as psychological. He is, in short, the founder of Psychology just as surely as he is the founder of Logic: or, at any rate, it is to Aristotle that we owe the first clear conception of a science which should confine itself to the phenomena connected with what we may for the moment call the mind. There had, it is true, been scattered remarks upon psychology spread throughout the observations of the pre-Socratic thinkers: and Plato had not only discussed such questions generally in his writings, but had devoted great part of several dialogues—especially the Phædrus, Phædo and Timæus, to this subject.
It had only been however in connection with other problems that the phenomena of mind had been discussed: and in Plato particularly the treatment of the question had been obscured by semi-mythical and mystical reflections which detracted from the value of his observations. It is different when we come to Aristotle. Not indeed that Aristotle views the subject in the abstract manner which would be expected from a modern inquirer. But, at the same time, as contrasted with the form of earlier theories, the psychological writings of Aristotle display a surprising power of isolating various phases of life and mind, without at the same time losing sight of their connection with allied phenomena. The same combination of analysis and synthesis which enabled him in dealing with moral facts to draw a line between Ethics and Politics¹ and yet recognise their essential unity, allowed him to study psychology in the abstract manner which the idea of a science renders necessary and at the same time give full weight to all those cognate circumstances which form as it were the setting of the conceptions of the special science.

These psychological writings comprehend a considerable number of distinct treatises. But there is one among them which may be regarded as the parent of the others. The Psychology proper (De Anima, as we generally call it), contains within the compass of some eighty or ninety pages the chief points in the psychological doctrine of Aristotle. It consists, as usually divided, of three books; of which the first is in the main a historical retrospect of pre-Aristotelian psychology, the second lays down the famous definition of the Soul and analyses at some length the faculties of sense-perception, while the third, if we regard the first and second chapters as belonging to the second rather than to the third book, is chiefly occupied

¹ Eth. Nic. vi. 8. 1. 1141b23, ἐστι δὲ καὶ ἡ πολιτικὴ καὶ ἡ φύσις ἡ αὐτῇ μὲν ἔξις, τὸ μὲντοι εἶναι οὐ ταύτῳ αὐταῖς—i.e. the moral ideal for the individual and for the state is one and the same, but its manner of realization (τὸ εἶναι) is different. Cp. X. 9. 1181b15, where the whole science is named ἡ περὶ τὰ ἀνθρώπινα φιλοσοφία.
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with the phenomena of thought and will. Comprehensive however as is Aristotle's main work on Psychology, it leaves almost untouched a number of subsidiary but important questions which require to be discussed in various supplementary treatises. These supplementary writings constitute the opuscules commonly grouped together as the Parva Naturalia. Prominent among them is the little work on Sense-Perception, a tract which deals particularly with the phenomena of sight, taste and smell, and expands the somewhat meagre analysis of these senses given in the Psychology itself. Following this comes the little work on Memory and Reminiscence, a very golden tract as Titze calls it, in which the laws of association are laid down with a clearness scarcely to be looked for outside modern philosophy. Next we meet with a trio of treatises connected with the phenomena of sleep and dreams, and which are severally entitled 'on Sleep and Waking,' 'on Dreams' and 'on Divination through Dreams.' The quasi-physiological character of the last-named treatises is continued in the works which follow and which deal with the phenomena of growth and life, of breath and death. The works in question are more accurately known as those on 'Longevity and Short Life,' on 'Life and Death,' and cognate subjects, and lastly that on 'Respiration'.

1 These minor psychological writings may be here briefly tabulated as follows:

a. peri alathseous kal alathteon.
b. peri moumys kal anamwseous.
c. peri upnov kal egrhugrosws.
d. peri epupinow.
e. peri the kai upnov maniket.
f. peri makribiodytos kal braxu biodytos.
g. peri swis kal thvados.
h. peri anapnois.

To these is sometimes added another tractate under the title peri nebstos kal gevos, as corresponding with the first two chapters of the peri swis kal thvados. But it would seem that we cannot in this way precisely distinguish between the separate portions of the Parva Naturalia: rather Aristotle intended the subjects of youth and age, life and death, to be discussed together in the sections which precede the work on
The genuineness of the works just mentioned has been seldom or never questioned. It is difficult, indeed, to find in the Catalogue of Aristotle's writings transmitted to us by Diogenes Laertius, a counterpart either to the *Psychology* itself or to the minor psychological treatises, but this is a difficulty which meets us in connection with all the writings of the Stagyrite, and is not peculiar to his compositions on *Psychology*. Nor, it need scarcely be added, are the psychological writings without the distinctive characteristics which are wont everywhere to disturb the Aristotelian student. We are met by the same abruptness, the same incompleteness on the one hand, redundancy on the other, as present themselves in the *Metaphysics* or the *Ethics*. Torstrik particularly has sought to make out the existence of a double version, a twofold recension in the *Psychology*: but this subject is too closely bound up with the general question of the composition of Aristotle's writings to be summarily settled in a general discussion such as this is meant to be. A still more sweeping charge was made by Weisse in questioning altogether the genuineness and authenticity of the third Book. But his view has never been accepted by Aristotelian scholars: and though few would refuse to acknowledge that the book in question is full of peculiar

respiration, which itself is regarded as a direct continuation of the foregoing discussion. Thus the treatise on life and death, after noting the influence of cold on animals and plants, ends by saying that this subject must be discussed at greater length; and we are thereupon introduced to the tract on respiration with the words: περὶ γὰρ ἀναπνείας ἀληγοὶ μὲν τινες τῶν πρῶτερον φυσικῶν εἰρήκασιν. So also Aristotle closes the *Parva Naturalia* at 480b21 by saying: περὶ μὲν οὖν ζωῆς καὶ θανάτου καὶ τῶν συγγενῶν ταύτης τῆς σκέψεως σχεδόν εἰρηται περὶ πάνων.

1 To the περὶ ψυχῆς possibly correspond in the Catalogue of Diogenes No. 13, περὶ ψυχῆς: 73, θεός περὶ ψυχῆς: 1. To the *Parva Naturalia* would seem to correspond 120, φυσικῶν κατὰ στοιχεῖον λέγ: while further in 117 μηχανικῶν: we may perhaps recognise our περὶ μηχανῆς. With respect to the general discrepancy between the works of Aristotle as named by us and catalogued by Diogenes Laertius, it may be some slight solution to remember that Aristotle himself frequently alludes to his writings, or rather parts of them, under very different designations from those which we employ. So, for instance, various portions of the *Physics* are cited as ἐν τοῖς περὶ κινήσεως—ἐν τοῖς περὶ ἀρχῶν—ἐν τοῖς περὶ χρόνου.

2 See the Appendix.
INTRODUCTION.

difficulties, there seem to be no good grounds for doubting its Aristotelian origin 1.

There are however other psychological writings commonly included in the works of Aristotle whose authenticity is much more open to dispute. Such for example is the work on Physiognomics, a tractate specially connected with the relation between the internal feelings and their outward expression 2. To the same class of spurious or semi-spurious writings belong the treatises on Colours and on Sounds 3, and lastly the little work on Animal Movement 4. This last-mentioned dissertation is of particular importance for Aristotelian psychology: and M. Barthélemy St Hilaire has not hesitated to include it in his translation of the Parva Naturalia. But though the work just mentioned throws no inconsiderable light upon Aristotle's theory of will and his general conception of the relation between motives and action, it is yet, almost without doubt, not even Aristotelian in the sense in which other works commonly ascribed to Aristotle are said to be so.

Thus far we have confined ourselves to Aristotle's actually extant works. But there is another work of which some fragments have been handed down which cannot be left altogether out of sight. This is the Dialogue Eudemus—a dialogue, which, as its second title indicates, was devoted to questions of psychology 5. Into the nature of these dialogues, and particularly their identification with the so-called exoteric writings, this is not perhaps the place to enter 6. But it seems difficult in the face

1 For Weisse's argument see his translation p. 278, and for an answer Schmidt in Jahrbücher für wissenschaftliche Kritik, Aug. 1831.

2 Φυσιογνωμική: printed in Bekker's Berlin Aris. p. 805. Such a work is catalogued by Diogenes No. 109: but the existing compilation is almost unanimously judged spurious. See Rose, De A. Libr. Ordine, pp. 221—225.

3 περὶ χρωμάτων: περὶ ἀκονστῶν ἢ περὶ φωνῆς.

4 περὶ ζῴων κινήσεως. See Rose (De Aris. Libr. Ord. 163). The work περὶ ζῴων πορείας (De Animalium Incessu) is on the other hand generally regarded as authentic.

5 Εἴδομα ἢ περὶ ψυχῆς.


W. AR.
of almost continuous tradition to set aside the Aristotelian character of this and other dialogues ascribed to Aristotle. Rose (Aris. Pseudepigraphus, p. 58) has indeed maintained that no dialogue whatever, least of all 'the puerile argument of Eudemus,' is worthy of Aristotle either in his earlier or his later years, and has regarded the ascription of such writings to the Stagyrite himself as due simply to the capricious judgment of Aristotelian Librarians. But though the fragments of the Eudemus which have been preserved for us contain little but what is more or less fantastic or commonplace, it must be remembered that we have but little of the main argument of the Dialogue itself, and that it is the introduction and setting of the discussion which has been particularly handed down. A dialogue on immortality would naturally touch upon the supernatural and mythical; but it would probably also supply a real psychological foundation for the belief. And in one passage to which Bernays, as might be expected, attaches considerable importance, the dialogue (whoever was its author) follows the same line of argument as that of the main treatise on psychology, and seeks to shew that the explanation of the soul as 'harmony' cannot hold out on examination. But, as will be shewn in the note upon the passage, the similarity thus presented by no means necessitates a conclusion such as that which Bernays would extract.

There are, it need scarcely be said, a great many other works of Aristotle which the student of Aristotelian psychology will find it necessary to consult. The part always implies the whole; and no section of Aristotelian thought can be understood without reference to the whole of which it is a fragment. The Metaphysics must be repeatedly consulted in order to elucidate the formulæ through which Aristotle explains the relations which subsist between the body and the mind. The Organon, as a system of logical analysis, often helps by the account it gives of the origin of knowledge to explain the work of reason in the formation of an intelligible world. Logic and Psychology, in short, inter-penetrate one another in Aristotle just as they have always done
in modern thought. The *Rhetoric* again forms as it were an appendix to the *Psychology* by means of that analysis of the emotions which is one of its most important features, and which helps to bring together psychology and ethics. The *Ethics* themselves too stand in close connection with the psychological doctrines of Aristotle: they may in fact be looked upon as a series of conclusions based upon the results of the *Psychology*. Still more striking is the connection on the part of the physical treatises. The distinctively biological and zoological works throw constant light upon the conditions under which animal organisms and, simultaneously, mental faculties come into existence, while the highly interesting chapters on the *Parts of Animals* supply us with the clearest statement of that teleological standpoint from which Aristotle continually holds problems of life and mind require to be considered.

The chronological position which these various works occupy, firstly by themselves and secondly in relation to the *Psychology*, is a question on which it is impossible to arrive at any very definite results. A variety of circumstances makes it almost impossible to determine the precise order in which Aristotle actually composed the writings which have come down to us. We must, to begin with, remember that the way in which the works originally shaped themselves in rough drafts or only in the writer's mind may not at all correspond with the order in which they were written down for such 'publication' as we can assign to them. Besides, the wish to give a systematic appearance to his works may have led the writer frequently to employ a future in referring to a work which was already written, or a past in referring to one which in the order of thought preceded that with which he was for the moment occupied, but of which the composition was for the time deferred. At any one time Aristotle would probably be working *simultaneously* on different subjects, and thus two treatises will frequently create confusion to the student who is seeking for a chronological arrangement and who finds now *A* implying *B*, now *B* involving *A*. Another point to
be considered is that what we speak of as a single work was probably to Aristotle a series of single works which he had gradually accumulated in his lifetime. Both the Ethics and the Metaphysics were probably writings of this character, and it is perfectly consistent that we should find in them marks of priority to some other writing, side by side with equally definite marks of posteriority. Lastly we must remember that everything points to the fact that Aristotle's works are in great part lecture notes, written perhaps in great part by himself, but supplemented by the editors from the notes which pupils had taken at his lectures. This and like considerations should make it evident that we have not really the data for settling with any accuracy the composition of Aristotle's works.

Supposing the different treatises to have formed distinct courses of lectures, we can easily understand how the writer might from time to time vary the order in which his courses were delivered, and might to one set of students speak of the Topics as prior to the Analytics, to another might reverse this order; and how in this manner what had been merely an accidental reference, relative to special circumstances, would become fixed as an integral part of the discussion.

Such considerations would seem to make it almost hopeless to attempt to fix the order of the works of Aristotle. But there are some general results which may be accepted as at least extremely probable. It would appear for instance that Aristotle commenced by composing works of a mixed logical and rhetorical character; and Rose is most probably correct in viewing the

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1 Cp. Susemihl in his Introduction to the Poetics, who compares the probable origin of Aristotle's writings with the way in which Hegel's works were supplemented by the notes of pupils.

2 For the way in which the Analytics and Topics thus reciprocally seem to involve each other, contrast Anal. Pr. 1. 1, 24a12 (καθάτερ ἐν τοῖς Τοπικοῖς εἰρηται): c. 30 46b30 (δι' ἄκριβειας δὲ διελθόμασεν ἐν τῇ πραγματείᾳ τῇ περὶ τὴν διαλεκτικὴν): II. 15, 64a37 and II. 17, 65b17 with Topics, VIII. II. 162a11 (φανερὸν δ' ἐκ τῶν ἀναλυτικῶν); and VIII. 13. 162b32, τὸ δ' ἐν ἀρχῇ...κατ’ ἀλήθειαν μὲν ἐν τοῖς Ἀναλυτικοῖς εἰρηται, κατὰ δόγμα δὲ νῦν λεκτῶν. [Cf. Ritter, III. 29.] For other instances see Zeller, Phil. d. Griechen II. 2 (2a Aufl.) p. 105, n. 2.
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Topics as the earliest work which Aristotle wrote. This was followed by the Analytics, and probably at no long interval by the treatise on Rhetoric. These works on method would appear to have been followed by the ethical and political writings as Rose supposes, rather than by the physical as Zeller holds, although it is not unlikely that part of the Ethics followed on the physical investigations. To the Ethics, Politics and Poetics (as a combination of the educational scheme enunciated in the

1 Cp. Rose, De Aris. Libr. Ordiné, p. 119. Zeller, P. d. C. II. 2. 105, regards the Categories as the first work Aristotle wrote, but as the Categories makes no reference to any other works it is extremely difficult to decide its place in chronological sequence, and Rose regards it as spurious. The Categories (if really Aristotle's) seems to have been composed after the De Anima: at least in 168 the writer, speaking about words as signs of thoughts, says περὶ μὲν οὖν τοῦτων εἰρηται ἐν τοῖς περὶ ψυχῆς. But the reference fits neither de An. III. 6 (Waltz) nor de An. II. 5 (Bonitz), and is more probably added by an editor or pupil.

2 So at least Rose thinks. Zeller, because the Rhetoric at its beginning (1356b26) describes itself as an offshoot (παραφώς) of politics and because in I. 11. 1372a1 the writer says of γελοῖα, διώρισται δὲ περὶ γελοίων χωρίς ἐν τοῖς περὶ ποιητικῆς, holds that the Rhetoric was compiled after the Ethics and Physics, and occupies about the last place chronologically among the works of Aristotle. But he fails to notice that Aristotle no less speaks of Rhetoric as equally the παραφώς of Dialectic (the Topics), and the reference to the Poetics counts for little, as the Poetics, as we have it, contains no such passage. Zeller allows himself that in Rhetoric III. 1. 1404b22, Aristotle speaks of Theodorus the actor as if he were still alive, while in Polit. VIII. 17. 1336b27 he is treated as dead. Besides, as Rose points out (p. 121), the treatment of moral questions in the Rhetoric is only intelligible on the assumption that it was written before the Ethics. So, for instance, is it with the discussion of the good (I. 6, 7), of the virtues (I. 9, 1. 8), of pleasure (I. 4), and of similar topics. The probability in fact is that the Rhetoric was quite one of the earliest works which Aristotle sketched out; and that in his early lectures against the false theories of Isocrates he already conceived the ideas which were to develop into his Logical and Ethical Theory.

3 Zeller (p. 107) has maintained the priority of the Physical to the Ethical writings on the ground that a writer who felt so strongly as Aristotle that a moralist must have a knowledge of the soul (Eth. Nēr. I. 13) would not be likely to investigate questions of Ethics before he had elaborated a psychology: and he finds traces of such reference to the Ethics in the ἔξωτερον λόγου of I. 13 and the τέταρτον μόρον of VI. 13. 1144g9. But any unprejudiced reader will find in the reference to the ἔξωτερον λόγου a reference not to the de Anima but to the popular psychology which is criticised in the de An., and the τέταρτον μόρον of Bk. VI. may mean that that particular book was written subsequently to the Psychology, but is also perfectly explicable from the double twofold division of the ψυχῆ in Bk. I. Bk. X. however, which refers to chapters on κλοησις in discussing pleasure, would seem to have been composed at a later period than the remainder of the work.
last chapters of the Politics) must have followed, not, as Rose so
learnedly maintains, the Metaphysics, but the works on what may
briefly be described as Natural Philosophy1. Among these works
on Natural Philosophy, the Physics, as we usually call it, occupied
the foremost place. This, as is clearly indicated in the first lines
of the Meteorology, was followed by the Treatise on the Heavens
(De Caelo), the dissertation which we commonly designate De
Generatione et Corruptione, and lastly the Meteorology itself2.
Thus far the order of the physical investigations is not difficult
to trace. But whether the Meteorology was followed by the
History of Animals, or by the Psychology, is a question which
cannot be easily resolved. Perhaps we may best hold with
Zeller that the History of Animals was begun before the Psychol-
ogy, but that on the other hand it was not completed till the
last-named work had seen the light3. But whatever be the true

1 That the Metaphysics did not as Rose thinks (p. 136) precede but succeed the
physical writings is already indicated by Physics 1. 9, 192b34, peri de tis kata tis
eidos arxhis...di' arkhias tis prwthis philosofoias erygon esti diordiasi, wste eis ekewon
ton kairw apokleswv. But this does not preclude us from supposing that the meta-
physical system of Aristotle was gradually elaborating itself in the writer's mind and
probably forming repeatedly, the subject of his lectures so that its distinctive doc-
trines would be continually implied in what Aristotle wrote.

2 Meteorolog. 1. 1, 338b10, peri mwn oivn twv prwton aitiaon tis fwsis kai peri
padas kwnhes w kwsis, esti de peri twv kata tis anw ferwv diatassomewn aitwv
kai peri twv stoicheiwn twv swnmatikon pwsa te kai poia...kai peri genhes w w fwrwvas
thn koina elrpa prwtwv.

3 See Zeller, p. 106, n. 5. Rose (p. 212) concludes from VIII. 9 and II. 5 of the
Hist. Anim. that it must have been composed some time after the battle of Arbela,
at which elephants were seen for the first time by the Macedonians.—The passages in
which the Psychology makes reference to other works are the following:

Bk. i. c. 3, 406b3, deti mwn oivn oivn anagkav tw kwnh w kal autw kineiathai prwteron
eirpaia: where the reference is probably not to 403b29 but to Physics VIII. 5.

Bk. ii. c. 4, 416b30, diaastrapfson ov< estin wteron peri aithis en tois oikieis lagnos
(where the writer may refer to a lost treatise peri trophiw or to De Gen.).

II. 5, 417a1, tooto de pois dunatov h adownaton elphkamw en tois kathblon lagnos
peri tov polein kai padosxev: the reference being to De Gen. Bk. i. c. 7.

II. 5, 417a17, estin h kwnhes energeia tis, atelh mevto, kathap ev eteireis elrtpai,
refers to Phys. III. 2, 201b31.

II. 5, 417b29, peri mwn tovton diaastrapf: kairwv genwtev en kal elzwv, refers most
probably to De An. III. cc. 4 and 5.

II. 7, 419b7, dir hmin mwn oivn aitiaon tovta drwpai allos lagnos, refers to De Sensu 2,
437b5.
relation of the *Psychology* and the *Zoology*, there can be no doubt but the composition of the former was formed closely by that of the minor psychological writings classed together as the *Parva Naturalia*; although it would seem that we must draw a distinction among these and allow that while some were composed *before*, others were composed only *after* the Biological Treatises, which would seem to occupy the next place in the series of Aristotle's works. These biological treatises are the highly interesting and suggestive chapters on the *Parts of Animals*, the tractate on *Animal Progression*, and lastly the work upon the *Generation of Animals*. The list most probably closed with the *Metaphysics*—that is to say, it was the last of Aristotle's works to be brought into anything like its present shape—although we must of course remember it must have been one of the earliest works of which Aristotle sketched the main ideas.

1 For the different references in the *Parva Naturalia* see Bonitz, *Index Aris. p. 99*. For the view that the *Parva Naturalia* may be in point of composition broken up into two groups in the manner indicated see Brandis, Aristot. 1192. The grounds of this view are that in *De Vita* 468b31 and *De Respir.* c. 7, 473a27 the writer refers to the Treatise on *Parts of Animals* as already written: treatises 467b6, the Inquiries on Life and Death, as concluding all his works on Animals, and in *De Gen. An. IV. 10*, 777b6 (αὐτὸν δὲ τοῦ μὲν ἐλάβαν μακρόβιον ὁπίσω ἵππον...περὶ δὲ ὡστερον ἐρμοῖν) regards the treatise on Longevity as still to be written.

2 That the treatise on the *Parts of Animals* is prior to that on the *Generation of Animals* is evident from *De Gen. An. I. 15*, 720b19, ἢ γὰρ φῶς παρὰ τὸ στόμα τὴν τελευτὴν τοῦ περιττόματος σωφράγει κάμψασα καθάπερ ἐρημαί πρότερον ἐν τοῖς περὶ τῶν μορίων λόγοις—*De Part. An. III. 5*, 668a8, πῶς μὲν οὖν τρέφεται τὰ ἵππα...ἐν τοῖς περὶ γενέσεως λόγοις μᾶλλον ἀρμαξές εἰσετίθν κ.λ. The work *De Incessu Animalium* is referred to in *De Part. An. IV. 11* 690b15, ἢ 8' αἰτία τῆς ἀνόσωσας αὐτῶν ἐρημαί ἐν τοῖς περὶ τῆς ποτεῖας τῶν ἵππων διωρισμένοις.

3 That the *Metaphysics* is among the later works of Aristotle is clear *inter alia* from the fact that Aristotle in *Meta. A. I. 1*, 981b25 says ἐρήμητα μὲν οὖν ἐν τοῖς Ἡθικοῖς τῆς διαφορᾶ τέχνης καὶ ἐπιστήμης, and in *A. 4*, 985a12 he refers to the *Physics* as...
The Psychology of Aristotle thus stands, when looked at in connection with its probable date of composition, midway between the material renderings of physical science and the more ideal tendencies of metaphysics. And this double aspect which the treatise thus chronologically presents will be found to be entirely in agreement with Aristotle’s conception of psychology and the work of the psychologist.

II. The Scope and Method of Psychology as Conceived by Aristotle.

Aristotle’s conception of Psychology is already stated for us in the opening words of his main treatise on the subject. It is, he tells us, a ‘history of the soul’ (ἱστορία ψυχῆς) which he proposes to put before us. This word ‘history,’ it is true, did not convey to Aristotle the same associations as it bears to us. To him it meant simply a description, an account: it was a collection of observations which had scarcely reached the exact deductive character which would constitute them into the form of a science (ἐπιστήμη). Afterwards indeed we shall find that Aristotle does determine the object matter of his investigations in such a manner as to raise the results of his observations into real scientific form. But, at starting, Aristotle has to feel his way towards the nature of the problems which will fall within the new field of knowledge which he is elaborating.

The historical development and the essential nature (φύσις καὶ ουσία) represent the two aspects of the soul which the psychologist, according to Aristotle, must consider. He must, that is to say, supply on the one hand a genetic history of the soul, preceding the Metaphysics: οὗτοι μὲν οὖν ὥσπερ Βέγομεν καὶ μέχρι τοῦτον δυών αἰτίαν ἐφήσαντο ὡς ἡμεῖς διωρίσαμεν εν τοῖς περὶ φύσεως. So also Bk. M. 1076b, περὶ μὲν οὖν τῆς τῶν αἰσθητῶν οὐσίας εἰρηται τίς ἔστι ἐν μὲν τῇ μεθόδῳ τῇ τῶν φυσικῶν περὶ τῆς ὕλης, ἵστερον δὲ περὶ τῆς κατ’ ἐνέργειαν.

1 For this conception of ἱστορία, v. Anal. Pr. 1. 31, 4624, and Hist. An. 1. 6, 491r12.
trace it in its gradual development from simpler to more complex forms; and on the other hand he must add to such an historical and genetic analysis the logical exposition of the constant essential nature which belongs to soul at once in its lower and its higher forms. But the psychologist is to be no abstract student of the soul. He must proceed to note its different properties, and study the phenomena occurring in connection with it whether they be exclusively psychical or shared in common by the animal organization¹.

The method of the new science which he is constructing is another preliminary question which Aristotle finds it somewhat difficult to answer. How, he asks, are we to gain a knowledge of this soul? or what is to provide us with a ground of certainty (πιστεύει) for our conclusions? The question which Aristotle thus raises cannot be said to be anywhere answered by him. The unnecessary distinction between observation and consciousness, as it is frequently maintained, fortunately did not present itself to his mind, or at least nothing which he says enables us to class him either with those who regard internal introspection or those who view external observation as the method of psychological inquiry. Nor does Aristotle ever seem to have determined for himself how far the method of psychological investigation was to be regarded as identical with that of other forms of scientific knowledge. The object of inquiry in psychology is indeed, he remarks, identical with that of any other science, and therefore it seems natural to expect that the method of investigation will be also similar: but it may also be that the method of inquiry varies with the nature of the object under consideration, and thus it will be necessary to find out what this method is—whether 'deductive argument' or 'Platonic division' or some other form of investigation, and further what are the principles from which such method will begin its reasonings.

To questions such as these, Aristotle, as has been already implied, returns no immediate answer. Instead, he proceeds to

¹ De An. 1. 1, 402a1—10.
enumerate the different problems to which the science must some way or other find an answer. *Solvitur ambulando* would seem to be briefly the reply he would give to the doubts which the logician might raise about the mode in which the study of psychology should be pursued. And, at any rate, the method of the science, he implies, cannot be ascertained until we have acquired a closer knowledge of the problems which it seeks to solve. To Psychology, in fact, Aristotle would seem to apply the same principle as he applies to Ethics: its principles and results must be discovered and pursued after the manner in which nature evidently shews they should be studied\(^1\). And it is therefore necessary to come to an understanding as to *what* we have to study before we can be sure of *how* we are to proceed in our investigation.

The problems which Aristotle proposes for the consideration of the psychologist have, in the midst of much that sounds rather antiquated to our ears, many points that are still possessed of real interest. The student of soul, he tells us, must note what is the class or genus under which soul falls, and particularly must discover whether it is some potential form of existence, or, on the other hand, a fully realized form of activity. Again, is soul homogeneous in all its various forms, and, if not so, are the various classes of soul distinguished by a generic or specific difference? "for at present," Aristotle adds, "writers who investigate the soul seem to confine their observations to the soul of man alone\(^2\)." A difficulty not far removed from that just mentioned is concerned with the relation of the definition to the soul, and the degree to which such definition can express the qualities belonging to soul in its general characteristics. Further, we require, he thinks, to examine the relation of the faculty or organ to the operation of the faculty, and see whether it be reason or thinking, sense or perceiving that first claims analysis.

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\(^1\) *Eth. Nic. I. 7*, 1098\(^b\)5, μετέναι δὲ πειρατέον ἐκάστας (τὰς ἄρχας) ἰ πεφύκασιν.

\(^2\) 402\(^b\)2, υὐν μὲν γὰρ οἱ λέγουσι καὶ ἔργα λέγουσι περὶ ψυχῆς περὶ τῆς ἀνθρωπίνης μόνης θολκασιν ἐκισκοτείν.
The relation of soul and body appears above all to Aristotle a subject which the psychologist cannot afford to leave unnoticed. The greater number of our mental states seem he insists, to depend upon some conditions of our bodily organs: and even if thought be allowed to be something which is unconnected with the phenomena of body, still, most of our mental manifestations—anger, desire, sense-perception, &c.—would seem to be accompanied by some condition of our corporeal organism, and even thought itself would seem to depend upon the sensuous pictures of imagination, and thus similarly imply a bodily concomitant. A variety of facts, in short, Aristotle holds, would seem to bear witness to the close connection which subsists between the phenomena of soul and the processes of body, and thus make it necessary that the two orders of facts should be studied in relation to each other.

Psychology, with Aristotle, thus falls to a great extent under the comprehensive science of natural philosophy \((φυσική)\). It must however be remembered that physic or natural science meant to Aristotle something very different from what it commonly means to us. His physic is the science which considers the qualities of body not in their abstract features but rather in their concrete manifestations. When Aristotle sets himself to study a subject physically \((φυσικός)\) he investigates it, as we should say, concretely—with no one-sided consideration of the facts but with an all-embracing comprehension of the different aspects of the problem. With Plato in the Phaedrus (270 c) he believes it is impossible to study properly the nature of the soul apart from any reference to the rest of nature \((άνευ τῆς τοῦ ὀλου φύσεως)\).

Physic then in Aristotle does not, like Metaphysic, deal with

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1 \(403^a16\), ἐνικε δὲ καὶ τὰ τῆς ψυχῆς πάθη πάντα εἶναι μετὰ σώματος, θυμὸς...καὶ τὸ φιλεῖν τε καὶ μιαεῖν κ.τ.λ.

2 De Part. Anim. i. i, 641*21, τοῦ φυσικοῦ περὶ ψυχῆς ἀν εἶνυ λέγειν καὶ εἴδειναι. 403*17, καὶ διὰ πάντα ἡδή φυσικὸ τὸ θεωρῆσαι περὶ ψυχῆς.

those attributes of being which are immutable and separated from any material expression, nor like mathematic with those which while unchanged are yet to a greater or less degree materially expressed: it investigates, upon the contrary, those which are at once mutable and inseparable from some material embodiment. It relates particularly to those objects which possess an intrinsic capacity of movement: it is, we may almost say, the science of phenomena of movement. But the Aristotelian physic is not a hasty materialism which states nothing but the fabric out of which the organism has to be constructed. It has to do with all the four principles or ‘causes’ into which Aristotle supposed the existence of every object could be analyzed—the material as supplying the actual elements out of which anything is made, the efficient, or agency by which it is made, the formal as giving the shape or idea which any object expresses, and the final cause or the intrinsic end which any form of existence seeks to realize. “The physicist,” says the sixth Book of the Metaphysics, “should possess knowledge not only of the material but also of the matter in relation to the definition which expresses its real notion, and particularly in fact this latter.” And to the same effect the Treatise on the Parts of Animals maintains that a true physical philosophy must content itself with no mere abstract statement of the material elements of which a phenomenon is composed or of the stages through which an object must have passed before it reach its final form. Such an analytic and genetic science is, says


2 *Metaphys.* Κ. 7, 106430, ἢ μὲν οὖν φυσικὴ περὶ τὰ κινήσεως ἐχοντ’ ἀρχὴν ἐν αὐτῷ οὐκέων.

3 *Phys.* ΙΙ. 7, 19822, ἐπεὶ δ’ αἰ στια τῆτάρτης, περὶ πασῶν τοῦ φυσικοῦ εἰδέναι, καὶ εἶς πάσαις ἀνάγον τό διὰ τ’ ἄποδώσει φυσικῶς, τόν ὑλήν, τό εἴδος, τό κινήσαι, τό οὐ ἑνεκα. Καὶ εἰς οὐ ἑνεκα. So also 20832 and 1946.

4 *Meta.* Ζ. ΙΙ, 103716, οὖ γὰρ μόνον περὶ τῆς ὑλῆς δεὶ γνωρίζειν τὸν φυσικὸν ἄλλα καὶ τῆς κατ’ τὸν λόγον καὶ μᾶλλον.
Aristotle, little better than would be the carpenter's explanation of a wooden hand: nay, indeed, Aristotle with quiet naïveté remarks, the carpenter would give the better explanation of the two, because he would not content himself with an enumeration of the hammer strokes which made a hollow here, an elevation there, but would also state the reason why he aimed the blow in such and such a manner, and for what end his movements were directed. And therefore in attempting to explain the facts of animal existence, physic must not fail to take account of mind as the constitutive form (ἐνδός) in all living things.

Metaphysical and teleological however as is the natural philosophy of Aristotle, it does not itself exhaust the explanation of the soul. Were soul never anything but active, never more than a principle of movement, physic might indeed claim to be competent to discuss it. But so far as soul cannot be so described, so far it ceases to fall within the region of the physicist. It is in fact only these phenomena of soul 'which are not independent of matter' that physic is competent to investigate. And besides, were physic able to deal with all psychical phenomena, there would be really no philosophy beyond a philosophy of nature.

The truth is that soul cannot according to Aristotle be adequately discussed by either the metaphysical transcendentalist or the physiologist separately. The psychical side of human nature is of so peculiar a character, so independent on the one

1 De Partibus An. 1. 1, 641a30, λεκτέων εἰς τῷ περὶ φύσεως θεωρητικῷ περὶ ψυχῆς μᾶλλον ἢ περὶ τῆς ὀληρ, δοσφ μᾶλλον ἢ ὀληρ δὲ εἰκεῖνη φύσις ἐστιν ἢ ἀνάπαλιν. The whole chapter is valuable for the light it throws upon Aristotle’s method of studying nature. Cp. De Motu An. 2. 704b13, where we have the expression μέθοδος φυσικῆ, of which one principle is ἡ φύσις οὐδὲν ποιεῖ μάτην.

2 De Part. An. 1. 1, 641a10, δῆλον οὖν ὡς οὐ περὶ πάσης ψυχῆς λεκτέων οὐδὲ γὰρ πάσα ψυχή φύσις.

3 Meta. Β. 1, 1026a5, περὶ ψυχῆς ἐνιας θεωρῆσαι τὸν φυσικὸν δοσὶ μὴ ἀνευ τῆς ὀληρ ἐστιν.
side of physical surroundings, so connected on the other with physiological processes, that it can only be fully understood through the combined labours of both orders of inquirers. The feelings for example are materialized ideas (λόγοι ἐνυλοι) and can only be understood when their supersensuous aspects are taken in connection with their bodily antecedents. Metaphysic and Physic must in fact be brought together if we would rightly understand the phenomena of mental action. This two-faced character of psychological inquiry Aristotle illustrates for us by a concrete illustration. “Suppose,” he says “the question should be what is anger? The transcendentalist (διαλεκτικός) would define it as the effort after retaliation; the natural philosopher would describe it as a ferment of the pericardial blood or heat.” But, the writer goes on to imply, the true physicist will take account of both these aspects of our mental states. Just, he explains, as it is an insufficient description of a house to enumerate the stone and timber out of which it is constructed, unless we note as well the cause and reason of its existence as a shelter against injury from winds and rains: so also the true psychologist will recognise the fact that the subjective state and its physical counterpart are only different sides or aspects of one and the same phenomenon—a phenomenon therefore which is only rightly comprehended when its two sides are considered in their mutual influence upon each other.

It is but another phase of this same standpoint when Aristotle insists on the need of uniting two modes of psychological investigation which correspond in part to what have since been known as rational and empirical psychology. To grasp the mind in its full meaning we must not, he holds, know it merely as a substance: we must add on a knowledge of the attributes and actions which belong to it. “The truth,” says Aristotle, “seems to be that it is not only a knowledge of the generic character of anything which helps towards detecting the causes

1 403 a 20; διαφερόντως δ' αὖ δρισαυτο φυσικός τε καὶ διαλεκτικός ἑκατον αὐτῶν, οἷον ἁργὴ τι ἑστίν...τίς οὖν ὁ φυσικός τοῦτων;...ἡ μᾶλλον ὁ ἐξ ἀμφῶν.
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of the properties of substances—as in mathematics the knowledge of straight and curved or the generic character of what is a line or a superficies assists us in seeing to how many right angles the angles of the triangle are equal—but even conversely the knowledge of the properties contributes in great measure to a knowledge of the ‘what’ or the generic notion.” Without in fact this knowledge of the actual manifestations, the varying phenomena in which the soul displays its action, our psychological studies will leave us with the mere empty phraseology of Transcendentalism (διαλεκτικῶς ἐφηναι καὶ κενῶς ἁπάντες)¹.

Aristotle would seem then to take the same view of the study of mind as Hegel has done in a passage of the Encyclopediad. “If we propose to think the mind,” we may suppose Aristotle saying with the latter, “we must not be quite so shy of its special phenomena. Mind is essentially active. But if the mind is active, it must, as it were, utter itself. It is wrong therefore to take the mind for a processless ens as did the old metaphysic which divided the processless inward life of the mind from its outward life. No good will be done unless the mind be viewed in its concrete reality, in its action: and in such a way that its manifestations are seen to be determined by its inward force².”

The Method of Psychology, as conceived by Aristotle, is, it will now be evident, not to be summed up in any shibboleth of induction or deduction. Assuredly Aristotle’s study of psychology is preeminently inductive. Here, as in Ethics, it is the fact which forms the starting point³. Mind and body are, he reasons, intimately as matter of fact connected, and soul must therefore be explained by such a concrete method as will fully recognise its environment. But, at the same time, the real character of any object of investigation is to be found in the consideration of its end: and, so far as this is the case, psychology goes beyond the

¹ 1. 1, 403*2.
² Logic of Hegel, translated by W. Wallace, § 34.
³ Eth. Nic. 1. 4, 1095b6, ἀρχὴ γὰρ τὸ ὅτι.
immediate fact, the simple datum. A natural history of the mind, which traces it in its progress from more elementary to more developed forms, is undoubtedly, Aristotle would have us to believe, a valuable contribution to the theory of psychology. But the whole precedes the part, the substance the attributes, and a well-established Science of the Soul must as little fail to account for a something to which these attributes shall be referred as for the attributes themselves which observation registers.

III. THE PRE-ARISTOTELIAN PSYCHOLOGY.

The historical retrospect of previous psychology which occupies the greater portion of the first book of the main treatise illustrates further the comprehensive nature of Aristotle's conception of the science of mind. Here, as in his other compositions, the aim of Aristotle is to shew that the thinkers before him had been too one-sided in their attitude and had thus identified soul with some one characteristic, which was really only a single factor in psychical operations. Just in fact as in the Metaphysics Aristotle shews how his predecessors had identified now the matter now the form with real being or true substance, or in the Ethics how previous moralists had mistaken virtue or prosperity for the happiness of which they were only sides or aspects: so in the Psychology we find him engaged in pointing out the degree to which previous students had confined their attention now to this side, now to that, of psychical phenomena.

Two ways especially of regarding mind are recognised by Aristotle amid the somewhat naive views of previous psychologists. Some of them had emphasized its perceptive and cognitive faculties, others had laid stress on its powers of movement

1 Polit. I. 2, 1253*20, ού γάρ ὅλον πρότερον ἁναγκαῖον εἶναι τοῦ μέρους.
and active exercise¹. The mind, in other words, had been, if we may employ modern phraseology, identified now with the intellect, now with the will: and the great object of Aristotle’s writings on the subject of psychology is to shew that both these aspects of our psychical operations must be taken into consideration—that the mind must be treated not merely as a perceiving, knowing faculty, or as a desiring active faculty, but as the two in combination—as something in fact which is at once cognitive and conative, recipient and active, spiritual and material, intellectual and emotional. Hence it is that he discusses with somewhat wearisome detail the modifications given by Democritus, Pythagoras or Anaxagoras to the view which identified mind with movement and spontaneous action on the one hand and the different explanations of the processes of cognition by Empedocles or Plato on the other. The details of these criticisms must be read in the Psychology itself: here it is only necessary to refer to them so far as they seem to throw light on Aristotle’s conception of the scope and problem of psychology as we have previously considered it².

The great defect which Aristotle finds in the procedure of previous psychologists is the degree to which they ignored the bodily environment of soul and confined their observations to the nature of the mental operations in themselves. “They attach the soul to the body without trying in addition to determine the reason why or the condition of the body under which such attachment is produced:” and while stating the nature of the soul itself, they determine nothing “with regard to the nature of the body which is to receive it³.” Their procedure is thus, Aristotle holds, as inconsistent as the transmigration theories of

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¹ De An. 1. 2, 403b25, τὸ ἐμψυχον δὴ τοῦ ἄψυχον δυνάμεν μᾶλλον διαφέρει δοκεῖ, καὶ οὕτως εἰ τῷ αἰσθάνεσθαι παρειδήφαμεν δὲ καὶ παρὰ τῶν προγενεστέρων σχεδὸν διὸ ταῦτα περὶ ψυχῆς.

² For an exhaustive account of Pre-Aristotelian Psychology see Siebeck’s Geschichte der Psychologie; Theil i, Die Psychologie vor Aristoteles (Gotha, 1880).

³ 1. 3, 407b20, οἱ δὲ μόνον ἐπιχειροῦσι λέγειν ποιῶν τι ἡ ψυχῆ, περὶ δὲ τοῦ δεξιόμενου σώματος οὕτως ἔτι προσδιορίζονται.
Pythagorean schools, reasoning as they do "as if it were possible for any soul to clothe itself in any body." Soul and body are on the contrary closely adapted to one another, and to disregard the nature of the body which is to be the receptacle of some definite form of soul is as absurd as if we were to speak of the carpenter's art as clothing itself in flutes: the truth being that soul can make use of the body only under the same limitations as those under which an art can make use of its fitting instruments.

The Atomists had indeed attempted to explain the relation of the body to the soul: and by their conception of the soul as made up of infinitely small globules like the motes we see in sunbeams, they had sought to explain the way in which it acts upon the body. But their explanation, Aristotle thinks, is ludicrously insufficient. It is in fact, as an explanation of the influence which the mind exercises on the body, no better than that which the comedian Philippus gave of the movements of the wooden Aphrodite of Daedalus when he referred it to an injection of quicksilver. Soul, it seems to Aristotle, does not act on the body in this materialistic machine-like manner; it is through the influence of will and thought (διὰ προαιρέσεως τινὸς καὶ νοησεως) that such interaction of soul and body is possible. And in Aristotle's day there was no historian of materialism to add—"as if this were not obvious to the very savage long before science had made the slightest beginning." 

A like antipathy on the part of Aristotle to any crudely materialistic psychology appears in the language which he uses with regard to all attempts to attach physical predicates directly to the mind and to speak of soul as being moved or sustaining shocks. Many mental phenomena are indeed, he grants, movements, and thinking no less than anger may depend on certain changes in the organism. "But to describe the soul as feeling angry is no more appropriate than to speak of it as

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1. 407b24, παραπλησιον δε λέγουσιν ὡσπερ ει της φαίη την τεκτωνικην ελς αὐλως ἐνδεικναν.
2. 1. 3, 406b24.
3. Lange, Geschichte d. Materialismus, 1. 16.
weaving or building. Perhaps, indeed, it is better to say not that the *soul* pities or learns or infers but rather that the man does so through his soul." Nor, Aristotle continues, must this be understood as though the process were conducted *in* the mind: all that is meant is that the process sometimes terminates in, sometimes starts from soul. Sense-perception, for example, is an instance of a mental act terminating in mind, because in sense-perception a merely material process has to be brought back to mind and translated into a conscious image: recollection on the other hand is an instance of a process which starts from mind—originates, that is, in a conscious subjective effort to recall a lost idea and ends in the physiological survival of it in our organism.

The unity of the mental phenomena is another point which Aristotle maintains most strongly in the criticisms which he passes on the conceptions of his predecessors. To resolve the soul into the different elements is to lose sight of that combining force, that synthetic agency, which alone can render knowledge possible. Empedocles' theory of cognition is thus a most inadequate expression of our mental energy. It holds that each objective element in nature is known by a corresponding element in mind—earth by earth, water by water, fire by fire. But such disjunction of the different elements loses sight, Aristotle thinks, of just that very point which supplies the rationale of knowledge. It is not the elements but the ratios which subsist between them which enable us to know: so that there is evidently no use of the elements being present in the mind without the different ratios and compositions which especially serve to constitute an act of knowledge.

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1. I. 4, 408\(b\)11, τὸ δὲ λέγειν ὄργυζοδαι τὴν ψυχὴν ὑμοιον κἂν εἶ τις λέγοι τὴν ψυχὴν ύφαιναι ἢ οἰκοδομεῖν βελτιών γὰρ ἅμως μὴ λέγειν τὴν ψυχὴν ἔλεεν ἢ μαυθανείν ἀλλὰ τὸν ἄνθρωπον τῇ ψυχῇ.

2. 408\(b\)15, τοῦτο δὲ μὴ ὡς ἐν ἐκείνῃ τῆς κινήσεως οὕτως, ἀλλὰ ὅτε μὲν μέχρι ἐκείνης, ὅτε δ' ἀπ' ἐκείνης, οἷον ἢ μὲν ἀλαθήσας ἀπὸ των ὁ, ἢ δ' ἀνάμνησις ἀπ' ἐκείνης ἕπὶ τὰς ἐν τοῖς ἀλαθητηρίοις κινήσεις ἢ μονάς.

3. I. 5, 410\(a\)7, οὐδέν οὖν δόφελος εἶναι τὰ, στοιχεῖα ἐν τῇ ψυχῇ εἰ μὴ καὶ οὐ λόγοι.
The Platonic psychology supplies materials for a large part of Aristotle's criticisms on the views held by the thinkers of his day respecting soul. The half-mathematical half-metaphysical theories of the *Timeus* meet with little sympathetic treatment at Aristotle's hands. The doctrine of a world-soul "distributed according to harmonic numbers" and "borne altogether in harmonic courses" throws, to Aristotle's mind, but little light upon the real questions of psychology. Yet, as Teichmüller reminds us (*Studien*, p. 252), Aristotle's theory of a creative reason is in some respects only a development of Plato's conception of a world-soul: and the inconsistencies which Aristotle's prosaic interpretation of the expressions of the *Timeus* discovers in the doctrine had been partly foreseen by Plato himself (*Tim.* 29 c). Aristotle generally is not seen at his best when engaged in criticizing Plato. Unphilosophical however as are the arguments brought against the Idea of Good in the *Ethics* or against ideas generally in the *Metaphysics*, they are surpassed in quibbling commonplaceness by those directed in the *Psychology* against the theory of a world-soul. Construing literally all that Plato said about the soul being a circle—the sphere of the 'same' and the sphere of the 'other'—Aristotle goes on to object that the soul cannot be represented as a magnitude (*μέγεθος*)—that since circular movement is everlasting the thought of this world-soul will be so too (as if Aristotle himself did not claim just this eternal thought for his own 'creative reason'), that thought is liker rest than motion, and that "happiness cannot be an attribute of what is acted on by force." It is, as Teichmüller with no unmerited pleasantry remarks, as if one were to criticize Goethe's saying, "Green is the golden tree of life," on the ground that gold is not green, and that a tree is not made of metal because otherwise its sap could not be assimilated by diffusion.

1 I. 3. 407.
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The Platonic Psychology however did not confine itself to the doctrine of a world-soul propounded in the *Timaeus*. In the *Republic* the axiom of contradiction had been somewhat skilfully applied to distinguish Reason from Appetite and both from the spirit of indignation, the sense of honour (θυμός) which abets the reason: and in the *Timaeus* these three faculties are assigned to different portions of the physiological structure, thought having its dwelling in the head, spirit being located in the breast and heart, and appetite residing in the lower regions (*Timaeus* 69 δ). These faculties were accordingly regarded as so many parts (μέρη) or kinds (εἴδη or γένη) of soul: and though Plato raises the question (*Republic*, 436) whether each of these functions be separate or whether it be with the whole soul (ὅλη τῇ ψυχῇ) that we are engaged in each particular application, his general exposition tends to regard the three as separate and independent entities, so that we think with one part, desire with another, and shew spirit with a third part of our mental organism.¹

This separation of faculties appears to Aristotle decidedly unsatisfactory. To regard the mind as reasoning with one part of itself, desiring with another, and so forth, is to destroy implicitly its essential unity. The body by itself cannot certainly form a sufficient bond of union: and we are met directly by the difficulty of finding some force or other which will account for the actual oneness of our mental organism.² And even such a simple division of faculties as that of rational and irrational is exposed to the objection that will embraces elements which fall within each of these two sides of our nature.³

¹ Probably however as Mr Archer-Hind suggests (*Journal of Philology*, no. 19) the physiological partition of the *Timaeus* is not to be taken literally, and the unity claimed for the soul in the *Phaedo* is compatible with the threefold division of the *Republic* on the assumption that “in connection with the body soul assumes certain phases which are temporary and only exist in relation to the body.”

² 1. 5. 414 Κ, λέγουσι δή τινες μερισμὸν αὐτῆς καὶ ἄλλω μὲν νοεῖν ἄλλω δὲ ἐπιθυμεῖν. τῷ οὖν δὴ ποτε συνέχει τῇ ψυχῇ, εἰ μερισμὸν πέφυκεν; οὐ γὰρ δὴ τὸ γε σώμα δοκεῖ γὰρ τούτοισιν μᾶλλον ἢ ψυχῇ τὸ σῶμα συνέχειν.

³ ΠΡ. 9, 432 Β–Α, ἔχει δὲ ἀπορίαν εὐθὺς πώς τε δεῖ μόρια λέγειν τῆς ψυχῆς καὶ πόσα, τρόπον γὰρ τινα ἀπερίφορα φαίνεται, καὶ οὐ μόνον ἂ τινες λέγουσι διώρθωσες λογιστικὸν καὶ ὀμιλικὸν καὶ ἐπιθυμητικὸν, οί δὲ τὸ λόγον ἔχον καὶ τὸ ἄλογον κ.τ.λ.
These criticisms on previous psychologists are evidently not entirely the self-satisfied work which Francis Bacon supposed all Aristotle's historical investigations to be. Aristotle is not merely seeking to demolish all existing theories before proceeding to develope his own views: or at any rate, he is not demolishing them merely for the demolition's sake. The historical standpoint, which is so characteristic of Aristotle in all his writings, has an entirely different significance. To Aristotle as to Coleridge, "the very fact that any doctrine had been believed by thoughtful men was part of the problem to be solved, was one of the phenomena to be accounted for." And if we must allow that Aristotle shews little power of viewing a conception from the standpoint of its original advocates and tends in general to criticise a theory too much from the platform of his own formulæ and doctrines, we must none the less recognise the value of the light he throws upon preceding psychological speculation. He prepares us at the least for the results he himself will lay before us: he helps us to understand the significance of his own work by the statement of that to which it is opposed: he gives us a keener appreciation of the difficulties which we have to face and of the dangers which we must avoid. Already we have learned from the mistakes of previous thinkers that no abstract theory of mind will satisfy the facts which call for explanation: that we must not limit our investigation of psychical phenomena to the single phase of their existence in man: that the bodily environment must not be treated as of no importance: and that the unity of the mental faculties must be beyond all things steadfastly maintained. And Aristotle's own definition of the Soul is in great part only a restatement of these different propositions.

1 De An. i. 5, 410b16, πάντες δὲ καὶ οἱ διὰ τὸ γνωρίζειν καὶ αἰσθάνεσθαι τὰ δυτικὰ τῆς ψυχῆς ἐκ τῶν στοιχείων λέγοντες αὐτὴν, καὶ οἱ τὸ κινητικότατον, οὗ περί πάσης λέγοντες ψυχῆς.
IV. ARISTOTLE'S DEFINITION OF SOUL.

Fully to understand the Aristotelian definition of the Soul requires a more than ordinary acquaintance with the technical phraseology of Aristotle’s *Metaphysics*. To begin with, we may say that Aristotle regards the soul and body as two sides of an antithesis, in which the opposing members only exist in the true sense of the terms in their combination with each other. The writer begins his inquiry with the fact of the existence of natural living objects. There are natural as opposed to artificial things: and of such natural phenomena there are some which possess life, others which are lifeless. Life itself, he defines, as the process of nutrition, increase and decay from an internal principle¹. Here then, in the ‘living natural object,’ we find a concrete reality which presents us with two sides or aspects—the one body, the other soul. But body itself is not soul: soul is rather an attribute or predicate of body: the form to which body acts as matter.

Soul is thus, from Aristotle’s point of view, more or less dependent on the body: but it is only on the other hand in soul that body attains its true reality. Body is then not so much the physical basis of the soul as soul the cause or reason of the body. The physiological phenomena of the body find, in fact, their truth in soul, as their final outcome, but as at the same time their end and higher meaning. In Aristotle’s own peculiar phraseology, soul is the substantial reality or essence (*οὐσία*) of the body.

Aristotle’s Theory of Substance is well known to be full of apparent inconsistencies. While on the one hand the logical treatises regard substance as the individual object, the particular thing (*τόδε τι*)—such and such a man, such and such a plant, the *Metaphysics* frequently identify real being with the universal or generic notion—man or plant conceived of in their general

¹ II. 1, 412a14, ἵων δὲ λέγομεν τὴν δὲ αὐτοῦ τροφὴν τε καὶ αἴθεσιν καὶ φύσιν.
character. To the tract 'on Categories,' 'first substances' are definite forms of existence, 'secondary substances' the genera and species in which first substances are contained: to the writer of the Metaphysics, amid much that corresponds entirely with the teaching of the Organon, there is a tendency to regard 'first substances' as specific forms and constitutive notions.

These two accounts of substance are not however really so far apart as they are sometimes thought to be. Neither in his logical nor in his metaphysical writings does Aristotle ostensibly recede from his antagonism to the Platonic account of real being or true existence. To Plato, the real had been the general notion, the universal permanent element which was to be found in no one individual thing, but yet gave life and existence to them all—the idea (as it is commonly designated) which made each thing to be what it actually was. Against this theory of the 'real,' Aristotle's philosophy is one continuous protest. To Aristotle the real being, the substantial truth, the essential nature of things—for by all these terms we may translate the Greek expression—lies in the union of two elements, which may be separated by an effort of analysis, but which form complementary sides in every really existing thing. The members of this antithetic synthesis may be variously denominated. We may say that everything which really 'is;' and to which qualities attach themselves, is the result of a coalition between an unformed original indeterminate matter (οὐλή) on the one hand,

1 Categ. c. 5, 2a11, οὐσία δὲ ἔστιν ἡ κυριωτάτα τε καὶ πρῶτως καὶ μᾶλλα λεγομένη, ἡ μὴτε καθ' ὑποκειμένου τινὸς λέγεται μὴτ' ἐν ὑποκειμένῳ τινὶ ἔστιν, ὅτι τὸς Ἀνθρώπως ὁ ὁ Ἰττος ὑποστήμεροι δεύτεραι δὲ οὐσίας λέγονται ἐν ὑπ' εἴδεσιν αἱ πρῶτοι οὐσίαι λεγόμεναι ὑπάρχουσιν. So also Metaphys. Z. 3, 1029a8, οὐσία is explained as τὸ μὴ καθ' ὑποκειμένου ἀλλὰ καθ' οὔ τὰ ἄλλα. Still more definitely it is said, Categories, 3b10, πάσα δὲ οὐσία δοκεῖ τὸ δὲ τὶ σημαίνειν: a result also expressed in the reasonings of Metaph. Z. 16, 1041b4, τῶν καθόλου λεγομένων οὐθὲν οὐσία. Cp. also Gen. An. IV. 2, 767b34.

2 Metaph. Z. 7, 1032b1, εἴδος δὲ λέγω τὸ τὶ ἐστιν εἰκός τοῦ πρῶτος οὐσίαν. Z. 11, 1037, ἡ οὐσία γὰρ ἐστὶν τὸ εἴδος τὸ ἔσον....and more clearly 1037b1, τὸ τὶ ἐστιν εἰκός τοῦ εἰκός τῶν τινῶν...ὑπέρ ἐπὶ τῶν πρῶτων οὐσίων, ὅσπερ ἐπὶ τῶν πρῶτων οὐσίων, ὅτι καμπυλότητα καὶ καμπυλότητι εἶναι, εἰ πρῶτη ἔστιν. Λέγω δὲ πρῶτην ἡ μὴ λέγεται τῇ ἄλλῃ ὑπ' ἄλλῳ εἶναι καὶ ὑποκειμένῳ ὡς ὑλή.
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and a regulative creative form (εἴδος) on the other. Matter, as conceived by Aristotle, is thus the original substratum, the indefinite unformed starting-point which is as yet mere negation, but is to become something actual: while Form is the mode in which this undetermined something passes from its state of merely negative existence into that of real definite being. Or again, we may say, every real thing is at once individual and universal: it is either an individual universalized by the relations in which it exists or an universal individualized through the particular conditions which determinate existence imposes on it. The truth of things thus lies in the fully determined concrete rather than in the vague or empty abstract: or, in Aristotelian phrasology, it is a combination (σύνολον) in which matter merges in form and form gains reality through an as yet unformed matter. And in some such sense as this Soul is the substance—that is, the concrete reality or substantial truth of Body.

Soul therefore, Aristotle himself elsewhere says, is the realization of the body (ἐνέργεια σώματος). This conception of realization occupies a prominent place in Aristotle's philosophy. The world Aristotle regarded as a perpetual process of development—a constant transformation of what merely had the power of being into that which actually existed. Existence therefore shewed us two inseparable and correlative aspects of its operations—a state of potentiality or capability (δύναμις) on the one hand, and a state of actualization or realization (ἐνέργεια) on

1 Metaphys. Z. 10, 1035b29, καθόλου δ' οὐκ ἔστιν οὐσία, ἄλλα σύνολον τι ἐκ τούτων τοῦ λόγου καὶ τηροῦται τῆς ἔλεγχος ὡς καθόλου. Ζρ. 1057a29, ἡ οὐσία γὰρ ἐστὶν τὸ εἶδος τὸ ἐνόν, εἰ δὲ καὶ τῆς ὑλῆς ἡ σύνολος λέγεται οὐσία. And the sense of fully determined reality as equivalent to οὐσία is put most clearly De Interpret. c. 13, 23b23, τὰ μὲν ἄνευ δυνάμεως ἐνέργειαι εἶσον, οἷον αἱ πρῶται οὐσίαι. For Aristotle's conception of ὑλή the following passages are important: De Gen. 1. 4, 32c2, ὅτι δὲ ὑλή μᾶλλον μὲν καὶ κυρίως τὸ ύποκείμενον γενέσεως καὶ φύσεως δεικτικόν: Meta. II. 1, 1042b27, ἐλπὶ δὲ λέγω ἢ μή τόδε τι οὐσία ἐνέργεια δυνάμει ἐστὶν τόδε τι: or more simply in Meta. Z. 3, 1029b20, λέγω δ' ὑλήν ἡ καθ' αὐτήν μήτε τι μήτε ποσὸν μήτε ἄλλο μήθεν λέγεται οἷς ἁρματος τὸ ὄν. So shortly it is the ἁρματον, the undetermined.

2 Meta. II. 3, 1043b35.
the other—this realization being itself in turn only a stage of potentiality for the development of some other aspect of reality. It should be evident from this in what sense it is that soul is the realization of the body. Without soul, Aristotle implies, the body is a mere potential existence, a mere possible substratum for development in future: it is nothing actual or real. But the whole meaning of a potential capacity lies in its reference to the actual realization which expresses it. Just as the seed reaches its true meaning in the tree, so the soul constitutes the real significance of the body. Soul is thus not only the realization, the true meaning of the body: it is also in a sense its end or termination. When an organism has advanced so far as to possess a soul, it has reached, as it were, its last stage in development.

To express this aspect of the mental functions, Aristotle makes use of the word entelechy (ἐντελέχεια). The word is one which explains itself. Frequently, it is true, Aristotle fails to draw any strict line of distinction between entelechy and energy: but in theory, at least, the two are definitely separated from each other, and ἐνέργεια represents merely a stage on the path towards ἐντελέχεια. Entelechy in short is the realization which contains the end (τέλος) of a process: the complete expression of some function—the perfection of some phenomenon, the last stage in that process from potentiality to reality which we have already noticed. Soul then is not only the realization of the body: it is its perfect realization or full development.

There is however a further differentiation of the term ἐντελέχεια in the definition of the soul. The full development of any object or of any idea may be either implicit or explicit. The cognitive powers of man for instance find their development on the one hand in the possession of scientific truths and general

1 Eth. Nic. ix. 9, 1170a17, τῇ δὲ δύναμις ἑλς τὴν ἐνέργειαν ἀνάγεται.
2 Meta. Θ. 8, 1050a23, διὸ καὶ τὸν ομοίον ἐνέργεια λέγεται κατὰ τὸ ἔργον καὶ συντείνει πρὸς τὴν ἐντελέχειαν. Whereas ἐντελέχεια connotes as it were both ἔργον and τέλος: it is a ἔςις which is at the same time ἐνέργεια.
knowledge, on the other hand in the application of these truths to new fields of intellectual interest. The knowledge, in other words, through which man as a rational being attains the full fruition, the perfect realization of his faculties, may be either knowledge possessed but dormant in the mind or it may proceed to something further and be this same knowledge consciously applied and used. Now it is in the first of these two senses that soul is the entelechy or perfect realization of the body: it is the first or earliest—that is the relatively dormant or implicit actualization in which our bodily processes attain their real truth. "Thus then," writes Aristotle, "if we be required to frame some one common definition which will apply to every form of soul, it will be that soul is the earlier perfect realization of a natural organized body." The words imply that Aristotle knows how perilous it is to lay down any general phrases which will apply to all the different forms of soul in the wide meaning in which he employs the expression. The love of concrete particular facts which shews itself in the distrust which he expresses in the Ethics for vague general theories and definitions would have led him rather to pass directly to the study of the different phases of soul and the distinctive characteristics of the separate mental functions. But the need of a general comprehensive study of psychology in opposition to the limited and un-systematic propositions of earlier thinkers made it imperative on Aristotle to supply a conception of the soul which should apply not merely to that vital force which gave meaning to the human organism but also to the animal creation generally and even to the forms of vegetable life. And such a comprehensive definition of the soul Aristotle found in calling it the earliest entelechy of body—the perfect development which having reached the stage of realization is capable of continued action,

1 *De An. II. 1, 412b4, εἰ δὴ τε κοινὸν ἐπὶ πάσης ψυχῆς δεὶ λέγει, εἰς ἄν ἐντελέχεια ἡ πρώτῃ σώματος φυσικῷ ὁργανικω."*

2 *Eth. Nic. II. 7, 1107a29, οἱ μὲν καθόλου (λόγοι) κενώτεροί εἰσιν, οἱ δὲ ἐπὶ μέρους ἀθρινώτεροι."
the ἐνεργεία which is still a δύναμις, the developed state which is the condition of perfect action.

There are other expressions by which Aristotle enables us to grasp still further his conception of the soul. Soul for instance he asserts is the τὸ ἢν ἐναι of the body, the manifestation or expression of the being of the body. This strange-looking term is one possessed of much significance. It would seem to have arisen from the combination of the phrase τὸ ἐστι with the words τὸ ἐναι. The τὸ ἐστι of an object is the statement of its general leading nature. By τὸ ἐναι on the other hand we must understand simply the definite existence, the particular manifestation of any object to which the term is applied. If then we combine the two formulæ together—the change from τὸ ἐστι to τὸ ἢν would seem intended to remove the notion outside the limits of present time and so give the phrase a wider and more abstract character than it would otherwise possess—we arrive at that same notion of concrete reality, of individualized universality which we found before to be the sense of substance (οὐσία). The substance or reality however with which we are now dealing is 'without matter' (ἀνευ ὑλῆς)—it is, that is to say, fully determined and realized and therefore free from all those associations of something not yet fully formed which are inherent in Aristotle’s theory of matter.

Soul is accordingly, as the τὸ ἢν ἐναι of the body, the realization of its general character—the manifestation of its a priori meaning—the exposition of what body was and is. Thus further soul is the λόγος, the idea of body. It is so because

1 De An. II. 1, 412. Cp. Meta. Z. 19, 1033b14, ἐπεὶ δὲ ἡ τῶν ψυχῶν ὑπάρχ (τῶτο γὰρ οὐσία τοῦ ἐνεργεία) ἢ κατὰ τὸν λόγον οὐσία καὶ τὸ εἶδος καὶ τὸ τι ἢν ἐναι τῷ τοιῷδε σώματι.

2 Meta. Z. 7, 1033b14, λέγω δ' οὐσίαν ἄνευ ὑλῆς τὸ τι ἢν ἐναι. It is frequently identified with the use of ἐναι with a dative, as denoting the essential character of some object. So Meta. Z. 4, 1039b14, discussing the conception λογικός, says ἐστι τὸ τι ἢν ἐναι ἐκάστον δ' ἄνευται καὶ αὐτό. οὐ γὰρ ἐστι τὸ τοῦ εἶναι τῷ μονοικῷ ἐναι· οὐ γὰρ κατὰ σαντον εἶ μονακός. Cp. also Meta. H. 3, τὸ γὰρ τὶ ἢν ἐναι τῷ εἶλει καὶ τῇ ἐνεργείᾳ ὑπάρχει. ψυχῇ μὲν γὰρ καὶ ψυχῇ ἐναι ταύτων, ἀνθρώπῳ δὲ καὶ ἀνθρώπων οὐ ταύτων, εἰ μὴ καὶ ἡ ψυχῇ ἀνθρώπου λειχθήσεται.
it expresses the true significance of the body and so contains its
definition. It is in short, Aristotle implies, only through the
soul that we can understand, explain or comprehend the body.
And so far as modern physiological psychology asserts that mind
is to be known only through a study of the material processes
which are its concomitants, it reverses altogether the standpoint
of Aristotle's psychology.

This relation of the body to the soul has been however strangely
misunderstood by most commentators on the Aristotelian psycho-
logy. So deep rooted is the conviction that mind and body are
two entirely different forces that few thinkers have been able to
grasp the Aristotelian conception of their mutually comple-
mentary character. Even a writer who has devoted so much of
a lifetime to the work of expounding Aristotle to his countrymen
as M. Barthélemy St. Hilaire finds the secret of all the aberrations
of Aristotle in his failure to distinguish between the body and the
soul. "He has confounded them," he writes, "by ascribing to the
one functions which belong exclusively to the other." But the
truth is that Aristotle has neither confounded them nor misapprop-
riated their functions. He has simply risen above the ordinary
popular standpoint which views them as two mutually exclusive
forms, and regarded them as moments in one great idea—as
factors which require the support of one another—and in which
nevertheless mind or soul is the real truth of the union. He does
not for one moment deny, as we shall find when we consider his
theory of reason, that there may be activities of thought indepen-
dent of material organization. What he does maintain is that
soul represents the true meaning of the body, so that body
cannot be rightly said to exist apart from soul—and that it is
through soul that the bodily processes attain their true signi-
ificance.

Regarding soul in this way as the truth of body, Aristotle
will not accept such phrases as harmony or adjustment (συμ-
θεσία) as expressions of the relations which subsist between the
body and the soul. In many ways indeed the conception of
harmony would seem to be not unlike the manner in which Aristotle conceives the soul in its connection with the physical organism. But the fourth chapter of the first book of the Psychology shews how far he is from accepting such an explanation of the soul. Not indeed that Aristotle rejects this conception of the mental functions with the same decisiveness as that with which he sets aside various other theories advanced upon the subject. He sees that the view which regards the living being as compounded of contraries (συγκείσθαι εξ ἑναντίων) agrees in some respects with his own theory of the relations which subsist between the body and the mind: and with genuine dialectical subtlety, after he has enumerated the different arguments which seem to shew that the soul cannot be regarded as a harmony of different elements in proper ratio, he proceeds to state the difficulties which meet his own conclusion, from the fact that the destruction of the body ends in the destruction of the soul just as conversely the destruction of the soul coalesces with the annihilation of the body. Yet none the less Aristotle holds to his own conclusion, which maintains that soul and body are not simply a harmony or proportionate ratio of opposing elements, but rather an inner unity in which the bodily functions find their truth and real meaning in the soul. Body, in fact, exists for the sake of soul: and while the mental functions are dependent for their exercise upon the body, it is equally true that body is devoid of meaning when apart from soul.

‘We must then,’ says Aristotle, ‘no more ask whether the soul and the body are one, than ask whether the wax and the figure impressed upon it are one, or generally inquire whether the material and that of which it is the material, are one.’ The two, he means, are only complementary sides of one and the same

1 De An. 1. 4, 407b30, ἄρμονλαν γὰρ των αὐτῆς (i.e. ψυχῆς) λέγουσι· καὶ γὰρ τὴν ἄρμονλα κρᾶσιν καὶ σύνθεσιν ἑναντίον εἶναι καὶ τὸ σῶμα συγκείσθαι εξ ἑναντίων· καίσοι γε η μὲν ἄρμονλα λόγος τις ἄστι τῶν μικρότερων ἢ σύνθεσις, τὴν δὲ ψυχὴν οὐδέτερον οἷον τῆς εἶναι τούτων. . . . ταύτα μὲν οὖν ἐχει ποιαντας ἀπορλαι· εἰ δ’ ἄστιν ἐκείνον ἡ ψυχὴ τῆς μίζεως, τί δὴ ποτε ἕμα τῷ σαρκὶ εἶναι ἀναφέρεται;

2 Id. II. 1, 412b6.
state or object. Not that Aristotle anticipates the monistic standpoint of Spinoza and regards thought and extension, mind and body, as only different aspects of one and the same substance, viewed now under one attribute, now under another, or that he holds with George Henry Lewes that "a mental process is only another aspect of a physical process." Aristotle does not leave the mind in a position of simple equilibrium against the body. To him body only attains reality in soul: and the mental functions, while the outcome of the physical, are yet also in a way the presupposition on which they rest. Soul, in fact, is what gives meaning and reality to body just as it is vision which gives meaning and reality to the eye: or as it is axehood which, were we to conceive an axe as a natural body, would be the soul and truth of an axe. Just, in short, as the eye is only properly an eye when it sees, the axe only properly an axe when it is used as such, so the body is only rightly called body when it is realized in soul.

Such an explanation of the relation between mind and body is not perhaps altogether flawless, but it goes a long way to a solution of a problem which has often met with very insufficient answers. It involves no such deus ex machina as is involved in the Occasionalism of Geulinx or the pre-established harmony of Leibnitz. It holds, it will be seen, that mind and body are not to be viewed as entities entirely separated from one another, but as correlatives which mutually imply each other: as terms in fact which stand as right and left or as the outward and the inward. It maintains, to use the words of Prof. Erdmann's Leib und Seele—a book which is in many ways the best commentary to be had on Aristotle's general psychological position—that as body cannot be imagined without mind, so mind cannot be conceived without body—that the two in fact presuppose one another. Body and soul thus stand in the closest relation to one another. The soul is the immanent end or

1 De An. 412b12 and 413a1.
determination of the body, the body nothing but the expression or realization of the soul: the soul is the idealization of the bodily organs, while they are the actualization of the mental powers. Or if soul be viewed as the perfection and completion of that for which the body is adapted, body on the other hand is the explication or development of the nature of the soul.

Phrases like these, it should however be remembered, only apply to Aristotle's psychological conceptions so far as we can venture to render the Aristotelian terminology by modern equivalents. It may be said at once that no English word can fully represent what Aristotle meant by ψυχή. The word was one which had gradually acquired a special connotation to which its usage, say in the Homeric poems, gives us but little clue. And when we ask what English term would best translate the word as used by Aristotle it is difficult to arrive at any precise decision. 'Mind' might well be said to occupy the same place in the psychology of our day which ψυχή did in that of Aristotle's times: and it might be plausibly regarded as the true equivalent for Aristotle's word. But on the other hand it is to be remembered that the 'mind' means less than Aristotle's expression meant in Greece. We talk about the 'mind' of animals but scarcely of the 'mind' of plants: and yet it is to plants as well as to animals that the Aristotelian term has to be applied. 'Vital principle' (the phrase by which Collier sought to represent the term) means at once less and more than Aristotle's word: and it seems desirable to find a single term which shall be as concise as the original word itself. 'Psychic force' is therefore equally objectionable, not to take account of the further fact that it merely repeats in English characters the Greek original. 'Soul' on the other hand would seem to be free from some of these defects. It is no doubt coloured for us by religious and moral considerations which are foreign to the psychological inquiries of the Stagirite: but in some respects it may claim to recall some part at least of Aristotle's meaning. The 'soul' of a plant and the 'soul' of a man are
alike the central vivifying element in each: a 'soulless' man or 'soulless' melody are alike devoid of inner force and meaning. And therefore, though it is really impossible to stick consistently to one stereotyped equivalent—though according to the context we must modify the English term we select—it would seem desirable to employ 'soul' as the usual equivalent of Aristotle's ψυχή.

But the important question for us, Aristotle himself would probably have said, is not what is the abstract nature of this ψυχή, but what are the powers and faculties in which it manifests its action. And accordingly, from the consideration of soul in the abstract, he proceeds to investigate the different forms in which it presents itself before us. True to his general preference of concrete particulars to abstract universals, he has no sooner stated what mind is in general than he proceeds to exemplify and corroborate his theory by a statement of its various manifestations. The good definition, he declares, must not remain a bare assertion: it must prove its own validity and set forth the grounds on which it rests. Too often the terms of a definition are like unproved conclusions. But the genuine definition will not merely exhibit the results at which it has arrived: it will also state the steps by which it has attained its end. And such a corroboration of the definition of the soul is found in enumerating the various aspects of life to each of which the description of an implicit perfection or entelechy may be applied.

V. THE PSYCHICAL FACULTIES.

These various developments of life, of which each, besides constituting the soul of its own stage of life, is also incorporated as a 'moment' in the soul of man, are briefly what Aristotle knows as faculties. For, it is of life, that soul

1 De An. ii. 2, 413a16, νῦν δ' ὡσπερ συμπεράσματ' οἱ λόγοι τῶν ὅρων εἶσον.
W. AR.
may be regarded as the foundation or the principle—the cause in which its several conditions may be viewed as concentrated. There will then be as many forms of soul as there are definite types of life—in other words, we may trace the vital phenomena as they display themselves in plants and animals, and whatever be the function or set of functions in which each object seems to realize its true nature, this function or combination of functions may be regarded as the soul or ψυχή for that one stage of existence.

Psychology with Aristotle is thus closely related to biology: and the same conception of development (taken generally) as dominates his biology is prominent also in his psychology. The continuity (συνέχεια) of terrestrial life was constantly present to his mind. Nature, he remarks in his treatise On the Parts of Animals, proceeds without interruption from inanimate to animate forms of existence through the intermediate stage of beings which are living but yet not animals1, and the ambiguous character of sponges and such like objects attracted his special notice. Analogy, he found, ruled the relations of the parts of vegetable to the parts of animal nature: and among animals again he recognised a similarity between the different limbs and organs characteristic of the different species. Nor did he allow more than a difference of degree between animals and man. 'The great majority of animals,' he remarks in the eighth book of his History of Animals, 'present some traces of those mental characteristics which display themselves most prominently in the human being; and the 'soul' of children is but little different from that of lower animals2. Man therefore stands on the same line as the rest of animal existence. He is the end and centre of creation: but he is so simply in so far as all forms of life lead gradually

2 Hist. Animalium, Book viii. 1, 588a18, ἐνεστι γὰρ ἐν τοῖς πλεῖστοις καὶ τῶν ἄλλων ζῴων ἔχουν τῶν περὶ τὴν ψυχήν τρόπων, ἀπερ ἐπὶ τῶν ἄνθρωπων ἔχει φανερωτέρας τὰς διαφορὰς.
up to man as the perfect development of what is contained im-
plycily and imperfectly in lower forms.

This biological conception of a progressive development of
life on earth, stands, as has been said, in the closest relation with
the Aristotelian psychology. There are, in fact, just as many
forms of soul as there are clearly ascertained types of vitality:
and the soul exhibits itself in a series of forms corresponding to
the stages by which life passes from that of mere vegetable
existence to the higher faculties of thought and will. Aristotle
thus comes to recognise four different kinds (as we may say) of
soul, each one of which represents a different stage of physical
development. It is indeed only with the power of sense-per-
ception that we reach the animal properly so called. But before
this stage is reached, there is a simpler form of life, of which the
full development may be described as soul. This is contained in
the discharge of the normal functions of nutrition, growth and
reproduction—the different processes in fact by which food is
assimilated and mere existence is maintained. If it be sense-
perception which constitutes the animal, it is this nutritive func-
tion which constitutes the truth or real meaning of the vegetable
or plant. And besides these processes which thus constitute
the first entelechies of plants and animals, the psychologist
requires to take account of other forms of soul which belong
chiefly or exclusively to man. Aristotle accordingly recognises
the following four stages in the development of soul. There
is, first, soul as the perfect realization of the nutritive and
vegetative life, secondly, soul as equivalent to the exercise of
sense and its perceptive powers, thirdly, soul as expressive of
desire and thus attended by the capacity of local movement,
and lastly, soul as implying the action of the intellect and under-
standing—briefly the vegetative, the sensitive, the conative
and the intellectual soul.\footnote{II. 2, 413b12, ἡ ψυχή τούτων ὅρισται, θρεπτική, ἀλεθητική, διανοητική, κινήσει. Σρ. II. 3, 413a31.}

These stages in the development of soul are not however
spoken of so much as forms or kinds of soul as parts (μόρια) or faculties (δυνάμεις). And here at once a difficulty presents itself. What is the sense in which we can regard the soul as divided into parts? How can we preserve its inner unity, if we allow it to be thus split up into different applications of its activity? Questions like these bring Aristotle face to face with all the problems with which a theory of mental faculties is surrounded. The division cannot, he thinks, stop with the enumeration of some three or four faculties: the very differences on which the ordinary divisions are founded make it necessary to recognise a much larger group of powers of mind. The Platonic division into reason, spirit and appetite must be supplemented by the faculties of growth, sensation and imagination. And there is a further difficulty which meets any attempt to divide the mind into different faculties. The unity of the mental action makes it utterly impossible to confine some processes within the limits of one single faculty. The conative or oeretic energy of soul would have, to suit the popular psychology, to be spread over two or three different faculties: because, adds Aristotle, while volition, one of its elements, falls within the sphere of reason, its other factors—appetite and impulse—fall within the field of the irrational.

Faculties to Aristotle are thus not different ‘parts’ into which soul is actually divided, but only different sides or aspects of mental action. In opposition to the Platonic psychology which had seemed to draw a fast line between the members of its division, Aristotle views the partition of the soul into faculties as merely a convenient application of abstraction. And thus his faculties are not separable in actual fact or actual locality: the partition is one which rests simply on a difference in their mode of work-

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1 II. 2, 413b14, πότερον δὲ τούτων ἑκαστῶν ἐστιν ψυχή ἢ μόριον ψυχῆς καὶ εἰ μόριον πότερον οὕτως ὡστ' εἶναι χωριστῶν λόγω μόνον ἢ καὶ τόπω. Cp. III. 9, 432a22.

2 III. 9, 432a24.

3 III. 9, 432b7, εἶ δὲ τρία ἡ ψυχή, ἐν ἑκάστῳ ἐσται δρέπος: because, it is explained, ἐν τῷ λογισμικῷ ἡ βούλησις γίνεται, καὶ εἰ τῷ ἀλόγῳ ἡ ἐκπιθυμία καὶ δ ὑμός.
ing, on the point of view from which they are regarded (λογίᾳ): it is in short a distinction not a division. It is therefore only by an effort of abstraction that we can distinguish between different faculties of soul: just in fact as we can, according to the Nicomachean Ethics, distinguish between the convex and concave, or as, to use the additional illustration of the Eudemian Ethics, we can in the case of one and the same line distinguish between its straightness and its colour. We may separate in short between the sensitive and the concepive powers of mind: but it is one and the same mind to which sensations are brought and by which concepts are formed: and the distinction, so far as it exists, is only a difference in the manner of the mind's activity in dealing with materials of knowledge.

The number of the mental faculties is accordingly a subject on which Aristotle is somewhat indifferent. Sometimes (II. 3. 1) the faculties are spoken of as five—the nutritive, sensitive, conative, locomotive and intellectual: at other times (II. 2. 7) four only are enumerated, because the conative and locomotive faculties are practically one: while, at other times, since the sensitive faculty is the basis of the conative, three only are enumerated and the Aristotelian scheme of psychic faculties reduces itself to the faculty of nutrition, the faculty of sense and the faculty of thought. Soul therefore is itself defined as the fundamental principle of life, of sense-perception and of thought: it is the unity in which they are all embraced. For

1 II. 2. 10, 413b29, τῷ δὲ λόγῳ δι’ ἑτερα φανερῶν αἰσθητικῶν γὰρ εἶναι καὶ δοξαστικῶν ἑτερον, ἐπερ καὶ τὸ αἰσθάνεσθαι τοῦ δοξάσεως.

2 Eth. Nic. I. 13, 1102a28, ταύτα δὲ πότερον διώρισται καθάπερ τά τοῦ σώματος μόρια καὶ πᾶν τὸ μεριστὸν ἵ τῷ λόγῳ δῦο ἐστιν, ἀχώριστα περικότα καθάπερ ἐν τῇ περιφερείᾳ τῷ κυρτῶν καὶ τῷ κοίλων.

3 Eth. Eud. I. 1, 1170b32, διαφέρει δ’ οὕθεν οὕτ’ εἰ μεριστῇ ἡ ψυχὴ οὕτ’ εἰ ἀμερῆς, ἔχει μέσην δυνάμεις διαφόρους οὕτε ἐν τῷ καμπύλῳ καὶ τῷ κοίλῳ καὶ τῷ κυρτῶν ἀδιαχώριστον καὶ τῷ εὐθὺ καὶ τῷ λευκῶν καὶ τῷ εὐθὺ καὶ τῷ λευκῶν.

4 III. 7, 431b13, οὐχ ἑτερον τὸ ὅρκετικον καὶ φιλετικὸν οὕτ’ ἄλληλων οὕτε τοῦ αἰσθητικοῦ ἄλλα τὸ εἶναι ἄλλο.

5 II. 2. 12, 414a12, ἡ ψυχὴ δὲ τούτο ὁ ἔμεν καὶ αἰσθανόμεθα καὶ διανοούμεθα πρῶτος.
(Aristotle further explains) these souls or faculties of soul form an ascending series in which the higher faculty involves and comprehends the lower. The functions of nutrition are the basis for the faculties of sense: and the exercise of sense is necessary to provide a foundation and materials for thought. "The different forms of soul in fact stand to one another in the same way as do the several species of figure: both in the case of figures and of animate beings the earlier forms always exist potentially in the later." Just in short as the triangle may be regarded as the basis of all other rectilineal figures: so, in like manner, may the nutritive functions be viewed as the presupposition of all the later faculties, so that the possession of the sensitive faculties involves the possession of the faculties of nutrition, while the exercise of reasoning and thought implies and rests upon both the nutrient and sentient capacities.

Two points of view must be however steadily embraced in studying Aristotle's theory of faculties. On the one hand, it must be remembered that no higher exercise of soul can be dissevered from its lower animal presuppositions. But on the other hand we must remember also that each one of these faculties is a faculty of soul, and that it is only by reference to the unity of the soul that each can be rightly understood. Nor must we fail to note the general distinction Aristotle draws between that which is prior in order of time and that which is prior in order of thought. If modern theories of development have often neglected the distinction between 'nature' and 'history,' between the chronological genesis of a phenomenon and its existence as a logical conception, Aristotle repeatedly asserts that the reality precedes the potentiality and that if in time the lower form has the priority, still, in thought and real being, the higher, more developed form always stands the first. And in reading his natural history, as we may call it, of the mind,

1 II. 3, 414a28.
we cannot too often recall his own caution against forgetting whether we should describe how each thing naturally comes into existence or how it actually is\(^1\).

VI. THE NUTRIENT FUNCTIONS.

The first among these psychic faculties, that viz. which constitutes the basis of vegetable life—need not detain us long. It also, we must remember, is a first entelechy—the implicit perfection of plant life—the cause or principle on which the different phenomena of growth eventually rest. Its work may be reduced to two main functions—those of reproduction and of absorbing food. It stands therefore first among those steps or stages of ideal perfection which Aristotle knows as 'souls.' It is accordingly 'the most common form of the soul:' it is the essential characteristic of all vegetable life and it forms the necessary presupposition of all the higher faculties, because it secures those very conditions of existence without which any further exercise of function is impossible. Its two functions—reproduction and nutrition—are in Aristotle's theory closely connected with one another. The absorption of food is but the beginning of that process which finds its natural termination in the creation of another life. Nature in no one of all her operations acts without an aim or fruitlessly: and the assimilation of nutrition has for its end the permanent continuance of existence. "It is in fact the most natural of functions in every animal to generate another like itself in order that the individual may thus as far as possible participate in the eternal and divine." The character of food itself as nourishment Aristotle takes some trouble to determine. The common opinion he finds is that

\(^1\) De Part. An. 640a18, δει δὲ μὴ λεηθεναι πῶτερον προσήκει λέγειν πῶς ἐκαστὸν γίνεσθαι πέρυκε μᾶλλον ἢ πῶς ἔστιν. . . . ἢ γὰρ γένεσις ἑνεκα τῆς οὐσίας ἐστιν, ἀλλ' οὐχ ἢ οὐσία ἑνεκα τῆς γενέσεως. Metaph. M. 1077a18, τὸ ἄτελές μέγεθος γενέσει μὲν πῶτερὸν ἔστι, τῇ οὐσίᾳ δὲ ἵστερον, οἷον ἄφικον ἐμψίξου.
contrary is nourished by contrary: but there are others who explain it by the contact of similars. Between these two opinions, Aristotle, in accordance with his usual method, takes up an intermediate position. "So far," he thinks, "as the food is undigested, the contrary is nurtured by the contrary: so far as it is digested the like is nurtured by the like";—in other words the food becomes assimilated to the organism which it is destined to maintain.

Assimilation is thus the character of the process through which the lowest of the psychic faculties displays its operation. But we shall find that the mode of action thus assigned the nutrient faculties foreshadows as it were the manner in which all the other activities of soul are conceived to act. We may in fact say, with Bäumker, that while the plant assimilates the material in a material manner, sense assimilates the material in an immaterial manner, and thought assimilates the immaterial in an immaterial manner. And if this be more epigrammatic than true, it is at least the case that both in sensation and in thought, the work of soul resolves itself into a "receptive" act which cannot but carry with it many of the assimilating associations of the nutrient activities.

VII. THE FACULTIES OF SENSE.

From the capacities of growth and reproduction, Aristotle passes to the faculties of sense. These sentient capacities mark a decided point in the development of life on earth: for it is the possession of the powers of sense which first constitutes the animal. As the vegetable functions were characteristic of the plant, so it is the attribute of sensation which distinguishes the animal from objects simply animate. There is indeed, as we

1 II. 4, 416b7.
2 De Part. An. III. 4, 666a34: τὸ ἰδών αἰσθῆσιν ὄρισται. De An. II. 2. 4, 413b2.
have seen, a certain amount of similarity, between the action of
the nutrient and the action of the sensitive capacities in dealing
with their materials. Both receive or apprehend their object,
but the degree to which they do so is intrinsically different.
The faculties which constitute plant life simply devour their object,
they take in the matter as well as the form of that
which they employ as nutriment; whereas the faculties of sense
receive nothing but the form of their object while they leave the
matter, of which it is composed, untouched.

Sensation is thus usually explained by Aristotle as a process
in which we are 'moved' or 'affected' (literally, 'suffer') by an
external object. It involves therefore immediately an 'altera-
tion' or a qualitative transformation: the affection, which is the
vehicle of alteration, produces a change in the nature or quality
of the organ which perceives. The hand in fact, Aristotle might
be taken to imply, becomes, when it perceives something, altered
in its quality: it loses its own temperature and becomes cold or
hot like its object: it is altered or transformed by the external
object of sensation. So again the eye in perceiving colour
becomes as it were coloured itself: it is subject, that is, to a
qualitative change by means of which the affection to which it is
exposed. But this susceptibility upon the part of sense is not a
susceptibility to the actual object of sensation: it is but the
specific character, the determining form which the sense receives.
And accordingly we find the faculty of sense defined as a power
of receiving sensible objects without their material concomitants.

1 II. 12, 424b32—424b2.
2 II. 5, 416b33: ἡ δ' αἰσθησις ἐν τῷ κινεῖσθαι τε καὶ πάσχειν συμβαίνει δοκεῖ γὰρ ἀλλοιωθεῖς τις εἶναι. ἄλλοιωθεῖς itself is regarded as a kind of κίνησις, a metaβολή κατὰ τὸ ποιῶν, and more definitely we read De Gen. I. 4, 319b10: ἀλλοιωθεῖς μὲν ἔστιν ὅταν ὑπομένοντος τοῦ ὑποκειμένου, αἰσθητοῦ ὄντος, μεταβάλλῃ ἐν τοῖς αὐτοῦ πάθεσιν ἡ ἐναρτίον φύσις ἡ μεταξύ. That πάθος is the vehicle of ἀλλοιωθεῖς appears from Metaph. Δ. 21, 1022b15, πάθεσι λέγεται ἕνα μὲν τρόπον ποιήτης καθ' ἴνα ἄλλοιωθαι ἐνδέχεται.
3 So in II. 12. 4, 424a34, Aristotle asks why plants do not perceive—καλ γὰρ ὕψεται καὶ βερμαίεται—i.e. they display signs of that ἄλλοιωθεῖς which was said to constitute perception.
4 III. 2, 425b22: τὸ ὄργῳ ἔστιν ὡς κεχρωμάτισται.
just in the same way as the wax receives the figure of the seal without the iron or the gold of which the seal itself may be composed.

Thus far Aristotle might seem to offer little but a mechanical interpretation of the perceptive powers. It might appear in fact as if sensation were nothing but a physiological process in which external objects stamped themselves upon the corporeal organism and so gave rise to various corresponding perceptions. But Aristotle supplements his theory in such a way as renders such an interpretation indefensible. The passive affection which is involved in all sensation is not merely passive; nay rather we may call it non-passivity. For if suffering (πάθεων) be identical with being moved (κινεῖσθαι), it is virtually equivalent to active energy (ἐνεργεῖν). In receiving as it does the forms of things, sense is more than receptive: at the same time as it is impressed, it also in its turn impresses and gives that εἴδος to the things of sense without which they could not be otherwise perceived. But the writer fails here, as he fails always, to draw a distinction between the work of sense and the work of thought: and though we learn that the sensitive act (αἰσθάνεσθαι) is limited to an individual 'here' and 'now,' while perception (αἰσθησίς) refers to the general aspect of a quality (τοιοῦνδε), we are not told how this transition is effected.

The searching analysis to which Aristotle subjects the terms which he himself applies to sense-perception makes it however at least clear that it is only in a limited acceptance that we can describe the faculty of sense either as a mere capacity (ἐνναμίς) or as merely a 'suffering' or passive affection (πάθος). We must remember says Aristotle that 'capacity' and 'affection' are not univocal. A man may possess a 'capacity' of knowledge (for instance) either because he belongs to the class of beings capable of knowledge, or because he possesses an ac-

1 II. 12, 424a18: ἡ μὲν αἰσθησίς ἐστὶ τὸ δεκτικόν τῶν αἰσθητῶν εἴδὼν ἀνευ τῆς ύλης, ὁδὸν ὁ κηρὸς τοῦ δακτύλου ἀνευ τοῦ σηθροῦ καὶ τοῦ χρυσοῦ δέχεται τὸ σημεῖον.
2 III. 4, 429b29: ἡ απάθεια τοῦ αἰσθητικοῦ.
3 II. 5, 417ab.
quaintance with some special branch of knowledge which he is able to apply to actual use: and similarly the child as well as the grown-up man may be said to possess the ‘capacity’ to become a general. Now both of these capacities can be said to ‘suffer’ or be acted on: but the sense of this ‘suffering’ in the one case is very different from that which it bears in the other. The former, the man who possesses the capacity of knowledge simply in virtue of his humanity, ‘suffers’ or is acted on when from his condition of potential knowledge but actual ignorance he is brought round to the opposite condition, the other who possesses learning which he can apply is acted on by being led to give expression to the knowledge which he implicitly possesses. Thus in ‘suffering’ we must recognise two senses—on the one hand, the destruction of the one state by its contrary (φθορά τος ὑπὸ τοῦ ἐναντίου), on the other hand a preservation of something potential by means of what is actual (σωτηρία τοῦ δυνάμει ὄντος ὑπὸ τοῦ ἐντελεχείᾳ ὄντος). We must accordingly distinguish between two kinds of ‘suffering’ in sense-perception—the first that in which the mere condition of a faculty becomes a faculty ready for action as happens at the time of birth (ὑπὸ τοῦ γεννώντος), the second that which brings the perceptive faculty, when developed, into actual exercise and enables it to reach its natural termination.

Sense then is not merely the reaction to an outward stimulus: it is not simply a form of reflex action: it is rather the realization of an internal faculty in response to its appropriate object. The sensible object, is, in other words, not so much the condition as the occasion of sensation: perception is something internal and immanent; only called out into action by an external object. Thus, to take a definite example, taste is affected by the object of taste as touch: and therefore the organ of taste must be rendered moist and like its objects—yet this however without losing its intrinsic character (σωζόμενον)1. The view therefore of earlier thinkers who maintained that in sense-perception like was

1 II. 10, 422b2: πάσχει γάρ τι ἡ γεύσις ὑπὸ τοῦ γευστοῦ ἡ γευστοῦ ἀναγκαῖον ἄρα
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affected by like is not altogether false when stated with the proper limitations. The faculty of sense is potentially that which the object of sense is in actuality: and thus while undergoing the impression it is like its object, but, after the impression has been received, it becomes identical with it\(^1\).

The object and the faculty of sense thus stand, to Aristotle's mind, in intimate relation with one another. The object and the faculty are in fact correlatives, and in the perceptive act tend to coincide. They differ only in the manner of their definite existence (τὸ ἐγνατ) or in the manner in which they may be regarded (τὸ λόγον)\(^2\). They are only different sides or aspects of one and the same phenomenon, one side of which expresses itself in the operations of sense, the other in the concrete sensible thing. Aristotle however does not carry his doctrine of the relativity of knowledge so far as to deny the existence of a sensible world apart from sense-perception. "The early natural philosophers"—Democritus and Empedocles would seem to be intended—"were not right in holding that there was nothing white or black apart from vision, and no flavour independently of taste." Their theory, he thinks, is true if understood in reference to actual perception, but not if taken to apply to sense as mere potentiality\(^3\). Sense and things sensible are indeed correlative terms: but the faculty of sense is not so permanent in the relation as is the sensible object itself. The sensible object in fact, Aristotle holds, precedes the exercise of sense: the removal of the sensible object removes along with it the faculty of sense, while the faculty of sense does not simultaneously remove the sensible object\(^4\). It would seem therefore that

1 II. 5, 418a3.
2 III. 2, 425b36: ἡ δὲ τοῦ αἰσθήματος ἐνέργεια καὶ τῆς αἰσθήσεως ἡ αὐτὴ μὲν ἄστι καὶ μία, τὸ δ' ἐγνατ οὐ ταυτὸν αὐτάις.
3 426a20: ἀλλ' οἱ πρῶτοι φυσιολόγοι τούτο οὐ καλῶς ἔλεγον, οὐδὲν οἴδομεν οστε λεικόν οὔτε μέλαν εἶναι ἄνευ βάφως, οὐδ' χιμών ἄνευ γείσως.
4 Categ. 5, 7b37: τὸ μὲν γὰρ αἰσθῆτον ἀναφεθὲν συναναίρετ’ τὴν αἰσθήσου, ἡ δ'
though Aristotle never really probed the difficulties contained within the question whether the faculty or the object of sense is prior, and glided over it by his elastic distinction of a potential and a real capacity, he still held firmly to the view that sense-perception perpetually involves a correspondence between the object and the organ of sensation, so that if upon the one hand the outward object may be said to make the sense to operate, there is another in which the sense creates for itself the object which it can perceive. To Aristotle, therefore, we may say matter is not a “permanent possibility of sensation” realized in perception but sensation a permanent possibility of perceiving what as perceived is the realization of the sensitive capacities.

The correspondence which thus subsists between the object and the organ of perception meets with special recognition in the phraseology of Aristotle. Perception, it is said, requires that the cognitive subject should occupy a middle point (μεσότης) with reference to the objects of sensation. For the object of sense generally presents a pair of opposites—white and black, sweet and bitter, hot and cold—and sense must for the moment identify itself with one or other of them. But, in order to do so, it must itself be neither: it must occupy the middle point between the pairs of opposing qualities, so that it may be the better able to distinguish between them. For sense is essentially a critical faculty: its office is to distinguish between the qualities of objects: and to do so it must be itself equally removed from all these qualities.

And 

*aισθησις τὸ αισθητόν οὐ συναναρεῖ*. The grounds on which these conclusions are made to rest imply a physical conception of *aισθησις*, which is hardly in accordance with Aristotle’s developed views upon this subject. The *αισθητόν*, it is said, is prior to *αισθησις* because *αισθησις* itself results from a composition of various *αισθητά*, such as fire and water. 

1 *De Sensu*, 2, 438b22: τὸ γὰρ αισθητὸν ἐνεργεῖν ποιεῖ τὴν αισθήσιν.
2  II. II. 11, 424b6: αισθήσεως οὖν μεσότητος τινος οὔσης ἡς ἐν τοῖς αισθητῶς ἑναντιώσεως. καὶ διὰ τοῦτο κρίνει τὰ αισθητά, τὸ γὰρ μέσον κριτικόν γίνεται ἢ ἰρὸς ἐκέτερον αὐτῶν θέτερον τῶν ἄκρων.
3  II. II. 2, 422b23: πᾶσα γὰρ αισθήσεως μᾶς, ἑναντιώσεως εἶναι δεκεῖ, οἶνον δύσι λευκοῦ καὶ μέλανος.
hence it is that the sense is powerless in the presence of a quality which exceeds a certain limit. Excessive light destroys the organ of vision: excessive sounds whether they be too high or too low cannot be perceived: excessive objects of touch destroy life itself. And the reason in each case is the same. Strong light, strong odours, too high sounds—all destroy that equilibrium which sense-perception involves: the organ as an intermediate condition is no longer able to cope with the quality which falls outside the ordinary range to which the perceptive powers are adapted.

The general character of sense-perception should now be tolerably evident. Sense, we have seen, is no merely material process: it is, as Aristotle expresses it, a "movement of the soul through the body." Thus, in Aristotle's psychology, even perception is a going beyond the immediate fact, if the expression be allowed. The object which it apprehends is perceived not in its individual character but in relation to its general idea. And thus the object of sense-perception as perceived is implicitly an universal: it is, to use Aristotle's example, not Callias, but Callias as man that we perceive.

The analysis of the special senses requires us to take into consideration three main points. These three are 1st the object, 2nd the organ, and 3rd the medium of sense-perception. The second of these evidently enters into our inquiry. Perception, we have already seen, is a process in which at once soul

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1 II. 12. 3, 424b28.
4 An. Post. II. 19, 100b16, καὶ γὰρ ἀληθεύεται μὲν τὸ καθ’ ἐκαστον, ἡ δ’ ἀλήθεια τοῦ καθόλου ἐστὶν, οἶον ἀνθρώπου ἀλλ’ οὗ Καλλίου ἀνθρώπου.
and body are concerned, and it is therefore necessary to discuss the physical machinery by which perception is effected. The first—the object of sensation—calls for more remark. Aristotle it should be noted distinguishes between three kinds of objects of sense—a special, a common, and an incidental object. It is the first of these three objects of sensation with which we have meanwhile to do. Each single sense, Aristotle holds, has a special quality assigned to it; and the sense as such never goes beyond this quality. Thus the object of sight, we shall find, is colour, the object of hearing sound; and thus sight never gets beyond perceiving colours, hearing beyond perceiving sounds: if we do go beyond it and refer our sensation to a thing or person, we have passed beyond the special sensible, and, interpreting our sensation, have reached what Aristotle calls the incidental object of sensation. It is then only this special sensible—this ἔδωκαί αἰσθητόν—with which we are meanwhile concerned, and with regard to each special sense our first inquiry (first, because, as we have seen, the object is prior to the faculty) must be—what is the object with which it is concerned. But not only have we to discuss the object and the organ: the perceptive act also involves a medium. The impression which effects perception is no actual contact between the object and the organ: in fact, if the object be placed directly on the organ (e.g. the eye) no perceptive act whatever will result. Rather, perception is the result of a movement which is communicated by the object to some intervening substance, and is thence transmitted to the organ of perception. And thus it becomes an essential part of an analysis into the separate senses to inquire what is the nature of the media by which the sensible quality, which is the real object of sensation, is transmitted to the organ of perception.

1 II. 6.
2 II. 6, 418a11: λέγω δ' ἔδωκαί μὲν δ' ὑπέλεξεν ἐτέρα αἰσθήσει αἰσθάνεσθαι, οἷον ὑψίς χρώματος. Cp. Plato, Theaetetus 184 E: ἢ καὶ θεώσεις ὁμολογεῖν ἄ δε' ἐτέρας δυνάμεως αἰσθάνει, ἄδονατον ἐνεναι δε' ἄλλης ταύτ' αἰσθάνει, οἷον ἄ δε' ἀκοής, δέ' ὑψίως, ἢ ἄ δε' ὑψίως, δε' ἀκοής;
3 De An. II. 6, 418a20.
4 II. 7, 419a25—30. III. 13, 435a15.
VIII. THE SPECIAL SENSES.

To Aristotle, as to the ordinary understanding, there are five distinct senses which require to be considered by the psychologist. The first chapter of the third book of the *Psychology* even tries to make it appear that we do not possess more: but the reasoning, however we may try to connect it, is distinctly inconclusive. These senses stand to one another in a relation not unlike that in which the different forms or faculties of soul are connected. Just as the vegetative capacities are regarded as the basis on which all the other faculties repose, so in like manner touch is the sense which all the other senses presuppose. Touch is, in fact, the most common of all the perceptive faculties: it is that which all animals necessarily possess: and its final cause is of a humbler nature than that of the other senses. Sight and hearing are directed to our moral advancement, our intellectual development—they are τοῦ εὖ ὑπὲρ ἑνεκα: whereas touch and taste are intended for our bare subsistence, contribute to nothing but our animal existence, are in short simply τοῦ ὑπὲρ ἑνεκα. And hence presumably it is that Aristotle begins his analysis of the different senses with sight, and ends with touch, treating, that is, the senses not in the order of history but in that of nature. But it seems here more in accordance with the course we have previously followed to proceed from the lower to the higher, and thus begin with touch and gradually end with hearing and sight.

Touch is a sense of which Aristotle finds the analysis peculiarly perplexing. Each of the three points, which we noticed (p. lxii.) as requiring to be studied, presents some difficulty. As to its object—how comes it that the sense perceives qualities so opposite as hot and cold, dry and moist, hard and soft? Qualities so different as these cannot be brought under any one common

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1 *Hist. An.* iv. 8, 532b29.
2 III. 13, 435b2.
3 *De Sensu,* 1, 437a4. *De An.* III. 3, 429a3.
4 *De An.* II. 11, 423b—424a.
category; and yet none the less, each sense, it is to be presumed, perceives one class of objects. The difficulty here stated Aristotle can hardly be said to solve. He reminds us that the other senses have also sometimes a variety of opposites between which they have to judge: and he finally determines the object of the sense of touch as the distinctive qualities of body as body, these qualities being further explained as those which characterize the different elements, viz. hot and cold, dry and moist. Yet these qualities, Aristotle elsewhere tells us, cannot be reduced to fewer: and thus his answer really leaves the matter where it was. On the difficulties connected with the organ and the medium Aristotle is more satisfactory. Immediately, of course, the flesh might be supposed to be the organ of sense-perception. But this result is scarcely in accordance with what happens in the other senses. There, when the object is placed directly on the organ of sense, no perception whatever is possible: and it might be expected that were flesh the organ of touch it would be equally unable to perceive through immediate contact. The fact in short would seem to be that the real organ of touch is something inward, and that the flesh is simply the medium by which the tangible qualities of body are transmitted. Nor does the fact that we appear to perceive these qualities by immediate contact invalidate such a conclusion. Were a membrane spread over the flesh, we should equally appear to perceive through contact on the part of the object with this membrane, while at the same time no one would maintain this membrane to be the organ of perception. Flesh then is simply the medium of touch: although it must be added that the medium here does not play the same part as it does in some among the other senses. It is, that is to say, not so much the vehicle as the concomi-

1 423b27, ἀπταῖς μὲν οὖν εἰς αὐτὰς διαφορὰς τῶν σώματος ἢ σώμα.
2 De Generatione, II. 2, 330a24, δῆλον τοιούτω δὴ ταύτα ἄλλας διαφορὰς ἀνάγονται εἰς τὰς πρώτας τέταρτας ἀφείται ὡδεικτεῖς ἐπεὶ ἀπεξετάζετε οὐσίαν γὰρ τὸ θερμὸν διόπερ ύπρόν ἢ ἄπειρον.
3 Partl. An. II. 10, 656b35, οὖν εἰς τὸ πρῶτον οὐδὲν ἢ σάρξ ἢ ἀλλ’ ἐντός.
4 De An. II. 11, 423b26, ὡστε τὸ μεταξὺ τοῦ ἀπτικοῦ ἢ σάρξ.

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tant of sensation—the mode in which our sensations of touch are gained may be compared with the manner in which a man may be wounded through his shield.\(^1\)

Taste\(^2\) is viewed by Aristotle as a species of touch, differing only in that, while touch is disseminated over the whole body, taste is restricted to a single part of it—the tongue. Its object is flavour (χυμός) and this is undoubtedly some modification of the moist or watery. But how it is that flavours originate from water is a question on which Aristotle finds divergent views are entertained. It cannot be, as Empedocles maintained, that water contains implicitly the various flavours in it; nor can it be, as Democritus perhaps held, that water is an atomic compound which contains the germs of all flavours, so that some may originate from one part, others from another part: rather it must be some affection of the water at the hands of some productive agent which produces flavour\(^3\). Flavour is accordingly defined by Aristotle as such a kind of affection produced in what is moist by what is dry as transforms the mere potential capacity of taste into actual exercise\(^4\). Of flavour various kinds are enumerated and compared with the different kinds of colour. The simple flavours are, like the simple colours, two in number—sweet and bitter—while the others may be regarded as modifications of these two primary kinds\(^5\). The organ of taste can be as little localized as can that of touch. Popularly, of course, the tongue is regarded as the part concerned with the perception of flavours; and Aristotle often speaks as if he held himself the tongue to be the instrument of taste\(^6\). But this of course is only a concession to the customary language

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1. 423\(b\)14, τῶν ἀπτών ὁχ ὑπ τοῦ μεταξύ ἀλλὰ ἁμα τῷ μεταξύ ἀλφανάμιμα ὁσπερ ὅ δι’ ἄσπιδος πληγείς.
3. *De Sensu*, 4. 441\(a\)20, λειπεται δι’ τῷ πάσχειν τι τὸ ὑδαρ μεταβάλλειν.
4. 441\(b\)19, καὶ ἔστι τούτο χυμὸς το γενημένον ὑπ τοῦ εἰρημένου ἡμοῦ πάθος ἐν τῷ ύμφρι τῆς γενέσεως τῆς κατὰ δύναμιν ἄλλωστικῶν εἰς ἐπέργειαν.
5. 422\(b\)10; 442\(a\)12, ὁσπερ δὲ τὰ χρώματα ἐκ λευκοῦ καὶ μελανος μιξεώς ἐστίν, οὗτος οι χυμοι ἐκ γόλυκος καὶ πικροῦ.
of mankind: in reality, Aristotle views the tongue as little
more than medium in the transmission of the flavour of ex-
ternal objects. Neither however in taste nor touch is the
medium some external body as it is in the case of sight or
hearing: rather, whereas sight, smell and hearing act at a
distance from their object, touch and taste operate in close
proximity by means of almost actual contact. At first sight,
water might be thought to be the medium in the case of
taste: but still, though “if we were in the water we should per-
ceive anything sweet cast into it, our perception would be the
result, not of the intervening medium, but simply of the mingling
of the sweet thing with the water.” Still it is at least evident
that the tongue must be potentially moist in order to perceive
the different flavours. At the same time it must preserve that
condition of indifference and equidistance from the two extremes
of moist and dry without which no perceptive faculty is capable
of action. And thus the sick, Aristotle adds by way of ex-
planation, have but an imperfect sense of flavours because
their tongue is imbibed with such an amount of moisture as
makes it impossible for them to acquire the taste of other
flavours.

Smell Aristotle finds a sense which is somewhat difficult
to analyse: just as up to the present day it has been treated
with much less success than any of the other senses. The
reason for this backward condition of psychology in regard to
odours is, Aristotle thinks, due to its defective development in
man. While man possesses a much finer sense of touch than
any other animal, “we do not,” he adds, “possess the sense of
smell in anything like the same degree of delicacy as that in
which it is possessed by other animals.” In the case of man,
scent would seem to be merely a sort of concomitant upon
feelings of pain and pleasure and to be perceived only indirectly,

1 II. II, 423b6.
2 422a11, οὐκ ἂν δ' ἄν ἡ ἀισθήσεις ἥμων διὰ τοῦ μεταξύ διὰ τῷ μεθάναι τῷ υγρῷ.
3 422b3.
4 De An. II. 9. De Sens. c. 5.
much in the same way as some animals possess the sense of
sight only as a vague consciousness of a distinction between the
dangerous and dangerless. In this comparative obscurity of the
sense of smell, Aristotle has recourse to taste as a perci
cipient faculty of not uncognate character and much more fully un
stood. Taste and smell indeed present to Aristotle's mind a con
stant parallel to one another. The object of both is a combin
ation of the moist and dry: but while flavour is contained in water
only, the object of smell or odour exists at once in air and water.
Odour in fact belongs to what is dry, just as flavour belongs to
what is moist: and the object of smell is thus said to be a
dryness which holds taste or sap within it (ἐγχυμος ἡμοτυς). The
popular account of odour as a smoke-like exhalation (καπνόδης ἀναθυμιασις) Aristotle views as on the whole untenable.
Such an exhalation cannot possibly exist in water, and it is in
water to a great extent that smells come to be perceived.

The organ and the medium of smell are closely in accordance
with this quality of odours. Air and water may both serve as
media. An object in short is perceived as odorous in so far as
it is adapted to 'rinse out' as it were the taste-like dryness
which constitutes as we have seen the general character of
smell. This would seem to be a result which both air and
water are able to perform: and the question therefore arises,
what is the common characteristic present at once in air and
water which makes them thus to disseminate and transmit the
fragrant qualities of body? To this question Aristotle has no
definite answer to give us. In one passage he speaks of this
common quality as something 'nameless,' nor do we elsewhere
find any more satisfactory answer. The organ of smell is

1 422β6, ἐστι δ' ἡ δομὴ τοῦ ἔνομο, ὡσπερ δ' ἔμοις τοῖς ὑγροῖς. 2 De Sensu, 5, 443β7.
3 Ibid, 5, 443α21. No doubt in c. 2, 438β24 we have ἡ δομὴ καπνώδης τίς ἐστιν ἀναθυμιασις asserted as the ground for referring the organ of smell to fire, but the
passage in question seems a mere hypothesis to shew how on the popular assumption
that each sense corresponds to some element or other, smell would have to be referred
to fire. See Bäumker, p. 47, who in 16 reads φανερὸν ὡς et del.
4 De An, 421β8. 5 De Sensu, 442β29, πλωτικόν ἡ ὑποτικὸν ἐγχυμοῦ ἡμοτυς.
6 De An. II. 7, 9, 419α32.
represented as corresponding with the media that communicate
the qualities of odour. It is therefore composed of air and
water, and it cannot act except we simultaneously draw in
the breath: if we exhale or restrain the breath, smell cannot
operate.

The sense which has been just described stands midway
between the elementary sensations with which we started and
those sense-functions which remain to be discussed. While
touch and taste act apparently by actual contact, odours are
perceived by the intervention of some medium or other—a
mode of operation which is still more prominent in sight and
hearing. And while touch and taste are indispensable con-
ditions of animal existence, the sense of smell is almost as
it were a luxury in life—an appendage to the faculties which
are essential to vitality itself. Still more is this true of the
two remaining senses. Sight and hearing play an important
part in our higher cognitive development. But they do so to
different degrees. Sight, as the sense which reveals the greatest
number of differences in objects, is indeed directly the most
intellectual sense: but hearing, by the knowledge which it brings
of others’ minds, is incidentally the most important factor in our
spiritual knowledge: so that, adds Aristotle, the blind are
generally more intelligent than the deaf.

Hearing is discussed by Aristotle with less detail than the
importance of the sense itself would seem to merit. It would
almost seem, in fact, as if, as Trendelenburg suggests, the
Treatise on Sense had lost a section which would have explained
the character of sound and hearing in accordance with the
statement of the Genesis of Animals. But at the same time
Aristotle’s analysis of hearing and its object is comparatively
full. The real object of hearing, Aristotle would seem to hold,
is that vibration of the air which we describe as sound or noise.

1 425a5; 421b14.
2 De Sensu, 1, 437a16, διότερον δομιστήροι οί τυφλοί τῶν ἔνειν καὶ κοφών.
3 De An. II. 8.
4 De Gen. Animal. v. 7, 786b23; 788a34.
Hence then it is air which forms the essential element in enabling us to hear. "Every object so constituted as to set in movement the air extending continuously in one stream until it reach the hearing is sonorous.\(^1\)" Air then is the medium of sound: and hearing is the result of a movement in the air within the ear communicated by a movement of the air which lies outside. Closely connected with this is the explanation Aristotle gives of the distinction between high notes and low. High or sharp notes, he explains, are those which move the sense of hearing to a great extent within a short period of time\(^2\)—that is they are those which offer a great number of vibrations: low notes on the contrary are those which move the ear but slightly in a larger space of time—that is they are those which present a less number of vibrations. Shortly in fact high notes are the result of rapid, low or grave notes the result of slow vibrations. But perhaps the most interesting section of Aristotle's chapter on hearing is the distinction which he draws between mere sound or noise and actual speech. Mere sound, he points out, may be made by the tongue and in other ways: for voice, on the contrary, the organ striking must be animate and accompanied by some mental image (\(μετὰ \ φαντασίας \ τυνος\)): voice being in fact sound possessed of meaning (\(φόφος \ σημαντικός\)).\(^3\)

Sight\(^4\), as might be expected from the important place it occupies in the economy of knowledge, is discussed by Aristotle at greater length than any of the other senses. Beside the chapter devoted to it in the Psychology itself, it occupies the greater portion of the Treatise on the Senses, and there is a special Tractate on the collection of qualities which constitute its object

\(^1\) 420\(^a\)3.
\(^2\) De An. II. 8, 420\(^b\)3. Cp. Timaeus, 67 B, δύοι μὲν οὖν φωνὴν θάμεν τὴν δὲ ὁπο' ὑπ' ἀέρος ἐγκεφάλου τε καὶ αἰματος μέχρι φυσίν πληγήν διαδιδομένη, τὴν δὲ ὑπ' αὐτῆς κίνην, ἀπὸ τῆς κεφαλῆς μὲν ὀρχομένη, τελευτώσαν δὲ περὶ τὴν τοῦ ἕπατος ἑδραν, ἀκόην δὴ οὖν ταχεία, δέξιαν, δὴ δὲ βραδυτέρα, βαρυτέραν.
\(^3\) II. 8, 420\(^b\)31. Cp. and contrast Poli. I. 1, 1253\(^a\)10 where Aristotle distinguishes between φωνὴ and λόγος: ἡ μὲν οὖν φωνὴ τοῦ λυπηροῦ καὶ ἡ δὲτο οὐτοί ὁ δὲ λόγος ἐκτὸς ὑπὸν ἔστι τὸ συμβέβην καὶ τὸ βλασφέρον.
\(^4\) De An. II. 7; De Sensu, 2. 3.
INTRODUCTION.

—viz. colour (περὶ χρωμάτων). Colour itself is a secondary quality (to adopt Locke’s phraseology) which has the power of throwing the actually pellucid into movement¹: for it is this excitation of the pellucid or diaphanous and no material emanation (ἀπόρροια) which explains the visibility of colour. What then, we have to ask, is this pellucid (διαφανές)? It is that which is not visible by itself but becomes visible only through a foreign colour (δι’ ἀλλότριον χρώμα). So, for instance, air or water are pellucid: they are so, because apart from their specific properties they contain the same quality as inheres within the upper air or aether: pellucidity in fact is an attribute of no definite body or elements except the aether. Now this pellucid substance is, as potential, colourless, and dark: it becomes actual through fire or some such agency. But this presence of fire in the pellucid is just what produces light, just as its absence on the other hand produces darkness. Light therefore may itself be defined as the actual expression or full play of the pellucid as pellucid: practically we may describe light as the colour of the pellucid. ’ Colour then is the quality which sets the actually pellucid into motion: so that since this actually pellucid matter is so actual by means of light, it follows that colour is not visible without the help of light—light, that is to say, is a condition of vision.

This account of colour cannot certainly be said to be distinguished by lucidity. At times it seems a mere see-saw between two terms—colour and pellucidity—which are made in turn to explain each other. But we shall not perhaps be misrepresenting Aristotle’s doctrine if we regard colour as an intensification of light. This view of colour seems at least to correspond with Aristotle’s second definition. Colour, he says, is the limit of the pellucid, the increased expression of transparency which shews itself upon the surface of a body². So understood, colour at once gives us two primary hues—white

¹ 418a31, πάν δὲ χρώμα κινητικὸν ἐστὶ τοῦ κατ’ ἐνέργειαν διαφανοῦς. Cp. 419a9.
² De Sensu, 3, 439b11, ὡστε χρώμα ἀν ἐλθὲ τοῦ διαφανοῦς ἐν σώματι ὑπομένω πέρας.
and black—corresponding to the light and shade which play upon the surfaces of substances—and from these two primary colours all the others may easily be derived. Into the manner in which Aristotle conceives the other colours to be formed from this primary white and black it would be out of place to enter here. But the student of the physics of Aesthetics will find much that will repay him in the pages of the Tract on Sense which discuss this subject, and may find some similarity between the theories there enunciated and those of Goethe’s *Farbenlehre*.

The media by which the qualities of coloured objects are transmitted need not detain us long. Air and water are the two which Aristotle enunciates. They act as such in virtue of that pellucid quality which they share in common with the upper aether. At the same time they are themselves colourless and thus well adapted by their neutral character to transmit the colours of material objects. Aristotle accordingly rejects entirely that theory of sensible emanations with which he has been sometimes so strangely credited. Rather in fact he may be thought to have anticipated in some respects the undulatory theory of light and vision.

The organ of sight is of course the eye. But the perceptive power is not located in the external organ. Apart from that reference to the heart which we will notice afterwards, it is particularly the inner chamber or *kóρή* which receives the impressions transmitted by the intervening medium from the coloured object\(^1\). The internal substance of the eye is therefore composed of water, a view corroborated empirically by the fact that when the eye is injured water is seen to gush forth from it\(^2\). But Aristotle’s analysis of the visual organ does not end with this description of it as composed of water. He explains that this water is produced by the brain, and refers to various ducts (*πόροι*) by which it is conveyed to the inner chamber of

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1 *De Part. An. ii. 8, 653b25; Hist. An. i. 8, 491b20, τὸ δ’ ἐντὸς τοῦ ὄφθαλμοῦ, τὸ μὲν ὑγρόν, φ βλέπει, κορή.*

2 *De Sensu, 2, 438b51, καὶ εὐλόγῳ τὸ ἐντὸς ἐστὶν ὦδατος’ διαφανές γὰρ τὸ ὅδωρ, τὸ δὲ περὶ τούτο μέλαν, τὸ δ’ ἐκτὸς τούτου λευκὸν.*
the eye. It would be however an entire mistake to suppose that Aristotle viewed the act of vision as dependent on the brain or had any knowledge of the optic nerves. It is the heart and not the brain which Aristotle regards as the ultimate organ of vision, and he would seem to have formed no conception of the functions which the optic nerves discharge.  

Aristotle’s analysis of the single senses may be readily allowed to be possessed of more than merely antiquarian interest. Compared with the account of sense-perception given in the *Timaeus* of Plato, Aristotle’s results mark a real advance in physiological observation. Plato had indeed (*Timaeus* 67 c) grasped to some extent the dependence of sound on oscillations of the air, but instead of stating how the physiological structure receives and retains those oscillations he makes hearing simply a “vibration which begins in the head and ends in the liver.” To Plato, in fact, the senses are, as Prof. Jowett says, “not instruments, but rather passages through which external objects strike upon the mind. The eye is the aperture through which the stream of vision passes, the ear is the aperture through which the vibrations of sound pass. But that the complex struc-

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1 The chief passages bearing on this subject are as follows: *De Gen. An.* ii. 6, 74a^3^5, δ ὁφθαλμὸς σῶμα...υγρὸν καὶ ψυχρὸν καὶ οὐ προϊόρχον ἐν τῷ τῶν...ἄλλο ἀπὸ τῆς περὶ τὸν ἐγκέφαλον ὑγρότητα ἀποκρίνεται τὸ καθαρύτατον διὰ τῶν πόρων οἱ φαινονται φέροντες ἀπ’ αὐτῶν πρὸς τὴν μὴν γνα τὴν περὶ τὸν ἐγκέφαλον. *De Gen. An.* ii. 6, 74b^3^5, αἰτίων δ’ ὅτι τῶν ὁφθαλμῶν αἰσθητήρων ἐστὶ μὲν ὡσπερ καὶ τὰ ἄλλα αἰσθη-

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*Hist. An.* i. 11, 492^a^2^1^, περαλνουσι δὲ καὶ οἱ ὁφθαλμοὶ εἰς τὸν ἐγκέφαλον καὶ κεῖται ἐπὶ φλεβίου εκάτερος. *Hist. An.* i. 16, 495^a^1^1^, φέρουσι δ’ ἐκ τοῦ ὁφθαλμοῦ τρεῖς πόρους εἰς τὸν ἐγκέφαλον, ὃ μὲν μέγιστος καὶ ὃ μέσος εἰς τὴν παρεγκέφαλία, ὃ δ’ ἐλάχιστος εἰς αὐτὸν τὸν ἐγκέφαλον. *De Sensu,* c. 2, 438^b^1^2^, ἦδη γὰρ ταῖς πληγέσις ἐν πολέμῳ παρὰ τὸν κρόταφον οὕτως ὡστε ἐκτεινθῆναι τοὺς πόρους τοῦ ἄματος ἐδοξε γενέσθαι κότος, ὡσπερ λύχνου ἀπωσβεσθέντος, διὰ τὸ οἷον λαμπτήρα τινα ἀποστηθήναι τὸ διαφανὲς καὶ τὴν καλουμένην κόρην. Sprengel, in his History of Medicine, tried to identify the πόροι of Aristotle with the nerves, and of the three πόροι mentioned the first might be thought to represent the ramus ophthalmicus, the second the optic, and the third the oculo-motor; but, as Bona Meyer says (p. 432), Aristotle had at least no idea of the function of nerves in the πόροι he mentions. And similarly Dr Ogle in his note on *Parts of Animals,* ii. 10, thinks that in *Gen. An.* ii. 6, Aristotle is speaking of optic nerves, and so also in *De Sensu,* c. 2, but considers that as Aristotle speaks also of πόροι in relation to other sense-organs, it is unlikely he can have understood the office of the nerves in general.
ture of the eye or the ear is in any sense the cause of sight and hearing he seems hardly to be aware” (Dialogues of Plato III. p. 581). In part no doubt the same defect appears in Aristotle. But the descriptions of the eye and ear in Aristotle's writings shew an amount of accurate observation which we look for in vain in Plato.

Defective however as Plato is on the analytic and physiological side, there is another respect in which he far surpasses Aristotle. The organs of sense, Plato is particular to note, are not as perceptive merely mechanical and disconnected members of our body. “No one,” he remarks in the Theaetetus, “can suppose that we are Trojan horses, in whom are perched several unconnected senses, not meeting in some one nature, of which they are the instruments, whether you term this soul or not, with which through these we perceive objects of sense¹” (Jowett's Translation). But of such a reference to soul or mind there is directly but little mention in Aristotle's explanation. The description of the sensitive capacities as themselves a soul, the identification of the different αἰσθητήρια with a so-called ψυχή αἰσθητική would almost seem to have blinded Aristotle to the insufficiency of mere physical processes to explain a psychological result. His account therefore of the special senses leaves untouched a number of problems which the perceptive processes immediately involve. It is different when our philosopher leaves the physical aspect of the senses, and proceeds to discuss the mode in which the perceptive organs act in concert as a cognitive whole. His results are then of no mere antiquarian interest: the problems which he investigates are those with which we still are occupied. How do our sensations of qualities—white, sweet, &c.—give us knowledge of concrete things? How do we distinguish between the reports of one sensation and those of another? How is it that our sensations sometimes deceive us? how does this complexity of organs, some of which are even double, unite itself into

¹ Theaetet. p. 184 D, δεινὸν γὰρ ποι εἰ πολλαὶ τινὲς ἐν ἡμῖν, ὡσπερ ἐν δουρείοις ὑπαι, αἰσθήσεως ἑγκαθήτηκας, ἀλλὰ μή εἰς μίαν τινὰ ἰδέαν, εἴτε ψυχήν εἴτε ὁ τι δεῖ καλεῖν, πάντα ταῦτα ξυνεῖτε, ὑ διὰ τοῦτον οἷον ὅργανον αἰσθανόμεθα ὡς αἰσθητά.
INTRODUCTION.

one single perception? and what is the character of that mys-
terious consciousness which accompanies us in our perceptive
acts? Such are some of the questions which Aristotle now
proceeds to investigate. He solves them, through the doctrine
of a common or central sense (κοινή αἴσθησις) in which our
separate sensations are collected, arranged, and classified.

IX. COMMON OR CENTRAL SENSE.

The particular senses—sight, smell, hearing and the rest—
are all, we have already seen, restricted to some individual
quality (ἰδεόν αἴσθητον) which can only be perceived by the
sense adapted to it. Thus sight takes account only of the
colour of objects, smell only of their odour, while touch restricts
itself to the hardness or softness, the heat or coldness of ex-
ternal objects. But these single senses as such never really
constitute the act of sense-perception. Such perception is not
merely a matter of the outward organ: perception is a move-
ment of the mind through the body: and it is only by reference
to this unity of all the senses in a common mental faculty that
sense-perception can take place. Without relation to this supe-
rior faculty—this κῶρον αἴσθητήρον—no one of the single senses
would be fitted for perception. The need of such a central
sense—of a perceptive faculty which stands to each one of the
separate senses as the mind in general stands to each one of its
four faculties—is apparent from the mere duplicity which marks
the organs of sensation. For just as the body is throughout
twofold, so also each of the senses, if we except the touch and
taste, appears as a double faculty1, and yet notwithstanding our
two eyes, two ears, two nostrils, we still perceive but one colour,
one sound, one odour.

This central sense, of which the general nature has been thus
far sketched, plays two main functions in relation to the work of

1 De Part. An. 656b32; 669b18.
sense-perception. On the one hand, it is required for the distinction and the comparison of the separate communications of the single senses: on the other hand, it is the means by which a consciousness of sensation accompanies the work of sense-perception.

I. The distinction of our separate sensations. Each single sense, we have already seen, perceives nothing but one single quality or group of qualities. How then is it that we distinguish between the qualities, whether they belong to one and the same sense or be communicated by different senses? The second case constitutes of course the more perplexing question of the two, and is therefore the form in which the problem is generally stated by Aristotle. What, he asks, is the faculty which distinguishes between white and sweet? The sense of taste communicates to us the feeling of a flavour which is sweet, the sense of eyesight reveals to us the quality of white. But the sense of taste knows nothing of the sensations of sight, the sense which perceives colour knows nothing of the character of flavour. Yet none the less the distinction is there: we not only distinguish white from black, sweet from bitter, but we also separate between the sensation of white and the simultaneous sensation of sweet. Here then two things require to be at once united and disunited, connected and disconnected: they must be subjected to an act of comparison and judged different in consequence of this comparison.

A discrimination of this kind cannot be made by two separate faculties: it is to one single faculty that the two separate

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1 III. 2. 10, 426b12, ἐπεὶ δὲ καὶ τὸ λευκὸν καὶ τὸ γυλικὸ καὶ ἐκαστὸν τῶν αἰσθητῶν πρὸς ἐκαστὸν κρίνομεν, τίνι καὶ αἰσθανόμεθα ὅτι διαφέρει; ἀνάγκη δὴ αἰσθάνεσθαι αἰσθητὰ γὰρ ἔστω. Cr. III. 7, 4, 431a20; De Sensu, c. 7. De Somno, 2, 455b15, ἐστὶ δὲ τοῖς καὶ κοινῆ δύναμις ἀκολουθοῦσα πάσαις, ἢ καὶ ὅτι ὅρα καὶ ἀκοῆς [omitt καὶ with E] ἀλαθάνεται: οὐ γὰρ ἢ τῇ γε δέχεται ὥρα ὅτι ὅρα. καὶ κρίνει δὴ καὶ δύναται κρίνειν ὅτι ἄσερα τὰ γυλικὰ τῶν λευκῶν, οὔτε γενέσθαι οὔτε δέχεται οὕτω ὁμοφών, ἀλλὰ τοῖς κοινῷ μορίᾳ τῶν αἰσθητηρίων ἀπάντων.

2 III. 7, 431a24, τί γὰρ διαφέρει το ἀπορεῖν πώς τὰ μὴ ὁμογενῆ κρίνει ἡ τῶν ὁλιγνωσίων ὑπὸν λευκὸν καὶ μέλαν.
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sensations must be transmitted in order that they may be compared and separated\(^1\). The case therefore is well compared by Aristotle to what would happen in the case of two opinions between which it was necessary to distinguish. "Were I to perceive one thing, you to perceive another, a third person would be needed to pass judgment on the two". There is required then some one function of the mind by means of which it gains perception of all objects\(^2\)—some common central organ of perception in which the separate communications of the senses are combined. But how, asks Aristotle, can this central faculty manifest such contrary action as it would seem necessarily to involve? It must take cognizance of two separate sensations and yet meanwhile it must preserve that unity which can alone compare two different sensations: it must within one and the same moment of time present before itself two or more reports of sense\(^3\). The same thing cannot, it might be thought, move at one and the same time in two opposite directions as undivided and within an undivided space of time. But there is a distinction by the help of which the difficulty may be met. In place, in time and in number, the faculty in question is, we may say, one and indivisible: but in the nature of its action, in its use and application (τῶ εἴναι) it is different\(^4\). Physical analogies may help us further to comprehend this double and apparently contrary action on the part of central sense. We may compare it to the point, taken in its widest sense and understood of either time or space\(^5\). Such a point is at once one and two:

1 426b17, οὕτε δὴ κεχωρισμένοις ἐνδέχεται κρίνειν ὅτι ἐτερον τὸ γλυκὸ τοῦ λευκοῦ, ἀλλὰ δὲι ἐνὶ τινὶ ἀμφω δὴλα εἶναι.
2 426b19, οὖν μὲν γὰρ κἂν εἰ τοῦ μὲν ἐγὼ τοῦ ὁ δὲ σὺ αἴτθοιο, δῆλον ἂν εἴη ὅτι ἐτερᾳ ἀλλήλων. δὲι δὲ τὸ ἐν λέγειν ὅτι ἐτερον.
3 De Sensu, 7, 449a8, ἀνάγκη ἄρα ἐν τί εἶναι τῇ ψυχῇ φ᾽ ἄπαντα αἰσθάνεται.
4 426b22, ὅτι μὲν οὖν οἷς οἷον τε κεχωρισμένοις κρίνειν τὰ κεχωρισμένα, δῆλον.... ἀλλὰ μὴν ἀδιάβατον ἀμα τάς ἑνατλας κινήσεις κινεῖαι τὸ αὐτὸ ἡ ἀδιαίρετον καὶ ἐν ἀδιαίρετῳ ἁρων.
5 427a4, τῶ εἶναι μὲν γὰρ διαιρετόν, τόπῳ δὲ καὶ ἀμφω ἀδιαιρετον. De Sensu, 7, 449a19, ἀσθάνοιτ' ἂν ἀμα τῷ αὐτῷ καὶ ἐνὶ, λόγῳ δ' οὖ τῷ αὐτῷ.
6 De An. 111. 2, 427a10, ἀλλ' ὅπερ ἦν καλοῦσι τινες στεγμήν ἢ μία καὶ ἡ δύο,
it is an undivided unit complete within itself, and yet this point can be at once the end of one line and the beginning of another—the same point, that is to say, can be regarded as both one and two: it may exist both as divided and as undivided. Or indeed the question—how can this central faculty embrace two contrary qualities and yet not lose its characteristic unity is only the same problem as presents itself when we consider how one and the same object is at once white and sweet: the co-existence of the objective qualities is no less inexplicable than the co-existence in the mind of their subjective counterparts. In the one case and in the other we must conclude that that which is essentially one can yet manifest itself in two directions: or, in other words, what is marked numerically and locally by unity may yet be conceived of as different.

This exercise of comparison which Aristotle thus assigns to the central or the common sense is not however restricted to the work of distinguishing the separate communications of the senses: it displays further its synthetic power in grasping the common properties which are involved in the existence of the qualities of the body. For at the same time as we perceive (say) a colour, we perceive it further as a coloured surface or magnitude: at the same time as we have the sensation of notes

ταότι καὶ διαμετέρι. Cp. III. 7. 4, 431a21, ἐστὶ γὰρ ἐν τε ὀντὶ δὲ καὶ ὡς δρόσ. The στιγμὴ in question is to be taken in its most general sense as referring either to time or space. Brentano’s interpretation of it as = νῦν is supported by De Celo, III. 1, 300a14, τὸ γὰρ νῦν τὸ ἄτομον οἷον στιγμὴ γραμμῆς ἐστιν: but any such definite interpretation is unnecessary, especially as Aristotle, among the synonyms he uses, nowhere speaks of a ‘now,’ but always of a point or limit. The ordinary sense of point is indeed all that is required. v. Phys. iv. 11, 220a10, καὶ γὰρ ἡ στιγμὴ καὶ συνέχει τὸ μῆκος καὶ ὀριζε’ ἐστι γὰρ τὸν μὲν ἀρχὴ τοῦ δὲ τελευτῆ.

1 De Sensu, 7, 449a13, ἡ ὡσπερ ἐπὶ τῶν πραγμάτων αὐτῶν ἐνδέχεται, οὕτω καὶ ἐπὶ τῆς ψυχῆς.

2 De An. III. 1, 425a15, where the κώνα are described as those ὅν ἐκάστη αὐθῆει αλεθανόμεθα κατὰ συμβεβηκός. This is generally thought to be in contradiction with 425a27, but I have tried to translate the whole passage in such a way as will make the two places quite consistent. (Cp. Büumker, p. 65.) So also in III. 3. 12, 428b23, the κώνα are identified with ἐπιμένει τοῦ συμβεβηκόνος οἷς ὑπάρχει τὰ ἱδια, and to κίνησις καὶ μέγεθος is added ἀ συμβεβηκε τοῖς αλαθητοῖς.
following on one another we perceive the fact of number: and at the same time again as we feel a surface hard or soft we perceive it as some kind of figure. Beyond then the particular objects of the single senses, we require to recognise a number of qualities ('categories' we should call them in modern phraseology) which enter more or less into each of our sensations—"which," in Aristotle's words, "we perceive immediately in connection with each perception." These common objects of perception (αισθητὰ κοινά) are variously enumerated. Sometimes five are mentioned—movement, rest, number, figure, magnitude: at other times unity as a species of number is added: but there is one passage in which time is appended, and in the Treatise on Sense the common objects of perception are extended so as even to include the rough and smooth, the sharp and blunt.¹

Movement is generally regarded as the chief among these common sensibles. The rest may be viewed in fact as, in some way or other, modifications of it. Thus, for example, rest is known by absence of movement, and number is perceived by the negation of what is continuous. Evidently, therefore, since this movement is itself not the product of any one sense but the result of sight and touch in combination, the common objects of perception cannot be referred to any one single organ of particular sensation. For, Aristotle argues, if these common qualities were thus apprehended by any single sense they could be so only in the way in which the perception of some colour gives us the perception of sweet—i.e. because we have perceived the two together at some time in our past experience, and thus in the perception of the one are reminded simultaneously of the other: or else they must be a mere incidental addition to sensation in the way that from a sensation of something white we come to perceive an individual—'the son of Diaries,' as the subject of which white was a property. But, Aristotle continues, the common objects of sensation are the

¹ De Sens. c. 4, 442b4. De An. ii. 6, 418a17.
result of a common general sense, and not any merely incidental appendage to our sensations: they therefore cannot be regarded as a mere concomitant or συμβεβηκώς of sensation. Nor even were they to be apprehended as in the former of our two alternatives, would they even then be classed among the acts of some particular sense-faculty. For to perceive as there described the object of one sense through the perception of another sense really requires a unity of sense: the senses perceive that two qualities are united in one object—e.g. yellow and bitter—not in their own isolated character, but as a combined faculty (οἷοι ἡ αὐτὰ, ἀλλ' ἡ μία) and therefore the common sensibles cannot be the product of any special organ of sense. Rather, in fact, these universal characteristics of all objects of sensation are provided by the central faculty of sense: sight and other senses may contribute largely to a knowledge of them, but in the last resort it is the common sense, the primary source of all sensation, which presents them to our observation.

2. The Consciousness of Sensation. This comparison of separate sensations in which as we have seen lies the chief action of the central sense involves immediately another property. To judge of two sensations we require a power of holding them before the mind, a power of knowing them as our sensations—a power which transcends the mere sensation of a colour or of a smell as such and recognises it as something belonging to ourselves. What then is this faculty by which we perceive that we perceive—by which we not only see and hear, but perceive that we see and hear? It must, Aristotle holds, be the primary fundamental faculty of all perception—that same central sense which we have previously recognised. For, he reasons, this consciousness of sight (for instance) must be the

1 De An. III. i. 425a-30.
2 De Men. i. 450a12, φανερῶν δὴ τῷ πρώτῳ αισθητικῷ τούτῳ ἡ γνώσις ἐστίν. Aristotle specially argues that those common sensibles are a result of sensation and not of thought, because memory involves time (ὅταν ἐνεργῇ τῇ μνήμῃ προσαρθάνται δὴ πρῶτερον).
result either of sight itself or of some sense different from this. But, if we assume the latter, then since the sense which perceives sight also perceives its object, we shall have two senses—sight and the sense perceiving sight—relating to one and the same object. This however, Aristotle implies, is absurd, since in this case the one sense would be quite superfluous. It follows therefore that this consciousness of sight is a result of sight itself. But the sight here mentioned is not the immediate organ of vision. For, Aristotle continues, were the sense which thus perceives the sensation of sight something different from sight itself, the process would either go on to infinity because this sense-perceiving sense would itself require another to perceive it, or else we must at last assume a sense which is itself conscious of its own perception. And this, he adds, we must regard as belonging to the original perceptive faculty (ἐπὶ τῆς πρώτης τοῦτο ποιητέου).

This reference of the consciousness of sensation to that primary power of sense-perception on which all the special senses in some degree depend, is expressed still more clearly in a passage in the Tract on Sleep. "There is," it is there said, "a common power which accompanies all the special senses, and by which the mind perceives both that it sees and that it hears: since it is not by sight it sees that it sees." Unless in fact we are prepared to credit Aristotle with a wonderful amount of inconsistency we must regard the one passage as illustrative of the other. So taking them we cannot but allow that if Aristotle asserts in the one passage "it is not by sight mind sees that it sees," and in the other passage writes "sight perceives that it perceives," he is using sight in the former passage as the mere particular organ, whereas in the other it is identified with that original faculty of sense which serves as basis to the whole system of the senses. The consciousness of sense-perception is then, we may conclude, an attribute of that same central sense

1 De An. III. 2.
2 De Somno 2, 455a15.
which enabled us to compare and distinguish the different reports transmitted by our isolated senses. The two functions are in fact but different aspects of one and the same process: for the comparison of the reports of sense involves as its presupposition the conscious recognition of them as our own, the faculty, in other words, of holding them before the mind.

This central sense is thus the basis of our whole perceptive capacity; it is the beginning and the principle of all sensation (ἐρχή τῆς ἀισθήσεως). But, further, just as each one of the senses has its physical counterpart or organ; and as the soul or ὕψων itself is not independent of the body; so in the same way the central sense is regarded as connected with a portion of our body. It might have been supposed that this physical organ of perception would have been the brain, as Aristotle’s predecessors had believed. But, Aristotle expresses himself strongly against the view which would connect sense-perception with the cerebral machinery. The brain, he says distinctly in the Treatise on the Parts of Animals, is not the cause of our perceptions, seeing that it is devoid of sensation and is itself but like many of the superfluous discharges¹. Particularly does he call attention to the fact that the brain produces no sensation on being touched². A superficial reader of the Tract on Sense might indeed suppose that the brain is supposed to be essentially connected with the sense of sight. But the three ‘passages’ which lead from the brain to the eye have nothing to do with the completion of the

¹ De Part. An. II. 10, 656b16, εἰς ἀισθήσεις ἐκεῖνοι ἀσαρκὸς εἰναι φασίν ἀισθάνεσθαι μὲν γὰρ τῷ ἐγκεφάλῳ, τὴν δ' ἀισθήσιν οὐ προσέθεσθαι τὰ μέρα τὰ σαρκικὰ λιαν' τοῖς δ' οὐδέτερον ἐστιν ἄλλης....τῶν τ' ἀισθήσεων οὐκ αἴτιοι οὐδὲν ἐστί, τούτῳ δ' ὀρώντες ἑνάλτερον ὑπὸ τῶν ᾨδών μορᾶς ἐκ συλλογισμῷ πρὸς ἄλλης συνειδήσεως. δι' μὲν οὖν ἀρχή τῶν ἀισθήσεων ἐστι ὁ περὶ τῆς καρδίαν τόποι, διώρισται πρῶτον ἐν τοῖς περὶ αἰσθήσεως. Cf. Plato, Timæus 76 b. For Aristotle’s misconceptions as to the nature of the brain, see Ogle’s note on the passage (Parts of Animals, p. 174).

² De Part. An. II. 7, 652b2, δι' μὲν οὖν οὐκ ἔχει συνέχειαν οὐδέμιλα πρὸς τὰ ἀισθητικὰ μόρια, δὴ λοιπὸν μὲν καὶ διὰ τῆς δόξης, ἐτι δὲ μάλλον τῷ μυθεμένῳ ποιεῖν αἰσθήσιν θεαμαθόμενος, ὡσπερ οὐδὲ τὰ ἁμα οὐδὲ τὰ περίττομα τῶν ἱμων.
perceptive act: they simply, as has been already pointed out, conduct from the brain that aqueous humour which is employed to receive the object of sensation. The brain in short stands in no real connection with the work of sense-perception, but is viewed simply as serving as a cooling apparatus to counteract the excessive warmth of the heart.

The heart then rather than the brain is the organ in which Aristotle holds the central faculty of sense to be located. By its very position alone the heart is well adapted to discharge the duties of a central sense: placed midway between the front and back it is the natural meeting-place of all the different reports of sense. Nor indeed is it only of the operations of perception that the heart is thus the central principle: it is the centre also of the faculties of growth and reproduction. The heart may therefore be regarded in the Aristotelian System as the physical basis, the physiological counterpart of mind. But it would be a mistake, as Neuhäuser has fully pointed out, to identify the central sense, the original faculty of the perceptive act, with the heart which Aristotle thus describes. True indeed if we confined our observations simply to the physical and physiological treatises of Aristotle we could hardly but conclude that Aristotle views the heart as actually the organ which effects that comparison and distinction of sensations which we have before described. But, it should be noticed, Aristotle nowhere says that this central common faculty of sense-perception is itself

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1 De Part. An. ii. 7, 652\(b\)10, ἐπει δὲ ἀπαντα δεῖται τῆς ἐναντίας ῥοπῆς ἵνα τυγχάνῃ τοῦ μετρίου καὶ τοῦ μέσου, διὰ ταύτην τὴν αἰτίαν πρὸς τὸν τῆς καρδίας τόπον καὶ τὴν ἐν αὐτῇ θερμότητα μεμιχάνηται τὸν ἐγκέφαλον ἢ φόσοις.

2 De Juvenc. 3, 469\(b\)10, ἀλλὰ μὴν τὸ γε κόρον τῶν αἰσθήσεων ἐν ταύτη (τῇ καρδίᾳ) τοῖς ἐναίμοις πάσιν ἐν τούτῳ γὰρ ἀναγκαίον εἶναι τὸ πάντων τῶν αἰσθητηρίων κοινῶν αἰσθητήρων.

De Gen. An. ii. 6, 743\(b\)25, διὰ μὲν οὖν τὸ τῆς ἀρχῆς ἐν τῇ καρδίᾳ τῶν αἰσθητήρων εἶναι καὶ τοῦ ἰσού παυτὸς αὐτῇ γίνεται πρῶτον.

3 De Juvenc. 1, 467\(b\)28, ἐπει οὖν τῶν ἵδων αἰσθητήριων ἐν τῷ κοινῷ ἐστὶν αἰσθητήριον, εἰ λά τὰς κατ' ἐνέργειαν αἰσθητήρεις ἀναγκαίοις ἀπαντῶν, τούτῳ δ' ἐν εἰῇ μέσον τοῦ πρῶτον καλουμένον καὶ ἐπισκόπον.

4 409\(b\)6: 469\(b\)5.

5 Aristoteles' Lehre von dem sinnlichen Erkenntnisvermögen.
the heart, all he says is that it takes place *in* the heart, or, at the most, he holds that the principle and source of our perceptions is the region round the heart. And however confusedly Aristotle states his view, he would seem to hold, not that the heart itself compares and distinguishes our different sensations: but simply that it is *through* the heart that the process is effected: that it is in short the condition and concomitant, not the cause of our perceptions.

The question therefore of the relation of the heart to the perceptive act resolves itself into the more general question of the relation between mind and body as conceived by Aristotle. But, as we have already seen, body as such is, from Aristotle's point of view, simply dead and useless matter, and it is only through the co-operation of the mind that it attains to its full meaning. Perception is in fact, to repeat a passage which we have already noticed, an affection of the mind through the body: it involves the combination of at once physiological and psychological conditions for its exercise. The mind can therefore be affected only through the material organs which form its substratum: while the body only attains to the faculty of real perception through the immanent action of the mind. And thus if that consciousness and comparison of sensations which is required to combine and distinguish different sensations can take place only through the assistance of the blood-producing, centrally located heart: it must be remembered, on the other hand, that it is only through that mind or soul which is the truth of body that the heart can go beyond the physical processes for which it is adapted.

It was not improbably in a simple spirit of antagonism to Plato that Aristotle referred the common categories which enter into our perceptions to the sensitive faculty itself. Plato had distinguished in the clearest terms between the particular object of the separate senses and the general conceptions which entered into all of them. The perceptions of one power, he remarks in the *Theaetetus* (p. 185), cannot be perceived by an-
other faculty—what is perceived by hearing cannot be perceived by sight, the object of sight cannot be perceived by hearing. Further, he goes on, each of these senses is identical with itself and different from any other. But these common qualities of sameness and difference cannot be perceived by either of the senses in question themselves: they are as little competent to judge of this as they (in place of taste) can decide whether two objects are bitter or not. The same result holds good of all general categories—being and not-being, likeness and unlike-ness, sameness and difference, unity and number. There is no special organ (ἰδιον ὁργανον), Plato holds, by which they are to be perceived, but the mind by its own action apprehends the general ideas which enter into every object. And similarly in the Republic, Plato shews how number arises out of the inability of sense to distinguish between its different reports—how the mind, finding that the senses report to it about one thing as now hard now soft, is obliged to consider whether each of its reports are one or two. (Bk. vii, 524).

The opposition which is here apparent between the Platonic and the Aristotelian Psychology is probably one of the many instances in which the difference between the two thinkers is little else than one of terminology. It seems no doubt as if Aristotle, in ascribing the categories which enter into every object of experience to sense itself, or even central sense, was necessarily in direct antithesis to Plato, who refers them to what he calls the 'mind.' But this central sense of Aristotle means evidently much the same as Plato's 'mind.' As the power which contributes a consciousness of sensation and enables us to dis-tinguish and compare sensations, it is clearly not a sensitive but an intellectual operation. And a writer less enslaved than Aristotle was to terminology would have left the problem to be explained by reference to the indivisible action of the mind as the synthetic factor in our existence. The doctrine of a central or common sense remains an instance of the fictitious entities which an analytic psychology pushed to extremes tends to create.
X. IMAGINATION, DREAMS AND MEMORY.

Sense-perception, we have seen, is viewed by Aristotle as a sort of movement excited in the substance of the corporeal organ of sensation by the medium which intervenes between the organ and the quality which constitutes the object of sensation. Now this movement or impression does not always vanish with the disappearance of the object which has caused it. There are of course many cases in which a stronger sensation overpowers and buries a weaker, just as a bright fire puts out a feeble or a greater sorrow overshades a smaller. The struggle for existence among our sensations, the mutual play in which our different impressions cross and cover one another, is recognised by Aristotle in a manner which the followers of Herbart have been particularly ready to recognise. Amid this crossing and recrossing of sensations there are some which make their way upward to the surface and leave a trace or relic (μονή) of themselves. The sensitive impression in short stamps itself as it were upon the sense and its effect continues after the object of sensation is withdrawn. There may of course be different degrees in this persistence of sensations. The impression may be such that it requires a conscious effort to revive it: or it may be so vividly printed that we cannot for a time get rid of it. Thus, Aristotle remarks, we see nothing if we suddenly transfer ourselves from sunlight to a darkened room, because the movement which the light excited still persists within the eyes: or if again we close our eyes after gazing long at a brilliant light we are presented with a succession of pictures of different colours which ultimately close with black. This is an extreme instance of the manner

1 De Insomm. 1, 460b2, ἄπελθόντος τοῦ θύραθεν αἰσθήτου ἐμείνει τὰ αἰσθήματα αἰσθητα δέντα.
2 De Sensu, c. 7, 447b15, ἀλ ' ἡ μείζων κίνησις τὴν ἐλάσσον ἐκκρόθει. De Insomm. 3, 461a1.
3 De Insomm. 2, 459b9, μεταφέροντων τὴν αἰσθήσειν ἀκόλουθοι τὸ πάθος, οἶον ἐκ τοῦ.
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in which a sensitive impression persists and leaves its trace behind it: and it is upon this fact that imagination (φαντασία) as conceived by Aristotle depends.

Imagination is accordingly defined by Aristotle as "the movement which results upon an actual sensation": more simply we may describe it as the after-effect of a sensation, the continued presence of an impression after the object which first excited it has been withdrawn from actual experience. Hobbes indeed was little else than translating Aristotle when he wrote: "All fancies are motions within us, relics of those made in the sense." The pictures of imagination in fact are simply a result of the general law of nature that the movement of one substance prolongs itself and gets communicated to another. And hence it is that in the Rhetoric, Imagination is described as weak sensation or, in the language of Hobbes, "decaying sense."

Further light is thrown by Aristotle on this conception of Imagination by contrasting it with several other of the mental operations with which it is not to be identified. Imagination, the Psychology itself explains, must not be regarded as either sensation, opinion, thought or scientific knowledge. With sensation it is of course intimately associated. The faculty for receiving sensations is in fact fundamentally identical with that which forms pictures of imagination: but they manifest themselves in different ways: they are different aspects of a faculty which may be looked at now in this way now in that. At the same time there remains a decided difference between sensation

\[ \text{Illustration of text content.} \]

1 De An. III. 3, 429b1, ἡ φαντασία ἐν εἰς κίνησις ὑπὸ τῆς ἀληθείας τῆς κατ’ ἐνέργειαν γεγομένην. Cr. 459b17. 'Imagination' means much more than φαντασία, but seems the nearest English equivalent. Vorstellung corresponds much more closely to Aristotle's conception.

2 Freudenthal has collected a number of passages in which Hobbes' expressions strikingly recall Aristotle.

3 De An. III. 3, 428b10.

4 Rhetor. I. 11, 1370b8, ἡ φαντασία ἐστὶν ἀληθείας τις ἀδενής.

5 De Insomn. I. 459b15, ἦστι μὲν τὸ αὐτὸ τῷ ἀληθητικῷ τὸ φανταστικόν, τὸ δ’ ἐκεῖνον φανταστικῷ καὶ ἀληθητικῷ ἑτέρον.
and imagination. Sense requires an object to excite it into action, while imagination may arise without the help of any outward object: sense is always ready to act when needed, imagination is much more capricious: sensation is the property of every animal, imagination is a more exclusive faculty (the bee would seem to have it, the worm would seem to be without it): the reports of sense are as such always true, whereas the pictures of imagination are often the reverse: and lastly sense and imagination often stand in inverse ratio to one another—we have an image when our senses are remiss—nay, images frequently present themselves to us when our eyes are closed.

Opinion or δόξα is however the mental phenomenon from which Aristotle thinks it especially important to distinguish Imagination. Even if opinion be not like scientific knowledge always true, but like imagination liable to error, there is one property connected with opinion which marks it definitely off from imagination. For opinion is attended with belief (πίστις): it implies a readiness to act upon the view it entertains: and while imagination seems a characteristic of many animals, belief of this sort would seem to attach to none. Belief again implies an act of thought or reason: and such reason is no attribute of animal existence. Nor, Aristotle continues, will it mend the matter, to regard imagination as a combination of opinion and sensation. Upon this supposition, the opinion under consideration must be of the same object as the sensation: that is, it is not the combination of the idea of good and the sensation of white which will constitute imagination: the sensation and the idea must alike refer to the same quality or object. The result then of this theory must be to identify imagination with the direct immediate conception of a sensation.

But conception, argues Aristotle, does not in this way correspond with the presentations of our image-forming faculty. The ‘image’ which we form of the sun is that of a surface one foot in diameter: our

1 De An. III. 3, 428a1—18.
2 428b1, τὸ οὐ φανερότατον ἐστὶ τὸ δοξάζειν ὅπερ αἰσθάνεται μὴ κατὰ συμβεβηκός.
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‘opinion’ is that it is larger than our earth. Imagination at the same time is not possible without sensation: and it follows therefore by this method of elimination that it is that after-effect of sense-perception as which we have already described it. As such it will of course vary in the degree of truth or falsehood it implies with the character of the sensation to which it is attached. If the sensation of which it is the continuance be that of the special qualities of sense, the corresponding picture of imagination will be practically true: should it on the other hand be the ‘decaying’ relique of our common or our incidental sense-perceptions, it will of course be several degrees from truth.

The phenomena of dreams, hallucination and illusion form a direct corollary to Aristotle’s doctrine of Imagination. Illusion in general is the result of the fact that the faculty of forming pictures of imagination and that of framing judgments are different and employ different standards. So it is that people form wrong impressions under the influence of passion: or that people in a fever suppose they see animals depicted on the wall. Often of course, Aristotle points out, in the case of such delusions one sense comes in to rectify another. An object held between the crossed fingers appears double to the touch: yet, Aristotle continues, we do not assert the object is twofold, because the sight is more authoritative than the touch. But there is a more characteristic form in which deception may originate—a form closely connected with the explanation Aristotle gives of imagination. “The reason” says he “of deception is that pictures of imagination present themselves not only when the object of sensation is itself in movement: it presents itself also if the sense itself be put in movement, supposing it be moved in the same manner as it would have been moved by the object of sense itself.” So it is, Aristotle explains, that the earth appears

1 De Insomni. 2, 460b16, αὕτη δὲ τοῦ συμβαίνειν ταῦτα τὸ μὴ κατὰ τὴν αὐτὴν δύναμιν κρίνειν τὸ τε κύριον καὶ ὃ τὰ φαντάσματα γίνεται.

2 460b20.

3 De Insomn. 2, 460b23—26, τοῦ δὲ διεψεύδατο αὕτιον ὅτι οὐ μόνον τοῦ αἰσθητοῦ
to people when they sail to be in movement, because the organ of
vision is moved in the same way as it would be if the earth were
really in movement. Illusion then in this case is the result of
the fact that a bodily excitation suggests and originates a picture
of the very object which might actually have caused this sensuous
affection.

This theory of Illusion serves also with Aristotle as an ex-
planation of dreaming. Just as the movement of the eye in the
person sailing gives rise to the idea that the earth itself is moved:
so similarly a dream is the result of a movement excited whether
from without or from within, in our bodily organs. The con-
ditions which create dreaming may thus be said to be present
just as much by day as during night. But there is a particular
circumstance which comes in to explain the greater efficacy of
these conditions during sleep. And this circumstance depends
so far upon the nature of sleep itself that it may be advisable to
add here a word on Aristotle's theory upon this subject.

Sleep and waking are, according to Aristotle, two phenomena
which characterize animals as opposed to plants, and they belong
simply to those creatures which possess a faculty of sense-percep-
tion. Both sleep and waking are thus affections of our sensitive
capacities: but as contraries they stand towards those functions
in two entirely opposite relations. Waking, in short, is identical
with the free play of our faculties of sense (τὸ λευκόθαλμον τὴν
αισθησιν), sleep is, on the contrary, the result of restriction and
quisance on the part of these same faculties. But this freedom
or imprisonment of sense is not a matter which affects one or
other of the senses separately; it affects them altogether. Sleep,
that is to say, is, no less than waking, a phenomenon of that central sense which we have seen serves as foundation for the work of perception. But the organ within which the operations of this central sense is carried on is, we have seen before, the heart: and sleep thus comes to be an effect of the action of the heart. Sleep, in fact, is not any incapacity whatever on the part of our perceptive faculty: it must be distinguished from such un-natural phases of this incapacity as insanity, choking or fainting. In most cases it is a result of the process of digestion—the food, that is to say, which has been taken into the body rises in the process of digestion to the head, causes there a heaviness, and descending, expels the heat: it may also result from labour or disease, but simply in both cases because the upper parts of the body have been made cool in the manner we have described. And therefore Aristotle’s most explicit account of the phe-nomenon of sleep refers it to the circuit in reverse order and in considerable volume (ἀντιπεριστάσεις ἀθρώως) made by the sub-stantial nutriment which has been carried by the natural heat within the body on to the primary organ of sensation1.

The movements therefore which result in dreams are present just as much by day as during night: but by day they are expelled through the simultaneous action of the senses and the understanding. “But at night, by reason of the inactivity of the particular senses, these movements are carried downward to the origin and principle of our perceptive faculties, and so become clear and conspicuous, after the commotion of this current has been composed2.” Thus then the blood in its descent toward the heart carries with it movements whether they be potential or

1 De Somn. 458b25, τί μὲν οὖν τὸ αϋτὸν τοῦ καθεύδειν εἴρηται, ὅτι ἡ ὑπὸ τοῦ σωματώδους τοῦ ἀναφερομένου ὑπὸ τοῦ συμφύτου βερμοῦ ἀντιπεριστάσεις ἀθρώως ἐπὶ τὸ πρῶτον αἰσθητήριον καὶ τι ἐστὶν ὁ ὕπνοι ὅτι τοῦ πρῶτον αἰσθητηρίου κατάληψις πρὸς τὸ μὴ δύνασθαι ἐνέργειαν.

2 De Insomn. 461a4, νῦκτωρ δὲ δι’ ἄργλαν τῶν κατὰ μόρον αἰσθησιῶν καὶ ἀνυπαθεῖν τοῦ ἐνέργειαν, διὰ τὸ ἐκ τῶν ἔξω εἰς τὸ ἐντὸς γινεῖαι τὴν τοῦ βερμοῦ παλιρροιαν, ἐπὶ τὴν ἀρχὴν τῆς αἰσθησιως καταφέρονται καὶ γίνονται φανερα καθιστομένη τῆς ταραχῆς.
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actual. Of these movements now one, now another, comes to the surface: they emerge and operate when freed from the stronger motion which keeps them in check: just as (Aristotle adds the illustration) artificial frogs rise to the surface of the water when the salt with which they are surrounded melts away. Released, then, from the other movements which obstruct them, they protract their movement outwards to the little blood which still remains within the organs of sense, and thus give rise to impressions and create pictures of imagination much in the same way as the rapid changes in the clouds cause them to be viewed as men and centaurs. Dreams, then, Aristotle concludes, are movements which give rise to images within our organs of perception (κινήσεως φανταστικαὶ ἐν τοῖς αἰσθητήριοις). There are of course cases in which dreams are the result of semi-conscious sensations, half-heard sounds or half seen lights: and reflections and ideas are often added to them. But in itself dreaming is simply the result of the movement of our sensations during the period of sleep as such.¹

The materialistic character of Aristotle's conception of φαντασία need now be scarcely noted. The pictures which imagination, either in our waking moments or in our dreams, presents to us are simply the result of a physiological process, in which the movement of the organ of sensation continues the impression which either originally excited it, or might at least have originally done so. The pictures or images themselves are conceived in genuine materialistic fashion—as seal impressions, through which it becomes possible to see that which is itself absent, but is present in its representative effect: they are traces, or moulds, left behind in our organism, and thus, where there is too much movement, or where the brain is either too hard or too soft, the impressions we are now discussing do not manage to subsist.

The materialist aspects of the process do not however exhaust Aristotle's account of our image-forming faculty. We must re-

¹ De Insomni. 462*29, τὸ φαντάσμα τὸ ἀπὸ τῆς κινήσεως τῶν αἰσθητήρων, ἓτερ ἐν τῷ καθεύδει, ἢ καθεύδει, τοῦτ' ἐστὶν ἐνύπνιον.
member, as we have had occasion to remark before, the background given to the whole Aristotelian Psychology by the ψυχή as the truth or reality of body. Particularly we must take into account the fact that sense-perception is no mere material assimilation of the outward world but in its last resort depends upon that central faculty of sense, through which we have the power of comparing and combining our sensations. Thus the pictures of imagination, though dependent on the sensations which have passed away, are not of a merely sensuous character: they become through that κοινή δύναμις of sense generalized conceptions of an object—they are αἰσθήματα but ἄνευ ἕλης: and the images of our imaginative faculty often approximate closely to the ideas of thought. It is within its semi-sensuous images that reason comes to grasp its ethical ideas; and its images, though immediately limited to the domain of sense, may become the basis of deliberation and thought. Thought indeed, as well as sense, Aristotle himself says, may originate imagination; and in another passage the imaginative faculty is looked at as a species of thought.

The representative images of phantasy are to Aristotle the stepping-stone to memory and recollection. It seems in fact at first sight difficult to draw any decided line between these relics of sensation which form the pictures of imagination and those survivals of the past which constitute a memory; and Aristotle himself does not always distinguish them. At the same time there is a real difference between them. The phantasm carries with it little connotation of truth or falsehood in the form of a reference to some external object, and it implies no relation to any time in past experience at which it was originally presented. Memory however carries with it both these attributes—it implies at once an object to which it corresponds, and

1 De An. III. 8, 4329, τὰ γὰρ φαντάσματα ὄσπερ αἰσθήματα ἐστι πλὴν ἄνευ ἕλης.
2 Ibid. III. 7, 431b1, τὰ μὲν οὖν εἴδη τὸ νοητικὸν ἐν τοῖς φαντάσμαις νοεῖ.
3 Ibid. III. 10, 433a10, εἶ τις τὴν φαντασίαν τιθεῖται ὡς νόησιν τινα.
it is attended by a consciousness of some time in the past at which the event remembered actually happened\(^1\). Memory then involves time; and consequently, Aristotle maintains, it is only those animals which possess a sense of time that are capable of remembering what has happened.

Memory is accordingly defined by Aristotle as "the permanent possession of a sensuous picture as a copy which represents the object of which it is the picture\(^2\)," and he adds further that it is the function of our ultimate faculty of sense which is also that by which we gain a consciousness of time\(^3\). The strength of memory thus depends to a very considerable extent upon the tenacity with which the original impression was received. Hence, writes Aristotle, memory does not on the one hand attach to those who are under great movement and excitement, whether from passion or from youth, because in such a case the movement in which sense consists and the impression which it involves falls, as it were, on running water: nor, on the other hand, can the impression fix itself in those who are dried up and crumbling away like ruined buildings. Neither, in short, the very young nor the very old are gifted with much power of memory: and similarly, the very quick and very slow are alike deficient in remembering, the one because the image representing their perception does not stay after it is caught, the other because this image never gets a hold at all\(^4\).

This retention of our past impressions by the aid of Memory serves as basis for a much more active application of the mental faculties. This new retrospective function is what Aristotle knows as recollection or reminiscence (ἀναμιμησκεσθαι)—the faculty, that is to say, of calling back to consciousness the per-

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\(^1\) De Mem. 1, 440b22, ἀλ γὰρ ὅταν ἐνεργῇ κατὰ τὸ μνημονεύειν, οὕτως ἐν τῇ ψυχῇ λέγει, ὅτι πρῶτον τὸν ἤκουσεν ἢ ὅσθε τὸ ἐνύησεν....διὸ μετὰ χρόνου πᾶσα μνήμη.

\(^2\) 451a15, φαντάσματος ὡς εἰκόνας ὡς φάντασμα ἔξεις.

\(^3\) 450b12.

\(^4\) 460a32, διὸ καὶ τοῖς μὲν ἐν κινήσει πολλῇ διὰ πάθος ἢ δι’ ἁλκίαιν οὖσαν οὐ γνωται μνήμη, καθάπερ ἄν εἰς ὑδωρ ἰδέων ἐμπιπτούσας τῆς κινήσεως καὶ τῆς ὁμογένειας.
ceptions and ideas which memory has treasured up within its storehouse of the past. Such recollection may take place either intentionally or unintentionally: we may, that is to say, recall some event of past experience either accidentally as it were or by the help of a distinct effort to call it back to mind; but in either case it is regulated by certain laws which it is one of the great psychological merits of Aristotle to have tabulated for us. The laws which thus express the mode in which the mind attempts to recall its past impressions are what have commonly been designated since Aristotle's day, the Laws of the Association of Ideas. But to Aristotle, it must be added, the laws in question have little or none of the significance which they have acquired in the hands of modern inquirers. To him they are simply a statement of the manner in which we seek to regain some fragments of our knowledge which have for the moment got outside our consciousness. Recollection in short being the recalling of our past impressions, it follows that the success of our efforts to recall them will depend to no inconsiderable extent on the degree to which we can recall the order in which other impressions stood to that of which we are in search. But our impressions follow one another in memory in an order similar to that in which the actual sensations succeeded one another. Recollection thus involves a study of the laws of sequence in the order of our ideas; and Aristotle analyses the method of recalling past impressions in the following manner. "When engaged in recollection we seek to excite some of our previous movements, until we come to that which the movement or impression of which we are in search was wont to follow. And hence we seek to reach this preceding impression by starting in our thought from an object present to us or something else whether it be similar, contrary or contiguous to that of which we are in search; recollection taking place in this manner because the movements are in one case identical, in another case coincident and in the last case partly overlap."
Similarity, contrariety and contiguity are thus to Aristotle the three principles by which for purposes of recollection our ideas and impressions have to be guided. Our sensuous movements and impressions really follow one another in an order corresponding to that of external nature. Thus, the more order and arrangement there is in the elements of our experience—the better connected our ideas are—the more easily will they be remembered. And again the greater the number of times we have established a connection between our ideas, the greater will be the ease with which we can recall them. Habit in short becomes a second nature: and the constant conjunction of two phenomena in outer experience will lead to their being so connected in the mind that the one will never shew itself without the other.

With the exercise of recollection we have gone considerably upwards in the scale of animal existence. No doubt this recollection is like all preceding operations in great part a bodily affection (σωματικοῦ πάθος); it rests upon that theory of physical movement and physical impression which underlies, as we have seen, Aristotle’s whole theory of sense-perception. But at the same time this process of reminiscence, though thus dependent upon bodily conditions, involves, to stimulate these conditions, an act of mind which goes decidedly beyond a mere material phenomenon. We have already (p. xxxv.) referred to the passage (14, 408b 15) in which Aristotle views it as starting from the action of the mind just as perception ends in such a mental principle. Recollection in fact would seem to be confined to man. And the reason is that recollection implies a process of reasoning—a distinct selection of means to which our volition is submitte.
ends in what Aristotle calls deliberation. The mere animal may remember; it may possess the faculty of memory and retain its past impressions and experiences. But of the facts it thus retains it can make no use; it is unable to call up the treasures of its experience at will: it simply remembers, it never recollects. And the meaning of this is that the animal as such is unable to make the past to bear upon the present, it fails to get outside the limits of its particular sensations, it cannot apprehend the universal, the general idea under which individuals are included. But all this is involved in the work of recollection. To apprehend two sensations as similar involves an understanding of them in their general relations: and it is just the universal which is the beginning and the intermediate notion in these links which are presented in the sequence of our ideas (ἔοικε δὲ τὸ καθόλου ἀρχή καὶ τὸ μέσον πάντων). But to allow this is to hold that recollection presupposes thought or reason as the faculty which goes beyond the individual and interprets it as an universal. And thus we pass almost imperceptibly from the recollection of our past impressions to the faculty of Thought or Reason.

XI. ARISTOTLE'S THEORY OF THOUGHT.

The most perplexing part of Aristotle's psychology is undoubtedly his theory of thought. There are many circumstances which explain this difficulty. There is the fragmentary character of the chapters in which Aristotle enunciates his views upon the subject. There is the apparent contradiction which runs through the whole epistemology of Aristotle and which makes him emphasize now the part of sense, now the work of reason in building up knowledge. There is the further fact

1 453*10, τὸ ἀναμνησκόμενον ἐστὶν ὁλον συλλογισμὸς τις.
2 Eth. Nic. VII. 3, 1147\textsuperscript{b}4.
that reason seems from one point of view almost an excrescence and luxury in Aristotle's system. If there be any mental function rather than another which would be assigned to reason by a modern psychologist, it would be the work of distinguishing between sensations, of translating sensations into things, of apprehending number and other forms which give meaning to the intimations of our senses. But this work, we have already seen, is regarded by Aristotle as effected not by thought but simply by that central sense, which also gives the consciousness of sense. Little room would seem thus left vacant for the reason when so much is done by sense. And the difficulties which thus arise, if partly solved, are also partly increased by the distinction Aristotle draws between a passive and a creative reason—in fact the many diverse interpretations which have been given to a few words of Aristotle's on this subject form one of the greatest stumblingblocks to any student of Aristotle's philosophy.

Some light however may be thrown into the chaos of Aristotle's theory if we at once avail ourselves of this distinction and state very briefly what would seem to be the meaning of thus distinguishing two aspects or applications of our intellectual powers. To advance then immediately the view which the following pages will try to verify, Aristotle would seem to mean that while our intellectual powers are on the one hand merely receptive—while they merely elaborate and, by processes of discursive thought, systematize the materials of thought—these materials of thought only become so, only get formed into an intelligible world, by an act of reason which has gone on from the creation of the world and is in turn employed by each of us. Shortly then the creative reason is the faculty which constantly interprets and as it were keeps up an intelligible world for experience to operate upon, while the receptive reason is the intellect applying itself in all the various processes which fill our minds with the materials of knowledge.

Reason, says Aristotle, is the faculty through which the
soul is ratiocinative and conceives opinions—the passage is not less tautologous in the original—and in another passage he speaks of it as the part by which the mind knows and understands\(^1\). Aristotle accordingly regards reason as in many ways the direct antithesis of sense. The old psychologists were much mistaken when they viewed perception as identical with thought and explained thought itself as a material process\(^2\). The very possibility of error on the part of thought shews it to be something which must be distinguished from the communications of the special senses: they, as we have seen before, are as such always true. Sense again requires to go outside itself to find its object: reason finds its object as it were within and thus is free to act according to our will. For sense is limited to the particular and individual: reason deals rather with the universal and the abstract\(^3\).

Sense and reason are in fact related to one another just as are the concrete and the abstract, the immediate phenomenon and its essential nature. Some things indeed are so abstract to begin with that we cannot make the separation—mind and the being or abstract idea of mind are identical—but in the majority of substances we can draw the distinction—distinguish for example between water and the idea of water, flesh and the idea of flesh. Sense then, we may say, enables us to know the concrete thing, the particular qualities of heat or cold; whereas thought relates to the abstract nature, the real idea of such objects\(^4\).

Between these two applications of our cognitive capacities Aristotle does not, however, draw immediately any hard line of division. Between the individual and the universal, the

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\(^1\) 429\(b\)23, λέγω δὲ νῦν ὃ διανοεῖται καὶ ύπολαμβάνει ἡ ψυχή. 429\(b\)10, ὃ γινώσκει τε ἡ ψυχή καὶ φρονεῖ.

\(^2\) III. 3, 427\(b\)26.

\(^3\) II. 5, 417\(b\)22, αὐτῶν δ’ οἷς τῶν καθ’ ἐκαστὸν ἡ κατ’ ἐνεργείαν αἰσθήσει, ἡ δ’ ἐπιστήμη τῶν καθόλου ταύτα δ’ ἐν αὐτῇ πᾶς ἔστι τῇ ψυχῇ. διὸ νοῦσαι μὲν ἐκ’ αὑτῷ, ὅποιαν χωλήται, αἰσθάνεται δ’ οὐκ ἐπ’ αὑτῷ ἀναγκαῖον γὰρ ὑπάρχειν τὸ αἰσθητὸν.

\(^4\) III. 4, 429\(b\)10.
concrete and the abstract, there is not so great an interval as Plato had supposed. Clearly then the faculties which apprehend these two aspects of phenomena cannot be sharply marked off from one another. They are in fact, Aristotle thinks, not so much different faculties as different applications of the same faculty, and he accordingly compares them to the same line as it is now straightened now bent back upon itself. The cognition of the senses resembles the straight line—sense that is to say knows its object directly and immediately. The cognition of reason resembles rather the bent line which returns upon itself—that is to say, reason in becoming conscious of the essential ideas of phenomena is but as it were finding itself in things, and the mind after perceiving from reason the idea which explains the phenomenon, brings it back again to reason as its home. But it is the same line which is now bent now straight: it is only a difference of aspect which subsists between the cognition of sense and that of thought. The difference indeed is not much greater than that which we might try to draw between the knowledge of an abstract idea and that of the idea of the same idea. Just in fact as it is only a different aspect of the reason which considers now the straight line now the idea of the straight line: so with regard to sense and thought we must remember that it is one and the same object of which sense comprehends the concrete, thought the immaterial aspect, and that the distinction in the faculties is no greater than that which subsists between the aspects of the object.

Not only however does Aristotle thus coordinate in some respects the cognition of the senses with the cognition of the

1 429a15, τῷ μὲν οὖν αληθινῷ τὸ θερμὸν καὶ τὸ ψυχρόν κρίνει καὶ ὅν λόγον τις ἢ σάρξ ἢ ἄλλῳ δὲ ὅτι τῷ χωριστῷ ἢ ὃς ἢ κεκλασμένη ἢ χείρα πρὸς αὐτὴν ὅταν ἐκταθῇ τὸ σαρκεῖ εἶναι κρίνει. Neuhäuser makes νοῦς the nominative to κρίνει. But though grammatically this seems the easier interpretation, a more general subject seems required. Teichmüller's view (Studien p. 494) that the crooked line is that in which sensuous images are gathered together by thought into a concept, the straight line that in which they are scattered and isolated as merely individual, is ingenious but scarcely more. See my note on the passage itself.

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reason: sense further serves to explain the mode in which reason operates. The same formula of assimilation, of suffering, and receiving, which served for our nutritive and sensitive capacities, is thought also adapted to explain our higher intellectual functions. Reason is affected by or suffers from its object (πάσχει), just as sense, we saw, received impressions from the qualities of outward things. But if even sense was not a merely passive state, if even there an innate power was presupposed, enabling it to separate the form from the matter and grasp its objects in their formal aspects, still more must this be the case with the exercise of thought. And accordingly Aristotle no sooner suggests that reason may be like sense and therefore be affected by its object than he adds it must be therefore unaffected—it must, that is to say, in order that it may receive its object, be its superior rather than its subject. He accepts then so far the expression of Anaxagoras that reason is something unblended with material objects, something which remains untrammeled by the outward world and which can therefore master it by knowing it.

Anaxagoras' expression however suggests to Aristotle's mind a difficulty whose solution enables him to explain still more clearly the place of reason in the economy of knowledge. If thought be something apart from things, something outside the world, how is knowledge ever to be attained (εἰ δ' νοὺς μηθεὶν μηθὲν ἔχει κοινὸν, πῶς νοησεῖ? Thought, it has been said, is a kind of receptivity. But if one thing is to be acted on, another to act upon it, there must be some common element or factor to combine them (ὥ γὰρ τι κοινὸν ἀμφοῖν ὑπάρχει τὸ μὲν ποιεῖν δοκεῖ τὸ δὲ πάσχειν). Some light is thrown upon the problem

1 429a13, εἰ δὴ ἐστὶ τὸ νοεῖν ὦσπερ τὸ αἰσθάνεσθαι, ἡ πάσχει τι ἀν ἐν ἤπ τοῦ νοητοῦ ἡ τι τοιοῦτον ἐτέρων ἀπαθεῖ ὁπαῖς ὁπαῖς δὲ ἐστὶ, δεκτικῶν δὲ τοῦ ἐδούν καὶ δυνάμει τοιοῦτον ἀλλὰ μὴ τοῦτο. Themistius would seem to have read ἐτέρων ἀπαθές, but the correctness of the ordinary text is confirmed by line 29, ὥστε ὤμωλα ἡ ἀπάθεια τοῦ αἰσθητικοῦ καὶ τοῦ νοητικοῦ.

2 429a18, ἀνάγκη ὁπα, ἐπεὶ πάντα νοεῖ, ἀμηγὴ εἶναι, ὦσπερ φησὶν 'Αναξαγόρας, ἧν κρατῆ, τοῦτο δ' ἐστὶν ὡς γνωρίζῃ παρεμφανίζειν γὰρ κωλύει τὸ ἄλλοτρον καὶ ἀντι-φράττει.
by the further problem, how reason itself can become the object of thought. If, argues Aristotle, thought or reason is an object of thought just because it is thought (εἰ μὴ κατ’ ἄλλο (νοῦς) ἄντος νοητός), then, on the supposition that everything becomes thinkable and knowable in the same way (ἐν δὲ τὸ νοητὸν εἰδεῖ) we must assume that other things require (in order to be thought and known) to be endowed with reason; or, if reason be not an object of thought just because it is reason, we must suppose that reason, instead of being free from admixture, has some element incorporated with it which makes it thinkable in the same way as other external things are (ἡ γὰρ τοῦ ἄλλου ὅ νοῦς υπάρξει, ἢ μεμηχυμένον τε ἔξει ο ποιεῖ νοητὸν ἄντον ὁσπέρ τὰλλα). But both these alternatives are eventually rejected: we must neither reduce things to thought nor thought to things, neither spiritualize matter nor materialize spirit. Rather we must allow the presence of a common factor between subject and object in the processes of thought (ἡ το μὲν πάσχειν κατὰ κοινὸν τί). And by virtue of this community reason may be said to hold in itself implicitly the whole world of experience (δυνάμει πῶς ἐστὶ τὰ νοητὰ ὅ νοῦς)—thought, that is to say, is not only within us but without us—and the world of reason outside us is present potentially in the world of thought within—the microcosm contains implicitly the macrocosm. But this subjective world of thought is to begin with a mere ἄ πριορί possibility: it is a mere form without the actual experience which will give these forms reality (ἄλλ’ ἐντελεχείᾳ οὐδὲν πρὶν ἀν νοῇ). And thus the relation of thought to the world is not unlike that of a writing tablet to the knowledge which will be graven on it1. The metaphor is not to be pressed as though it implied a purely empirical account of thought and knowledge. The comparison refers simply to one point, and it is misused when taken as equivalent to Locke's white paper or other sensualist similes. All that Aristotle means to bring out by his comparison is that just as a sheet of

1 430r1, δεὶ δ’ οὕτως ὁσπέρ ἐν γραμματεῖα χρησθεὶν υπάρξει ἐντελεχείᾳ γεγραμμένον ὁσπέρ συμβαλλεῖ ἐπὶ τοῦ νοῦ.
paper may be regarded as containing a priori and implicitly all that will be written on it, so similarly the intellect or reason may be viewed as implicitly containing its objects, which like itself are rational.

To the question then, How is knowledge possible? How do we think things? Aristotle answers that we do so only in so far as the object of our experience is also reasonable. And this he makes still clearer by distinguishing between the two kinds of objects of thought to which reason may apply itself. These are either abstract and immaterial or concrete and material. In the former case this correspondence between our thought and the thought of things is of course complete: “in the case of immaterial conceptions the subject and the object of thought are identical” (ἐπὶ τῶν ἀνευ βλησ τὸ αὐτό ἐστι τὸ νοοῦν καὶ τὸ νοούμενον). But in material objects this correspondence is of course not so directly present. How then do they come to be objects of thought—how in fact are they known? The answer is that, though not explicitly rational, they are still so implicitly—that is, they presuppose a basis of thought—so that even in dealing with material objects our thought is simply refining itself in the world.

Thus far then Aristotle’s position would seem to be that thought and knowledge presuppose a universe already thought as an intelligible world. But the question now arises—What is this object of thought? How do we get to something intelligible? Reason, we may grant, is the faculty of receiving and applying ideas, of acquiring a knowledge of the general character of things, of filling up the as yet unwritten book of our experience. But there is a problem to be solved before this work of reason is possible: we must have secured our object of thought, our intelligible world, our matter on which thought is to operate—we must have found the instrument by which thought can exercise its actual functions. To do so we must advance a step farther than Aristotle’s analysis has yet carried us. We must see that reason does not only receive ideas and in the course of its experience
gradually give them reality: it must first of all create or make these ideas, it must construct an intelligible world, an object of thought in which and with which it may operate: it must determine and constitute the very subject-matter of its action. And if we follow the few words in which Aristotle has unfolded his theory of a creative Reason we shall perhaps find that something like this was the nature of the intellectual act which Aristotle intended to represent.

The mind of man, says Aristotle, must contain the same differences as metaphysical analysis finds inherent in existence as a whole. Just as any class of things of which being can be predicated may be analyzed into a matter which is potentially all the class, and a causal or formative element which acts on this matter as art does on the materials given to it: so in mind we must distinguish between two forms or aspects of the reason standing in this relation to one another. On the one hand reason becomes all things: on the other hand it makes all things—makes them in the same sense in which light creates the objects of vision. In saying that reason ‘becomes’ all things Aristotle must mean that reason is able to apply itself to the whole domain of experience: that it can bring everything under the forms of rational knowledge. But reason does not only ‘become’ all things: it also makes all things. That is to say, it creates an intelligible world in the only sense in which experience can be acquired. And the illustration of the sunlight helps to make Aristotle’s meaning still more clear. For just—the metaphor would seem to mean—just as the sun communicates to things that light without which colour would be invisible and sight would have no object: so in the same manner this creative reason communicates to things those

1 III. 5, ἐπεὶ δ’ ὡσπερ ἐν ἀπάθη τῇ φύσει ἐστὶ τὸ τὸ μὲν ὕλη ἐκάστῳ γένει (τούτο δὲ τὸ πάντα δυνάμει ἐκεῖνα) ἔτερον δὲ τὸ αἴτιον καὶ ποιητικόν, τῷ ποιεῖ πάντα, οἷον ἡ τέχνη πρὸς τὴν ὕλην πέπονθεν, ἀνάγκη καὶ ἐν τῇ ψυχῇ ὑπάρχειν ταύτας τὰς διαφορὰς.

2 430’4, καὶ ἐστὶν ὃ μὲν τοιοῦτος νοῦς τῷ πάντα γίνεσθαι, ὃ δὲ τῷ πάντα ποιεῖν, ὃς ἔστιν ταύτα, οἷον τὸ φῶς τρόπον γὰρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει δυνατὰ χρώματα ἐνεργεία χρώματα.
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ideas, categories, or whatever we may call them, by which they become objects on which thought as a receptive passive faculty may operate. Now, Aristotle goes on, such reason—reason which by giving thought to things bestows upon them real existence—is clearly independent of the body¹: because, we may venture to add, this body itself is only an object of thought, an intelligible thing, in virtue of this very act of creative reason, which accordingly cannot itself depend upon the body. Such thought again is like actual knowledge—it is identical with its object²—i.e. the work of thought in dealing with these ideas which thus constitute existence is scarcely different from existence itself—the thinking of the world is in fact the creation of the world and the world as thought. Still the knowledge of these fundamental categories of existence is not something present to everyday consciousness: it is only by a later effort of analysis that they are grasped at all. Long before the individual has come to know these ultimate ideas he has unconsciously to himself applied them in building up his own experience: it may be that he never consciously recognises the existence of such ideas at all. But this thinking of the world is never really in abeyance: and if we leave the individual and consider the subject in the absolute we shall see that this potential thought is not really prior even in time to creative reason³. This reason in fact is always implicitly present in the world: it does not think at one time, and rest from thinking at another⁴; that is, if we may again supplement Aristotle, our categories of thought are ever active in the world, because, however unconscious we may be of them, it requires only an effort of introspection to discover them as necessary ingredients of our experience. But if so, this thought

¹ καὶ οὐτος ὁ νοοῦς χωριστὸς καὶ ἀμυγής καὶ ἀπαθῆς, τῇ οὐσίᾳ ὥν ἐνεργεῖα: αὖ δὲ τιμώτερον τὸ ποιεῖν τοῦ πάσχοντος καὶ ἡ ἀρχὴ τῆς ὑλῆς.
² τὸ δ’ αὐτὸ ἐστιν ἡ καὶ ἐνεργείαν ἐπιστήμη τῷ πρᾶγματι, cp. c. 4, 430a3, ἐπὶ τῶν ἄνευ ὑλῆς τὸ αὐτὸ ἐστὶ τὸ νοοῦν καὶ τὸ νοομενον.
³ ἡ δὲ κατὰ δόσμων χρόνῳ προτέρα ἐν τῷ ἐνι, διὸς δὲ οὐδὲ χρόνῳ.
⁴ ἄλλος όμίχρε ὤν οὐκ ὡθεῖ δ’ οὐ νοεῖ.
is really eternal and immortal: an intelligible universe, that is, has always involved these very forms which to this day are found by mental analysis to be the factors which explain our knowledge of the universe. Yet the employment of them does not convey this sense of everlastingness along with it—Plato's reminiscence of a previous state of being in which the mind has been face to face with truth is a fiction of his own—because our reason dealing with fundamental ideas of this character is unaffected by its objects and employs them for the greater part of its existence in unconsciousness. It is just here however—in this persistency of thought constituting throughout time the universe—that the sense of 'life continuous, being unimpaired' must be looked for. The receptive intellect which merely thinks a world that has been rendered intelligible cannot lay claim to any such preeminence. Its work is restricted to the lifetime of the man who uses it: it depends upon the different communications of sense and the various reports of memory which enable it to apprehend the outward world, and it may thus be said to perish with the dissolution of the body. Besides it has none of the independent footing which creative reason may be said to have: it is throughout dependent on it for its action: because indeed without the faculty which constitutes an intellectual world the thinking and cognition of the world would be a positive impossibility.

The stumblingblock which has prevented students from understanding Aristotle's position lies perhaps chiefly in separating the fourth and fifth chapters of the third book from each other as if Aristotle were speaking of one reason in the one chapter, of another reason in the other. The real point to be remembered is that the problem which Aristotle is seeking to solve in the latter half of the fourth chapter is, How does reason think the world? How does the immaterial—thought—come to receive the material—things? The answer is that this is possible only

1 χωρισθείς δ' ἐστὶ μόνον τοῦθ' ὑπερ ἐστὶ, καὶ τούτῳ μόνον ἀδάνατον καὶ ἀδιάν.
2 οὐ μνημονεύομεν δὲ, ὅτι τούτῳ μὲν ἀπαθῆς, ὁ δὲ παθητικὸς νοῦς φθαρτός, καὶ ἀνευ τούτου (i.e. τοῦ ποιητικοῦ) οὐδὲν νοεῖ (i.e. ὁ παθητικός).
in virtue of a community between thought and things. And this κοινόν is more definitely the creative reason which being at once in our minds and immanent in the world bridges the gulf between external objects and the receptive intellect.

This explanation of Aristotle’s theory of a creative reason may be thought an instance of that tendency to modernize an ancient problem which no one would generally deprecate more than the present writer. But it may be said at least that in the fragmentary state in which Aristotle has left his theory, no course is open to a student unless he be prepared to supplement to some degree the scattered thoughts which the original Greek presents. And the interpretation which has just been given may be allowed to comprehend and also in a way to shew the truth contained in many of the different explanations which Aristotelian commentators have given of this creative reason.

The divergencies of view respecting Aristotle’s meaning on this subject go back to an early period in the history of Aristotelianism. The idealist and transcendental interpretation meets us already in Eudemus: the more natural and empirical in Theophrastus. But it is with Alexander of Aphrodisias that we first find a decidedly theistic and supernatural rendering of the creative reason. Alexander regarded it, it would appear, as a purely spiritual agency acting as the fundamental basis of phenomena and transmitting its influence to man’s nature from outside1. This supernatural interpretation on the part of Alexander exercised no inconsiderable influence on the Arabian philosophers in mediaeval Europe. To Avicenna it is the passive intellect alone which has a place in the human soul; and the creative intellect becomes transmuted into a series of pure spirits, a cycle of intelligences, of which the higher shed their light upon the lower until they reach the intellectus agens as the spiritual agency which lies nearest to man. Emanation thus comes in to explain the action of this active or creative intellect: the intelligible forms stream into our souls, just as on the other hand the substantial

1 For a fuller account of the ancient interpretations, with references, see the notes to iii. 5.
forms descend upon corporeal matter: and each act of knowledge means a fresh descent of the intelligible forms from the creative reason upon our natural understanding. A more sober interpretation is that given by Averroes. To him the passive intellect is merely the sensitive capacity by which we can distinguish and compare our separate sensations. But true intellectual cognition only arises when the passive and the active intellect are brought into combination: this active intellect being the faculty which gives actual intelligibility to the merely potentially intelligible phantasms or pictures of imagination. But this cognitive process in which the intellectus agens gives meaning to the intellectus passivus is still in every mind essentially the same phenomenon: “all who were are and shall be acquire their intellectual knowledge by one and the same cognitive act.” A much less metaphysical account is given by Thomas Aquinas: the creative intellect becomes little more in his hands than a faculty for abstracting general forms from concrete individuals. Both the passive and the active intellect are according to Thomas parts or aspects of the human soul: but while on the level of the passive intellect the mind is a mere possibility for receiving forms, the active intellect enlightens and illumines the phantasms, which are in themselves individual, and abstracts the intelligible species from them.

Modern exponents of Aristotelianism have been as little harmonious in explaining Aristotle’s doctrine. Trendelenburg, for instance, regards the passive reason as a single expression to denote all the lower cognitive powers of man: and though unable to view the active intellect as one with the divine mind, he yet sees in it, as the source of first principles, something of a divine nature. Zeller takes a similar view of the νοῦς παθητικὸς: the passive reason is “the whole of the presentative

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1 Condensed from the fuller account given by Brentano of the different interpretations of Aristotle’s conception.

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faculties which go beyond sensuous perception and imagination without yet reaching the highest stage of thought": the creative reason being itself apparently just this highest stage of intellectual development. Renan returns rather to the position of Alexander and the Arabians. The creative reason is, he thinks, analogous to Malebranche's theory of seeing things in God. Borrowed perhaps from Anaxagoras it is in decided conflict with many other assertions of the Stagyrite: but it is but lost labour to try to reconcile what Aristotle himself left unsolved. And lastly, Brentano interprets the passive reason as equivalent to the imaginative or representative powers and regards the creative intellect as the spiritual faculty which operates before all thought, and therefore operates unconsciously—a faculty which once it is applied to our sensitive capacity gives it the necessary impulse for acting on our spiritual nature, and so becomes the efficient cause of our thought. It is in fact "the light which illuminating the images of sense makes the intelligible, within the sensible, knowable to the eye of our mind."

The scattered truths exhibited by these divergent theories would seem more or less comprised in the explanation which has been already suggested. The creative intellect is clearly, to begin with, not the intelligence of God as such: it is, Aristotle expressly tells us, 'in the soul' of man that the distinction which he draws is found: and whatever account we give of it must harmonize with this one fact. But if this creative thought be the act of mind which for each one of us translates a world of phenomena into a world of real objects, which renders what is merely sensuous capable of forming parts in a rational experience, if it be the very condition of discursive thought because without it our intellectual powers would have no object on which to operate—it follows that it is a process which is confined to no one individual, but which every man goes through consciously or unconsciously. It represents the very act which called the world, as a thing which could be known, into existence: it takes

us back to the time when man first thought the universe: and it thus easily approximates to that universal thought or λόγος which "was in the beginning"—as the a priori condition of a rational experience—and which was also God himself.¹

What then, let us ask, is the general significance or import of Aristotle's theory of a creative reason, and how does it stand to his general psychology and metaphysics? The answer to the question is twofold. It overcomes on the one hand the antithesis between body and soul; it explains on the other hand the parts played by sense and thought respectively in knowledge. So long as soul was merely the entelechy of the body, the explanation of their unity and co-operation was but half completed; and it was difficult to understand how merely material phenomena became cognitive and intellectual conditions. But with the consideration that it is only through an act of thought that body can be known at all, that body is body only in so far as it is interpreted by intellect, the antithesis which the definition of the soul had only partially removed is brought finally to unity. And though we need not assert that Aristotle himself gave this application to his theory, it cannot be far wrong in us to draw the conclusions which his theory would seem to warrant.

Still greater is the importance of this theory of Reason in its bearings on Aristotle's account of the beginnings and development of knowledge. Most students are acquainted with the popular summary of Aristotle's doctrine—nihil est in intellectu quod non prius fuerit in sensu. And it is a comparatively easy task to collect a number of passages in which Aristotle would seem to make sense the source of all our knowledge, the source even of our ultimate principles of thought. The last chapter of the Posterior Analytics would be especially quoted in support of such an account of Aristotle's Erkenntnisslehre or Epistemology: and there is no doubt but the passage if it stood alone would make the writer a mere empirical sensationalist. For the point

¹ Teichmüller develops the comparison farther, Studien zur Geschichte d. Begriffe (1874), p. 399.
insisted on by Aristotle is just that our primary ideas, our general notions, our cognitive faculties, are not ready-made and determined faculties—ἀφορισμέναι ἔξεις—they start from no higher source of knowledge than sense-perception. And the chapters explain how the ‘inborn discriminating faculty’ of sense is followed by a continuance of the sensation in memory—how a number of memories go to form one experience (ἐμπειρία)—and how from experience or from “every universal which has settled down as a one beside the many” comes the origin of art and science. Nor does the chapter leave us in any uncertainty as to how these universals are to be formed. A right use of generalization and abstraction clears up all the difficulty. Amid the flux of sensitive impressions, the writer explains, some one or other becomes fixed as an object of conscious observation: and once so fixed it becomes a centre round which other impressions may gradually group themselves, just as the soldier who stays the flight of his defeated comrades becomes a rallying-point from which they may again recover order. It is easy to see how the process will go on. Round this particular impression a number of like sensations group themselves—a class of lower generality is so formed—and the process goes on with ever-widening circles until general ideas of the greatest scope are ultimately reached.

Generalization or Induction—the process of advancing from particular instances to general laws—seems thus the agency by which we must explain the origin of general ideas. And since this induction itself is primarily dependent on sense-perception—since in fact apart from sense-perception induction cannot

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1 Post. Anal. 11. 19, 100κτο, οὕτω δὴ ἐνυπάρχουσιν ἀφορισμέναι αἱ ἔξεις, οὗτ' ἀπ' ἄλλων ἔξεων γίνονται γνωστικώτερον ἅλλ' ἀπ' αἰσθήσεως.

2 Ibid., οἷον ἐν μάχῃ τροπῆς γενομένης ἐνὸς στάντος ἑτέρος ἑαυτή, εἰδ' ἑτερος ἑως ἐπὶ ἀρχὴν ἡλθεν, ἢ δὲ πυχὴ ὑπάρχει τοιαύτῃ οὐσίᾳ οὐ αὐτή δύνασθαι πάσχειν τούτῳ.

3 στάντος γὰρ τῶν ἀδιαφόρων ἐνός, πρῶτον μὲν ἐν τῇ πυχῇ καθίλου, πάλιν ἐν τούτω ἱσταται ἐὼς ἀν τὰ ἀμερή στὶ καὶ τὰ καθόλου οἷον τοιοῦτ' ἕξον ἐως ἕξον' καὶ ἐν τούτω ἱστατοί.

4 ἡπὶν δὴ ὡς ἴματ' ἐν πρῶτα ἐκατόγυ μνημείῳ γνωρίζειν ἀναγκαίως καὶ γὰρ καὶ αἰσθήσιος οὕτω τὸ καθόλου ἐμποιεῖ.
operate at all—it seems to follow that sense is in the last resort
the origin of our ideas and our knowledge\(^1\). But alongside of this
emphatic assertion of the value of sense in generating
knowledge and ideas, comes the ascription of the knowledge of
the ἀρχαί or first principles of our experience to reason. We
find them so accounted for in the Posterior Analytics\(^2\) and in the
sixth book of the Ethics. While one chapter asserts that as syllo-
gism cannot itself supply the principles on which demonstration
rests induction must discover them, another chapter maintains
that as neither science nor opinion can supply the principles of
science, reason itself must be their source\(^3\).

The contradiction which is here apparent and which is in
accordance with Aristotle’s general attitude upon the subject
can only be solved, if it be explicable at all, by a true under-
standing of his creative reason. It seems no doubt at first
sight absurd that one and the same writer should assign the
origin of our ideas, the first beginnings of our knowledge, at
one time to sense, at another time to reason. But we have
gone a long way towards reconciling his conflicting statements
when we understand that a creative reason as the thought which
makes things, which constructs an intelligible world, is the
necessary presupposition of sense-perception itself. Nor do
other passages which might be brought forward in support of
Aristotle’s sensationalism really conflict with this interpretation.
No doubt Aristotle says it is impossible to exercise thought
without the help of a sensuous image—νοεῖν οὗκ ἐστὶν ἄνευ φαν-
tάσματος—and the passage might be taken to mean that thought
itself presupposes a constant sensuous accompaniment as the

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1 *Post. Anal. 1. 13, 81b5, ἐπαρχηθαίναι δὲ μὴ ἠχώτας ἀληθεύων ἀδίκουτον τῶν γὰρ
καθ ἔκαστον ἡ αληθείας.

2 100b5, ἐπεὶ δὲ τῶν περὶ τὴν διάνοιαν ἔξων αἰς ἀληθεύομεν αἱ μὲν ἀληθεῖς
eἰσιν, αἱ δὲ ἐπιδεῖχναι τῷ ψεύδοι, ὅπως δέκα καὶ λογισμός, ἀληθὴ δ’ ἐκ ἐπιστήμης καὶ νοῦς
καὶ οὐδὲν ἐπιστήμης ἀκριβότερον ἄλλο γένος ἢ νοῦς, αἱ δ’ ἄρχαι τῶν ἀποδείξεων γνωριμία-
tεραι, ἐπιστήμης δ’ ἀπαξα μετὰ λόγων ἔστι, τῶν ἄρχων ἐπιστήμης μὲν οὐκ ἂν εἰρ’ ἐπεὶ δ’
οὐδὲν ἀκριβότερον ἐπεξερεται εἰναι ἐπιστήμης ἢ νοῦς, νοῦς ἂν εἰρ’ τῶν ἄρχων.

3 *Eth. Nic. vi. 3, 1139, εἶλαν ἂρα ἄρχαι ἐξ ὧν ὁ συλλογισμός ὧν ὀν ἔστι συλλο-
γισμός ἐπαγωγή ἄρα. vi. 6, 1141b7, λειτηται νοῦν εἰναι τῶν ἄρχων.
symbol of its action. But there is no contradiction in holding on the one hand that thought requires for its exercise an object suggested by sense and maintaining on the other hand that thought requires to illuminate this object in order that it may think it. The two points of view, in fact, refer to different aspects or stages of the work of knowledge. When Aristotle says that it is thought which gives thought its object, he is referring to the primary and fundamental act by which a conscious mind interprets the universe; when he says that thought finds its object in the images of sense and cannot operate without them, he is referring to the elaboration in discursive thought of the materials so determined by thought. Nor does this merely mean that Aristotle gave a subjective expression to an objective fact—that he regarded the forms of things as impressing themselves by their own action on the reason: or that he wishes us to believe that “it is only in our consciousness that the eternal ideas of transient phenomena become conscious of themselves:” so that “the creative Nous means simply the forms of things acting through the imagination on the possibilities of subjective conception.” For Aristotle says, not that things make thought, but that thought makes things: and though he never loses sight of the correspondence between the two sides of the relation, so that our thought is merely as it were finding itself in things, he is none the less aware that it is thought which stands first in the universe. No doubt it is within the phenomena of sense that the forms of reason are to be discovered—ἐν τοῖς εἴδεσι τοῖς αἰσθητοῖς τὰ νοητὰ ἐστί—but this merely emphasizes the fact that it is because phenomena are thought that they are intelligible to

1 De Mem. II. 449b30, νοεῖν ὃδεν ἐρεῖν ἔρειν ἡμᾶς μαθηταῖς ἔφη τὸ αὐτὸ πάθος ἐν τῷ νοεῖν ὅπερ καὶ ἐν τῷ διαγράφειν· ἐκεῖ τε γὰρ οὐδὲν προσχωμένον τῷ τῷ ποσίν ὑψιστόν εἶναι τὸ τριγώνον, διός γράφομεν ὑψιστόν κατὰ τὸ ποσίν· καὶ δοῦνο ωςάτως, κἂν μὴ ποσίν νοῇ τίθεται πρὸ ὑμμάκτων ποσίν, νοεῖ δ’ οὖχ ἔν ποσίν. Cp. De An. III. 7, 431a17, III. 8, 432a8.

2 Westminster Review for October, 1881.

3 III. 8, 432a10.

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sense; that it is in applying themselves to and being embodied in our sensuous experience that the ideas of reason gain their true import. And though the forms of reason are thus contained within the vehicle of sense, it is still reason which is the cause and origin of them in things: for the reason is just the constitutive form which itself determines and applies the forms and categories of existence just as the hand is the instrument of instruments, the instrument which makes and uses other instruments. 

What thus holds good of the origin of our ideas generally applies also in no less degree to the origin of our ethical conceptions. They also are the growth of experience illuminated by the energy of reason. Ethics indeed must be studied by constant reference to personal experience: it is the particular fact which must form the starting-point of the moralist: and it is just by gradual experience, constant habituation (ἐθισμός) that the ἀρχαὶ of conduct must be realized. For these principles are just the motives for which our acts are due: they embody themselves in our highest ideals of what is just and true: and as it is vice which destroys such principles so it is the experience of a moral life which forms and preserves them. They constitute the major premiss of the practical syllogism by which our conduct is determined: and the universal here as elsewhere is the product of the inductive process by which individuals combine to form a universal truth. But this is only half of Aristotle's analysis. It remains further to be added that these particulars which thus go to make up the universal, require to be fixed and interpreted by reason: and if we give the name of αἰσθησις to this apprehension of the individual, we must remember that it is also at the same time

1 432a1, ὡς ἄρχει ὁργανων ἐστιν ὁργάνων καὶ ὁ νοῦς εἴδος εἴδουν.
3 Eth. Nic. VI 5, 1140b16, καὶ μὲν γὰρ ἄρχαὶ τῶν πρακτῶν τὸ ὑπεκα τὰ πρακτὰ τῶ δὲ διεφθαρμένῳ δι' ἠδονῆς ἡ λύπην εἰθὲν οὗ φαίνεται ἡ ἁρχὴ...ἔστι γὰρ ἡ κακὰ φθαρτικὴ ἁρχή.
4 VI. II. 4, 1143b4; VI. 12, 10, 1144a31.
an act of reason\textsuperscript{1}. The recognition, in short, of the principles of morals is an instantaneous immediate act which resembles the direct apprehension of the senses, but it is an act not like the perception of the special senses but rather like the mathematical sense which combines a number of isolated points into a particular geometric figure\textsuperscript{2}.

Reason then, it now only remains to add, is essentially what constitutes the individual\textsuperscript{3}. It is no longer dependent on bodily conditions like the other cognitive and emotional elements in our nature: it is something of a transcendent character: something which brings us into connection with God himself\textsuperscript{4}. And thus we cannot enquire about the time when reason came into existence: as an actualized state, something which does not become ἐνέργεια but is essentially itself developed, it never began to exist—rather it is coeval with the world\textsuperscript{5}. It is only in its personal application to experience that we can apply categories of before and after to it: in itself as eternal and unceasing it is outside all relations of time.

With such thoughts we pass beyond the distinction between a creative and a passive reason. For the two it must be remembered are not “two reasons:” they are merely different modes of viewing the work of reason: and the passive discursive reason which becomes everything and applies itself to the varying phenomena of experience is capable of such action only in so far as its object is determined for it by creative reason. And it is therefore unnecessary for Aristotle to specialize the reason of which he says that it is introduced ‘from

\textsuperscript{1} VI. 11, I143\textsuperscript{b}5, ἐκ τῶν καθ’ ἐκαστα τὸ καθόλου τούτων οὐν ἔχειν δὲ αἰσθητικ, αὕτη δ’ ἐστὶν νοῦς.

\textsuperscript{2} Eth. Nic. VI. 8, I142\textsuperscript{a}26, ἀντίκειται μὲν δὴ (φρόνησις) τῷ νῷ: ὅ μὲν γὰρ νοῦς τῶν ἄρων ὅν οὐκ ἔστι λόγος, ἡ δὲ (φρόνησις) τοῦ ἐσχάτου, οὐδὲ οὐκ ἔστιν ἑπιστήμη ἄλλη αἰσθητικ, οὐχ ἡ τῶν ἴδιων, ἄλλη οὖν αἰσθάνομεθα ὅτι τὸ ἐν τοῖς μαθηματικοῖς ἐσχάτον τρίγωνον.

\textsuperscript{3} X. 8, 1178\textsuperscript{a}22: δοξεῖ δ’ ἂν καὶ εἴναι ἐκαστὸς τούτο, εἰπερ τὸ κύριον καὶ ἁμενον.

\textsuperscript{4} Eth. X. 7, 1, 1177\textsuperscript{b}16, εἶτε θείον ὅν καὶ αὐτὸ εἶτε τῶν ἐν ἦμιν τὸ θεϊστάτον.

\textsuperscript{5} Metaph. II. 5, 1044\textsuperscript{b}22, ἐπεὶ δ’ ἐνια ἄνευ γενέσεως καὶ φθορᾶς έστι καὶ οὐκ ἔστιν οἶον αἱ στυγναί, εἰπερ εἰσὶ, καὶ δίως τὰ ἐδή καὶ αἱ μορφαὶ (οὐ γὰρ τὸ λευκόν γίγνεται ἄλλα τὸ ἐθνὸν λευκόν). Cp. Teichmüller, p. 387.
without:’ that it does not result from mere physical generation in the way that the faculties for sustaining life—the ψυχή θρεπτική—may be said to do. No doubt as so introduced into the mind this creative reason is only a δύναμις: but the first key to understanding Aristotle is to know that δύναμις and ἐνέργεια are relative terms: and that what is an ἐνέργεια from one aspect may be a δύναμις from another. And thus Aristotle may perfectly well say that the different forms of soul must exist in man potentially before they do so in actuality and yet hold that it is in potential form that reason as an actual or rather an actualizing faculty is present originally in man. Such a view at least is perfectly consistent with the view of reason as a creative faculty which has been here set forth. For the creative reason is just, we have seen, the source of those general forms or categories by which a world of sense becomes a world for intellect. But of course such categories are, to start with, only implicit in experience, they are mere potential forms which can be applied to experience: and the γραμματεία of the human mind is at first destitute of anything but the forms themselves which, as they first exist in the mind, are indeed potentially all things—able to explain and interpret all the sensations which things can convey—but actually nothing; devoid of any particular content until experience provide them with it.

XII. The Will and Practical Reason.

The analysis of man as a cognitive and intellectual being is followed immediately in Aristotle by the account of him as an active and conative being: and the theory of knowing determines directly his theory of acting. It might have been expected that

1 De Gen. An. ii. 3, 736b27, λέγεται δὲ τοῦ νοῦν μόνον θύμαθεν ἐπεισείναται καὶ θείου εἶναι μόνον οὐθέν γὰρ αὐτοῦ τῇ ἐνέργειᾳ κοινωνεῖ σωματικῇ ἐνέργειᾳ.
2 Ibid. 736b15.
an intermediate stage would have been discussed, and that be-
fore proceeding to analyze man as an active being he would
have treated him as emotional. But neither in the Psychology
nor in the Ethics does Aristotle give us any account of the
feelings as such. It is the powers and faculties not the suscepti-
bilities of man with which he is occupied: and among such
dvómeves no place is left for the πάθη or emotions. At the
beginning indeed of the treatise, these feelings had excited con-
siderable interest in Aristotle: their semi-bodily character had
seemed to him to suggest some of the most difficult questions
which he would have to discuss. The feelings he saw were
always materialized notions (λόγοι ἐνυλοί) and could only be
described correctly when explained not merely from the stand-
point of the physicist or physiologist, but also from that of the
dialectician or metaphysician. But the conception of soul as a
first entelechy or perfect realization left, it would seem, no op-
portunity for treating of the feelings. Man is an emotional
being simply in so far as he is a sensitive or perceptive being1:
and there is no definite phase of life which we can speak of as
having a pathetic or emotional soul.

It is to the Rhetoric and Ethics that we must go if we would
find out what little Aristotle has said on the subject of the
feelings. Even in these treatises what we find is not any sys-
tematic exposition of the feelings but simply a description of
some aspects of them. What we have in the Rhetoric is a popu-
lar delineation of some of the more obvious feelings to which we
are subject: the Ethics gives us an analysis of the universal con-
comitants of all feelings. These concomitants are pleasure and
pain: feelings in fact are just the states which are followed by
pleasure and pain2. And of pleasure and pain Plato had given
a more than usually exhaustive account. Pleasure, he had ex-
plained, arose from the πλήρωσις, the filling up and satis-

1 II. 2, 413b23, ὃπον μὲν γὰρ ἀθέωσις, καὶ λύπη τε καὶ ἠδονή, ὃπον δὲ ταῦτα, ἐὰν ἀνάγχησι καὶ ἐπιθυμία.
2 Eth. Níc. II. 4, 1105b21, λέγω δὲ πάθη μὲν ἐπιθυμίαν, ἀργήν, φόβον, θρόσος, φόβον, ἀργίν, φιλίαν, μέσως, πόθον, ζῆλον, ἔλεος, ἀλώς ὅσ ἐπεται ἠδονή ἡ λύπη.
faction of a preceding state of deficiency; pain on the other hand was just the sense of want and deficiency, ἐνδεία. And though the explanation was suggested by and referred directly to the bodily pleasures it was still held by its author to apply also to the higher pleasures as similarly the answer to a sense of want which was waiting to be replenished by intellectual nourishment. Pleasure accordingly was always a γένεσις, a process towards the normal condition of a subject, and therefore as such never in itself an end. And the theory had consequently received a moral application as shewing, by the absence of finality from pleasure, that pleasure, taken by itself, could not be the end of life. It is similarly from a moral point of view that Aristotle analyses pleasure; and his immediate object is to shew that the argument which maintains that pleasure cannot be the sumnum bonum, because of its being a mere process towards an end, is unsatisfactory. Rather, he maintains, pleasure is an ἐνέργεια: it arises from the free play, the unimpeded, unthwarted operation of our faculties: it results from the contact of a perfectly acting organ with an appropriate object just as pain is on the contrary the result of thwarted constrained action on the part of either a sensitive or intellectual faculty.

Of such pleasure and pain the importance in the economy of man’s nature is that it is just through them that man passes from the state of a merely cognitive and intellectual and begins to be a moral and active being: “it is when the sense perceives something as pleasant or painful that the mind affirms or denies it—that it pursues it or avoids it.” Aristotle in fact is fond


2 III. 7, 2, 431b8, τὸ μὲν οὖν αἰσθάνεσθαι δροιον τῷ φῶς μόνον καὶ νοεῖν ὅταν δὲ ἢδο ἢ λυπηρόν, οἷον καταφάσα ἢ ἀποφάσα διώκει ἢ φεύγει.
of pointing out the correspondence between the practical and the speculative side of human nature. What is in the speculative intellectual sphere truth and error, is in the moral and practical good and evil: what is in the one affirmation and negation is in the other pursuit and avoidance. Pleasure and pain in fact form distinctively the field of Ethics: and the especial weakness in Socrates' intellectual apprehension of Ethics is just the fact that he left no room for the effect of the πάθη in influencing conduct.

But while our feelings of pleasure and pain are thus the phenomena on which our moral and active life reposes, they do not enter into our life as mere feelings, as mere natural tendencies or uniformed susceptibilities. The same constructive work, as intellectually translates a mere sensitive impression into a real object of cognition, displays itself also in building up the motives which ultimately constitute our wills, and the practical reason is shortly nothing but the intellectual reason applied to explain and create action. The sensuous images of φαντασία which suggest our action are really little else than mere sensations; it is only when the mind proceeds to view them as good or evil that it pursues or avoids them. Thus the sensitive or emotional capacities of our nature are but the material substratum, the ὕλη of our moral experience. To construct a moral world we must translate the sensitive into the rational, the phenomenal into the real, just as we require to do in order to build up an intelligible world; we must think the materials which sense supplies and discover in them the general forms or ideal truths which underlie them. And though the practical reason never carries on its work without the help of images of sense, these images themselves are no

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1 Eth. vi. 2, 1139a21, ἀιδεὶ ὅπερ ἐν διανολῇ κατάφασις καὶ ἀπόφασις, τοῦτ' ἐν ὀρέξει διώξει καὶ φυγῇ.
2 Mag. Mor. 1182b22, συμβαλλεῖ οὖν αὐτῷ ἑπιστήμασι ποιώντι τὰς ἀρετὰς ἁμαρτεῖν τὸ ἀλογον μέρος τῆς φυσῆς, τούτο δὲ ποιών ἁμαρτεῖ καὶ πάθος καὶ ἡμός.
3 Π. 7, 431b14, τῇ δὲ διανοητικῇ φύσει τὰ φαντάσματα ὀλον αἰσθήματα ῥάρχει ὅταν δὲ ἁγαθόν ἢ κακόν φύσῃ ἢ ἀποφήγη φεύγει ἢ διοίκει.
4 431b2, τὰ μὲν οὖν εἶν τὸ νοητικὸν ἐν τοῖς φαντάσμασι νοεῖ.
more the practical reason itself than the air which forms the medium and condition of eyesight constitutes the pupil\(^1\).

The motive or conative aspect of the soul thus includes two main factors which require to act in unison in order that action may result. And thus a δύναμις like this conative power just shews the weakness of a system of mental faculties. One element which enters into it belongs to the sphere of the rational, another falls within the limits of the irrational\(^2\). The real truth is that desire and reason must co-operate in order that a moral conclusion may be carried into effect: in the language of the Ethics, moral choice or προαλτεσίς may be described as either νοῦς ὀρεκτικός reason stimulated by desire, or ὀρεξὶς διανοητικὴ desire guided by understanding\(^3\).

This conception of the will, or (if the term be disapproved) the origin of moral decision is explained for us by what Aristotle tells us in the Psychology itself about the springs of action. The spring of action cannot, he there shews at length, be found either in mere animal processes of vegetation and nutrition which contain no conception of an end at which they aim, or in the faculties of sense which often exist without the concomitant of any tendency to spontaneous action, or even in the purely cognitive reason which is as such impotent to produce any effect upon the feelings or even to counteract their influence\(^4\). And here the Ethics itself comes in in turn to expand and interpret these remarks. The merely logical understanding, says the writer in the sixth book, never leads to action\(^5\). But if reason as reasoning be thus powerless to influence and shape the will, as little can mere animal appetite produce this end. For appetite is merely affected by what is pleasant and painful—and

\(^1\) 431a17, ὡσπερ ὦ ἀγρὶ τὴν κόρην τοιαύτα ἐποίησεν, αὐτὴ δὲ θέρετον.
\(^2\) ΙΙΙ. 9, 432b5.
\(^3\) Eth. Nic. VI. 2.
\(^4\) De An. ΙΙΙ. 9, 432b26, ἀλλὰ μὴν ὁδὲ τὸ λογιστικός καὶ ὁ καλοῦμενος νοῦς ἐστὶν ὁ κινῶν ὁ μὲν γὰρ θεωρητικὸς ὁδὺν νοῦ πρακτόν...ἀλλὰ οὐδὲ ὡς ὁ τῶν τοιῶν ὡς ἐκείνης φεύγειν ἡ διάκεισθαι, οὐκ οὖν κελέται ἐκτὸς ὁχήματι.
\(^5\) Eth. Nic. VI. 2, 1139a35.
before pleasure and pain have come to be elements in moral action they must have been translated into good and evil\(^1\). But to be so translated, the promptings of appetite must have been determined by an object and end which thought alone can contribute. The faculty of desire does not and cannot operate without the presentation of a mental image to consciousness (ὁρεκτικὸν δὲ ὅνει ἄνευ φαντασίας 433\(^b\)28): it is only by being made an object of thought or by being presented by imagination before the mind that the object of desire comes to determine conduct (τὸ ὁρεκτὸν κενεὶ ὅν κινοῦμενον τῷ νοηθῆναι ἡ φαντασθη-ναι 433\(^b\)12). And in the language of the exoteric psychology of the *Ethics*, it is only in so far as appetite is participant in reason (λόγου μέτεχον) that it provides a basis for the exercise of virtue.

What however neither reason alone nor desire alone can effect is produced by the two when acting in cooperation. But Aristotle as usual perplexes us by one of those provoking contradictions which seem at first at variance with the rest of his system. Not only, we are told, is it thought or reason acting with desire that can stimulate to action—imagination sometimes takes the place of thought\(^2\). Yet the difficulty so caused is removed when we remember that Aristotle is speaking here of the forces which lead to action *generally*: he simply means that in the animal world as such the pictures of sense take the place of reason, and man, when he subsides into his purely animal nature, similarly follows the lead of his senses. But the difference is that the animal is restricted to these pictures of a purely sensuous experience and is unconscious of any higher ideal: man on the other hand cannot be merely

\(^1\) *Eth. Nic.* III. 3, 1111\(^b\)17, ὡ μὲν ἐπιθυμία ἡδὸς καὶ ἐπιλύσως, ἡ προαίρεσις δ’ οὐτε λυπηροῦ οὖθ’ ἡδός.

\(^2\) III. 10, 433\(^b\)9, φανεται δὲ γε δὺ ταῦτα κινοῦντα, ἡ ὄρεξις ἡ νοῦς, εἶ τις τὴν φαντασίαν τιθεὶς ὥς νόησιν τινα. *Cp. De Motu Animal.* 700\(^b\)17: ὁρόμεν δὲ τὰ κινοῦτα τὸ ὑπὸν διάνοιαν καὶ φαντασίαν καὶ προαίρεσιν καὶ βουλήσιων καὶ ἐπιθυμίαν. ταῦτα δὲ πάντα ἀνάγεται εἰς νοῦν καὶ ὄρεξιν καὶ γὰρ ἡ φαντασία καὶ ἡ αἰσθησις τὴν αὐτὴν τῷ νό ἤχωραν ἔχουσι.
an animal, and even in following the lead of sense is conscious of a superior faculty—a faculty which necessarily thinks the sensuous image and brings it into connection with his past experience. For deliberation, the weighing of different and divergent courses of conduct, is only possible on the assumption that we can measure the competing motives and form one conception out of several pictures of sensuous experience.

The doctrine of the practical syllogism illustrates still further Aristotle's conception of the relation of reason to desire in determining conduct. Action, according to such logical analysis, resolves itself into a universal major and a particular minor, out of which some action or other follows as conclusion. In such a syllogism, the major is of course the general moral imperative—the conception of some end or other as the thing it is desirable to do; the minor, on the other hand, applies this general conception of what is good to some particular person or some individual object. According to one of the examples given in the *Ethics*, the major says everything sweet should be tasted, the minor this particular thing is sweet; and, if there be no antagonistic syllogism, the sweet thing in question must be tasted. But there is no disjunction between the elements which thus enter into our moral determinations. It is reason—practical reason—which has to do with the constitution both of the major and of the


2 III. 11, 434b9, καὶ ἀνάγκη ἐνι μετρεῖν τὸ μέγιστον γάρ διόκει, ὡστε δύναται ἐν ἑκ πλειώνων φαντασμάτων ποιεῖν.

3 *De An. iii. 11, 434a16, ἐπεὶ δ’ ἣ μὲν καθόλου ὑπόληψις καὶ λόγος, ἢ δὲ τοῦ καθ’ ἔκαστα (ἥ μὲν γὰρ λέγει δι᾽ ὑπὸ τοῦ τοιοῦτον τὸ τοιοῦτον πράττειν ἢ δὲ ὂτι τὸ οὐν τοιοῦτον, κἀγὼ δὲ τοιοῦτον) ἤδη αὐτὴ κινεῖ ἢ δόξα, εἰδάχθη τῆς ἤ καθόλου, ἢ ἁμέρῳ ἀλλ’ ἢ μὲν ἤρε- μοσα συλλογ. ἢ β’ ὅ. Thus, it should be noticed, both the major and the minor premise may have either an objective or a subjective reference. Cf. *Eth. Nic. vii. 3, 6, 1147a4, διαφέρει δὲ καὶ τὸ καθόλου. The practical syllogism is also explained vi. 12, 10, 1144a31: vii. 3, 9, and *De Motu Animal. 701b32*, ποτέν μοι, ἡ ἐπιθυμία λέγει τοῦ δὲ ποτὸν ἢ αλοθρήσει εἶπεν ἢ ἡ φαντασία ἢ ὁ νοῦς. εὐθῶς πινεῖ. οὕτως μὲν οὖν ἐκ τοῦ κυνείσθαι καὶ πράττειν τὰ ζῷα ὅρμωσι, τῆς μὲν ἐκχάτης αἰτίας τοῦ κυνείσθαι δρέξεως ὁμάς, ταῦτας δὲ γνωμώνης ἢ δὲ αλοθρήσεως ἢ διὰ φαντασίας καὶ νοῆσεως. The way in which here ἐπιθυμία is made the source of a general imperative evidences the spurious character of the treatise.
minor premiss: it is an intuition of reason, acting as directly as the perceptive act, which interprets the particular instance, and which combines these instances into a universal law. Reason deals at once with the ultimates of universality and the ultimates of particularity; it is at once the beginning and the end of our moral reasoning1. And thus there comes to be a real unity between reason and desire in determining conduct. The universal law of what is desirable and good is, in a sense, fixed and stationary, while the minor premiss—the particular application of this maxim—is subject to movement, and passes under the influence of desire from one universal to another: the particular proposition 'this thing is sweet' may attach itself either to the major—'everything sweet should be tasted,' or its contrary 'nothing sweet should be tasted.' But the actual moral act displays to us nothing of this difference. The stationary universal of reason and the particular direction of desire are merely different aspects of one and the same process—a process which Aristotle effectively compares to the action of a ball-and-socket joint (γυγγυλοσ). In such a joint one part seems to be reaching forward, while another remains immovable in its position: (έλξευ) attraction and impulsion (δόσε) combine to produce the action which results2. But just as in such a case the distinction between the two sides of the movement is one only of aspect, so that we can hardly say where the joint ceases to attract and begins to propel, so similarly in moral active reason and desire, the stationary and the impulsive factors unite in one common aim determined by an ideal of reason.

Reason thus appears as the ultimate basis of our moral, just as we saw it was also of our intellectual, life. For the true object of consciousness in this union of desire and reason is not two objects—one of desire, another of reason—it is one

1 Eth. Nic. vi. 11, 4, καὶ ὁ νοῦς τῶν ἑσχάτων ἐπ’ ἀμφότερα...διὰ καὶ ἀρχὴ καὶ τέλος νοῦς.

single common force which finally becomes the principle of action\(^1\). And when we ask how this object of our final wish is framed, the answer must be, that it is so through the agency of reason. Ultimately, and transcendentally in fact, there is no difference between the object of thought and the object of wish; the *βουλητῶν* and the *νοητῶν* are merely different aspects of one and the same great generality. Even in our own experience it is thought which determines desire: and the principle and starting-point of conduct turns out to be an exercise of reason\(^2\). And when Aristotle proceeds to state more definitely what is this object of perfect wish which thus determines and regulates our natural desires, he becomes still more of an idealist. For while the object of wish to any individual is but the apparent and relative good, still to a perfect man it is the absolute ideal good: and the aim of life comes to be an attempt to make our practical views in life elevate themselves to the full height of the absolute ideal of goodness\(^3\). It would take us outside psychology to develop these views further here. But it shews us once more the correspondence between the cognitive and ethical philosophy of Aristotle. The same writer who reproduces Plato's idea of good as the constructive reason which gives both knowledge and reality to things, now finds the determining aim of conduct in an absolute ideal which constitutes the pattern to which morality must raise itself.

**XIII. General Estimate.**

The unsatisfactory character of many of Aristotle's psychological results is probably apparent to most readers. In following his account of our mental processes we are brought face

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\(^1\) III. 10, 433a21, ἐν δὴ τι τὸ κινῶν τὸ δρεκτῶν.

\(^2\) *Metaph. Α. 7, 1072b29*, ὀρεγόμεθα δὲ διότι δοκεῖ μᾶλλον ἡ δοκεῖ διότι ὀρεγόμεθα. ἀρχὴ δὲ ἡ νόησις.

\(^3\) *Εθ. Νευ. III. 4, 1113a22*, ἀρα φατέοι ἀπλῶς μὲν καὶ κατ' ἀλήθειαν βουλητῶν εἶναι τὰγαθῶν, ἐκάστῳ δὲ τὸ φαινόμενον;
to face with the same defects as also with the same merits as meet us in his other works. There is the same picture of a thinker who is distracted between two solutions of a question, who indulges in what at first sight are the most palpable contradictions and who leaves us without any satisfactory solution of the difficulties which he raises. The result might have been different had Aristotle sought to develop instead of merely seeking to criticise the Platonic idealism, and while noting the imperfections of Plato's theory, tried to correct and complete those points in the spirit of Plato himself. He chose instead to put himself in opposition to the teaching of his master and preferred (speaking generally) to state his views in such a form as would bring them into sharpest antagonism to the Platonic doctrines. Meanwhile however the mantle of the master had descended even on the pupil who set himself to oppose his teaching: and the Aristotelian Anti-Platonism became itself a phase of Platonism. But this fact is constantly obscured by the phraseology in which Aristotle is led to state his results. And thus the unity by which Aristotle really tries to reconcile matter and form, individual and universal, the world and God, sense and reason, the material and the spiritual, is one which we must discover for ourselves rather than expect to find in Aristotle himself.

This unifying link between complementary or antagonistic conceptions is what a modern reader will assuredly most desiderate in Aristotle. Aristotle himself no doubt sees clearly enough the defects of the Platonic Psychology with its doctrine of locally separated faculties. But what inner unity is there in Aristotle's own theory? How does body become soul, how does a merely material organization become a spiritual agency, is a question which Aristotle only very partially solves by his view of soul as the truth or reality of body. And when we examine the different faculties of the soul, a like want of unity in the soul itself strikes us. No hint is given of a continuous development of one faculty from the other.
The perceptive powers presuppose the vegetative, the rational presuppose the perceptive and imaginative: but how the one leads to the other is a question on which Aristotle tells us little. And how—a defect which Zeller has especially emphasized—how does this congeries of faculties resolve itself into a personal self, an individual me? We need perhaps hardly be astonished that Aristotle does not directly answer this question. Ideas develop themselves but slowly in the history of thought: and the conception of a personal, isolated and yet universal, self had not been grasped by the philosophers of antiquity. Reason is no doubt, as we have seen, said to be this self: but Reason as conceived by Aristotle seems, as destitute of any memory of the past and as unaffected by the experiences of life, to be without that attribute of consciousness which would seem necessary to the conception of self. Such criticism is perhaps of somewhat doctrinaire a type, since what applies to reason as creative is true as we have seen only of a phase of reason, and does not interfere with the exercise of consciousness in its application to phenomena. Yet it remains none the less true that Aristotle’s theory of reason is full of difficulties which we indeed may try to solve but which are certainly not solved in Aristotle’s own writings.

The number of these difficulties might easily be increased: and though, as we have seen, some of them are not so great as they at first sight appear, it is impossible to blind our eyes to the real nature of very many of them. But in place of pointing out defects, it is a pleasanter and perhaps more useful task to enumerate the really important truths which Aristotle’s psychological treatise may be allowed to teach us. (1) To begin with, Aristotle was the first who constituted Psychology into a special science. He mapped out the phenomena of mind as the subject of a particular ἱστορία: and gave a definite turn to the humanitarian studies of Socrates by shewing that the knowledge of man involved particularly a knowledge of the nature of man’s ψυχή. But (2) while holding that psychology
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was to be studied as an independent science, Aristotle further saw that the study of soul could not be successfully conducted so long as it was confined exclusively to the human manifestation of it. Man's \( \psi \nu \chi \eta \) in fact Aristotle found was simply one phase of that general tendency which nature at each stage of life displayed—a tendency to concentrate the specific functional activity of that stage in some definite form. And the law of such stages of life was, he found, one of regular subordination, so that the faculties of thought implied the possession of the faculties of sense and these again the faculties of nutrition. Thus (3) he called attention to the semi-physiological and corporeal character of some mental phenomena: he was especially struck by the material bodily side of the feelings: and he maintained that the body was not to be studied as an abstract entity but with particular reference to the bodily organization adapted to it. (4) He recognized and yet partially solved this dualism in man's nature by his own definition of the \( \psi \nu \chi \eta \) as the implicit realization or truth of body. While unable fully to explain the union of the antithesis he yet shewed that soul and body were not so much two contradictory forces as two complementary counterparts in human nature. But (5) he did not merely content himself with such an abstract explanation of man's \( \psi \nu \chi \eta \); he expanded and illustrated it by an enumeration of the different stages in the development of this soul from lower to higher forms; and by his explanation of the relation of these faculties to one another he advanced considerably beyond the standpoint of Plato. (6) He sketched with considerable success the object, organs and operations of the several senses: his analysis of sound and colour especially deserves notice for its anticipation of modern research. But (7) he also shewed the need of rising above sense in order to explain its intimations. His theory of a central or common sense, though mistaken in ascribing to sense what sense as such is unable to bestow—the distinction, comparison and interpretation of sensations—directs attention nevertheless to the presuppositions of every purely
sensational system of cognition. And the unity of consciousness which he claims for the exercise of sense goes some way in explaining how the different faculties of soul become an indivisible personal self. Still more is this brought out (8) in his theory of a creative reason as the presupposition of the exercise of ordinary thought. For fragmentary though the theory is, it is nevertheless an emphatic assertion of the priority of thought to matter in the universe. How, Aristotle finds himself obliged to ask, does thought think things, how does an immaterial force come to receive and know material phenomena. And his answer is, as we have seen, that thought knows and thinks things only in so far as things are thought, so far as they are the work of reason, so that our subjective thought is but finding itself in outward things. Lastly, (9) Aristotle's theory of will forms a natural pendant to this same theory of reason. In place of the vague unsatisfactory conception of θυμός in Plato, we find the will conceived not as a single faculty but as the consilience of reason and feeling; while at the same time Aristotle never loses sight of the fact that mere appetite as such does not lead to action, but requires to be constituted by thought as a rational desire before it can issue in conduct.

Psychological research has made great progress since the days of Aristotle. He would have been surprised to find that the association of ideas which he noticed so casually had been constituted by some into a universal key to the whole mental furniture of man, or that the higher mental processes no less than the lower had been resolved into the answer to an external stimulus—into that same conception of 'suffering' and imprint-receiving which he himself regarded as applicable to all but the highest exercise of thought. No true student of his writings will seek to discover these or other modern developments in his writings. But in his conception of the relation of soul and body, in his theory of a central sense and his intuitions of a creative reason, he left behind him lessons which no psychologist can afford to disregard.
ΑΡΙΣΤΟΤΕΛΟΥΣ
ΠΕΡΙ ΨΥΧΗΣ Α.
ΑΡΙΣΤΟΤΕΛΟΥΣ

ΠΕΡΙ ΨΥΧΗΣ Α.

§ 1 Τῶν καλῶν καὶ τιμῶν τὴν εἰδήσιν ὑπολαμβάνοντες, μᾶλλον δὲ ἐτέραν ἐτέρας ἢ καὶ ἀκρίβειαν ἢ τῷ βελτιώνων τε καὶ θαυμασιωτέρων εἶναι, δι’ ἀμφότερα ταῦτα τὴν τῆς ψυχῆς ἱστορίαν εὐλόγως ἄν ἐν πρώτοις τιθείμεν. δοκεῖ δὲ καὶ πρὸς ἀλήθειν ἄπασαν ἡ γνώσις αὐτῆς μεγάλα συμβαλλόμενα, μάλιστα δὲ πρὸς τὴν φύσιν ἔστι γὰρ οἷον ἀρχὴ τῶν ζωῶν. ἐπιζητοῦμεν δὲ θεωρῆσαι καὶ γνῶναι τὴν τε φύσιν αὐτῆς καὶ τὴν οὐσίαν, ἐθνότα συμβέβηκε περὶ αὐτῆς· ὃν τὰ μὲν ἱδια πάθη τῆς ψυχῆς εἶναι δοκεῖ, τὰ δὲ δι’ ἐκείνην καὶ τοῖς ζῷοις ὑπάρχειν. πάντη δὲ πάντως ἔστι τῶν ἀληθευτάτων λαβεῖν τινα πίστιν περὶ αὐτῆς καὶ γὰρ ὄντος κοινοῦ τοῦ ζητήματος πολλοῖς ἐτέρους, λέγω δὲ τοῦ περὶ τῆς οὐσίαν καὶ τὸ τί ἐστι, τάχ’ ἄν τῷ δόξει μία τις εἶναι μέθοδος κατὰ πάντων περὶ δὲ βουλόμεθα γνῶναι τὴν

3. τε om. E Tor. || ταῦτα om. E Tor. || τὴν τῆς τὴν περὶ τῆς E. Tor. 9. δι’ ἐκείνην] κοινὰ γ. 10. δὲ καὶ πάντως STU VW γ. 11. ζητήματος καὶ STU VW Tor. 12. τοῦ SVWX Bekk. Trend.
ARISTOTLE'S PSYCHOLOGY.

BOOK FIRST.

CHAPTER I.

The acquisition of knowledge is, we conceive, always something high and honourable: but one form of knowledge is superior to another either in virtue of the self-contained simplicity of its truths or by the greater dignity and wondrousness of its contents: and on both these grounds the investigation of the soul might with justice claim a foremost place. And, besides, the knowledge of it is thought to have important bearings on truth generally and especially on nature: for soul is as it were the prime factor in animal existence.

The object of our enquiry is to observe and to discover both the historical development and the essential nature of the soul, and further to find out the phenomena occurring in connection with it—phenomena of which some are thought to be affections peculiar to the soul itself, others, while owing their existence to the soul, are thought to belong to the animal nature taken as a whole. By far in every way the greatest difficulty connected with it is that of reaching some certainty about it. The object of investigation is, it is true, the same here as it is in many other subjects—it is, that is, the question of the essential notion and of the generic character. It might therefore be supposed that there is some one common method applicable to all objects of which we wish to
οὐσίαν, ὁσπέρ καὶ τῶν κατὰ συμβεβηκὸς ἰδίων ἀπόδειξις, ὅστε ἕτη τὴν μέθοδον ταύτην. εἰ δὲ μὴ ἔστι μία τίς καὶ κοινὴ μέθοδος περὶ τὸ τί ἐστιν, ἐτι χαλεπώτερον γίνεται τὸ πραγματευθῆναι· δεησει γὰρ λαβεῖν περὶ ἐκάστον τίς ὁ τρόπος. ἢν δὲ φανερὸν ἢ, πότερον ἀπόδειξις τίς ἐστιν ἢ διαίρεσις ἢ καὶ τίς ἄλλη μέθοδος, ἐτι πολλὰς ἀπορίας ἔχει καὶ πλάνας ἐκ τίνων δεὶ ἕτη· ἄλλα γὰρ.

§ 3 ἄλλων ἀρχαί, καθάπερ ἄριθμον καὶ ἔπιπέδουν. πρῶτον δ' ἵσως ἀναγκαίον διελείπεν ἐν τίνι τῶν γενῶν καὶ τί ἐστι, λέγω δὲ πότερον τόδε τι καὶ ὦσία ἢ ποιῶν ἢ ποσῶν ἢ καὶ τίς ἄλλη τῶν διαφέρων κατηγοριῶν· ἐτι δὲ πότερον τῶν ἐν δυνάμει ὄντων ἢ μᾶλλον ἐντελεχεία τίς· διαφέρει γὰρ οὐ τι

§ 4 σμικρόν. σκεπτέων δὲ καὶ εἰ μεριστῇ ἡ ἀμερῆς, καὶ πότερον 402

optimized. ομοειδὴς ἀπασα ψυχή ἢ οὐ· εἰ δὲ μὴ ὀμοειδῆς, πότερον εἰδει διαφέρουσιν ἢ γένει. νῦν μὲν γὰρ οἱ λέγοντες καὶ ζητοῦντες περὶ ψυχῆς περὶ τῆς ἀνθρωπίνης μόνης ἐσώτειρον ἐπι

§ 5 σκοπεῖν. εὐλαβητεύον δ' ὄπως μὴ λαυθάνῃ πότερον εἰς ὁ λόγος 5

αὐτῆς ἐστί, καθάπερ ζώου, ἢ καθ' ἐκαστον ἐρεσ, οἶον ἢππον, κυνός, ἀνθρώποι, θεοῦ, το δὲ ζῶον τὸ καθόλου ἢτοι οὐθέν ἐστιν ἢ ύστερον· ὀμοίως δὲ κἀν εἰ τι κοινῶν ἄλλο κατηγοροῖο.

§ 6 ἐτι δ' εἰ μὴ πολλαὶ ψυχαὶ ἄλλα μόρια, πότερον δεὶ ἕτη.
discover the essential nature, just as deductive argument traces out the properties dependent on the genus: and in this case we should have to seek the method in question. But if there be no one common method for finding out the generic character, our procedure becomes still more difficult, as it will then be necessary to settle with regard to each subject of investigation what is the method of enquiry which is appropriate to it. And even if it were clear whether some deductive argument or Platonic division or some other method were the right one to apply, yet even so the question from what points we should begin our enquiry is one which offers many difficulties and leaves much room for divergent views, because different conceptions have different fundamental principles, as we see in the difference between the elementary ideas of arithmetic and those of geometry.

The first point however which demands our attention is to determine in which of the higher classes soul is included and what is its generic character—whether, in other words, it is an individual thing and real substance or a quality or quantity or any other of the categories as they have been distinguished. We must further ask whether it belongs to the class of potentialities or is rather a completed actuality—two conceptions between which there is no small difference. Another question, we shall have to ask, is whether it is divisible or free from parts, and whether again all souls are homogeneous or not; and if not homogeneous, whether it is specifically or generically that they differ: for at present writers who investigate the soul seem to confine their observations to the soul of man alone. Special care must be taken to discover whether there is one definition comprehending all the different forms of soul just as the definition of animal applies to all particular animals, or whether the definition is different in respect of each individual species: just as if for example we were to allow a definition of horse, dog, man and God, but should assert that the universal 'animal' either signifies no actually existing thing or is posterior to the particular species, this also holding good of any other common term. Should it however be ascertained that there are not
τείων πρότερον τὴν ὅλην ψυχήν ἢ τὰ μόρια. χαλέπτων δὲ καὶ τούτων διορίσαι ποιά πέφυκεν ἔτερα ἀλλήλων, καὶ πότερον τὰ μόρια χρῆ ζητεῖν πρότερον ἢ τὰ ἔργα αὐτῶν, οἷον τὸ νοεῖν ἢ τὸν νοῦν καὶ τὸ αἰσθάνεσθαι ἢ τὸ αἰσθητικὸν ὀμοίως
§ 7 δὲ καὶ ἔπε τῶν ἄλλων. εἰ δὲ τὰ ἔργα πρότερον, πάλιν ἂν τις ἀπορήσειν εἰ τὰ ἀντικείμενα πρότερον τούτων ζητητέον, οἷον
§ 8 τὸ αἰσθητὸν τοῦ αἰσθητικοῦ καὶ τὸ νοητὸν τοῦ νοητικοῦ. ἐσκε δ' οὐ μόνον τὸ τί ἐστι γνώναι χρήσιμον εἶναι πρὸς τὸ θεωρῆσαι τὰς αἰτίας τῶν συμβεβηκότων ταῖς οὐσίαις, ὥσπερ ἐν τοῖς μαθήμασι τί τὸ εὐθὺ καὶ καμπύλων ἢ τί γραμμὴ καὶ ἐπί- πεδον πρὸς τὸ κατιδεῖν πόσας ὁρθάς αἱ τοῦ τριγώνου γωνίαι ἰσαι, ἀλλὰ καὶ ἀνάπαλν τὰ συμβεβηκότα συμβάλλεται μέγα μέρος πρὸς τὸ εἰδέναι τὸ τί ἐστιν. ἐπειδὴ γὰρ ἔχωμεν ἀποδιδόναι κατὰ τὴν φαντασίαν περὶ τῶν συμβεβηκό- των, ἢ πάντων ἢ τῶν πλείστων, τότε καὶ περὶ τῆς οὐσίας ἐξομεν λέγειν κάλλιστα· πάσης γάρ ἀποδείξεως ἀρχὴ τὸ τί ἐστιν. ὥστε καθ' ὅσους τῶν ὀρισμῶν μὴ συμβαίνει τὰ συμ- βεβηκότα γνωρίζειν, ἂλλα μὴ εἰκάσαι περὶ αὐτῶν εὕμα- 403° ρέος, δῆλον ὅτι διαλεκτικῶς ἐίρηνται καὶ κενῶς ἄπαντες.
§ 9 ἀπορίαν δ' ἔχει καὶ τὰ πάθη τῆς ψυχῆς, πότερον ἐστὶ πάντα κοινὰ καὶ τοῦ ἔχοντος ἢ ἐστὶ τι καὶ τῆς ψυχῆς ἢ διον αὐτῆς τούτῳ γὰρ λαβέιν μὲν ἀναγκαίον, οὐ βάδιον δε. φαίνεται 5

11. τούτω V. 12. δει ζητεῖν UWX. 15. πρότερα ES. Tor. 16. νοθ EVX. 22. εἰδησα STUWXy. 403° 2. κενῶς] περιττός W.
several souls, but merely different parts in the soul, the question rises whether we should begin by investigating the whole soul or should start rather with the parts. And here again it is difficult to determine which of them are really different from one another, and whether we should first of all investigate the parts or their functions—whether we should for instance investigate the act of reasoning or the faculty of reason, the act of sensation or the faculty of sense: and so also in other cases. And supposing we determine to examine first of all the functions, still the further question may be raised whether we should beforehand treat of the objects which are their counterpart—treat, that is, of the object of sense before the faculty of sense, and of the object of thought before the faculty of thought.

The truth however seems to be that it is not only a knowledge of the generic character of anything which helps towards detecting the causes of the properties of substances—as in mathematics the knowledge of straight and curved or the generic character of what is a line or superficies assists us in seeing to how many right angles the angles of the triangle are equal—but even conversely the knowledge of the properties contributes in great measure to a knowledge of the 'what' or the generic notion. When, in fact, we are able to present to the mind's eye all or most of the properties which appear to be connected with an object, we shall be in a position to speak as well as may be about the thing itself: although the starting point of all demonstration consists in knowing what a thing is. And thus all definitions that do not convey a knowledge of the properties attending on an object and do not even render it easy to frame a conjecture regarding them are evidently mere empty phrases such as transcendentalists alone would use.

It is a further question whether the affections of the soul are also all shared along with the soul by the body which contains it, or whether there is in addition something peculiar to the soul itself. This is a question which it is necessary and yet not easy to answer. It appears at any rate that in the great majority of cases the soul is neither active nor passive
δὲ τῶν πλείστων οὐθὲν ἀνευ σώματος πάσχειν οὔδὲ ποιεῖν, οἶνον ὁργίζεσθαι, θαρρεῖν, ἐπιθυμεῖν, ὅλως αἰσθάνεσθαι. μάλιστα δ’ έοικεν ἵδιον τὸ νοεῖν. εἰ δ’ έστὶ καὶ τούτῳ φαντασία τυς ἦ μὴ ἀνευ φαντασίας, οὐκ ἐνδεχοίτ’ ἄν οὐδὲ τούτ’ ἀνευ § 10 σώματος εἴναι. εἰ μὲν οὖν έστι τι τῶν τῆς ψυχῆς ἐργῶν ἦ παθημάτων ἵδιον, ἐνδεχοίτ’ ἄν αὐτὴν χωρίζεσθαι, εἰ δὲ μηθὲν έστιν ἵδιον αὐτῆς, οὐκ ἀν εἰς χωριστή, ἀλλὰ καθάπερ τῷ εὐθείᾳ, ἦ εὐθὺ, πολλὰ συμβαίνει, οἴον ἀπεσθαί τῆς χαλκῆς σφαίρας κατὰ στυγμήν, οὔ μέντοι γ’ ἀφεται τούτου χωρίσθεν τὸ εὐθὺ. ἀχώριστον γὰρ, εἴπερ ἄει μετὰ σώματος 15 τωὸς ἐστιν. έοικε δὲ καὶ τα τῆς ψυχῆς πάθη πάντα εἴναι μετὰ σώματος, θυμὸς, πραότης, φόβος, ἐλεος, θάρσος, ἐτι χαρὰ καὶ τὸ φιλεῖν τε καὶ μισεῖν, ἀμα γὰρ τούτοις πάσχει τι τὸ σώμα. μηνύει δὲ τὸ ποτὲ μὲν ἰσχυρῶν καὶ ἐναργῶν παθημάτων συμβαίνοντων μηδὲν παροξύνεσθαι ἦ 20 φοβείσθαι, ἐνίοτε δ’ ύπο μικρῶν καὶ ἀμαυρῶν κινεῖσθαι, ὅταν ὀργῇ τὸ σώμα καὶ οὔτως ἔχη ὁσπερ ὅταν ὀργίζηται. ἦτι δὲ τούτῳ μᾶλλον φανερὸν μηθὲνός γὰρ φοβεροῦ συμβαίνοντος ἐν τοῖς πάθεσι γίνονται τοῖς τοῦ φοβομένου. εἰ δ’ οὔτως ἔχει, δῆλον ὅτι τὰ πάθη λόγοι ἐνυλοὶ εἰσιν. ἀστεὶ οἱ ὄροι 25 τοιοῦτοι οἰον τὸ ὀργίζεσθαι κύνησις τῆς τοῦ τοιουδ’ σώματος ἦ § 11 μέρους ἦ δυνάμεως ύπο τούθε ἐνεκα τούθε. καὶ διὰ ταύτα ἐδή

6. τῶν μὲν πλ. Ἕχυ. Τορ. || ἀνέ τοῦ σώματος Ε. Τορ. 8. ἰδίω
Τορ. 25. ἐν ἦλῃ ET.
without the co-operation of the body, for example in being angry, in shewing courage, in feeling appetite—in one word, in being sensitive. Thought seems to be the clearest case of a state peculiar to the soul alone: but if even thought is only the presentation of an image or not independent of such presentation, it would follow that it is impossible for even this act of the soul to be exercised in independence of the body. If then there be any of the functions or affections of the soul which distinctively belong to it, it would be possible for the soul to exist in separation from the body: if, on the other hand, there be no functions or affections so belonging to it, the soul would not admit of separate existence: it would resemble the straight line which as straight has many properties, such as for example to touch a brazen globe in or at a point, while at the same time it cannot touch the globe when separated from its material embodiment: the straight line being really inseparable as always existing along with some body or another. So in like manner the different feelings appear to be all accompanied by some particular condition of the body—such feelings, viz. as anger, meekness, fear, pity, courage, and further joy and love and hate—all of which appear to be accompanied by some particular affection of the body. This indeed is shewn by the fact that sometimes great and evident disasters which have befallen us cause us no irritation or fear, while at other times the feelings are excited by trivial and almost imperceptible mischances, the body being at such times boiling full and in the same state of excitement as in anger. Still more is this evident from the fact that even without the occurrence of anything really terrible people have the same feelings as a person in fright.

The feelings then are materialized notions, and they require to be defined in correspondence with this character. The feeling of anger for instance has to be defined as on the one hand a certain movement on the part of such and such a body or part or faculty, and as on the other hand excited by such and such a cause and due to such and such motives.
Peri Physeis A.

Physeis to thewrihsai peri phoths, ἡ πάσης ἢ τῆς τουαύτης.

diaferontos δ' ἀν ὁρίσαιντο ψυκικός τε καὶ διαλεκτικὸς

ἐκαστὸν αὐτῶν, οἴον ὅργη τί ἐστίν. ὁ μὲν γὰρ ὄρεξιν ἀντιλυ- 30

πῆςεως ἢ τι τουοῦτον, ὁ δὲ ἔστων τοῦ περὶ καρδίαν αἴματος

ἡ θερμοῦ. τοῦτων δὲ ὁ μὲν τὴν ύλην ἀποδίδωσιν, ὁ δὲ τὸ 403b

eidos καὶ τὸν λόγον. ὁ μὲν γὰρ λόγος εἶδος τοῦ πράγματος,

ἀνάγκη δ' εἶναι τοῦτον ἐν ύλῃ τοιαῦτῃ, εἰ ἐσται, ὁσπερ οἰκίας

ὁ μὲν λόγος τουοῦτος, ὅτι σκέπασμα κωλυτικὸν φθορᾶς ὑπ'

ἀνέμων καὶ ὁμβρων καὶ καυμάτων, ὁ δὲ φῆσει λίθους καὶ 5

πλίνθους καὶ ξύλα, ἔτερος δ' ἐν τούτωι τὸ εἶδος, ἕνεκα

tωνδί. τὸς οὖν ὁ ψυκικὸς τούτων; πότερον ὁ περὶ τὴν ύλην, τὸν
dὲ λόγον ἀγνώσθη, ἡ ὁ περὶ τὸν λόγον μόνον; ἡ μᾶλλον ὁ ἐξ

ἀμφοῖν. ἐκεῖνων δὲ δὴ τίς ἐκάτερος; ἡ οὐκ ἐστι τις ὁ περὶ
tα πάθη τῆς ύλης τὰ μὴ χωριστά, μηδ' ἡ χωριστά, ἀλλ' 10

ὁ ψυκικὸς περὶ ἀπανθ' ὅσα τοῦ τουοῦτοι σώματος καὶ τῆς του-

αύτης ύλης ἔργα καὶ πάθη. (ὅποσα δὲ μὴ ἡ τουαύτη, ἀλ-

λος, καὶ περὶ τινῶν μὲν τεχνίτης, ἐὰν τύχῃ, οἴον τέκτων ἡ

iatrōs) τῶν δὲ μὴ χωριστῶν μὲν, ἡ δὲ μὴ τουοῦτοι σώματος

πάθη καὶ ἐξ ἀφαιρέσεως, ὁ μαθηματικός, ἡ δὲ κεχωρι- 15

σμένα, ὁ πρῶτος φιλόσοφος. ἀλλ' ἐπανετέων οἴθεν ὁ λόγος.

29. ὁρίσαιντο ὁ φ. STUWX. || καὶ ὁ διαλεκτικὸς W. 403b και θ. Bkkn.

Tor. E. 3. ὁσπερ ἐπὶ οἰκίας W. 5. ὁμβρων καὶ πνευμάτων E. || φησιSVX.

11. τουοῦτοι] ψυκικοὶ T. Them. 12. ὅσα E. Tor. || ἡ Tor. 13. τινοι
Τ, τινα UW.
These facts themselves shew it to lie within the province of the natural philosopher to investigate the soul, either in its whole extent or with reference to the states we have described. Every such state however would be differently defined by the natural philosopher and by the transcendentalist. Take, for instance, the question—what is anger? The transcendentalist would define it as the effort after retaliation or the like, the natural philosopher would describe it as a ferment of the pericardial blood or heat. Here then the latter describes the material aspect of the phenomenon, the former states its form and its notion: for it is the notion which constitutes the form of the object, although at the same time it must in order to exist be realized in such and such a matter. Thus in the case of a house, the notion of it would be somewhat to this effect, that it is a shelter fitted to prevent our sustaining damage by winds and rains and violent heats, but the one observer will describe the stones and bricks and timbers, the other will seize upon the form and end which those materials contain. Which then among these is really the true philosopher of nature? Is it he who concerns himself simply with the material aspects and neglects the notion, or is it he who deals with the notion only? Rather, we may answer, it is he who considers the question from both these standpoints. How then, it may be asked, are we to describe each of the enquirers whom we have named? May we not reply that there is really no one occupied only with the qualities of matter, which are inseparable from it, and so far as they are inseparable from it, but that the natural philosopher is concerned with all the functions and properties attaching to body or matter in so far as it is of some specific kind? (When the qualities are not taken in this general way, they are dealt with by a specialist, who becomes, it may be, respecting some of them an artist, as for instance a builder or physician.) When on the other hand the qualities, though inseparable, can be treated abstractly and are not the qualities of any particular kind of body, they fall within the province of the mathematician, and when considered as entirely independent of material substratum, they fall within the province of the metaphysician.


12

ΠΕΡΙ ΨΥΧΗΣ Α.

ἐλέγομεν δ' ὅτι τὰ πάθη τῆς ψυχῆς ἀχώριστα τῆς φυσικῆς ὑλῆς τῶν ζώων, ἵνα τοιαύθεν ὑπάρχει θυμὸς καὶ φόβος, καὶ οὐχ ὥσπερ γραμμῆς καὶ ἐπίπεδον.

§ 1 Πεισκοπούντας δὲ περὶ ψυχῆς ἀναγκαῖον ἂμα διαπορούντας περὶ δὲν εὐπορεῖν δεὶ, προελθόντας τὰς τῶν προτέρων δόξας συμπαραλαμβάνειν ὅσοι τι περὶ αὐτῆς ἀπεφήναντο, ὅπως τὰ μὲν καλῶς εἰρημένα λάβωμεν, εἰ δὲ τι μὴ κα-

§ 2 λῶς, τούτ' εὐλαβηθῶμεν. ἀρχῇ δὲ τῆς ζητήσεως προθέσθαι τὰ μάλιστα δοκοῦνθ' ὑπάρχειν αὐτῇ κατὰ φύσιν· τὸ ἐμψυχοῦν τὴν ἀψύχου δυνών μάλιστα διαφέρει δοκεῖ, κινήσει τε καὶ τῷ αἰσθάνεσθαι. παρειλήφαμεν δὲ καὶ παρὰ τῶν προ-

§ 3 γενεστέρων σχεδὸν δύο ταῦτα περὶ ψυχῆς. φασὶ γὰρ ἔννοι καὶ μάλιστα καὶ πρῶτος ψυχήν εἶναι τὸ κινοῦν. οἰηθέντες δὲ τὸ μὴ κινοῦμενον αὐτὸ μὴ ἐνδέχεσθαι κνεῖν έτερον, τῶν 30

17. οὕτω χρυσώτα Ε. οὐ χρυσώτα Τορ. 18. ἵνα δὴ] ὅ γε Υ., εἴγε Τ. 22. συμπεριλαμβάνειν Τ. 4. τὴν μὲν παν. 26. δύσι Σ. 404 Τορ. 6. σφαιρ. πῦρ καὶ ψυχήν Β.
We must return however to our original argument. Our position is that the feelings of the soul are inseparable from the physical substratum of animal life. It is in this way then that anger and fear are related to the material: they cannot like lines and surfaces be treated in complete abstraction from it.

CHAPTER II.

The investigation of the nature of the soul requires that we should not only raise difficulties on questions that require settlement; we should also, after we have gone so far, collect the views of those who have previously stated their opinions on the subject: and this in order that we may at once adopt whatever is correctly stated, and also be on our guard against anything that may be the reverse.

The beginning of such an enquiry must be to set forth those characteristics which are generally regarded as the natural attributes of the soul. Now there are two points particularly in which the animate or soul-endowed is thought to differ from the inanimate or soulless—viz. motion and sensation. And these are in fact about the two characteristics of soul which our predecessors have handed down to us.

There are some who maintain that fundamentally and primarily the soul is the principle of movement. They reasoned that that which is not itself in motion cannot move anything else, and thus they regarded the soul as one of those objects which were in motion. Democritus, whose view agrees with that of Leucippus, consequently maintained soul to be a sort of fire and heat. For as the forms of the atoms are as the atoms themselves unlimited, he declares that those which are spherical in shape constitute fire and soul, these atoms being like the so-called motes which are seen in the sunbeams that enter through doorways, and it is in such a mixed heap of seeds that he finds the elements of the whole natural world. The reason why they maintain that the spherical atoms constitute the soul, is that atoms of such configuration are best able to penetrate through everything, and to set the other things in motion at the same time as they are moved themselves, the assumption here being that
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παρέχον τοῖς ζύοις τὴν κύησιν. διὸ καὶ τοῦ ζήν ὅρον εἶναι τὴν ἀναπνοήν· συνάγοντος γὰρ τοῦ περιέχοντος τὰ σώματα, καὶ ἐκθλίβοντος τῶν σχημάτων τὰ παρέχοντα τοῖς ζύοις τὴν κύησιν διὰ τὸ μηδὲ αὐτὰ ἱρεμεῖν μηδέποτε, βοηθειαν γίγνεσθαι θύραθεν ἐπεισιόντων ἄλλων τοιούτων ἐν τῷ ἀναπνεῖν· κωλύειν γὰρ αὐτὰ καὶ τὰ ἐνυπάρχοντα ἐν τοῖς ζύοις ἐκ-κρίνεσθαι, συνανείργοντα τὸ συνάγον καὶ πηγνύον· καὶ ζήν

§ 4 δὲ ἔως ἄν δύνωνται τοῦτο ποιεῖν. ἦσυχε δὲ καὶ τὸ παρὰ τῶν Πυθαγορείων λεγόμενον τὴν αὐτὴν ἔχειν διάνοιαν· ἐφασαν γὰρ τινὲς αὐτῶν ψυχὴν εἶναι τὰ ἐν τῷ ἄρι ξύσματα, οἰ δὲ τὰ ταύτα κινοῦν. περὶ δὲ τούτων εἰρηταί, διότι συνεχῶς φαίνεται κινούμενα, κἂν ἢ νηνεμία παντελῆς. ἔτι ταῦτα δὲ φέρονται καὶ ὅσοι λέγουσι τὴν ψυχὴν τὸ αὐτὸ κινοῦν· ἐοι-κασὶ γὰρ οὗτοι πάντες ὑπεληφθέναι τὴν κύησιν οἰκειότατον εἶναι τῇ ψυχῇ, καὶ τὰ μὲν ἄλλα πάντα κυνείσθαι διὰ τὴν ψυχὴν, ταύτην δ' ὑφ' ἐαυτῆς, διὰ τὸ μηθέν ὀρὰν κινοῦν δ

§ 5 μὴ καὶ αὐτὸ κωπεῖται. ὁμοίως δὲ καὶ Ἀναξαγόρας ψυχὴν εἶναι λέγει τὴν κινοῦσαν, καὶ εἰ τις ἄλλος εἰρήκειν ὡς τὸ πᾶν ἐκίνησε νοῦς, οὐ μὴν παντελῶς γ' ὀψπερ Δημόκριτος. ἐκείνος μὲν γὰρ ἀπλῶς ταύτων ψυχῆν καὶ νοῦν· τὸ γὰρ ἀληθὲς εἶναι τὸ φαινόμενον· διὸ καλῶς τούχσαι τὸν Ὤμηρον ὡς

13. οἱρανόθεν Τ. || εἴπ' εἰςιόντων Ε. 19. συχνῷ W. 28. ταῦτα τὴν UW.
the soul is that which supplies animals with motion. This same assumption led them to regard respiration as the boundary with which life was coterminous. It was, they held, the tendency of the encircling atmosphere to cause contraction in the animal body and to expel those atomic forms, which, from never being at rest themselves, supply animals with movement. This tendency however was counteracted by the reinforcement derived from the entrance from outside in the act of respiration of new atoms of a similar kind. These last in fact—such was their theory—as they united to repel the compressing and solidifying forces prevented those atoms already existing in animals from being expelled from them: and life, they thought, continued so long as there was strength to carry on this process.

The doctrine ascribed to the Pythagoreans seems also to have this same meaning. Some of them maintained that the soul was the motes within the air, others held that it was what put them in motion. Such motes have been employed to describe the soul, because they present the appearance of continual movement, even though there be a perfect calm.

Similar to the opinion which has just been stated is that which describes the soul as something which sets itself in motion: this and all other like definitions seeming to regard movement as the most distinctive characteristic of the soul. All other things, the supporters of these views imply, are moved in virtue of their soul, but soul is moved by itself: a conclusion which is explained by the observation that nothing is found to produce movement without at the same time moving itself.

Anaxagoras, in like manner, describes mind as the principle of movement: and this indeed must be the account given of it also by any other philosopher who maintains that reason set the universe in motion. Anaxagoras, however, did not regard soul in this light so completely as did Democritus. The latter absolutely identified soul and reason, holding as he did that that which presented itself to sense was real truth: so that (he observed) Homer had well sung of Hector
'Εκτωρ κείτ' ἀλλοφρονεών. οὐ δὴ χρήται τῷ νῷ ὡς δυνάμει τω περὶ τὴν ἀλήθειαν, ἀλλὰ ταύτῳ λέγει ψυχήν καὶ νοῦν. Ἀναξαγόρας δ' ἦττον διασαφεὶ περὶ αὐτῶν' πολλαχοῦ μὲν 404b λαρ τὸ αἰτιῶν τοῦ καλῶς καὶ ὀρθῶς τὸν νοῦν λέγει, ἑτέρωθι δὲ τούτων εἶναι τῇ ψυχῇ· εὖ ἀπασι γὰρ ὑπάρχειν αὐτῶν τοῖς ζῷοις, καὶ μεγάλοις καὶ μικροῖς, καὶ τιμίοις καὶ ἀτυ- μοτέρους. οὐ φαίνεται δ' ὦ γε κατὰ φρόνησιν λεγόμενοι νοοῦς 5 πάσιν ὀμοίως ὑπάρχειν τοῖς ζῷοις, ἀλλ' οὐδὲ τοῖς άνθρώποις.

§ 6 πάσιν. οὕτοι μὲν οὖν ἐπὶ τὸ κυνεῖσθαι τὸ ἐμψυχον ἀπέβλε- ψαν, οὕτῳ τὸ κωντικότατον ὑπελαβον τὴν ψυχήν· ὦσοι δ' ἐπὶ τὸ γινώσκει καὶ τὸ αἰσθάνεσθαι τῶν οὐτων, οὕτῳ δὲ λέγουσι τῇ ψυχῇ τὰς ἀρχὰς, οἱ μὲν πλείους ποιοῦντες, οἱ 10 δὲ μίαν ταύτην, ὡσπέρ Ἐμπεδοκλῆς μὲν ἐκ τῶν στοιχείων πάντων, εἶναι δὲ καὶ ἐκαστὸν ψυχῇ τούτων, λέγον οὕτω γαίρε μὲν γὰρ γαϊάν ὀπόταμεν, ὦδατι δ' ὦδρον, αἰθέρα δ' αἰθέρα διαν, ἀτάρ πυρὶ πῦρ αἰώνηλον, στοργῇ δὲ στοργῆν, νεῖκος δὲ τε νείκει λυγρῷ.

§ 7 τὸν αὐτὸν δὲ τρόπον καὶ Πλάτων ἐν τῷ Τιμαίῳ τῇ ψυ- χῇ ἐκ τῶν στοιχείων ποιεῖ· γινώσκεσθαι γὰρ τῷ ὀμοίῳ τὸ ὀμοίων, τὰ δὲ πράγματα ἐκ τῶν ἀρχῶν εἶναι. ὀμοίως δὲ καὶ ἐν τοῖς περὶ φιλοσοφίας λεγόμενοι διωρίσθη, αὐτὸ μὲν τὸ ζῷον ἐξ αὐτῆς τῆς τοῦ ἐνὸς ἱδέας καὶ τοῦ πρῶτου μῆκους 20 καὶ πλάτων καὶ βάθους, τὰ δὲ ἄλλα ὀμοιοτρόπως. ἔτι δὲ καὶ ἄλλως, νοοῦ μὲν τὸ ἐν, ἐπιστήμην δὲ τὰ δύο· μοναχῶς γὰρ ἐφ' ἐν· τὸν δὲ τὸν ἐπιπέδου ἀριθμὸν δόξαν, αἰσθήσοιν δὲ

as lying 'with thought apart.' Democritus, this shews, does not employ the term reason to denote a faculty conversant with truth, but uses reason as identical with soul. Anaxagoras himself, however, is less distinct in his identification of the terms. In many places he speaks of reason as the cause of what is beautiful and right, but in other passages he seems to place it on a level with the soul, as when for instance he maintains that it is present in all animals both great and small, both honourable and dishonourable. As matter of fact, however, reason, in the sense of intellect and insight, does not seem to be present equally in all animals or even indeed in all men.

Those then, who have concentrated their attention on the fact that what is animate is in motion have regarded soul as that which is most capable of movement: those thinkers, on the other hand, who have directed their observations to the fact that the soul knows and perceives things existing, identify soul with the elementary principles of all existence, some making those principles to be several in number, others resolving them into this one principle of soul. Thus Empedocles makes the soul to be composed of all the elements, and at the same time considers each one of these elements a soul. His words are as follows:

"Surely by earth we perceive earth, and man knoweth water by water. By air sees air the divine; by fire sees fire the destructive: Yea, love comprehends love, and 'tis through strife dismal we know strife."

In this same fashion also does Plato in the Timaeus construct the soul out of the elements. Like, he there maintains, is known by like, and the objects of knowledge are composed of the elements of existence. To the same effect also is the distinction drawn in his lectures on philosophy, where it is shown that on the one hand the generic or abstract form of the living subject is a product containing the abstract form of unity with the primary phase of length and breadth and depth: and that on the other hand other things are formed in a corresponding manner. An additional mode of explanation is to represent reason as perfect unity, understanding as the two (because it proceeds like a single line directly in one way to one conclusion only), whereas opinion is represented as the number
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τον τοῦ στερεοῦ· οἱ μὲν γὰρ ἄριθμοὶ τὰ εἰδη αὐτὰ καὶ ἀρχαί ἐλέγοντο, εἰσὶ δ’ ἐκ τῶν στοιχείων. κρίνεται δὲ τὰ πράγματα τὰ μὲν νῦ, τὰ δ’ ἐπιστήμη, τὰ δὲ δόξη, τὰ δ’ αἰσθήματα. § 8 σείει εἰδη δ’ οἱ ἄριθμοι οὐτοί τῶν πραγμάτων. ἐπεὶ δὲ καὶ κωνικών ἐδόκει ὁ ψυχή ἐναι καὶ γνωριστικῶν οὕτως, ένιοι συνέπλεξαν εξ' ἀμφοῖ, ἀποφημάμενοι τὴν ψυχήν ἄριθμον. § 9 κινοῦν τ’ ἐναντόν. διαφέρονται δὲ περὶ τῶν ἀρχῶν, τίνες καὶ τὸ πόσαι, μάλιστα μὲν οἱ σωματικὰς ποιοῦντες τοὺς ἀσωμάτους, τούτοις δ’ οἱ μίξαντες καὶ ἀπ’ ἀμφοῖ τὰς ἀρχὰς ἀποφημάτος-405§ 10 νάμενοι. διαφέρονται δέ καὶ περὶ τὸ πλήθος· οἱ μὲν γὰρ μὴν οἱ δὲ πλείους λέγουσιν. ἐπομενῶς δὲ τούτους καὶ τὴν ψυχὴν ἀποδιδόσας· τὸ τε γὰρ κωνικῶν τὴν φύσιν τῶν πρώτων υπειλήφασιν, οὐκ ἀλόγως. οἳ δὲν ἐδοξεί τισι πῦρ εἶναι· καὶ γὰρ τοῦτο λεπτομερέστατον τε καὶ μάλιστα τῶν στοιχείων ἀσωμάτου, ἕτε δὲ κωνικὰ ταῦτα καὶ κωνικὰ τὰ ἀλλὰ πρώτως. § 12 Δημόκριτος δὲ καὶ γλαφυρωτέρως εὑρηκεν ἀποφημάμενος διὰ τὸ εἰσάγαγεν· ψυχήν μὲν γὰρ εἶναι ταύτο καὶ νοῦν, τοῦτο δ’ εἶναι τῶν πρῶτων καὶ ἀδιαμέτρων, κωνικῶν δὲ διὰ μικρομέρειαν καὶ τὸ σχῆμα· τῶν δὲ σχημάτων εὐκυνητότατον τὸ σφαιροειδὲς λέγει· τοιοῦτον δ’ εἶναι τὸν τε νοῦν καὶ τὸ πῦρ. ’Αναξαγόρας δ’ έουσκε μὲν ἐτερον λέγειν ψυχήν τε καὶ νοῦν ἀστερος εἰσόμεν καὶ πρότερον, χρῆται δ’

of a superficialies, and sense perception as the number of a solid. Numbers, in fact, were said by the Platonists to be the very forms and principles of existence: and such numbers are formed from the elements. And things are apprehended—some by reason, others by understanding, a third class by opinion, and a fourth order by sense: while the numbers, to which these faculties correspond, constitute the forms or ideas of things themselves.

Since, moreover, the soul was held to be at once a faculty for movement and a faculty for knowledge in this numerical sense, there have been thinkers who have combined the two descriptions and have set forth the soul as a self-moving number.

While however these thinkers agree in reducing the soul to elements or principles, they differ as regards the name and number of the principles: a difference which prevails especially between those who make the principles corporeal, and those who make them incorporeal, and also between both of these and such thinkers as have blended and exhibited their principles as compounded from both sources. They differ too about the number of their principles, some reducing them to one, others regarding them as more in number.

There is a corresponding variation in their views about the soul. The principle of movement they, not unreasonably, regarded as one of the primary elements in the natural world: and consequently there were some who viewed the mind as fire, this being that one among the elements which is made up of the finest parts and is most incorporeal, while further it is the element which is the first to be moved itself and to move other things. The reason for each of these facts Democritus has expressed somewhat neatly. Soul he regarded as identical with reason, and this he held belonged to the class of primary and indivisible bodies, and possessed the faculty of movement by reason of the smallness of its parts and of its peculiar form. Now the form which is most susceptible of movement is the spherical: and of such shape is reason and fire. Anaxagoras, on the other hand, might, as we have said before, sometimes be taken to speak of soul and reason as different from one another: but he really
Αμφοῖν ὡς μία φύσει, πλὴν ἀρχὴν γε τῶν νοῦν τίθεται μά- 15 λιστα πάντων· μόνον γοῦν φησὶν αὐτὸν τῶν ὄντων ἀπλοῦν εἶναι καὶ ἀμυγή τε καὶ καθαρόν. ἀποδίδωσι δ’ ἀμφω τῇ αὐτῇ ἀρχῇ, τό τε γινώσκειν καὶ τό κινεῖν, λέγων νοῦν κυνήσαι τό § 14 πάν. ἑοικε δὲ καὶ Θαλής εξ ὑν ἀπομνημονεύουσι κινητικῶν τι τῆς ψυχῆν ὑπολαβεῖν, εἰπερ τὸν λίθον ἐφή ψυχήν ἑκείν, 20 § 15 ὁτι τὸν σίδηρον κινεῖ. Διογένης δ’ ὠσπέρ καὶ ἑτεροὶ τινες, ἀέρα, τούτων οἰχθεὶς πάντων λεπτομερέστατον εἶναι καὶ ἀρχήν καὶ διὰ τούτο γινώσκειν τε καὶ κινεῖν τὴν ψυχήν, ἤ μὲν πρῷ- τόν ἐστι καὶ ἐκ τούτο τὰ λοιπά, γινώσκειν, ἤ δὲ λεπτότατον, § 16 κινητικὸν εἶναι. καὶ Ηράκλειτος δὲ τὴν ἀρχὴν εἶναι φησι 25 ψυχήν, εἰπερ τὴν ἀναθυμίασιν, εξ ὑσ τὰλλα συνύστησιν· καὶ ἀσωματώτατον τε καὶ ἰδέων αἰεί· τὸ δὲ κινούμενον κινούμενον γινώσκεσθαι· εν κινήσει δ’ εἶναι τά ὄντα κάκεινος φαιτο καὶ § 17 οἱ πολλοὶ. παραπλησίως δὲ τούτοις καὶ Ἀλκμαῖων ἑοίκεν ὑπολαβεῖν περὶ ψυχῆς· φησὶ γὰρ αὐτὴν αὐθάνατον εἶναι 30 διὰ τὸ ἐοικέναι τοῖς ἀθάνατοις, τούτο δ’ ὑπάρχειν αὐτῇ ὡς αἰεί κινούμενοι· κινεῖσθαι γὰρ καὶ τὰ θεία πάντα συνεχῶς § 18 αἰεί, σελήνῃ, ἡλιον, τοὺς ἀστέρας καὶ τὸν οὐρανὸν ὄλον. τῶν δὲ 405 φορτικωτέρων καὶ υδῷρ τινὲς ἀπεφῄνατο, καθάπερ Ἰππων. πεισθῆναι δ’ ἐοίκασιν ἐκ τῆς γονῆς, οτι πάντων ὤγρα· καὶ γὰρ ἐλέγχει τοὺς αἴμα τας πάσκοντας τήν ψυχήν, ὅτι ἡ γονὴ § 19 οὐχ αἴμα· ταύτην δ’ εἶναι τὴν πρώτην ψυχῆν. ἑτεροὶ δ’ αἴμα, 5 καθάπερ Κριτίας, τὸ αἰσθάνεσθαι ψυχῆς οἰκείοτατον ὑπο- λαμβάνοντες, τούτο δ’ ὑπάρχειν διὰ τὴν τοῦ αἰματος φύ-
uses the two terms as fundamentally one in nature, with the exception that he makes reason generally the principle of all things. He says at least that 'it alone among existing things is simple and unmixed and pure.' At the same time he assigns to one and the same principle both faculties—both knowledge and movement—in saying as he does that reason moved the universe. Similarly also Thales, from what is related of him, seems to have regarded soul as something with capacity of movement, if it be the case that he spoke of the loadstone as possessing soul because it moves iron.

On the other hand Diogenes as also some others resolved soul into air, supposing that this was the subtlest of all things and, at the same time, a principle of existence. This also, they said, was the reason of the knowledge and of the movement of the soul; the faculty of knowledge falling to it as primary and as that out of which all other things are compounded, that of movement belonging to it as being of the subtlest nature. Heraclitus also identifies the soul with his principle in describing it as the "fiery process" out of which he derives other existing things, his ground being that it is that which is least corporeal and in constant movement. He believed in fact with the many that the objects of existence were in continual movement, and the moved, he argued, could be known only by means of the moved. Alcmæon too seems to have held similar views about the nature of the soul. The soul, he says, is immortal because it is like the immortal: and it is so because it is in everlasting movement, while all things divine—moon, sun, stars and the whole heaven—are for ever in such everlasting movement.

Among cruder thinkers there have been some such as Hippo who have even described the soul as water. This belief seems to have been suggested to them by generative seed which in all animals is moist—Hippo in fact argues against those who assert that the soul is blood on the very ground that the seed is not blood—and this seed they regarded as the primary form of soul. Others again, like Critias, have identified the soul with blood, regarding sentiency as the most distinctive characteristic of the soul and viewing this sensient capacity as due to the element of blood.
συν. πάντα γὰρ τὰ στοιχεῖα κριτῆς εἰληφε, πλὴν τῆς γῆς· ταύτην δὲ οὕθεις ἀποπέφανται, πλὴν εἰ τις αὐτῆς εἰρηκεν ἐκ § 20 πάντων εἶναι τῶν στοιχείων ἡ πάντα. ὁρίζονται δὲ πάντες τὴν ψυχὴν τρισὶν ὡς εἰσεῖν, κωνησεῖ, αἰσθήσει, τῷ ἀσωμάτῳ τούτων δὲ ἐκαστὸν ἀνάγεται πρὸς τὰς ἀρχὰς. διὸ καὶ οἱ τῷ γνωσκεῖν ὁρίζομενοι αὐτὴν ἡ στοιχεῖον ἡ ἐκ τῶν στοιχείων ποιοῦσι, λέγοντες παραπλησίως ἀλλήλοις, πλὴν ἐνος· φασὶ γὰρ γνωσκεῖσθαι τὸ ὅμοιον τῷ ὅμοιῷ· ἐπειδὴ γὰρ ἡ 15 ψυχή πάντα γνωσκεῖ, συνιστάσιν αὐτὴν ἐκ πασῶν τῶν ἀρ- § 21 χῶν. ὃσοι μὲν οὖν μίαν τινὰ λέγουσιν αἰτίαν καὶ στοιχεῖον ἐν, καὶ τὴν ψυχὴν ἐν τιθέασιν, οὐδὲν ἡ ἀέρα· οἱ δὲ πλείουσ § 22 λέγοντες τὰς ἀρχὰς καὶ τὴν ψυχὴν πλεῖον ποιοῦσιν. Ἀναξαγόρας δὲ μόνον ἀπαθῆ φησίν εἶναι τὸν νοῦν, καὶ κοινῶν 20 οὐθέν οὐθεὶ τῶν ἀλλῶν ἔχειν. τοιοῦτοι δὲ ὁμὶς γνωριζοί καὶ διὰ τιν' αἰτίαν, οὔτ' ἐκεῖνος εἰρηκεν οὔτ' ἐκ τῶν εἰρημένων συμ- § 23 φανές ἐστιν. ὃσοι δ' ἐναντιώσεις ποιοῦσιν ἐν ταῖς ἀρχαῖς, καὶ τὴν ψυχὴν ἐκ τῶν ἐναντίων συνιστάσιν· οἱ δὲ θάτερον τῶν ἐναντίων, οἰον θερμὸν ἡ ψυχρὸν ἡ το τοιοῦτον ἀλλο, καὶ τὴν 25 ψυχὴν ὅμοιος ἐν τι τοιῶν τιθέασιν. διὸ καὶ τοῖς ὁνόμασιν ἀκολουθοῦσιν, οἱ μὲν τὸ θερμὸν λέγοντες, οὕτι διὰ τοῦτο καί τὸ ζῆν ἑνόμασται, οἱ δὲ τὸ ψυχρὸν διὰ τῆς ἀναπνοῆς καὶ τῆς κατάψυξιν καλείσθαι ψυχῆς. τὰ μὲν οὖν παραδεδομένα περὶ ψυχῆς, καὶ δ' ἄν αἰτίας λέγουσιν οὔτω, ταὐτ' ἐστίν. 30

Thus, with the one exception of the earth, all the elements have gained a vote. The earth however has been adduced by no one except indeed in such cases as some thinker has explained the soul as formed from all the elements or has actually identified it with them all. Each in fact of the three attributes which we may say are generally used to characterise the soul—movement, perception and incorporeal existence—is supposed to characterize the principles of being. And for this very reason all those who define soul by its capacity for knowledge make it either an element or one of the elements, using (with the exception of one of their number) almost identical expressions respecting it. Like, in short, they say, is known by like; and since the soul knows all things, they constitute it out of all the elements. Thus then those thinkers who admit only some one cause and some one element identify the soul also with some one thing such as fire or air: those, on the other hand, who regard the primary elements of existence as more than one, resolve the soul also into several such elements. Anaxagoras alone says that the reason is not subject to modification from without and has nothing in common with anything beside itself. How being such it is to acquire knowledge and why this is so is a subject on which Anaxagoras has said nothing, nor does the general tenour of his writings help to make it plain. As many further as posit opposites among their primary elements of being constitute the soul also out of contraries; while those who maintain the one or other among contraries—as for example hot or cold or something of this character—resolve the soul also in a corresponding manner into some one or other of these elements. Hence further such thinkers follow etymologies: some maintaining soul to be the 'hot' because it is from the name of heating or 'seething' that the word to live is etymologically derived: others holding soul to be the 'cold' because it is from respiration and cooling that the word for soul has been constructed.

Such then are the opinions which have been handed down respecting soul, as also the grounds on which they rest.
ΠΕΡΙ ΨΤΧΗΣ Α.

III. Ἐπισκεπτέον δὲ πρῶτον μὲν περὶ κινήσεως ισόως γάρ
οὐ μόνον ψεῦδος ἐστὶ τὸ τῆς οὐσίας αὐτῆς τοιαύτην εἶναι οἷον
φασίν ὁ λέγοντες ψυχήν εἶναι τὸ κινοῦν ἑαυτὸ ἢ δυνάμενον 406 Κ
κινεῖν, ἀλλ’ ἐν τί τῶν ἀδυνάτων τὸ υπάρχειν αὐτῇ κίνησιν.
§ 2 ὅτι μὲν οὖν οὐκ ἀναγκαίον τὸ κινοῦν καὶ αὐτὸ κινεῖσθαι, πρῶ-
τερον εἰρηταῖ. διχώς δὲ κινουμένου παντός (ἡ γὰρ καθ’ ἑτερον
ἡ καθ’ αὐτό· καθ’ ἑτερον δὲ λέγομεν, ὡσα κινεῖται τῷ ἐν 5
κινουμένῳ εἶναι, οἷον πλωτήρεσ’ οὐ γὰρ ὁμοίως κινοῦνται τῷ
πλοίῳ· τὸ μὲν γὰρ καθ’ αὐτὸ κινεῖται, οἱ δὲ τῷ ἐν κινου-
μένῳ εἶναι. δῆλον δ’, ἐπὶ τῶν μορίων: οἰκεῖα μὲν γὰρ ἐστὶ
κίνησις ποδῶν βάδισις, αὕτη δὲ καὶ ἀνθρώπων: οὐχ ὑπάρ-
χει δὲ τοῖς πλωτήρσι τότε) διχώς δὲ λεγομένου τοῦ κινεῖ-
σθαι, νῦν ἐπισκοποῦμεν περὶ τῆς ψυχῆς εἰ καθ’ αὐτὴν κι-
§ 3 νεῖται καὶ μετέχει κινήσεως. τεσσάρων δὲ κινήσεων οὐσίων,
φορᾶς ἀλλοιώσεως φθίσεως αὐξήσεως, ἣ μίαν τούτων κινοῦτ’
ἂν ἡ πλείους ἡ πάσας. εἰ δὲ κινεῖται μὴ κατὰ συμβε-
βηκός, φύσει ἂν ὑπάρχοι κίνησις αὐτῇ· εἰ δὲ τούτο, καὶ 15
tόπος· πάσαι γὰρ αἱ λεχθεῖσαι κινήσεις ἐν τόπῳ. εἰ δ’,
ἔστιν ἡ οὐσία τῆς ψυχῆς τὸ κινεῖν ἑαυτῆν, οὐ κατὰ συμβε-

U. || κατ om. U. 10. διχώς δὲ] δισσῶς E; διχώς δὴ Sus. 11. περισκοποῦμεν V.
13. φθίσεων om. pr. E.
CHAPTER III.

Before proceeding further we must investigate the subject of movement. The truth may be that it is not only false to say that the essential substance of soul is of the character assigned to it by those who assert that soul is that which moves itself or is capable of producing movement: it may be an actual impossibility that movement should be a predicate of soul.

That that which causes motion need not itself be in motion is an opinion which has been previously stated. But further there are two senses in which everything that is in motion may be said to be so. The movement may be either directly its own or it may be communicated through something else. The latter expression is applied to all those things that are moved through being within something which is moved, as is for instance the case with sailors in a ship: the sailors not being moved in the same sense as the vessel, because while the vessel is in movement by itself the sailors are so through being in an object that is moved. This becomes evident when we apply it to the limbs. Walking for instance is a movement which belongs distinctively to the feet, it is also a movement which belongs to man as such, and yet it is not true of the sailors at the time when we are considering them.

There are then two senses in which we may say a thing is in motion: and we must now enquire with reference to soul whether in itself it is moved and participates in movement. Now there are four forms of movement—locomotion, alteration, decomposition and augmentation. The motion of the soul must be therefore either one of these four forms, or several of them, or all of them taken together. But further this movement of the soul, if it be not merely an accidental concomitant, must proceed from nature: and, if this be so, space will be an attribute of it, inasmuch as all the movements which we have mentioned occur in space. [But the soul's movement is no mere accidental concomitant.] If it be its very essence to set itself in motion, it will not be merely in an incidental sense that
βηκός αυτῇ τὸ κινεῖται ὑπάρξει, ὥσπερ τῷ λευκῷ ἡ τῆς τριπήξει: κινεῖται γὰρ καὶ ταῦτα, ἀλλὰ κατὰ συμβεβηκός. ὃ γὰρ ὑπάρχουσιν, ἐκεῖνο κινεῖται, τὸ σῶμα. διὸ καὶ ὐν ἐστὶν τόπος αὐτῶν. τῆς δὲ ψυχῆς ἐσται, εἰσερ φύσει § 4 κινήσεως μετέχει. ἐτί δ’ εἰ φύσει κινεῖται, καὶ βίᾳ κινηθεί. καὶ εἰ βίᾳ, καὶ φύσει. τὸν αὐτὸν δὲ τρόπον ἔχει καὶ περὶ ἡρεμίας. εἰς δ’ γὰρ κινεῖται φύσει, καὶ ἡρεμεῖ ἐν τούτῳ φύσει. ὁμοίως δὲ καὶ εἰς δ’ κινεῖται βίᾳ, καὶ ἡρεμεῖ ἐν τούτῳ βίᾳ. ποῖαι δὲ βίαιοι τῆς ψυχῆς κινήσεις ἐσονται καὶ § 5 ἡρεμία, οὐδὲ πλάττεως βουλομένους μίνιον ἀποδοῦναι. ἔτι δ’ εἰ μὲν ἀνω κινήσεται, πῦρ ἐσται, εἰ δὲ κάτω, γῆ τούτων γὰρ τῶν σωμάτων αἱ κινήσεις ἀνταῦ. ὃ δ’ αὐτὸς λόγος καὶ § 6 περὶ τῶν μεταξύ. ἔτι δ’ ἐπεὶ φαίνεται κινοῦσα τὸ σῶμα, ταῦτα εὐλογον κινεῖν τὰς κινήσεις ἀσ καὶ αὐτῇ κινεῖται. εἰ δὲ τὸτο, καὶ ἀντιστρέψασιν εἰπεῖν ἅλθες ὅτι ἢ τὸ σῶμα κινεῖται, ταύτην καὶ αὐτῇ. τὸ δὲ σῶμα κινεῖται φορᾷ. 406 δ’ ὥστε καὶ ἡ ψυχὴ μεταβάλλοι ἀν κατὰ τὸ σῶμα ἡ ὄλῃ ἡ κατὰ μόρια μεθυσταμένη. εἰ δὲ τούτ’ ἐνδέχεται, καὶ ἐξελθοῦσαν εἰσιέναι πάλιν ἐνδέχοντ’ ἀν’ τούτῳ δ’ ἐποιή ἀν τὸ ἀνί- § 7 στασθῇ τὰ τεθνεότα τῶν ζῴων. τὴν δὲ κατὰ συμβεβηκός κινήσειν καὶ υφ’ ἔτερον κινοῦτο: ὁσθεία γὰρ ἂν βίᾳ τὸ ζῷον.

motion will belong to it, as is for instance the case with the movement of white colour or three cubits length. These last are moved indeed, but they are so simply incidentally, in so far as the body, in which they inhere is moved; and thus space is no attribute connected with them. Such space however will be an attribute of the soul if it be the case that the soul participates in movement by its very nature.

Further, if the soul be in motion by its inherent nature, it should also admit of being put in motion by external force: and supposing it to be moved by force, it should also admit of being moved by nature. So also is it with respect to rest: for when an object is moved by nature into some state or other, it also rests in this by nature, just as when an object is moved into any state by external force it also rests in this state by force. But even the most vivid imagination will find a difficulty in explaining what would be the character of the forced movements and repose of the soul.

Again, if the movement of the soul be upward it will be composed of fire, if downward, of earth; such being the directions in which these bodies naturally move. And the same holds good also of the intermediate elements.

But fourthly, since the soul according to all appearance sets the body in motion, we may reasonably suppose that it originates in the body the same movements as those by which it is itself in movement. But if this be so, then it follows by conversion that whatever be the movement with which the body is moved, such also is that with which the soul itself is moved. Now the movement of the body is a local movement. It follows therefore that the soul would also change its position in respect of the body, executing these changes either in its entirety or in its several parts. But were this possible it would further follow that the soul would be able after passing out of the body to enter it again; and this in turn would involve the absurd conclusion that animals after having died can rise again.

With regard on the other hand to accidental movement, it is true that the soul could be thus moved incidentally at the hand of something else: the animal in which the soul is contained may be pushed on by external force: and so the soul
οὐ δὲι δὲ φ' τὸ ψ' ἐαυτοῦ κινεῖσθαι ἐν τῇ οὐσίᾳ, τοῦθεν ὑπ' ἀλλού κινεῖσθαι, πλὴν εἰ μὴ κατὰ συμβεβηκός, ωσπερ οὐδὲ τὸ καθ' αὐτὸ ἁγαθὸν ἢ δὲ αὐτό, τὸ μὲν δὲ ἄλλο εἶναι, τὸ δ' ἑτέρου ἐνεκεν. τὴν δὲ ψυχὴν μάλιστα φαίνει τις ἂν ὑπὸ τῶν 10
§ 8 αἰσθητῶν κινεῖσθαι, εἰπερ κινεῖται. άλλα μὴν καὶ εἰ κινεῖ
γε αὐτὴ αὐτήν, καὶ αὐτὴ κινοῖτ' ἄν, ὡστ' εἰ πᾶσα κίνησις
ἐκστασίς ἐστὶ τοῦ κινουμένου ἢ κινεῖται, καὶ η̂ ψυχή ἐξίσται
ἀν ἐκ τῆς οὐσίας, εἰ μὴ κατὰ συμβεβηκός αὐτῆς κινεῖ. ἄλλων
§ 9 ἔστιν η̂ κίνησις τῆς οὐσίας αὐτῆς καθ' αὐτὴν. ἔνοι δὲ καὶ 15
κινεῖν φασὶν τὴν ψυχὴν τὸ σῶμα ἐν φ' ἐστίν, ὡς αὐτὴ κινεῖται,
οἷς Δημόκριτος, παραπλησίως λέγων Φιλόππω τῷ κωμα-
δοδιδασκάλῳ. φησὶ γὰρ τὸν Δαίδαλον κινουμένην ποιήσαι
τὴν ξυλίνην Ἀφροδίτην, ἐγχέαντ' ἀργυρον χυτὸν. ὁμοίως δὲ
καὶ Δημόκριτος λέγει. κινουμένας γὰρ φησὶ τὰς ἀδιαρέτους 20
σφαῖρας διὰ τὸ πεθυκέναι μηδέποτε μένειν, συνεφέλκειν
§ 10 καὶ κινεῖν τὸ σῶμα πάν. ἥμεις δ' ἐρωτήσομεν εἰ καὶ ἡρέ-
μησιν ποιεῖ ταύτα ταύτα. πῶς δὲ ποιήσει, χαλεπόν ἢ καὶ
ἀδύνατον εἰπεῖν. ὅλως δ' οὐχ οὖτω φαίνεται κινεῖν ἢ ψυχή
§ 11 τὸ ζῷον, ἅλλα διὰ προαιρέσεως τινος καὶ νοησεως. τὸν αὐτὸν 25
de τρόπον καὶ ὁ Τίμαιος φυσιολογεῖ τήν ψυχήν κινεῖν τὸ
σῶμα: τῷ γὰρ κινεῖσθαι αὐτὴν καὶ τὸ σῶμα κινεῖ διὰ τὸ
συμπεπλέχθαι πρὸς αὐτό. συνέστηκίαν γαρ ἐκ τῶν στοι-
χείων, καὶ μεμερισμένην κατὰ τοὺς ἀρμονικοὺς ἀριθμούς, ὅπως
αἰσθητοί τε σύμφωνον ἀρμονίας ἔχῃ καὶ τὸ πάν ὕψηται 30

8. μὴ om. E. 11. αἰσθητικῶν S. Ald. 12. καὶ αὐτὴν κινοῖτ' ἂν
οὐσία conj. Trend. 13. ἔξισταται (om. ἂν) SWX. 17. κωμωδιδασκάλω
TUVWX. 22. ἐρωτήσωμεν STUVW || ἥρεμησεν ποιεῖ τοῦτ' αὐτὸ STW.
would be indirectly put in motion. But if a thing is essentially put in motion of itself, it must not be supposed put in motion by something else (unless in an indirect sense), just as the self-subsisting good should not be the good pursued for other ends nor the good absolute become the good relative. And yet about the only thing by which the soul, supposing it is moved, could be said to be so, would be the objects of sense.

If on the other hand it be said that the soul sets itself in motion in and by itself alone, it follows that it would also be moved in and by itself. But all movement is a displacement of the moved qua moved: and therefore the soul would be displaced and taken out of its essential nature, if it be not merely incidentally that it sets itself in motion. This however is the reverse of our hypothesis which holds that the motion is an attribute of its essential nature in and by itself.

A further modification of this theory is found in the view of those who say that the soul moves the body which contains it in a manner corresponding to that in which the soul itself is moved. This view is held by Democritus, whose words rather recall the saying of Philippus the comedian, that Daedalus made his wooden Aphrodite capable of movement by pouring quicksilver into her. Democritus' explanation is in truth not much superior to this. He tells us that the atomic globules contract and move the whole body in virtue of the law imposed upon them never to remain at rest. But, we should ask, are these same elements to produce rest also? How they will produce this result it is difficult or in fact impossible to say. And indeed generally, apart from any special form of this doctrine, the soul, so far as we can see, moves the body not in this manner but through the agency of purpose and of thought.

The Timaeus similarly explains on physiological principles the manner in which the soul moves the body: reasoning that the soul by the fact that it is itself in motion moves the body also, in consequence of its intricate conjunction with it. The writer regards the soul as compounded of the different elements and distributed according to the harmonic numbers [which underlie the universe] in order that it might have an original inborn perception of harmony and altogether be borne in har-
§ 12 ούρανοι φοράς τάς τῆς ψυχῆς κινήσεις. πρώτον μὲν οὖν οὐ
cαλῶς τὸ λέγεν τὴν ψυχὴν μέγεθος εἶναι. τὴν γὰρ τοῦ παν-
tὸς δῆλον ότι τοιαύτην εἶναι βούλεται οἶνον ποτ' ἐστὶν ὁ καλοῦ-
μενος νοῦς. οὐ γὰρ δὴ οἶνον γ' ἡ αἰσθητική, οὖδ' οἶνον ἡ ἐπιθυ-
§ 13 μητηκίη τούτων γὰρ ἡ κίνησις οὐ κυκλοφορία. ὁ δὲ νοῦς εἰς
cαὶ συνεχής, ὥσπερ καὶ ἡ νόησις. ἡ δὲ νόησις τὰ νοῦ-
ματα. ταῦτα δὲ τῷ ἐφεξῆς ἐν, ὥς ὁ ἀριθμός, ἀλλ' οὐκ ὡς τὸ
mέγεθος. διόπερ οὔτ' ὁ νοῦς οὖτω συνεχής, ἀλλ' ἦτοι ἀμερής ἡ
οὐκ ὁ μέγεθος τι συνεχῆς. πῶς γὰρ δὴ καὶ νοήσει μέγεθος ἦν;
πότερον καθόλου ἡ ὀτιόθεν τῶν μορίων τῶν αὐτῶν; μορίων δ' ἦ-
τοι κατὰ μέγεθος ἡ κατὰ στιγμὴν, εἰ δέ καὶ τοῦτο μόριον
§ 14 εἰπεῖν. εἰ μὲν οὖν κατὰ στιγμὴν, αὐταί δ' ἀπειροῦν, δῆλον ὡς
οὐδέποτε διέξεισιν, εἰ δὲ κατὰ μέγεθος, πολλάκις ἡ ἀπειράκις
νοῆσει τὸ αὐτό. φαίνεται δὲ καὶ ἀπαξ ἐνδεχόμενον. εἰ δ' ἱκα-
vὸν θυγείν ὀτιόθεν τῶν μορίων, τί δὲ κύκλῳ κινεῖσθαι ἡ καὶ
ὁλως μέγεθος ἐχεῖν; εἰ δ' ἀναγκαίον νοῆσαι τῷ ὀλῷ κύκλῳ
θυγόντα, τίς ἐστὶν ἡ τοῖς μορίοις θύγει; ἕτετ δὲ πῶς νοῆσει τὸ
μεριστὸν ἀμερές καὶ τὸ ἀμερές μεριστεῖ; ἀναγκαίον δὲ τὸν
νοῦν εἶναι τὸν κύκλον τούτον. νοῦ μὲν γὰρ κίνησις νόησις, 20

ἄν ὀτιόθεν τῶν μορίων Sylb., Bekk. || πότερον καθ' ὀλὼν θύγων ἡ κ.τ.λ. Tor. 11. τῶν
μορίων] μορίω E. 18. θύγοντι V. 19. ἀμερές ἡ Ey Tor.
monious courses. The soul so compounded, he bent the straight line [of the numbers] round into a circle, and when out of the one circle he had cut two circles connected at two points, he again divided the one circle into seven circles, considering as he did the revolutions of the heaven to correspond with the movements of the soul.

The first objection to this theory is that it is not befitting to speak of the soul as a magnitude, at the same time as the soul of the universe is evidently intended to be some such thing as is the so-called reason: it cannot at least be something like the sensitive or appetitive soul which is so described, as their movement is not circular rotation. Reason however is, no doubt, marked by unity and continuity, but it is so only in the sense in which the action of thought is so also. Now the action of thought is equivalent to the objects of thought; and these, it is true, form by their sequence a unity, but it is the unity of a number and not of a geometrical body. Hence then neither is the reason continuous in this sense but it is either destitute of parts or it is not continuous as a magnitude. How, in fact, if it be a magnitude, is it to think? Is it to do so as a whole or only with some one of its parts? If it be with the parts, it must be either as a magnitude or as a point if we may call this last a part. If, however, it be as a point, then, as the number of points in a given magnitude is endless, the process of thought will never reach an end; if it be as a magnitude it will think the same thing frequently or without limit. But, as matter of observation, thought may be exercised once for all.

Besides if it be sufficient for the soul to have touched with any of its parts, what need is there for it to move in a circle or indeed to have magnitude at all? If, on the other hand, it be necessary for thought that it should touch with the whole circle of the soul, what will happen when it touches with the parts? How further is it to think that which has parts through that which is without parts, or that which is without parts by that which has parts? And yet (from the standpoint of the Timaeus) reason must be a circle of this material kind: for thinking must be the movement of reason just as revolving is that of a circle: so that if thinking be a process of revolving
§ 15 κύκλου δὲ περιφορά. εἰ οὖν ἡ νόησις περιφορά, καὶ νοῦς ἂν εἰη ὁ κύκλος, οὔ ἡ τοιαύτη περιφορὰ νόησις. ἀεὶ δὲ δὴ τι νοη-σεῖ. δεῖ γὰρ, εἰπὲ αἴδιος ἡ περιφορὰ. τῶν μὲν γὰρ πρα-κτικῶν νοησεων ἔστι πέρατα (πᾶσαι γὰρ ἑτέρου χάριν), αἱ δὲ θεωρητικαὶ τοὺς λόγους ὁμοίως ὀρίζονται. λόγος δὲ πᾶς ὁρι-σμὸς ἡ ἀπόδειξις. αἱ δ᾽ ἀποδεῖξεις καὶ ἂντι ἄρχης, καὶ ἔχουσι πως τέλος, τὸν συνλογισμὸν ἡ το συμπέρασμα: εἰ δὲ μὴ περατοῦνται, ἀλλὰ οὐκ ἀνάκαμπτονσι γε πάλιν ἐπὶ ἄρχην, προσλαμβάνουσαι δ᾽ ἀεὶ μέσον καὶ ἀκρον εὐθυποροῦσιν. ἡ δὲ περιφορὰ πάλιν ἐπὶ ἄρχην ἀνακάμπτει. οἱ δ᾽ ὁρισμοὶ πάν-30
§ 16 τες πεπερασμένου. ἔτι εἰ ἡ αὐτὴ περιφορὰ πολλάκις, δεν-
§ 17 σει πολλάκις νοεῖν τὸ αὐτό. ἐτι δ᾽ ἡ νόησις οὐκεκέν ἥρεμησει τινὶ καὶ ἐπιστάσει μᾶλλον ἡ κινῆσει. τὸν αὐτὸν δὲ τρόπον
§ 18 καὶ ὁ συνλογισμὸς. ἀλλὰ μὴν οὐδὲ μακάριον γε τὸ μὴ ρά-
διον ἀλλὰ βίαιον: εἰ δ᾽ ἐστὶν ἡ κίνησις αὐτῆς μὴ οὐσία, 407b
§ 19 παρὰ φύσιν ἢ κινότο. ἐπίπονον δὲ καὶ τὸ μεμίχθαι τῷ
σώματι μὴ δυνάμενον ἀπολυθῆναι, καὶ προσέτι φευκτὸν, εἰπὲ βέλτιον τῷ νῷ μὴ μετὰ σώματος εἶναι, καθάπερ
§ 20 εἰσθῆ τε λέγεσθαι καὶ πολλοῖς συνδοκεῖ. ἀδηλὸς δὲ καὶ τοῦ 5
κύκλῳ φέρεσθαι τὸν οὐρανὸν ἡ αἰτία: οὐτε γὰρ τῆς ψυχῆς ἡ
οὐσία αἰτία τοῦ κύκλῳ φέρεσθαι, ἀλλὰ κατὰ συμβεβηκός
οὖν κινεῖται, οὐτε τὸ σῶμα αἰτίου, ἀλλὰ ἡ ψυχῇ μᾶλλον
§ 21 ἐκείνω. ἀλλὰ μὴν οὐδ᾽ ὅτι βέλτιον λέγεται: καίτοι γ᾽ ἔχρην

23. γὰρ ποιητικῶν ἡ πρ. SUWX. 26. ἡ μὲν οὖν ἀπόδειξις E. αἱ μὲν οὖν ἀποδείξεις y. Tor. 27. ἔχουσα E. 29. προσαναλαμβάνουσα E. Tor. 407b 1. μὴ οὐσία] conj. Tor. ἡ οὐσία. 2. ἢ κινότο E. ceteri κινοῦτ' ἂν.
it follows that reason would be the circle of which such a revolution constitutes thought. And again the soul will be continually involved in thought, since (as is asserted in the Timaeus) circular movement is everlasting. [This however is opposed to all experience:] in the case of processes of thought leading to action there are certain ends which limit them, all being for the sake of something else, and thoughts applied to speculation only are limited in the same manner as the reasoned explanations which they involve. Now every explanation resolves itself into either a definition or a deductive demonstration. But as for demonstrations, they both start from a principle as a beginning and have as it were a termination in the syllogism or the conclusion; and even if they do not reach a termination, still they do not turn back again to the beginning, but, employing always a fresh middle term and an extreme, proceed forward in a straight line, whereas a circular movement always returns back to the beginning. The same thing holds good also of definitions: they are all limited and determined. Besides, if the same revolution takes place a great many times, it will be necessary to think the same thing frequently. Further, thought bears a greater similarity to rest and stoppage than to motion: and so also is it likewise with syllogism.

Happiness, again, cannot be an attribute of that which is acted on by force and does not happen with ease: and if, to obviate this difficulty, it be held that movement does not constitute the soul's essential nature, its movement would be contrary to nature. It is burdensome also for the soul to be united with the body without possibility of release from it: and not only so, but such union is even something which is to be if possible avoided, supposing it to be better for the reason to be independent of the body, as is usually said and widely believed.

There is an obscurity also as to the reason why the heavens are carried in a circle; for it is not the essential nature of the soul which is the reason of its being carried in a circle, this movement being merely incidental to it: nor is it the body which is the cause, the soul being rather the cause which produces movement in the body. Nor indeed is it asserted that the soul moves in this manner because it is its better course.
§ 22 τέρα, ταύτην μὲν ἅφωμεν τὸ νῦν. ἐκείνο δὲ ἀτοπον συμβαίνει καὶ τούτω τῷ λόγῳ καὶ τοῖς πλείοστοις τῶν περὶ ψυχῆς· συνάπτουσι γὰρ καὶ τιθέασω εἰς σῶμα τὴν ψυχῆν, οὕτω γε ορθοδιορίσαντες διὰ τὸν αὐτὸν καὶ πῶς ἔχοντος τοῦ σώματος. καίτοι δόξευεν ἂν τούτ’ ἀναγκαίον εἶναι· διὰ γὰρ τὴν κοινωνίαν τὸ μὲν ποιεῖ τὸ δὲ πάσχει καὶ τὸ μὲν κινεῖται τὸ δὲ κινεῖ, τούτων δ’ οὕθεν ὑπάρχει πρὸς ἄλληλα τοὺς τυχόσων.

§ 23 οἱ δὲ μόνον ἐπιχειροῦσι λέγειν ποιόν τι ἡ ψυχή, περὶ δὲ τοῦ δεξιουμένου σώματος οὕθεν ἔτι προσδιορίζουσιν, ἠσπερ ἐνδεχόμενον κατὰ τοὺς Πυθαγορικοὺς μῦθους τὴν τυχοῦσαν ψυχῆν εἰς τὸ τυχόν ἐνδύσεσθαι σῶμα· δοκεῖ γὰρ ἔκαστον ἵδιον ἔχειν εἶδος καὶ μορφήν. παραπλήσιον δὲ λέγουσιν ἠσπερ εἰ τις φαίη τὴν τεκτονικὴν εἰς αὐλοὺς ἐνδύσεσθαι· δεῖ γὰρ τὴν μὲν τέχνην χρήσθαι τοῖς ὀργάνοις, τὴν δὲ ψυχήν τῷ σώματι.

§ 4 IV. Καὶ ἄλλη δὲ τις δόξα παραδέδοται περὶ ψυχῆς, πιθανῇ μὲν πολλοῖς οὐδεμιᾶς ἢττον τῶν λεγομένων, λόγους δ’ ἠσπερ εὐθύνας δεδωκυία καὶ τοῖς ἐν κοινῷ γινομένοις λόγοις· ἀρμονίαν γὰρ των αὐτῆς λέγουσι· καὶ γὰρ τὴν ἀρμο-
God however must have made the soul to be moved in this circular fashion for no other reason than that it was better for it to be in movement than to remain at rest, and, further, better to be moved in this manner than in any other. Such an investigation however can be more appropriately discussed in other fields of study, and may be therefore for the present left aside.

There is however one peculiar inconsistency which we may note as, marking this and most other psychological theories. They place the soul in the body and attach it to the body without trying in addition to determine the reason why or the condition of the body under which such attachment is produced. This would seem however to be a real question calling for solution: in so far as it is by reason of this communion that the one factor is active the other passive, and that the one sets in motion the other is in motion: and relations of this kind are never found in cases of mere juxtaposition. The thinkers however to whom we are referring attempt to state the nature of the soul only: with regard to the nature of the body which is to receive the soul they determine nothing in particular. And thus, although every body seems to possess a distinctive form and character, they act as if it were possible for any soul to clothe itself in any body, after the manner of the tales which Pythagoreans tell of transmigration. Their account in fact is much like speaking of the carpenter's art as clothing itself in flutes: the truth being that just as art makes use of its appropriate instruments, so the soul must make use of its fitting body.

CHAPTER IV.

There is still another opinion handed down respecting soul which meets with acceptance at the hands of many no less than any of the views which have been stated, though even in popularly written treatises it has been examined and brought, as it were, to account for its assumptions. The soul is by the doctrine in question regarded as a harmony of some sort. A
νίαν κράσων καὶ σύνθεσιν ἐναντίων εἶναι, καὶ τὸ σῶμα συγ-
§ 2 κείσθαι ἐξ ἐναντίων. καίτοι γε ἡ μὲν ἀρμονία λόγος τὶς ἐστὶ
tῶν μιχθέντων ἡ σύνθεσις, τὴν δὲ ψυχὴν οὐδέτερον ὅπως τ' 
§ 3 εἶναι τούτων. ἔτι δὲ τὸ κινεῖν οὐκ ἐστὶν ἀρμονίας, ψυχή δὲ 
§ 4 πάντες ἀπονέμουσι τούτῳ μάλιστ' ὡς εἰπεῖν. ἀρμόζει δὲ μᾶλ-
λον καθ' ύγιείας λέγειν ἀρμονίαν, καὶ ὅλως τῶν σωματι-
κῶν ἄρετῶν, ἡ κατὰ ψυχῆς. φανερώτατον δ' εἰ τις ἀπο-
διδόναι πειραθείη τὰ πάθη καὶ τὰ ἔργα τῆς ψυχῆς ἀρμο-
§ 5 νὰ τινί χαλεπῶν γὰρ ἐφαρμόζειν. ἔτι δ' εἰ λέγομεν τὴν 5
ἀρμονίαν εἰς δύο ἀποβλέπουντες, κυριότατα μὲν τῶν μεγε-
θῶν ἐν τοῖς ἔχουσι κίνησιν καὶ θέσιν τὴν σύνθεσιν αὐτῶν, ἐπει-
δὰν οὔτω συναρμόζωσιν ὡστε μηδὲν συγγενέος παράδεχεσθαι,
ἐπειδὴ δὲ καὶ τῶν τῶν μεμιγμένων λόγοιν, οὐδετέρως μὲν οὖν
εὐλογον· ἡ δὲ σύνθεσις τῶν τοῦ σώματος μερῶν λίαν εὐεξεῖ·
ταστος· πολλαὶ τε γὰρ αἱ συνθέσεις τῶν μερῶν καὶ πολλα-
χῶς· τίνος οὖν ἡ πῶς ὑπολαβεῖν τὸν νοῦν χρὴ σύνθεσιν εἶναι,
§ 6 ἡ καὶ τὸ αἰσθητικὸν ἢ ὀρεκτικὸν; ὁμοίως δὲ ἀτοπον καὶ τὸν
λόγον τῆς μίξεως εἶναι τὴν ψυχήν· οὐ γὰρ τὸν αὐτὸν ἔχει
λόγον ἡ μίξις τῶν στοιχείων καθ' ἡν σὰρξ καὶ καθ' ἡν ὅστοιν. 
συμβόησαι οὖν πολλαὶ τε ψυχὰς ἔχειν καὶ κατὰ πάν τὸ
σῶμα, εἰπερ πάντα μὲν ἐκ τῶν στοιχείων μεμιγμένων, ὁ δὲ
§ 7 τῆς μίξεως λόγος ἀρμονία καὶ ψυχή. ἀπαίτησει δ' ἂν τῖς
tούτο γε καὶ παρ' Ἐμπεδοκλέους· ἐκαστον γὰρ αὐτῶν λόγῳ
τινὶ φήσων εἶναι· πότερον οὖν ὁ λόγος ἐστὶν ἡ ψυχή, ἡ μᾶλ-
32. γε ομ. Ε. Τορ. 408a 1. ἀπονέμουσι ἀπαντεῖς τοῦτο STVVW. 3.
tὸν] τὸ VX, τὸ τὸν λ. Βζ.
harmony, it is argued, is a blending and conjunction of opposites: and it is out of opposites that the body is composed.

Harmony however it may be objected (1) is either a certain ratio of composition or an adjustment of bodies: and the soul cannot be described by either of these terms. Besides (2) movement is not a property which can be predicated of a harmony: while it is by almost all thinkers attributed to the soul. Harmony again (3) is a term which may be applied to health and to the bodily excellencies in general with much more propriety than to the soul: as would be (4) very evident if we should attempt to explain the feelings and functions of the soul by resolving them into some special harmony: so difficult is it to make them correspond. It may be added further (5) that in speaking of a harmony we do so with reference to two points. In the strictest sense, the term denotes so closely fitting an adjustment on the part of bodies possessed of movement and position as lets in nothing homogeneous; and hence secondly it is applied also to the ratio which holds between things that are compounded.

In neither of these two senses can the soul be reasonably regarded as a harmony. The adjustment of the parts of the body is very easy to be discovered: there are many such adjustments and they can be effected in a great variety of manners. Of what part then, we may ask, are we to suppose the reason is an adjustment or how are we to suppose it to be effected? or, again, what adjustment is it that forms the sentient or the appetitive nature? It is equally absurd to regard the soul as the expression of the ratio of the composition. The composition of the elements forming flesh is subject to a different ratio or proportion from that which forms bone; and if the soul be merely this ratio of composition then it will follow that we have many souls spread over the whole body, because all the parts of the body are formed from elements combined together and ex hypothesi it is the ratio regulating their composition which constitutes a harmony and therefore soul. This too suggests a question we might put to Empedocles relatively to his statement that each of the bodily parts is determined by a certain ratio. Whether, we might ask, is the soul this ratio, or is it
λον ἐτερόν τι οὔσα ἐγγίνεται τοῖς μέλεσιν; ἔτι δὲ πότερον ἡ
φιλία τῆς τυχούσης αἰτία μίξεως ἡ τῆς κατὰ τῶν λόγων; καὶ
αὐτὴ πότερον ὁ λόγος ἐστὶν ἢ παρὰ τὸν λόγον ἐτερόν τι;
§ 8 ταῦτα μὲν οὖν ἔχει τοιαύτα ἀπορίας· εἰ δ' ἐστὶν ἐτερόν ἡ
ψυχῇ τῆς μίξεως, τί δὴ ποτὲ ἀμα τῷ σαρκὶ εἶναι ἀναι-
25 ρεῖται καὶ τῷ τοῖς ἀλλοις μορίοις τοῦ ζῷου; πρὸς δὲ τοῦτος εἰπερ μὴ ἐκαστὸν τῶν μορίων ψυχὴν ἔχει, εἰ μὴ ἐστὶν ἡ
ψυχῇ ὁ λόγος τῆς μίξεως, τί ἐστώ δ' φθείρεται τῆς ψυχῆς
§ 9 ἀπολειποῦσης; ὅτι μὲν οὖν οὐθ' ἀρμονίαν οἷὸν τ' εἶναι τὴν
ψυχῆν οὔτε κύκλῳ περιφέρεσθαι, δῆλον ἐκ τῶν εἰρημένων. 30
κατὰ συμβεβηκός δὲ κινεῖσθαι, καθάπερ εἴπομεν, ἐστὶ καὶ
κινεῖν εαυτὴν, οἷον κινεῖσθαι μὲν ἐν ὃ ἐστὶ, τοῦτο δὲ κινεῖσθαι ὑπὸ τῆς ψυχῆς· ἀλλως δ' οὖχ οἷον τε κινεῖσθαι κατὰ τότον
§ 10 αὐτὴν. εἰςογώτερον δ' ἀπορήσειεν ἂν τις περὶ αὐτῆς ὡς
κινουμένης, εἰς τὰ τοιαύτα ἀποβλέψας. φαμὲν γὰρ τῇν ψυ-
408b χὴν λυπεῖσθαι χαῖρεν, ἀρρενὶς φοβεῖσθαι, εἴ δὲ ὀργί-
ζεσθαι τε καὶ αἰσθάνεσθαι καὶ διανοεῖσθαι· ταῦτα δὲ πάντα
κινῆσεις εἶναι δοκοῦσιν. οἶδην οἰνθεὶς τις ἄν αὐτὴν κινεῖσθαι.
§ 11 τὸ δ' οὖν ἐστιν ἀναγκαῖον, εἰ γὰρ καὶ ὅτι μάλιστα τὸ λυπεῖ-
5 σθαι ἡ χαίρειν ἡ διανοεῖσθαι κινήσεις εἰσὶ, καὶ ἐκαστὸν κι-
νεῖσθαι τοῦτων, τὸ δὲ κινεῖσθαι ἐστὶν ὑπὸ τῆς ψυχῆς, οἷον τὸ
ἀργίζεσθαι ἡ φοβεῖσθαι τῷ τὴν καρδίαν ὁδὴ κινεῖσθαι, τὸ
δὲ διανοεῖσθαι ἡ τοιοῦτον ἰσως ἡ ἐτερόν τ' (τοῦτων δὲ συμ-
βαίνει τὰ μὲν κατὰ φορὰν τυχῶν κινουμένων, τὰ δὲ κατ' 10
§ 12 ἀλλοίωσιν· ποία δὲ καὶ πῶς, ἐτερός ἐστιν λόγος.) τὸ δὲ λέγειν

something else which is implanted in the members? And further does the principle of 'love' give rise to any composition whatsoever or only to that standing in a certain ratio; and if the latter, is this love the ratio itself or is it something else outside the ratio?

Difficulties then of this kind may be raised upon the supposition that soul is a harmony. At the same time, if the soul be something different from the composition of the bodily parts, the question rises, how comes it that the soul is annihilated when the flesh and the other parts of the animal organism are destroyed—and further, if, after giving up the view which regards soul as the ratio of the composition, it can no longer be maintained that each of the parts of the body possesses a soul, it is difficult to see what it is that is destroyed when the soul has taken its departure.

It is evident then from what has been said that the soul cannot be a harmony: and further that it cannot have a circular movement. It may however, as we have said, be moved and move itself incidentally, so far as that in which it is contained may be moved, and this itself moved by the soul: otherwise, it is impossible for it to exhibit local movement.

A more plausible standpoint, however, from which to raise doubts in support of the movement of the soul might be found in an appeal to the fact that the soul is (as we say) pained, takes joy, shews confidence, is exposed to fear, and further is angered and perceives and pursues inferences—all such operations being viewed as processes of movement. Hence then it might be supposed the soul itself is moved. This, however, need not be the case. It may be indeed that feeling pain or rejoicing or exercising thought are motions in the fullest sense, and each of them may be identical with being moved. Further, too, this movement may be effected by the soul—for example, feeling anger or fear may be the result of such and such a movement of the heart, and inference is either a movement of this sort or something else. Some of these phenomena again may result from local movements, others from qualitative changes in a manner of which the details must be left for further inquiry.
οργίζονται τὴν ψυχήν ὁμοιον κἂν εἰ τις λέγω τὴν ψυ-
χὴν ὑφαίνειν ἢ οἰκοδομεῖν. Ἐλείμον γὰρ ἵσως μὴ λέγει τὴν
ψυχήν ἐλεῖν ἢ ὑμνάσαι ἢ διανοεῖσθαι, ἀλλὰ τὸν ἄνθρω-
πον τῇ ψυχῇ τούτῳ δὲ μὴ ὡς ἐν ἐκείνῃ τῆς κυνῆσεως οὐσῆς, 15
ἄλλ' ὅτε μὲν μέχρι ἐκείνης, ὅτε δ' ἀπ' ἐκείνης, οἶον ἢ μὲν
αὐτὸσπος ἀπὸ τουντί, ἢ δ' ἀνάμμην σις ἀπ' ἐκείνης ἐπὶ τας ἐν
§ 13 τοῖς αἰσθητηρίοις κυνῆσεως ἢ μονάς. ὃ δὲ νοῦς ἐσχετε ἐγγύνεσθαι
οὐσία τις οὐσά, καὶ οὐ φθείρεσθαι. μάλιστα γὰρ ἐφθείρετ' ἂν
ὑπὸ τῆς ἐν τῷ γῆρα ἀμαράστως· νῦν δ' ἵσως ὁπερ ἐπὶ 20
τῶν αἰσθητηρίων συμβαίνει· εἰ γὰρ λάβοι ο προσβύτῃς ὄμμα
τοιοῦτοι, βλέποι ἃν ὄσπερ καὶ ὁ νέος. ὅπερ τὸ γῆρας οὐ
τῇ τῇν ψυχήν τι πεπονθέναι, ἀλλ' ἐν δ', καθάπερ ἐν με-
§ 14 θαι καὶ νόσους καὶ τὸ νοεῖν δὴ καὶ τὸ θεωρεῖν μαραίνεται
ἀλλοι τινος ἐσώς φθειρομένου, αὐτὸ δὲ ἀπαθῆς ἐστιν. τὸ δὲ δια-
25

νοεῖσθαι καὶ φιλεῖν ἢ μισεῖν οὐκ ἔστιν ἐκεῖνον πάθη, ἀλλὰ
tουντι τοῦ ἐχοντος ἐκεῖνο, ἢ ἐκεῖνο ἔχει. διὸ καὶ τούτου φθειρο-
μένου οὔτε μνημονεύει οὔτε φιλεῖ· οὐ γὰρ ἐκεῖνον ἤν, ἀλλὰ τοῦ
κοινοῦ, ὡς ἀπόλωλεν· ὃ δὲ νοῦς ἵσως θειότερον τι καὶ ἀπαθῆς
§ 15 ἐστιν. ὃτι μὲν οὖν οὐχ οἶον τε κνείσθαι τῇν ψυχήν, φανερὸν 30
ἐκ τούτων· εἰ δ' ὅλως μὴ κνείσται, δῆλον ὡς οὗτ' ὑπ' ἐαντῆς.

12. Λέγει Τ. 15. οὐσις om. Ε. 16. μέχρις TVWX. 19. σίσα om. Ε.
Although, however, all this may be true, we must add that to speak of the soul as feeling angry is no more appropriate than to speak of the soul as weaving or building. Perhaps, in fact, it is better to say not that the soul pities or learns or infers, but rather that the man does so through his soul. Nor in saying that the man carries on these operations through his soul, must we take this to mean that the movement is in the soul, but simply that the movement sometimes advances towards soul, sometimes starts from it. Sense perception, for example, starts from such and such individual things [and advances forward to the soul which reads them]: recollection on the other hand starts from the soul and terminates in the movements or impressions which are stored up in the organs of sense. It must be remembered, too, that reason as a self-contained reality would seem to be implanted within the soul and would not seem to be destroyed with the dissolution of the body. For, if it could be so destroyed, it would be so chiefly in consequence of the decay following in old age, whereas, as facts really stand, the case is perhaps parallel to that of the organs of sense, where we should allow that the old man, if he were to receive an eye fitted for vision, would see as well as the young man. Thus old age is the result not of any affection sustained by the soul but by the medium in which it is contained, just as is also the case in drunkenness and in disease; and thinking and reflection are weakened on the destruction of something internal, but as for thought itself, it is unaffected by such accidents. So also the processes of discursive understanding as also loving and hating are not affections of the reason but of the organism which possesses it; so far as it possesses it. And hence it is that when this vehicle is destroyed, neither recollection nor love are longer possible, because these functions and feelings were not attributes of the reason but of that combination of soul and body which has perished. Reason, however, is in all probability of a diviner character, and not subject to impressions from without.

It is evident then from these considerations that the soul cannot be in motion: and if motion is a predicate of it in no sense whatever, it evidently would not be moved either by itself.
§ 16 πολὺ δὲ τῶν εἰρημένων ἀλογωτατον τὸ λέγειν ἄριθμὸν εἶναι τὴν ψυχήν κινοῦνθ᾽ ἑαυτόν· ὑπάρχει γὰρ αὐτοῖς ἀδύνατα· πρῶτα μὲν τὰ ἐκ τοῦ κυνῆσθαι συμβαίνοντα, ἵδια δ᾽ ἐκ τοῦ λέγειν αὐτήν ἄριθμόν· πῶς γὰρ χρῆ νοῆσαι μονάδα κινοῦν· 409 ε ὑπὸ τίνος, καὶ πῶς, ἀμερὴ καὶ ἀδιάφορον οὐ-
§ 17 σαν; εἰ γὰρ ἐστὶ κυνητικὴ καὶ κυνητή, διαφέρειν δεῖ. ἔτι δ᾽ ἐπεὶ φασὶ κυνηθείσαι γραμμὴν ἐπίπεδον ποιεῖν, στυγμὴν δὲ γραμμήν, καὶ αἱ τῶν μονάδων κυνῆσεις γραμμαί ἔσονται· 5 ἡ γὰρ στυγμὴ μονάς ἐστὶ θέσιν ἔχουσα· δ δ᾽ ἄριθμὸς τῆς
§ 18 ψυχῆς ἡ ἑδοὶ ποὺ ἐστὶ καὶ θέσιν ἔχει. ἔτι δ᾽ ἄριθμοὺ μὲν εὰν ἀφελὴ τις ἄριθμὸν ἡ μονάδα, λείπεται ἄλλος ἄριθμός· τὰ δὲ φυτὰ καὶ τῶν ζων πολλὰ διαρρούμενα ζῆ, καὶ δο-
§ 19 κεὶ τὴν αὐτὴν ψυχὴν ἔχειν τῷ εἶδει. δοξεὶ δ᾽ ἀν οὐθὲν δια- 10 φέρειν μονάδας λέγειν ἡ σωματία μικρά· καὶ γὰρ ἐκ τῶν Δημοκρίτου σφαιρίων εὰν γένονται στυγμαί, μόνον δὲ μένη τὸ ποσόν, ἔσται τι ἐν αὐτῷ τὸ μὲν κινοῦν τὸ δὲ κινοῦμενον, ὥσπερ ἐν τῷ συνεχεί. οὐ γὰρ διὰ τὸ μεγέθει διαφέρειν ἡ μικρότητι συμβαίνει τὸ λεχθὲν, ἀλλ᾽ ὅτι ποσόν. διὸ ἀναγ- 15 καὶστὶ τὸ τὸ κυνῆσον τὰς μονάδας. εἰ δ᾽ ἐν τῷ ζῷῳ τὸ κινοῦν ἡ ψυχή, καὶ ἐν τῷ ἀριθμῷ, ὅστε οὐ τὸ κινοῦν καὶ τὸ κινοῦμενον ἡ ψυχή, ἀλλὰ τὸ κινοῦν μόνον. ἐνδέχεται δὲ δὴ πῶς μονάδα ταύτην εἶναι; δεὶ γὰρ ὑπάρχειν τινὰ αὐτὴν
§ 20 διαφορὰν πρὸς τὰς ἄλλας· στυγμῆς δὲ μοναδικῆς τίς ἂν εἰῇ 20 διαφορὰ πλῆν θέσις; εἰ μὲν οὖν εἰσὶν έτεραί αἱ ἐν τῷ σωματὶ μονάδες καὶ αἱ στυγμαί, ἐν τῷ αὐτῷ ἔσονται αἱ μονάδες·

Of all psychological theories the most unreasonable is that which describes soul as a number which sets itself in motion. Such a view involves double impossibilities—firstly those resulting from its movement and more particularly those which spring from speaking of it as a number. In what manner for instance, (1) are we to conceive a unit as moved—and by what means and under what conditions is it to be effected—seeing that it is devoid of parts and contains no differences, while if it be at once fitted to produce movement and also subject to movement it must exhibit points of difference? (2) Further, it is a doctrine of the schools that the line when moved produces a superficies, and the point when moved creates a line. Thus then since the point is merely a unit or monad possessing such and such a situation, and the number of the soul is no doubt somewhere and possesses a certain position, it follows that the movements of monads or units will be lines also [not souls or animate existences]. Besides (3) if we take away a number or unit from a number, it is another and a different number that is left: whereas plants and many animals live after they have been divided and are held to possess specifically the same and not a different soul. Besides (4) there would appear to be no difference between speaking of monads or of infinitely small particles: if points be formed out of the globules of Democritus and quantity alone remain, still there will be in this as in everything continuous, something moving on the one hand, something moved on the other; as this law is the result not of any difference in size but rests simply on the ground that the one object as the other is a quantity. Thus then there must be something which will set the monads in motion. But if it be soul which produces movement in the animal, it will be soul which does so also in the number: so that the soul is not at once the moving and the moved, but the moving factor only. How then (5) can soul, being thus the moving factor only, be a monad? Supposing it to be a monad, it must be different from other monads: but what difference can there be between one monadic point and another except position? Thus then (6) if, on the one hand, the monads as also the points of the body are different from one another, still the monads will be in the same space as the latter—because
καθέξει γὰρ χῶραν στιγμῆς. καίτοι τί κωλύει ἐν τῷ αὐτῷ ἐγένετο, εἰ δύο, καὶ ἀπείρους; ὡν γὰρ ὁ τόπος ἀδιαίρετος,

§ 21 καὶ αὐτά. εἰ δ' αἱ ἐν τῷ σώματι στιγμαὶ ὁ ἀριθμὸς ὁ τῆς ψυχῆς, ἢ εἰ ὁ ἐκ τῶν ἐν τῷ σώματι στιγμῶν ἀριθμὸς ἡ ψυχῆ, διὰ τί οὖ πάντα ψυχῆν ἔχουσι τὰ σώματα; στιγμαὶ

§ 22 γὰρ ἐν ἀπασί δοκοῦσιν εἶναι καὶ ἀπειροῦν. ἔτι δὲ πῶς οὖν τε χωρίζονται τὰς ψυχὰς καὶ ἀπολύεσθαι τῶν σωμάτων, εἰ γε μὴ διαρροῦνται αἰ γραμμαὶ εἰς στιγμάς;

§ 1 V. Συμβαίνει δὲ, καθάπερ εἴπομεν, τῇ μὲν ταύτῳ λέγειν τοῖς σώματι τι λεπτομερές αὐτῇν τιθείσα, τῇ δ' ὅστερ δημόκριτος κινεῖσθαι φησιν ὑπὸ τῆς ψυχῆς, ἵναν τὸ ἄτομον. 

409b εἴπερ γὰρ ἐστιν ἡ ψυχὴ ἐν παντὶ τῷ αἰσθανομένῳ σώματι, ἀναγκαίον ἐν τῷ αὐτῷ δύο εἶναι σώματα, εἰ σώμα τι ἡ ψυχὴ τοῖς δ' ἀριθμοῖ λέγοντο, ἐν τῇ μιᾷ στιγμῇ πολλαῖς στιγμαῖς ἡ πάν σώμα ψυχήν ἔχειν, εἰ μὴ διαφέρων τὸς ἀριθμὸς ἐγγίνεται καὶ ἄλλος τις τῶν ὑπάρχοντων ἐν

§ 2 τῷ σώματι στιγμῶν. συμβαίνει τε κινεῖσθαι τὸ ἱδίον ὑπὸ τοῦ ἀριθμοῦ, καθάπερ καὶ δημόκριτον ἔφαμεν αὐτὸ κινεῖν τί γὰρ διαφέρει σφαίρας λέγειν σμικρὰς ἡ μοιάδας μεγάλας, ἡ ὅλως μοιάδας φερομένας; ἀμφοτέρως γὰρ ἀναγ-10

§ 3 καὶ οὖν τὸ ἱδίον τῷ κινεῖσθαι ταῦτας. τοῖς δὲ συμπλεξασιν εἰς τὸ αὐτὸ κίνησιν καὶ ἀριθμοὺς ταῦτα τε συμβαίνει καὶ πολλὰ ἔτερα τοιαῦτα. οὐ γὰρ μόνον ὀρισμοῦ ψυχῆς ἀδύνατον τοιοῦτον εἶναι, ἄλλα καὶ συμβεβηκός. δὴ λοιπὸς δὲ εἰ

each monad will occupy the room of a point. But if two can be in the same place, what is there to prevent an endless number from being also in the same place? This, however, is absurd; those objects of which the space is indivisible are themselves also indivisible. If, on the other hand, the points in the body constitute the number of the soul, or if the soul be the number arising from the points in the body, why is it that all bodies do not possess a soul: seeing that there seems to be points in all of them even innumerable? And further we may ask, (7) how is it possible for souls to be separated and released from the body, considering at any rate that lines cannot be resolved into their points?

CHAPTER V.

There are then, as we have said, two consequences of this doctrine of the soul. On the one hand its supporters are brought to maintain a view identical with those who regard soul as some subtle body, while, on the other hand, they are landed in the peculiar absurdity which Democritus fell into in explaining how the body is moved by the soul. For if there be a soul in every sentient body, there must be two bodies within the same body, supposing the mind is a body of some sort or other: those, on the other hand, who say it is a number must either allow many points to exist within one point or else allow every body to possess a soul, unless the number be introduced as differing from other numbers and from the points existing in the body. It follows also that the living creature is moved by number much in the same way as we said Democritus moved it. For what difference does it make whether we speak of the movement of small globes or of large monads or of monads generally in movement? In either case the movement of the animal must be the result of the moving of these elements.

These and many other like consequences meet those who have combined together movement and number into one conception. Such a conception can not only not be the definition of soul: it cannot even be regarded as a concomitant attribute
τις ἐπιχειρήσεως ἐκ τοῦ λόγου τοῦτον τὰ πάθη καὶ τὰ ἔργα
τῆς ψυχῆς ἀποδιδόναι, οὗν λογισμοὺς, αἰσθήσεις, ἡδονᾶς,
λύτας, όσα ἄλλα τουλάχιστον γὰρ εἰσομεν πρῶτον,
§ 4 οὐδὲ μαντεύσεσθαι βάδιον εἰς αὐτῶν. τριῶν δὲ τρόπων παρα-
δεδομένων καθ' οὓς ὀρίζονται τὴν ψυχήν, οἱ μὲν τὸ κινητι-
κότατον ἀπεφήναντο τῷ κινεῖν ἐαυτό, οἱ δὲ σώμα τὸ λεπ-
tομερέστατον ἢ τὸ ἀσωματώτατον τῶν ἄλλων. τάῦτα δὲ
tίνας ἀπορίας τε καὶ ὑπεναντιώσεις ἔχει, διεληλύθαμεν
§ 5 σχεδὸν. λείπεται δ' ἐπισκέψασθαι πῶς λέγεται τὸ ἐκ τῶν
στοιχείων αὐτὴν ἔχω. λέγουσι μὲν γάρ, ὦν 'αἰσθάνηται τε
τῶν ὄντων καὶ ἐκαστὸν γνωρίζῃ, ἀναγκαῖον δὲ συμβαίνειν
πολλαί καὶ ἀδύνατα τῷ λόγῳ. τίθεσθαι γὰρ γνωρίζειν τῷ
ὄμοιῳ τὸ ὄμοιον, ὡσπερ ἢν εἰ τῆν ψυχήν τὰ πράγματα
tιθέντες. οὐκ ἔστι δὲ μόνα ταῦτα, πολλὰ δὲ καὶ ἑτερα,
§ 6 μάλλον δ' ἵσως ἀπειρα τὸν ἀριθμὸν τὰ ἐκ τοῦτων. εἰς οὖν
μὲν οὖν ἐστὶν ἐκαστὸν τούτων, ἐστώ γινώσκειν τὴν ψυχήν καὶ
'αἰσθάνεσθαι· ἄλλα τὸ σύνολον τίνι γνωριεί ἢ 'αἰσθήσεται,
οἰον τὶ θεός ή ἀνθρώπος ή σάρξ ή ὀστοῦ; ὀμοίως δὲ καὶ
ὅτι οὖν ἄλλο τῶν συνθέτων· οὐ γὰρ ὀπασοῦν ἔχοντα τὰ στοι-
χεῖα τοῦτων ἐκαστὸν, ἄλλα λόγῳ τινὶ καὶ συνθέσει, καθάπερ
φησὶ καὶ Ἑμπεδοκλῆς τὸ ὀστοῦν.

ἡ δὲ χθῶν ἐπιπρός ἐν εὐστέρνον χοάνοισιν
τῷ δύο τῶν ὁκτὼ μερέων λάχει νησίτιδος αὐγῆς,
tέσσαρα δ' 'Ηφαῖστου· τὰ δ' ὀστέα λεύκ' ἐγένοντο.
οὐδὲν οὖν ὁφέλος εἶναι τὰ στοιχεία ἐν τῇ ψυχῇ, εἰ μὴ καὶ οἱ
λόγοι ἐνέστονται καὶ ἡ σύνθεσις· γνωριεῖ γὰρ ἐκαστὸν τὸ
ὄμοιον, τὸ δ' ὀστοῦν ἢ τὸν ἀνθρώπον οὐθέν, εἰ μὴ καὶ ταῦτ'
of it. This is evident when we attempt to explain by reference to such a notion the feelings and functions of the soul, as for instance, its ratiocinations, perceptions, pleasures, pains, &c.: as we said before, it is not even easy by the help of the imagination to conjecture from it what would be their character.

Thus then we have gone through the difficulties and objections which may be raised against two of the three methods of defining soul which have been transmitted to us. Some we have seen have regarded it as the most mobile element because it possesses the power of moving itself: others have viewed it as a body of the subtlest and the finest parts or as the most incorporeal of all other bodies. It remains to examine the sense in which it is said to be compounded of the different elements.

The object of this conception of the soul is, say its supporters, to explain how it can perceive the objects of existence and gain knowledge of each individual thing. A number of impossibilities, however, necessarily follow on this doctrine. It assumes, to begin with, that like is known by like, thus identifying, as it were, the soul with the things it knows. Our objects of knowledge however include not only elements but many other things besides, and, what is perhaps still more worthy of notice, the things compounded of these elements are unlimited in number. Now granting that the soul knows and perceives in the way described the elements from which each of these is formed, still, we may ask, by which will it know or perceive the concrete whole, as for example what is God or man or flesh or bone, and similarly any composite object? The different elements do not seem to compose each of these objects in any way whatever but according to a certain ratio and adjustment, as Empedocles himself says with respect to bone.

Then did the earth the productive within the huge furnace primeval
Gain out of eight parts two of the liquid transparently crystal;
Four parts came from the fire; and the bones white came to existence.

Obviously then there is no good in the elements being present in the soul, unless the ratios and the different adaptations be present also; for although each element may recognise its similar, still it will acquire no knowledge of a bone or of a human being,
περὶ ΨΤΧΗΣ Α.

ένεσται. τόπτο δ' ὅτι ἀδύνατον, οὐθέν δὲι λέγειν· τίς γὰρ ἄν ἀπορήσειν εἰ ἑνεστὼν ἐν τῇ ψυχῇ λίθος ἡ ἀνθρωπος; ὁμοίως δὲ καὶ τὸ ἀγαθὸν καὶ τὸ μὴ ἀγαθὸν. τῶν αὐτῶν δὲ τρόπον

§ 7 καὶ περὶ τῶν ἄλλων. ἔτι δὲ πολλαχῶς λεγομένου τοῦ ὄντος (σημαινεί γὰρ τὸ μὲν τόδε τι, τὸ δὲ ποσὸν ἡ ποιόν ἡ καὶ τινὰ ἄλλην τῶν διαρεθεισῶν κατηγοριῶν) πότερον εἰς ἀπάντων ἐσται ἡ ψυχὴ ἡ οὐ; ἀλλ' οὐ δοκεῖ κοινὰ πάντων εἶναι στοιχεία. ἂρ' οὖν οὐσία τῶν οὐσιῶν ἐκ τούτων μόνον; πῶς οὖν γνῶσκει καὶ τῶν ἄλλων ἐκαστὸν; ἡ φήσουσιν ἐκαστὸν γένους εἶναι στοιχεία καὶ ἀρχὰς ἱδίας, εἰς δὲν τὴν ψυχὴν συνεστάναι; ἔσται ἄρα ποσὸν καὶ ποιὸν καὶ οὐσία. ἀλλ' ἀδύνατον ἐκ τῶν τοῦ ποσοῦ στοιχείων οὐσίαν εἶναι καὶ μὴ ποσὸν. τοῖς δ' λέγοντον ἐκ πάντων ταύτα τε καὶ τοιαύθεν ἐτερα συμβαίνει.

§ 8 ἀποτολοῦν δὲ καὶ τὸ φάναι μὲν ἀπαθές εἶναι τὸ ὄμοιον ὑπὸ τοῦ ὄμοιον, αἰσθάνεσθαι δὲ τὸ ὄμοιον τοῦ ὄμοιον καὶ γνώσκειν τῷ ὄμοιῳ τὸ ὄμοιον. τὸ δ' αἰσθάνεσθαι πάσχειν τι καὶ κυ-νείσθαι τιθέασιν' ὁμοίως δὲ καὶ τὸ νοεῖν τε καὶ γνώσκειν.

§ 9 πολλακι ὅ' ἀπορίας καὶ δυσχερείας ἔχοντος τοῦ λέγειν, καθάπερ Ἐμπεδοκλῆς, ὅς τοὺς σωματικοὺς στοιχείους ἐκαστα γνωρίζεται καὶ πρὸς τὸ ὄμοιον, μαρτυρεῖ τὸ νῦν λεχθέν· ὅσα γὰρ ἑνεστὼν ἐν τοῖς τῶν ζώων σώμασιν ἀπλῶς γῆς, οἴον 30 ὅστα νεύρα τρίχες, οὐθένος αἰσθάνεσθαι δοκεῖ, ὥστ' οὐδὲ τῶν 41ο

§ 10 ὀμοίων. καίτοι προσηκεν. ἔτι δ' ἐκάστῃ τῶν ἀρχῶν ἀγνοια

17. μόνων STUVX. 20. ἀλλ' ἀδύνατον...καὶ μὴ ποσὸν ante έσται—οὐσία Trend. 29. πρὸς τὸ ὄμοιον] τῷ ὄμοιῳ τὸ ὄμοιον Tor. || λεχθέν] λεχθησόμενον T 30. έστιν EWX Tor.
unless these be present within it also. It need hardly be said however that this is quite impossible: who could question whether such an object as a stone or man is present in the soul? And the same thing may be said of the good and not-good, as also in other cases.

Being, it may be objected further, is a term used in various senses: it indicates now concrete substance, now quantity or quality, or it may be some other of the categories as they are distinguished. Is soul then, it may be asked, to be composed of all the categories or not? To the former supposition it may be at once replied that there are no elements which are common to all the categories. Does then, we may ask, the soul consist merely of the elements that fall under the category of substance? In that case, how does it come to have knowledge of each also of the other categories? Will it be said that every category of being has its own elements and appropriate principles and that the soul consists of these? The result then will be that the soul will have to be a quantity and quality as well as a substance. But out of the elements of quantity it is impossible that a substance should be formed: only a quantity can arise from elements of quantity. Such are the difficulties as well as others of a similar character involved in holding that the soul consists of all the elements.

It is a further inconsistency in the supporters of this doctrine that, while asserting that like perceives like and that we know like by like, they maintain that like is unaffected by like, and at the same time explain perception as a kind of affection and of being moved, and treat thinking and cognition in a similar fashion. There are in fact many difficulties and perplexities involved in saying with Empedocles that everything is known through the corporeal elements and that the similar is apprehended by the similar—as is especially attested by the fact that all those parts within the bodies of animals, which are composed of earth simply—as for example bones, sinews, hairs—are held to perceive nothing and thus not even those things which are like them—although according to the theory they should.

It may be added further that each one of the elemental

W. AR.
πλείων ἡ σύνεσις ὑπάρξει· γνώστεται μὲν γὰρ ἐν ἐκαστον, 
πολλὰ δ᾿ ἀγνοήσει· πάντα γὰρ τὰλλα. συμβαίνει δ᾿ Ἐμ-
pedokleis gev καὶ ἀφρονεόστατον εἶναι τὸν θεόν· μόνος γὰρ τῶν ἵ
stoiχεῶν ἐν οὐ γνωριεῖ, τὸ νείκος, τὰ δὲ θυτὴ πάντα· ἐκ
§ 11 πάντων γὰρ ἐκαστον. ὅλως τε διὰ τὸν αἰτίαν οὐχ ἀπαντά
ψυχὴν ἔχει τὰ ὄντα, ἐπειδὴ πᾶν ἡ στοιχεῖον ἢ ἐκ στοιχείου
ἐνὸς ἡ πλειόνων ἢ πάντων; ἀναγκαῖον γὰρ ἐστὶν ἐν τι γι-
§ 12 νῶσκεω ἡ τυνὰ ἡ πάντα. ἀπορήσεις δ᾿ ἀν τις καὶ τὶ ποτ᾿ ἔστι τὸ ἐνοποιοῦν αὐτά· ὣλη γὰρ ἐοικὲ τὰ γε στοιχεῖα, κυριώ-
tatov δ᾿ ἐκεῖνο τὸ συνεχὸν δ᾿ τὶ ποτ᾿ ἐστὶν· τῆς δὲ ψυχῆς
εἰναι τὶ κρείττον καὶ ἄρχον ἄδυνατον· ἄδυνατότερον δ᾿ ἐτὶ
tου νου· εὐλογοῦν γὰρ τοῦτον εἶναι προγενεόστατον καὶ κύριον
κατὰ φύσιν· τὰ δὲ στοιχεῖα φασι πρῶτα τῶν ὄντων εἶναι. 15
§ 13 πάντες δὲ καὶ οἱ διὰ τὸ γνωρίζειν καὶ αἰσθάνεσθαι τὰ ὄντα
τὴν ψυχὴν ἐκ τῶν στοιχείων λέγοντες αὐτήν, καὶ οἱ τὸ κι-
νητικότατον, οὐ̃ περὶ πάσης λέγουσι ψυχῆς. οὔτε γὰρ τὰ
ἀισθανόμενα πάντα κινητικά· φαίνεται γὰρ εἶναι τυα μο-
να τῶν ζωῶν κατὰ τόπον. καίτοι δοκεῖ τε ταύτην μόνην 20
τῶν κινήσεων καὶ νὴ ἡ ψυχὴ τὸ ζῷον. ὅμοιως δὲ καὶ ὅσοι τῶν
νοῦν καὶ τὸ αἰσθητικὸν ἐκ τῶν στοιχείων ποιοῦσιν· φαίνεται
γὰρ τὰ τε φυτὰ ζήτων οὐ μετέχουσα φορᾶς οὖν αἰσθήσεως,
§ 14 καὶ τῶν ζῶων πολλὰ διάνοιαν οὐκ ἔχειν. εἰ δὲ τις καὶ ταῦτα

3. πλέον SUVWXy. 6. γνωρίζει E. Tor. 8. ἢ στ.] ὅτι οἱ στ. Tor. 12. δ᾿ pr. E. Tor., γὰρ ceteri. 18. ἀπάσης STUVWXy.
principles will have much more ignorance than understanding: because while each element will know some individual object, it will be ignorant of many; as in fact it will be ignorant of everything else outside this one. Nay in fact Empedocles has to face the conclusion that God is most destitute of understanding: for he alone will have no knowledge of one among the elements—viz. strife, although all things mortal will possess this, because they are each compounded out of all the elements.

There is, besides, a general inconsistency which may be brought against the theory. Why is it on this supposition that all objects of existence do not possess a soul? Every one of them is either an element or formed from some one element or from several or all of them; and such objects must necessarily know one thing or some or all.

The question might besides be raised, what is it that brings the elements to unity? The elements themselves resemble mere unformed matter, and it is the synthetic force, whatever it may be, which is most important. Now it is impossible that there should be anything superior to soul or dominating it: and still more impossible that there should be anything superior to reason: for reason, it is to be believed, is by nature first born and supreme. And yet the philosophers in question make the elements the first forms of existence.

A general objection which may be brought both against those who, because the soul perceives and knows things existing, describe it as formed from the elements, and also against those who make it the most mobile principle, is that their statement does not apply to every form of soul. Sentient beings are not in every case capable of movement: some animals in fact appear to be stationary in place: although at the same time this is thought to be the only form of movement by which soul 'moves' the animal. A like objection falls on those who construct reason and the faculty of sense out of the elements: for plants [of which their theory takes no account, although compounded of the elements] appear to live without partaking in locomotion or sensation, and there are many animals which appear to have no powers of discursive reasoning. But even if this be granted and reason as well as the faculty of sense
παραχωρήσειν, καὶ θείη τῶν νοῶν μέρος τι τῆς ψυχῆς, ὁμοίως "δὲ καὶ τὸ αἰσθητικόν, ouden ἄν οὕτω λέγοιεν καθόλου περὶ 
§ 15 πάσης ψυχῆς ouden περὶ ολῆς μιὰς. τούτῳ δὲ πέπονθε 
καὶ ὁ ἐν τοῖς Ὀρφικοῖς ἔστιν καλομένοις λόγοις. φησὶ γὰρ 
τὴν ψυχὴν ἐκ τοῦ οἴου εἰσίναι ἀναπνεόντων, φερομένην ὑπὸ 
τῶν ἀνέμων. οὐχ οἶδον τε δὴ τοῖς φυτοῖς τοῦτο συμβαίνειν οὔδὲ 
τῶν ζῴων ἐνίοις, εἴπερ μὴ πάντα αναπνεόστω. τούτῳ δὲ 411 
§ 16 λέληθε τοὺς οὕτως ὑπειληφότας. εἰ δὲ δεῖ τὴν ψυχὴν ἐκ τῶν 
στοιχείων ποιεῖν, οὐθὲν δεῖ εἶ ἀπάντων. Ἰκανόν γὰρ θάτερον 
μέρος τῆς ἐναντιωσέως εἀντό τε κρίνει καὶ τὸ ἀντικείμενον. 
καὶ γὰρ τῷ εὐθείᾳ καὶ αὐτῷ καὶ τὸ καμπύλον γυνώσκομεν· 5 
κρυτῆς γὰρ ἀμφοῖν ὁ κανὼν, τὸ δὲ καμπύλον οὔθ' ἐαντοῦ 
§ 17 οὔτε τοῦ εὐθείος. καὶ ἐν τῷ ὄλω δὲ τνεῖ αὐτήν μεμιχθαί 
φασιν, οἷον ἰσως καὶ Θαλῆς φήμη πάντα πλήρη θεῶν εἶναι. 
§ 18 τούτῳ δὲ ἔχει τινὰς ἀπορίας· διὰ τίνα γὰρ αἰτίαν ἐν μὲν τῷ 
ἀέρι ἢ τῷ πυρὶ οὕσα ἡ ψυχή οὐ ποιεῖ ζῷον, ἐν δὲ τοῖς μι- 10 
§ 19 κτοῖς, καὶ ταύτα βελτίων ἐν τούτοις εἶναι δοκοῦσα; (ἐπιζητή- 
σεις γὰρ ἀν τοῦ καὶ διὰ τῶν αἰτίαν ἡ ἐν τῷ ἀέρι ψυχή τῆς 
§ 20 εν τοῖς ἐφαθείς βελτίων ἐστὶ καὶ ἀθανατωτέρα.) συμβαίνει δὲ 
ἀμφοτέρως ἀτοπον καὶ παράλογον· καὶ γὰρ τὸ λέγειν 
ζῷον τὸ πῦρ ἢ τὸν ἀέρα τῶν παραλογωτέρων ἐστὶ, καὶ τὸ 15 
§ 21 μὴ λέγειν ζῷα ψυχῆς ἐνούσης ἀτοπον. ὑπολαβέων δὲ ἐφικασὶν 
eiναι τὴν ψυχὴν ἐν τούτοις, ὅτι τὸ οἴον τοῖς μορίοις ὀμοειδὲς. 
ὡστε ἀναγκαῖον αὐτοῖς λέγει καὶ τὴν ψυχὴν ὀμοειδῆ τοῖς 
μορίοις εἶναι, εἰ τῷ ἀπολαμβάνεσθαι τι τοῦ περίχοντος ἐν 
toῖς ζῴοις ἐμψυχά τὰ ζῷα γίνεται. εἰ δὲ ὁ μὲν ἀὴρ διασπῶ- 20 
26. καθόλου om. TUV. Tor. 27. ὀοδὴ μιὰς ETUVW Trend., οὐδὲ περὶ 
μιὰς SX. 411a 2. eīte Bekk. Tor. 12. γάρ] γ' pr. E, δ' WX. 
15. παράλογων SUX. 19. ἀπολαμβάνειν STUW. 

regarded as parts only of the soul, not even then should we have a general statement made respecting every soul or even respecting the whole of one particular form of it.

A like defect meets us in the account given in the verses ascribed to Orpheus. The soul, it is there said, enters from the universe, being carried inwards by the winds as animals are breathing. Now this is impossible in the case of plants and also in the case of certain animals in so far as they are not known to breathe: but this the holders of this theory have failed to notice. But though it be necessary to construct the soul out of the elements, there is no necessity to compose it out of all of them: one or the other of two contraries is sufficient to distinguish at once itself and its opposite. Thus by means of the straight we judge both the straight line and the crooked, the rule being the standard of both, while the crooked on the other hand can act as standard neither to itself nor to its opposite the straight.

A general diffusion throughout the universe is claimed by some writers for the soul: it was in fact possibly this view which led Thales to assert that everything was full of Gods. This however is a theory which presents some difficulties. Why is it, for instance, that the soul which is in the air or in the fire does not produce an animal organism, while it does so in those objects which are mixed and compound, and this too though such thinkers hold the soul dispersed within the former to be the superior? With reference to which, we might further ask why it is that the soul in air is, as they hold, more excellent and more immortal than that amongst animals. In two ways, in fact, their theory is inconsistent with itself and paradoxical. To speak of fire or air as of an animal is rather paradoxical: to hold, on the other hand, that soul is present in them and yet not call them animals is inconsistent. So again, the ground on which they conceive soul to be present in these elements is the opinion that the whole is homogeneous with its parts: and thus it is incumbent on them to say that the soul is of like kind with its parts, if it be by acquiring part of their environment that animals become possessed of soul. If however the air when divided remains of one uniform kind, whereas the soul is (as
μενος ὀμοειδῆς, ἢ δὲ ψυχῆ ἀνομοιομερῆς, τὸ μὲν τι αὐτῆς ὑπάρξει δήλων ὤτι, τὸ δὲ οὐχ ὑπάρξει. ἀναγκαίον οὖν αὐτὴν ἢ ὀμοιομερῆ εἶναι ἢ μὴ ἐνυπάρχειν ἐν ὅτῳς μορίῳ τοῦ παν-

§ 22 τὸς. φανερὸν οὖν ἐκ τῶν εἰρημένων ὡς οὔτε τὸ γυνώσκειν ὑπάρ-
χει τῇ ψυχῇ διὰ τὸ ἐκ τῶν στοιχείων εἶναι, οὔτε τὸ κυνεί-

§ 23 σθαί αὐτὴν καλῶς οὐδ' ἀληθῶς λέγεται. ἐπεὶ δὲ τὸ γυνώ-
σκεν τῆς ψυχῆς ἐστὶ καὶ τὸ αἰσθάνεσθαι τε καὶ τὸ δοξά-
ζειν, ἐτι δὲ τὸ ἐπιθυμεῖν καὶ βούλεσθαι καὶ ὅλως αἱ ὀρέξεις,
γίνεται δὲ καὶ ἡ κατὰ τόπου κύνησις τοῖς ἄφοι ὑπὸ τῆς
ψυχῆς, ἐτι δ' αὐξῆ τε καὶ ἀκμή καὶ φθίσις, πότερον ὅλη 30
τῇ ψυχῇ τοῦτων ἐκαστον ὑπάρχει, καὶ πάσῃ νοοῦμεν τε καὶ 411b
αἰσθανόμεθα καὶ τῶν ἀλλῶν ἐκαστὸν ποιοῦμεν τε καὶ πάσχο-
μεν, ἡ μορίου ἐτέρους ἑτερα; καὶ τὸ ζῆν δὴ πότερον ἐν τω
τούτων ἐστὶν ἐν ἡ καὶ ἐν πλείον ἡ πᾶσιν, ἡ καὶ ἀλλὸ τι

§ 24 αἴτιον; λέγουσι δὴ τινες μεριστῆν αὐτῆς, καὶ ἄλλῳ μὲν 5
νοεῖν ἄλλῳ δὲ ἐπιθυμεῖν. τὶ οὖν δὴ ποτε συνεχεῖ τῇ ψυχῇ,
εἰ μεριστῇ πέφυκεν; οὐ γὰρ δὴ τὸ γε σῶμα· δοκεῖ γὰρ του-
νατίον μᾶλλον ἡ ψυχὴ τὸ σῶμα συνέχειν· ἔξελθούσης γοῦν
dιαπνεύται καὶ σήπεται. εἰ οὖν ἐτερῶν τι μίαν αὐτὴν ποιεῖ,
ἐκεῖνο μάλιστ' ἀν εἴη ψυχή. δεησε δὲ καὶ πάλιν κακείνο το
ζητεῖν, πότερον ἐν ἡ πολυμερές. εἰ μὲν γὰρ ἐν, διὰ τί οὐκ
εὐθέως καὶ ἡ ψυχὴ ἐν; εἰ δὲ μεριστῶν, πάλιν ὁ λόγος ζη-
tήσει τί τὸ συνέχον ἑκεῖνο, καὶ οὐτώ δὴ πρὸεισώ ἐπὶ τὸ

§ 25 ἀπειρον. ἀπορήσειε δ' ἀν τις καὶ περὶ τῶν μορίων αὐτῆς,
tίν' ἔχει δύναμιν ἐκαστὸν ἐν τῷ σῶματι. εἰ γὰρ ἡ ὅλη 15
ψυχὴ πάν τὸ σῶμα συνέχει προσήκει καὶ τῶν μορίων

28. δὲ καὶ τὸ SUWX || βουλευόμεθα TUVWXy. 30. αὐξῆς STUVWX.

411b 2. αὐθ. καὶ κυνοῦμεθα καὶ EVW Tor. 6. ἄλλῳ] ἄλλο EW Ald. Tor. 10. καὶ om. E Tor. 12. καὶ τὴν ψυχὴν ἐν SUWX.
they maintain) of different kinds, it is clear that some part of it will, some other will not, be present. Either then the soul of living creatures must be throughout homogeneous, or soul cannot exist in every elemental part of the universe.

It is clear then from what has been said, that neither does cognition attach to the soul in consequence of its being composed of elements, nor can it be said with any appropriateness or truth that it is moved. Knowledge however is a property of the soul, and so also is perception and opinion, and further appetite and volition and desire in general: and it is by the agency of the soul that animals possess local movement and powers of growth, and reach their full development and final dissolution.

The question therefore rises, whether it is to the whole of the soul that each of these belongs, and whether we think and perceive and in general perform each of our functions, active and passive, with the whole of it, or, on the contrary, do we perform different functions with different parts. And as for life likewise we must ask whether it is contained in some one of these parts or in several of them, or whether it may be even in all of them, or whether it is something else which is its cause.

There are indeed some thinkers, who assert that the soul is divided into parts, and that it reasons with one part, desires with another part. But what, we may then ask, is it, if the soul be originally and naturally divided—what is it that holds the soul together? It cannot certainly be the body: on the contrary, the soul would generally be said to unite the body; at least when the soul has made its exit from it, the body is dissolved and rots. If then it be something else that makes it one, this something else could only be the soul; and as to that something else it will be needful in turn to inquire, whether it is one or made of many parts. If it be one, why should not the soul be this unity at once? if divided, reason will again inquire what it is that binds it together: and so the process will go on for ever.

Questions might be raised also about the different parts of soul, and we might ask what power is it that each exercises in the body: for if the soul as one whole unites the body as a whole, it is probable that each also of the parts unites and binds some
ἐκαστον συνέχειν τι τοῦ σώματος. τοῦτο δὲ ἐοικεν ἀδυνάτῳ· ποίον γὰρ μόριον ἢ πῶς ὃ νοῦς συνέχει, χαλεπῶν καὶ πλά-
§ 26 σαι. φαίνεται δὲ καὶ τὰ φυτὰ διαιρούμενα ζῆν καὶ τῶν
ζώων ἐνα τῶν ἐντόμων, ὡς τήν αὐτήν ἔχοντα ψυχὴν τῷ 20
εἴδει, εἰ καὶ μὴ ἀριθμῷ· ἐκάτερον γοῦν τῶν μορίων αἰσθησιν
ἔχει καὶ κινεῖται κατὰ τόπον ἐπὶ των χρόνων. εἰ δὲ μὴ
dιατελοῦσιν, οὐθὲν ἄτοπον· ὅργανα γὰρ οὐκ ἔχουσιν ὡστε σώ-
ζεων τῆν φύσιν. ἀλλ' οὐδὲν ἤττουν ἐν ἐκατέρῳ τῶν μορίων
ἀπαντ' ἐνυπάρχει τὰ μόρια τῆς ψυχῆς, καὶ ὁμοειδὴ εἰσὶν 25
ἄλληλοις καὶ τῇ ὀλη, ἄλληλων μὲν ὡς οὐ χωριστὰ ὄντα,
§ 27 τῆς δ' ὀλῆς ψυχῆς ὡς διαιρετῆς οὐσίας. ἐοικε δὲ καὶ ἡ ἐν
.τοῖς φυτοῖς ἀρχή ψυχῆς τις εἶναι· μόνης γὰρ ταύτης κοινωνεί
καὶ ζῶα καὶ φυτά. καὶ αὐτὴ μὲν χωρίζεται τῆς αἰσθητικῆς
ἀρχῆς, αἰσθησιν δ' οὖθεν ἄνευ ταύτης ἔχει.

18. συνέχει EV. 21. γοῦν] γὰρ ET Tor. 25. ὁμοειδεῖς εἰσὶν
ἄλληλαις STUVX Tor. 28. ἀρχὴ ψυχῆ] ψυχὴ ἀρχὴ T. Tor.
portion of the body. This however seems impossible: it is
difficult even to imagine what part reason will connect, or in
what manner it will do so. Plants furthermore are found to
live after they have been divided, and so also among animals
are some insects—a fact implying that their different parts
possess a soul which, if not numerically one, is still specifi-
cally the same: each at any rate of the separate parts pos-
sesses sensation, and displays a power of local movement for
some time. That they do not continue to do so, is no matter
for surprise, because the parts in question do not possess such
organs as will maintain their nature. None the less, all the
parts of soul are present in each one of these parts, and they
are homogeneous with one another and with the soul taken as
a whole, standing to one another as inseparable but to the whole
soul as though it were divisible. Further also, the principle
of life in plants seems to be a kind of soul: for this alone is
common at once to animals and plants, and while it can itself
exist separate from the principle of sense, there is still no
living object that can possess sensitive capacities without having
this capacity of growth which plants display.
ΑΡΙΣΤΟΤΕΛΟΥΣ

ΠΕΡΙ ΨΥΧΗΣ Β.

§ 1 Τά μέν δὴ ύπο τῶν πρῶτον παραδεδομένα περὶ ψυ-412α χῆς εἰρήσθων πάλιν δ’ ὁσπερ ἐξ ὑπαρχῆς ἐπανίωμεν, πειρώμενοι διορίσαι τί ἐστι ψυχή καὶ τίς ἂν εἰ ἦν κοινότατος 5

§ 2 λόγος αὐτῆς. λέγομεν δὴ γένος ἐν τι τῶν οὐντῶν τὴν οὐσίαν, ταύτης δὲ τὸ μὲν ὡς ὑλή, δ’ καθ’ αὐτὸ μὲν οὐκ ἔστι τόδε τι, ἐτερον δὲ μορφὴν καὶ εἴδος, καθ’ ἦν ἦδη λέγεται τόδε τι, καὶ τρίτον τὸ ἐκ τούτων. ἔστι δ’ ἤ μὲν ὡς δύναμις, τὸ δ’ εἴδος ἐντελέχεια, (καὶ τοῦτο διχῶς, τὸ μὲν ὡς ἐπιστήμη, 10 § 3 τὸ δ’ ὡς τὸ θεωρεῖν). οὐσίας δὲ μάλιστ’ εἶναι δοκοῦσι τὰ σώματα, καὶ τούτων τὰ φυσικά ταῦτα γὰρ τῶν ἄλλων ἀρχαί. τῶν δὲ φυσικῶν τὰ μὲν ἔχει ζωήν, τὰ δ’ οὐκ ἔχειν. ζωὴν δὲ λέγομεν τὴν δ’ αὐτοῦ τροφὴν τε καὶ αὐξησιν καὶ φθίσιν. ὁμετερότατον σώμα φυσικὸν μετέχου ζωής οὐσία ἂν 15

BOOK SECOND.

CHAPTER I.

The psychological theories of earlier thinkers have occupied us hitherto. We will now take up the subject as it were afresh, and attempt to determine what soul is, and what is the most comprehensive definition that can be given of it.

Real substance is the name which we assign one class of existing things; and this real substance may be viewed from several aspects, either, first, as matter, meaning by matter that which in itself is not any individual thing; or secondly, as form and specific characteristic in virtue of which an object comes to be described as such and such an individual; or thirdly, as the result produced by a combination of this matter and this form. Further, while matter is merely potential existence, the form is perfect realization (a conception which may be taken in two forms, either as resembling knowledge possessed or as corresponding to observation in active exercise).

These real substances again are thought to correspond for the most part with bodies, and more particularly with natural bodies, because these latter are the source from which other bodies are formed. Now among such natural bodies, some have, others do not have life, meaning here by life the process of nutrition, increase and decay from an internal principle. Thus every natural body possessed of life would be a real substance, and a substance which we may describe as composite.
§ 4 εἴη, οὐσία δ' οὗτος ὡς συνθέτη. ἐπεί δ' ἔστι σῶμα καὶ τοιοῦτο, ζωὴν γὰρ ἔχων, οὐκ ἂν εἴη τὸ σῶμα ψυχή· οὐ γὰρ ἐστὶ τῶν καθ' ὑποκειμένου τὸ σῶμα, μᾶλλον δ' ὡς ὑποκειμένου καὶ ὅλη. ἀναγκαῖον ἂρα τὴν ψυχήν οὕσιαν εἶναι ὡς εἴδος σώματος φυσικοῦ δυνάμει ζωὴν ἔχοντος. 20 ἢ δ' οὐσία ἐντελέχεια. τοιοῦτον ἂρα σῶματος ἐντελέ-

§ 5 χεία. αὕτη δὲ λέγεται διιχῶς, ἢ μὲν ὡς ἐπιστήμη, ἢ δ' ὡς τὸ θεωρεῖν. φανερὸν οὖν ὅτι ὡς ἐπιστήμη· ἐν γὰρ τῷ ὑπάρχειν τὴν ψυχὴν καὶ ὑπνοι καὶ ἐγρήγορσίς ἐστιν, ἀνάλογον δ' ἢ μὲν ἐγρήγοροι τῷ θεωρεῖν, ὃ δ' ὑπνοι τῷ ἐχειν καὶ μὴ ἑνεργεῖν. προτέρα δὲ τῇ γενέσει ἐπὶ τοῦ αὐτοῦ ἢ ἐπιστήμη. διὸ ψυχή ἐστιν ἐντελέχεια ἡ πρώτη σῶματος

§ 6 φυσικοῦ δυνάμει ζωὴν ἔχοντος. τοιοῦτο δὲ, ὃ ἂν ἢ ὦργανικὸν. ὦργανα δὲ καὶ τὰ τῶν φυτῶν μέρη, ἀλλὰ παντελῶς ᾧ ἀπλὰ, οἷον τὸ φύλλον περικαρπίου σκέτασμα, τὸ δὲ περικάρπιον καρποῦ. αἱ δὲ βίζαι τῷ στόματι ἀνάλογον· ἀμφότεροι γὰρ ἔλκει τὴν τροφήν. εἰ δὴ τι κοινὸν ἐπὶ πᾶσης ψυχῆς δεὶ λέγειν, εἰ γὰρ ἐντελέχεια ἡ πρώτῃ σῶματος φυσικοῦ

§ 7 ὦργανικοῦ. διὸ καὶ οὐ δεῖ ζητεῖν εἰ ἐν ἡ ψυχή καὶ τὸ σῶμα, ὡσπερ οὐδὲ τῶν κηρῶν καὶ τὸ σχῆμα, οὐδ' ὀλος τὴν ἐκάστου ζωήν καὶ τὸ οὐ ζωή τὸ γὰρ. ἐν καὶ τὸ εἶναι ἐπεὶ πλεονα-

Since then the body, as possessed of life, is of this compound character, the body itself would not constitute the soul: for body is not [like life and soul] something attributed to a subject; it rather acts as the underlying subject and the material basis. Thus then the soul must necessarily be a real substance, as the form which determines a natural body possessed potentially of life. The reality however of an object is contained in its perfect realization. Soul therefore will be a perfect realization of a body such as has been described. Perfect realization however is a word used in two senses: it may be understood either as an implicit state corresponding to knowledge as possessed, or as an explicitly exercised process corresponding to active observation. Here, in reference to soul, it must evidently be understood in the former of these two senses: for the soul is present with us as much while we are asleep as while we are awake; and while waking resembles active observation, sleep resembles the implicit though not exercised possession of knowledge. Now in reference to the same subject, it is the implicit knowledge of scientific principles which stands prior. Soul therefore is the earlier or implicit perfect realization of a natural body possessed potentially of life.

Such potential life belongs to everything which is possessed of organs. Organs however, we must remember, is a name that applies also to the parts of plants, except that they are altogether uncompounded. Thus the leaf is the protection of the pericarp and the pericarp of the fruit; while the roots are analogous to the mouth in animals, both being used to absorb nourishment. Thus then, if we be required to frame some one common definition, which will apply to every form of soul, it would be that soul is the earlier perfect realization of a natural organic body.

The definition we have just given should make it evident that we must no more ask whether the soul and the body are one, than ask whether the wax and the figure impressed upon it are one, or generally inquire whether the material and that of which it is the material are one; for though unity and being are used in a variety of senses, their most distinctive sense is that of perfect realization.
§ 8 χώς λέγεται, τὸ κυρίως ἡ ἐντελέχεια ἐστιν. καθόλου μὲν οὖν εὑρήται τί ἐστιν ἡ ψυχή: οὐσία γὰρ ἡ κατὰ τὸν λόγον. τούτῳ δεῖ τὸ τί ἢν εἶναι τῷ τοιῷδε σώματι, καθάπερ εἰ τι τῶν ὀργάνων φυσικῶν ἐν σώμα, οἷον πέλεκυς: ἢν μὲν γὰρ ἂν τὸ πελέκει εἶναι ἡ οὐσία αὐτοῦ, καὶ ἡ ψυχή τοῦτο: χωρισθείσης γὰρ ταύτης οὐκ ἂν ἦν ἐπὶ πελέκεις ἢν, ἀλλὰ ἡ ὀμωνύμως. νῦν δὲ ἐστὶ πελέκυς: οὐ γὰρ τοιῷτου σώματος τὸ τί ἢν εἶναι καὶ ὁ λόγος ἡ ψυχή, ἀλλὰ φυσικῶς τοιῷδε ἔχουν:
§ 9 τοις ἀρχηγοῖς κυνήσεως καὶ στάσεως ἐν ἑαυτῷ. θεωρεῖν δὲ καὶ ἐπὶ τῶν μερῶν δεῖ τὸ λεγέν. εἰ γὰρ ἢν ὁ ὀφθαλμὸς ζῷον, ψυχή ἂν ἢν αὐτοῦ ἡ ψύσι: αὐτὴ γὰρ οὐσία ὀφθαλμοῦ ἡ κατὰ τὸν λόγον. ὁ δὲ ὀφθαλμὸς ὑλὴ ὄψεως, ἡ ἀπολει-πούσης οὐκ ἐστὶν ὀφθαλμός, πλὴν ὀμωνύμως, καθάπερ ὁ λίθων καὶ ὁ γεγραμμένως. δεῖ δὴ λαβεῖν τὸ ἐπὶ μέρους ἐφ' ὅλου τοῦ ζωτοῦ σώματος: ἀνάλογον γὰρ ἐξεί ὡς τὸ μέρος πρὸς τὸ μέρος, οὕτως ἡ ὁλὴ αἰσθησις πρὸς τὸ ὅλον
§ 10 σώμα τὸ αἰσθητικὸν, ἡ τοιοῦτον. ἐστι δὲ οὐ τὸ ἀποβεβληκός τὴν ψυχὴν τὸ δυνάμει ὁ ὡστε ζῇν, ἀλλὰ τὸ ἔχον τὸ δὲ
§ 11 σπέρμα καὶ ὁ καρπὸς τὸ δυνάμει τοιοῦτο σῶμα. ὡς μὲν οὖν ἡ τμῆσις καὶ ἡ ὀρασίς, οὕτως καὶ ἡ ἐγρηγορος ἐντελέχεια, ὡς δὲ ἡ ψύσι καὶ ἡ δύναμις τοῦ ὀργάνου, ἡ ψυχή 413α τὸ δὲ σώμα τὸ δυνάμει ὡς ἀλλ' ὀστερὸν ὁ ὀφθαλμὸς ἡ κόρη καὶ ἡ ψύσι, κάκει ἡ ψυχὴ καὶ τὸ σῶμα τὸ ζωον.

9. λέγεται om. SUWX. 15. coni. Tor. νῦν δ' οὐκ ἔστιν. 20. coni. Tor. ὁ δ' ἄφθ. τὸ σῶμα, δ' δὲ κόρη ὑλὴ ὄψεως. || ἀπολειποῦσης TVW. Trend. 21. ἔστιν] ἔτι EX, οὐκέτι' Tor. 24. οὕτως om. UVWX. 413α 2. ὁ om. ESV. Tor. 3. τὸ ἀντε ζωον om. ETV. Tor.
A general account has thus been given of the nature of the soul: it is, we have seen, a real substance which expresses an idea. Such a substance is the manifestation of the inner meaning of such and such a body. Suppose, for example, that an instrument such as an axe were a natural body: then its axehood or its being an axe would constitute its essential nature or reality, and thus, so to speak, its soul; because were this axehood taken away from it, it would be no longer an axe, except in so far as it might still be called by this same name. The object in question, however, is as matter of fact only an axe; soul being not the idea and the manifestation of the meaning of a body of this kind, but of a natural body possessing within itself a cause of movement and of rest.

The theory just stated should be viewed also in reference to the separate bodily parts. If, for example, the eye were possessed of life, vision would be its soul: because vision is the reality which expresses the idea of the eye. The eye itself, on the other hand, is merely the material substratum for vision: and when this power of vision fails, it no longer remains an eye, except in so far as it is still called by the same name, just in the same way as an eye carved in stone or delineated in painting is also so described. Now what holds good of the part must be applied to the living body taken as a whole: for perception as a whole stands to the whole sensitive body, as such, in the same ratio as the particular exercise of sense stands to a single organ of sense.

The part of our definition which speaks of something as "potentially possessed of life" must be taken to mean not that which has thrown off its soul, but rather that which has it: the seed and the fruit is such and such a body potentially. In the same way then as cutting is the full realization of an axe, or actual seeing the realization of the eye, so also waking may be said to be the full realization of the body: but it is in the sense in which vision is not only the exercise but also the implicit capacity of the eye that soul is the true realization of the body. The body on the other hand is merely the material to which soul gives reality: and just as the eye is both the pupil and its vision, so also the living animal is at once the soul and body in connection.
§ 12 ὦτι μὲν οὖν ὦκ ἐστὶν ἡ ψυχὴ χωριστῇ τοῦ σῶματος, ἡ μέρη τινὰ αὐτῆς, εἰ μεριστῇ πέφυκεν, οὐκ ἄδηλον· ἐνίων γὰρ ἡ ἐντελέχεια τῶν μερῶν ἐστὶν αὐτῶν· οὐ μὴν ἀλλ' ἐνιὰ γε οὐθὲν κωλύει, διὰ τὸ μηθενὸς εἶναι σῶματος ἐντελεχείας.

§ 13 ἐτὶ δὲ ἄδηλον εἰ οὕτως ἐντελεχεία τοῦ σῶματος ἡ ψυχὴ ὅσπερ πλωτὴρ πλοίου. τύπῳ μὲν οὖν ταύτῃ διωρίσθω καὶ ὑπογεγράφθω περὶ ψυχῆς.

§ 1 Π. Ἐπεὶ δ' ἐκ τῶν ἀσαφῶν μὲν φανερωτέρων δὲ γίγνεται τὸ σάφες καὶ κατὰ τὸν λόγον γνωριμώτερον, περατεύον πάλιν οὕτως ἐπελθεῖν περὶ αὐτῆς· οὗ γὰρ μόνον τὸ ὦτι δεῖ τὸν ὁμοιότατον λόγον δηλοῦν, ὦσπερ οἱ πλείστοι τῶν ὁρῶν λέγουσιν, ἀλλὰ καὶ τὴν αὐτίαν ἐνυπάρχει καὶ ἐμφαίνεις. νῦν δ' ὦσπερ συμπεράσματος οἱ λόγοι τῶν ὁρῶν εἰσίν· οἷον τί ἐστι τετραγωνισμός; τὸ ἵσον ἐπερομήκει ὁρθογώνων εἶναι ἴσοπλευρον. ὃ δὲ τοιοῦτος ὁρος λόγος τοῦ συμπεράσματος. ὃ δὲ λέγων ὦτι ἐστὶν ὁ τετραγωνισμὸς μέσης εὐρεσις,

§ 2 τοῦ πράγματος λέγει τὸ αὐτίον. λέγομεν οὖν ἀρχὴν λαβὼν· τες τῆς σκέψεως, διωρίσθαι τὸ ἐμψυχον τοῦ ἄψυχον τῷ ζην. πλεοναχῶς δὲ τοῦ ζην λεγομένου, καὶ ἐν τῷ τούτῳ ἐνυπάρχῃ μόνον, ζην αὐτὸ φαμεν, οἷον νοῦς, αἴσθησις, κίνησις καὶ στάσις ἢ κατὰ τόπον, ἐτὶ κίνησις ἢ κατὰ τρόπον.

§ 3 φὴν καὶ φθίσων τε καὶ αὔξησιν. διὸ καὶ τὰ φυόμενα σάντα δοκεὶ ζην· φαίνεται γὰρ ἐν αὐτοῖς ἔχοντα δυναμιν

17. ἐστὶν ὁ τετρ. ESTUX. 18. λόγος om. ETV. 20. λέγωμεν TW. 21. σκέψεως|σκέψεως τοῦ πράγματος SUWX. 25. φθίσεις τε καὶ αὔξησις Bekk. Tor. ETV.
It is not then difficult to see that soul or certain parts of it (if it naturally admit of partition) cannot be separated from the body: for in some cases the soul is the realization of the parts of body themselves. It is however perfectly conceivable that there may be some parts of it which are separable and this because they are not the expression or realization of any particular body. And indeed it is further matter of doubt whether soul as the perfect realization of the body may not stand to it in the same separable relation as a sailor to his boat.

This much may suffice as a description and sketch of the nature of the soul.

CHAPTER II.

It is however by proceeding from that which in the order of nature is indistinct, but is relatively to us more obvious and manifest, that we reach what is clear and more intelligible in the order of thought. We must therefore make a fresh attempt to discuss soul in this manner. For a definition should not, as most definitions do, merely assert the existence of an object and say what it is: it should also contain and express the cause or reason of the object. But, as usually framed, the terms of definitions are merely like conclusions. Thus, for example, let us ask—What is squaring? Squaring, it will be answered, is the construction of a rectangular equilateral figure equal to another figure with unequal sides. Now such a definition is merely like the statement of a conclusion. To say, on the other hand, that squaring is the discovery of a mean proportional is to state the cause which explains the result.

It may serve as a fresh beginning for our inquiry to say that the animate is distinguished from the inanimate or soulless by the fact of life. There are a number of ways in which a thing is said to live; yet should it possess only one of them—as for example, reason, sense—perception, local movement and rest, and further movement in respect of nutrition as well as of decay and growth—we say it lives. Hence it is that all plants are thought to live; because they manifestly contain within

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καὶ ἀρχὴν τοιαῦτην, δι᾽ ἡς αὐξησίν τε καὶ φθισῶν λαμβάνοντι, κατὰ τοὺς ἑναντίους τόπους· οὐ γὰρ ἀνω μὲν αὐξησίαν καὶ πάντοτε ἐκτρέφεται καὶ ζῷο διὰ τέλους, ἐκόμω ἀν δύνηται λαμβάνειν.

§ 4 τροφὴν χωρίζεσθαι δὲ τοῦτο μὲν τῶν ἄλλων δυνατόν, τὰ δὲ ἄλλα τούτον ἀδύνατον ἐν τοῖς θνητοῖς. φανερὸν δὲ ἐπὶ τῶν φυσικῶν οὐδεμία γὰρ αὐτοῖς υπάρχει δύναμις άλλην ψυχήν. τὸ μὲν οὖν ἐξ ἡς διὰ τὴν ἀρχὴν ταύτην υπάρχει τοῖς 413' ζῴους, τὸ δὲ ἄξον διὰ τὴν αἰσθήσεων πρώτως· καὶ γὰρ τὰ μὴ κυνούμενα μὴ αὐλάττονται τόπον, ἔχοντα δὲ αἰσθήσιν.

§ 5 ζῷα λέγομεν καὶ οὐ ἐξ' τοῦ μόνου. αἰσθῆσις δὲ πρῶτων υπάρχει πάσῳ ἀφῇ. ὡσπερ δὲ τὸ θρεπτικὸν δύναται χωρίζειν σθαι τῆς ἀφῆς καὶ πάσης αἰσθῆσεως, οὐτως ἡ ἀφὴ τῶν ἄλλων αἰσθήσεως· θρεπτικὸν δὲ λέγομεν τὸ τοιοῦτον μόριον τῆς ψυχῆς οὗ καὶ τὰ φυτὰ μετέχει· τὰ δὲ ζῶα πάντα ψυχεῖται τὴν ἀπτικὴν αἰσθήσιν ἔχοντα· δι’ ἡς δὲ αἰτίαν

§ 6 ἐκάτερον τούτων συμβιβασθείς, ύστερον ἔροιμεν. τῶν δὲ ἐπὶ τοσοῦτον εἰρήσθω μόνον, ὅτι ἐστὶν ἡ ψυχὴ τῶν εἰρημένων τούτων ἀρχὴ καὶ τούτως ὁριζόταται, θρεπτικῶς, αἰσθητικῶς, διανοητικῶς.

§ 7 τικῶν, κυνήσει. πότερον δὲ τούτων ἐκαμάτων ἐστὶν ψυχή ἡ μόριον ψυχῆς, καὶ εἰ μόριον, πότερον οὕτως ὡστε ἐναι χωριστὸν λόγῳ μόνον ἡ καὶ τόποι, περὶ μὲν τῶν τούτων οὐ χαλεπὸν

§ 8 οδιέω, ἐνιὰ δὲ ἀπορίαν ἔχει. ὡσπερ γὰρ ἐπὶ τῶν φυτῶν ἐνιὰ διαμορφώμεθα ψυχήν ζωτά καὶ χωρίζομεν απ’ ἀλλήλων, ὡς οὕσης τῆς ἐν τούτων ψυχῆς ἐντελεχείας μὲν μιᾶς ἐν ἐκάστῳ φυτῷ, δυνάμει δὲ πλειονῶν, οὕτως ὅρισμεν καὶ περὶ ἐτέρας διαφορᾶς τῆς ψυχῆς συμβαίνων ἐπὶ τῶν ἐντόμων ἐν τοῖς 30 διατεμονομένοις· καὶ γὰρ αἰσθησιν ἐκάτερον τῶν μερῶν ἔχει
themselves such a power and principle as enables them to acquire growth and undergo decay in opposite directions; for they do not while growing upwards not grow downwards but they grow in both directions and on all sides, and they continue to live so long as they can assimilate nourishment. Now this faculty of nutrition may be separated from the other functions; but in the case of mortal creatures the other faculties cannot exist apart from this, as indeed is evident from plants which possess no other psychic power except this faculty of growth.

It is then through this principle of nutrition that life is an attribute of all living things. At the same time the animal strictly so called only begins when we reach sensation: for even those objects which do not move themselves nor change their position but possess sensation are said to be animals and not merely to be living. Among the senses themselves, it is touch which is the fundamental attribute of all animal forms. And just as the nutritive function may exist apart from touch and every form of sense, so also may touch exist without any of the other senses. Thus while nutritive is the name given to that part of the soul in which plants share as well as animals, all animals are found to possess the sense of touch. Why each of these faculties is so allotted we shall state hereafter: here it may be enough to say that the soul is the source and centre of the various states here mentioned and is determined and defined by those powers of nutrition, sensation, understanding and movement.

With regard to these several functions, whether each is the soul or a part of the soul; and if a part, whether so as only to be separable in thought or actually in space—with regard to some of these questions it is not difficult to see the answer, while others present difficulties. For just as, in the case of plants, some parts when divided are found to live even when separated from one another—a fact which seems to shew that the soul within them exists as actually one though it is potentially several; so also do we see it happen with respect to another specific aspect of the soul in the case of insects which have been divided. In such a case, each of the divided parts possesses sensation and
καὶ κίνησιν τὴν κατὰ τόπον, εἰ δ' αἰσθησιν, καὶ φαντασίαν καὶ ὀρέξιν· ὅπου μὲν γὰρ αἰσθησις, καὶ λύπη τε καὶ ἤδονη, § 9 ὅπου δὲ ταῦτα, ἐξ ἀνάγκης καὶ ἐπιθυμία. περὶ δὲ τοῦ νοῦ καὶ τῆς θεωρητικῆς δυνάμεως οὐδέν πω φανερῶν, ἀλλ' ἔσοψε 25 ψυχῆς γένος ἐτερον εἶναι, καὶ τούτῳ μόνῳ ἐνδέχεται χωρί· § 10 ζεσθαι, καθάπερ τὸ ἀϊδίον τοῦ φθαρτοῦ. τὰ δὲ λοιπὰ μόρια τῆς ψυχῆς φανερῶν ἐκ τούτων ὡτι οὐκ ἐστι χωριστά, καθάπερ τινὲς φασιν· τὰ δὲ λόγω ὡτι ἐτερα, φανερῶν αἰσθητικῷ γὰρ εἶναι καὶ δοξαστικῷ ἐτερον, εἰπὲρ καὶ τὸ αἰσθάνεσθαι 30 τοῦ δοξάζειν. ὁμοίως δὲ καὶ τῶν ἄλλων ἑκαστον τῶν εἰρημέ· § 11 νων. ἐτι δ' εὔνοις μὲν τῶν ἵψων ἀπαυγὴ ὑπάρχει ταῦτα, τισὶ δὲ τινὰ τούτων, ἐτέροις δὲ ἐν μόνον. τούτῳ δὲ ποιεῖ διαφορὰν τῶν ἵψων· διὰ τίνα δ' αἰτίαν, ύστερον ἐπισκεπτέον. 414§ παραπλήσιον δὲ καὶ περὶ τὰς αἰσθητικὰς συμβέβηκεν· τὰ μὲν γὰρ ἐχεῖ πάσας, τὰ δὲ τινὰς, τὰ δὲ μιὰν τὴν ἀναγ· § 12 καινοτάτην, ἀφήν. ἐπεὶ δὲ ὃς ἵψων καὶ αἰσθανόμεθα διχῶς λέγεται, καθάπερ ὃς ἐπιστάμεθα, λέγομεν δὲ τὸ μὲν ἐπι· 5 στήμην τὸ δὲ ψυχὴν ἐκατέρω γὰρ τούτων φαμὲν ἐπίστα· σθαι: ὁμοίως δὲ καὶ ὃς ύγιαίνομεν, τὸ μὲν ύγιεία, τὸ δὲ μορίῳ τινὶ τοῦ σώματος ἢ καὶ ὅλῳ τούτων ὃς ἢ μὲν ἐπιστήμη· τε καὶ ύγιεία μορφῇ καὶ εἶδος τι καὶ λόγος καὶ ὁδὸν ἐνέρ· γεια τοῦ δεκτικοῦ, ἢ μὲν τοῦ ἐπιστήμονικοῦ, ἢ δὲ τοῦ ύγιαστι· 10

the power of local movement, and if sensation, then also in
addition imagination and desire: for where sense is pre-

sent, there pain and pleasure follow also as concomitants,
and where pain and pleasure exist, appetite is also necessarily

present. With regard on the other hand to reason and the

faculty of thought we have as yet no obvious facts to appeal
to. Reason however would seem to constitute a different phase
of soul from those we have already noticed and it alone admits
of separation as the eternal from the perishable. But as for
the other parts of soul, it is clear from these considerations that
they are not separated in the way that some maintain. At
the same time it is evident that in thought and by abstraction
they may be divided from one another. The sensitivity is
one thing, the reflective faculty another, if it be one thing to
have sensation, another thing to exercise reflection. And this
same truth holds good also of the other powers which have been
described.

Respecting these various powers, there are some animals
which possess them all, others which have merely some of them,
and others again which have but one only. It is this which
makes the difference between one class of animals and another,
though the reason for this fact can only be investigated after-
wards. The same thing may be noticed also as regards the
senses. Some animals have all of them, others have but some,
and a third class possesses only that one sense which is most
indispensable—viz. touch.

[Life, then, and sensation are what mark the animate.] But
there are two ways in which we may speak of that by which
we live and have sensation just as also that by which we know
may be employed to denote either knowledge or the mind,
by both of which we are in the habit of speaking of people as
knowing. So also that by which we are in health denotes on
the one hand the health itself, on the other hand some portion
of the body or it may be the whole of it. Now of these two
uses, knowledge and health are what we may term the deter-
mining form and notion and so to speak the realization of
the recipient faculty, in the one case of knowledge, in the other
of health—for the passive material which is subject to modifica-
κοῦ (δοκεῖ γὰρ ἐν τῷ πάσχοντι καὶ διατιθεμένῳ η τῶν ποιητικῶν υπάρχειν ἐνέργεια), ἡ ψυχὴ δε τοῦτο ᾧ ζῶμεν καὶ αἰσθανόμεθα καὶ διανοούμεθα πρῶτος, ὥστε λόγος τις ἂν εἴη § 13 καὶ εἶδος, ἀλλ' οὔχ ὑλή καὶ τὸ ὑποκείμενον. τριχῶς γὰρ λεγομένης τῆς οὐσίας, καθάπερ εἰπομεν, δὲν τὸ μὲν εἰδός, τὸ δὲ ὑλή, τὸ δὲ ἐξ ἀμφοῖν τούτων δ' ἢ μὲν ὑλὴ δύναμις, τὸ δὲ εἰδὸς ἐντελέχεια· ἐπεὶ δὲ τὸ ἐξ ἀμφοῖν ἐμψυχον, οὐ τὸ σῶμα ἐστὶν ἐντελέχεια ψυχῆς, ἀλλ' αὕτη σώματος τις§ 14 νος. καὶ διὰ τοῦτο καλῶς ὑπολαμβάνουσιν οἰς δοκεῖ μήτ' ἄνευ σώματος εἶναι μὴτε σῶμα τι ἡ ψυχῆ· σῶμα μὲν γὰρ οὐκ ἔστιν, σώματος δὲ τὶ, καὶ διὰ τοῦτο ἐν σώματι υπάρχει, καὶ ἐν σώματι τοιοῦτῳ, καὶ οὐχ ὡσπερ οἱ πρότερον εἰς σῶμα ἐνήρμοζον αὐτὴν, οὕθεν προσδιορίζοντες ἐν τίνι καὶ ποίῳ, καίπερ οὐδὲ φανομένου τοῦ τυχόντος δέχεσθαι τὸ§ 15 τυχόν. οὔτω δὲ γίνεται καὶ κατὰ λόγον· ἐκάστου γὰρ ἡ ἐντε—25 λέχεια ἐν τῷ δυνάμει υπάρχοντι καὶ τῇ οἰκείᾳ ὑλῇ πέφυκεν ἐγγίνεσθαι. ὅτι μὲν οὖν ἐντελέχειά τίς ἔστι καὶ λόγος τοῦ δύναμιν ἐχοντος εἶναι τοιοῦτον, φανερὸν ἐκ τούτων.

17. δὲ] om. UVWX Trend. 23. προσδιορίζοντες SUX. 28. τοιοῦτοι εἶναι SUX.
tion is what is taken to be the home of the manifestation of the active forces. Soul then is the original and fundamental ground of all our life, of our sensation and of our reasoning. It follows therefore that the soul must be regarded as a sort of form and idea, rather than as matter and as underlying subject. For the term real substance is, as we have before remarked, employed in three senses: it may denote either the specific form, or the material substratum, or thirdly the combination of the two: and of these different aspects of reality the matter or substratum is but the potential ground, whereas the form is the perfect realization. Since then it is the product of the two that is animate, it cannot be that the body is the full realization or expression of the soul; rather on the contrary it is the soul which is the full realization of some body.

This fact fully supports the view of those who hold that the soul is not independent of some sort of body and yet not to be identified with a body of any sort whatever. The truth is that soul is not body but it is something which belongs to body. And hence further it exists in a body and in a body of such and such a nature, not left undetermined in the way that earlier thinkers introduced it into the body without determining besides what and what sort of body it was, although it does not even look as though any casual thing admitted any other casual thing.

This same conclusion may be reached also on a priori grounds. The full realization of each object is naturally reached only within that which is potentially existent and within that material substratum which is appropriate to it. It is clear then from these considerations that soul is a kind of full realization or expression of the idea of that which has potentially the power to be of such a character.
§ 1 III. Τῶν δὲ δυνάμεων τῆς ψυχῆς αἱ λε�θεῖσαι τοῖς μὲν υπάρχουσιν πάσαι, καθάπερ εἰπόμεν, τοῖς δὲ τυφές αὐτῶν, ἐνίοις δὲ μία μόνη. δυνάμεις δὲ εἰπόμεν θρεπτικον, αἰσθητικον.  
§ 2 τικὸν, ὀρεκτικὸν, κυνηγικὸν κατὰ τόπον, διανοητικὸν. υπάρχει δὲ τοῖς μὲν φυτοῖς τὸ θρεπτικὸν μόνον, ἐτέρους δὲ τούτοις τε καὶ τὸ αἰσθητικὸν. εἰ δὲ τὸ αἰσθητικὸν, καὶ τὸ 414 ὀρεκτικὸν. ὦρεξεις μὲν γὰρ ἐπιθυμία καὶ θυμὸς καὶ βούλησις, τὰ δὲ ζωὰ πάντες ἔχουσι μίαν γε τῶν αἰσθήσεων, τὴν ἀφήν. ὁ δὲ αἰσθητικὸς υπάρχει, τούτω ηδονὴ τε καὶ λύπη καὶ τὸ ἡδὺ τε καὶ λυπηρῶν, οἷς δὲ ταῦτα, καὶ ἡ ἐπιθυμία τοῦ 5  
§ 3 γὰρ ἴδεος ὦρεξεις αὑτή. ἐτι δὲ τῆς τροφῆς αἰσθήσιον ἔχουσιν· ἡ γὰρ ἀφή τῆς τροφῆς αἰσθησίας· ἔχεις γὰρ καὶ ύγροῖς καὶ θερμοῖς καὶ ψυχροῖς τρέφεται τὰ ζωὰ πάντα, τούτων δὲ αἰσθητικὸς ἀφή τοῖς δὲ ἀλλοις αἰσθητοῖς κατὰ συμβεβηκός· οὐθὲν γὰρ εἰς τροφήν συμβάλλεται ψόφος οὐδὲ χρώμα οὐδὲ ὁσμῆ. ὁ δὲ χυμὸς εἰν τι τῶν ἀπτῶν ἔστιν. πείνα δὲ καὶ δύσα ἐπιθυμία, καὶ ἡ καὶ πείνα ἕξροι καὶ θερμοῦ, ἡ δὲ δύσα ψυχροῦ καὶ ύγροῦ· ο δὲ χυμὸς οἶον ἥδυσιμα τι τούτων ἔστιν. διασαφητεύον δὲ περὶ αὐτῶν ὑστερον, νῦν δὲ ἐπὶ τοσοῦτον εἰρήσθω, ὅτι τῶν ζωῶν τοῖς ἔχουσιν ἀφῆν καὶ ὦρεξεις υπάρχει 4  
§ 4 χει. περὶ δὲ φαντασίας ἄδηλου, ὑστερον δὲ ἔπισκεπτε. ἐνίοις δὲ πρὸς τούτους υπάρχει καὶ τὸ κατὰ τόπον κυνηγικόν, ἐτέρους δὲ καὶ τὸ διανοητικόν τε καὶ νοῦς, οἶον ἀνθρώπου καὶ

31. ἀισθ. ὀρεκ.] ὀρεκτικὸν αἰσθητικὸν ELSTW Tor. αὐτή STUX. 9. τῶν δ᾽ ἄλλων αἰσθητῶν vulg. 414 b. ὦρεξεις ἐστὶν 13. τι om. SUVX. 15. διωρίσθω SUVX.
CHAPTER III.

Of the powers of soul which have been mentioned, some organisms, as has been said, possess all, others again a few, while a third class possesses one only. The powers in question are those of nutrition, of sensation, of desire, of local movement and of reasoning. Plants possess the function of nutrition only: other creatures have this and also the faculty of sensation; and if this latter, then they must also have the faculty of desire: for desire includes appetite and passion and wish. Animals however without exception possess one at least among the senses—viz. touch: and wherever a faculty of sense is present it is accompanied by a feeling of pleasure and pain, and an object which is pleasant or painful. But where these are present, there appetite is also: for appetite is the desire of what is pleasant.

Besides, all animals have a sense for nourishment—viz. touch—for it is by means of things dry and moist, hot and cold, that all animals are fed: and touch is the sense which directly perceives these. As for the objects of other senses, on the contrary, it is only incidentally that they are fed by them; for neither sound nor colour nor smell directly contribute to food. Flavour again is included under the class of things that are tangible. Now hunger and thirst, which attach to taste, are forms of appetite, hunger being concerned with what is hot and dry, thirst with what is cold and moist, while flavour is as it were their seasoning.

These subjects we must afterwards discuss with more detail. Meanwhile it need only be asserted that those animals which possess the sense of touch have also the attribute of desire. Whether in addition they possess imagination is an obscure subject which must be investigated afterwards. Some animals possess, beside such faculties, the power of local movement also: others, as for instance men or other beings similar or superior to them, if there be any such, possess also understanding and reason.
§ 5 εἰ τι τοιούτον ἐτερόν ἐστιν ἡ καὶ τιμιώτερον. δῆλον οὖν ὅτι τὸν αὐτὸν τρόπον εἰς ἀν εἰς λόγος ψυχῆς τε καὶ σχῆματος. 20 οὔτε γὰρ ἐκεὶ σχῆμα παρὰ τὸ τρίγωνον ἐστὶ καὶ τὰ ἐφεξῆς, οὔτ' ἐνταῦθα ψυχὴ παρὰ τὰς εἰρημένας. γένοιτο δ' ἀν καὶ ἐπὶ τῶν σχημάτων λόγος κοινός, ὃς ἐφαρμόσει μὲν πᾶσιν, ἰδίως δ' οὐδενός ἐσται σχῆματος. ὅμοιώς δὲ καὶ ἐπὶ ταῖς εἰρημέναις ψυχαῖς. διὸ γελοίον ζητείν τὸν κοινὸν λόγον καὶ 25 ἐπὶ τούτων καὶ ἐφ' ἐτέρων, ὃς οὐδενός ἐσται τῶν ὄντων ἰδίως λόγος, οὐδὲ κατὰ τὸ οἰκεῖον καὶ ἀτομον ἐίδος, ἀφέντας τὸν τοιούτον. παραπλησίως δ' ἐξεὶ τῷ περὶ τῶν σχημάτων καὶ τὰ κατὰ ψυχήν· αὐτὶ γὰρ ἐν τῷ ἐφεξῆς ὑπάρχει δυνάμει τὸ πρότερον ἐπὶ τε τῶν σχημάτων καὶ ἐπὶ τῶν ἐμψυχῶν, 30 οἴον ἐν τετραγώνῳ μὲν τρίγωνον, εἰν αἰσθητικῷ δὲ τὸ θρεπτικόν. ὥστε καθ' ἐκαστὸν ζητητέον, τίς ἐκαστὸν ψυχή, οἴον τίς 7 φυτοῦ καὶ τίς ἀνθρώπου ἢ θηρίου. διὰ τίνα δ' αἰτίαν τῷ ἐφεξῆς οὕτως ἔχουσιν, σκεπτέον. ἀνευ μὲν γὰρ τοῦ θρεπτικοῦ τὸ αἰσθητικόν οὐκ ἔστων· τοῦ δ' αἰσθητικοῦ χωρίζεται τὸ θρεπτικόν ἐν τοῖς φυτοῖς. πάλιν δ' ἀνευ μὲν τοῦ ἀπτικοῦ τῶν ἄλλων αἰσθησεων οὐδεμία ὑπάρχει, ἀφή δ' ἀνευ τῶν ἄλλων ὑπάρχει· πολλὰ γὰρ τῶν ζῷων οὔτ' ὁψιν οὔτ' ἄκοιν ἔχουσιν 5 οὔτ' ὀσμῆς αἰσθησιν. καὶ τῶν αἰσθητικῶν δὲ τὰ μὲν ἔχει τὸ κατὰ τόπον κυνητικόν, τὰ δ' οὐκ ἔχει. τελευταίον δὲ καὶ ἐλάχιστα λογισμοῦ καὶ διάνοιαν· οἷς μὲν γὰρ ὑπάρχει λογισμὸς τῶν φθαρτῶν, τούτως καὶ τὰ λοιπὰ πάντα, οἷς δ' ἐκεῖνων ἐκαστον, οὐ πάσιν λογισμὸν, ἀλλὰ τοῖς μὲν 10

19. καὶ om. ESTVW. 25. κοινῶν] μόνων conj. Sus. 32. ὡστε καὶ καθ' k.t.L. Tor. 415b 2. θρεπτικῶν, οἶνον ἐν τοῖς φυτοῖς. Tor. ex ed. pr. 6. ὀμην ὁλως αἰσθ. STUWX, ὁλως om. Ey. 8. ἐλάχιστον SUVWX.
It is clear then that there is one general definition of soul neither more nor less than there is one definition of figure. Just as in the latter case there is no figure other than the triangle and the figures which follow on it, so neither in the case of soul is there any form of it beyond those which we have enumerated. No doubt it is possible to have in reference to figures a common definition which will suit all figures and yet be peculiarly characteristic of no one figure in particular, and a like general definition is possible also with respect to the forms of soul which we have named. [But such common definitions are mere abstractions.] And hence it it absurd both in this case and in others to seek for a universal definition which shall be peculiar to no one form of existence nor framed with reference to the particular and individual species, if such common definition makes us neglect particular analysis.

The different forms of soul in fact stand to one another in the same way as do the several species of figure: both in the case of figures and of animate beings, the earlier form always exists potentially in the later. Thus the triangle is contained within the square and similarly in the faculty of sense the function of nutrition is implicitly contained. Thus we must push our inquiry into particulars and ask what is the soul of each form of existence; as for example what is that of a plant or of a man or of some brute beast. We must inquire also why they stand in such an order of succession. The sensitive nature, for instance, is not found without the nutritive: and yet the nutritive is found separated from the sensitive, as in the case of plants. Without the sense of touch, again, none of the other senses is present, while touch itself is found apart from the others: many animals possessing neither sight nor hearing nor the sense of smell. So likewise animals possessed of the faculties of sense sometimes have, sometimes do not have, the faculty of local movement; while finally the smallest class possess also reflection and understanding. And all mortals that possess the faculty of reasoning possess also all the other powers, whereas those that possess each of those others do not in every case possess reflection; some in fact do not even possess imagination.
οὐδὲ φαντασία, τὰ δὲ ταύτη μόνη ζωσιν. περὶ δὲ τοῦ θεωρητικοῦ νοῦ ἔτερος λόγος. ὅτι μὲν οὖν δὲ περὶ τούτων ἐκάστου λόγος οὖτος οἰκείοτατος καὶ περὶ ψυχῆς, δῆλον.

§ 1. Ἀναγκαῖον δὲ τὸν μέλλοντα περὶ τούτων σκέψιν ποιεῖ
σθαι λαβεῖν ἐκαστὸν αὐτῶν τί ἔστων, εἰδὴ ὦτως περὶ τῶν ἐχο-
μένων καὶ περὶ τῶν ἄλλων ἐπιζητεῖν. εἰ δὲ χρῆ λέγειν τί ἐκα-
στον αὐτῶν, οὐδὲν τι τὸ νοητικὸν ἢ τὸ αἰσθητικὸν ἢ τὸ θρεπτικὸν, πρότερον ἐτι λεκτέων τι τὸ νοεῖν καὶ τι τὸ αἰσθάνεσθαι.

§ 2. αὐτὴν αἰτίαν, οὖν περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ. ὡστε
πρῶτον περὶ τροφῆς καὶ γεννησεως λεκτέων. ἡ γὰρ θρεπτική
ψυχή καὶ τοῖς ἄλλοις ὑπάρχει, καὶ πρώτη καὶ κοινοτάτη
dύναμις ἐστὶ ψυχῆς, καθ' ἐν ὑπάρχει τὸ ζῶν ἀπάσων. ἢς ἐστὶν

II. 

while others live by the aid of this alone. As regards the speculative reason a different account must be given. Meanwhile it is clear that the special definition of each of these powers separately is at the same time the most appropriate account of the soul.

CHAPTER IV.

The investigation of the faculties of the soul demands that we should discover what each of them is and then proceed similarly to consider allied and remaining questions. In order however to state the nature of each of them, as for example the faculty of thought or sense or of nutrition, we must beforehand explain what is thinking and what is the act of perception: for viewed in the light of their essential notion the actions which give expression to a power are prior to the power itself. And if this be so, and it be necessary to consider even before the actions their objects, it will, for the same reason, be our first duty to settle about them, as for instance about food and the object of sense and the object of thought.

Food and generation should therefore be the first subjects of our inquiry: for the nutritive faculty is an attribute of other beings as well as man and is that primary and most common function of the soul in virtue of which life is an attribute of all animals. Its office is to generate and to make use of sustenance. In animals in fact that are perfect and not impaired by any defect or that are not created by spontaneous generation the most natural function is to create another like itself, animal thus producing animal, plant plant, so that they may as far as possible partake of the eternal and divine: for this desire is universal and constitutes the end of all natural action—‘end,’ it should be remembered, meaning not only the person for which but also the purpose at which something is directed. Since then it is impossible to share in the eternal and the divine in the same identical person, because nothing mortal can remain numerically the same and individual, each individual shares in this in the way it can, in some cases to a greater, in others to a less degree, and though not actually the same it continues as
§ 3 ἀλλ' οἶνον αὐτό, ἀριθμὸι μὲν οὐχ ἐν, εἶδει δ' ἐν. ἔστι δὲ ἡ ψυχὴ τοῦ Ἱωντος σώματος αἰτία καὶ ἀρχή. ταῦτα δὲ πολ- λαχῶς λέγεται. ὀμοίως δ' ἡ ψυχὴ κατὰ τοὺς διωμυσένους τρόπους τρεῖς αἰτία· καὶ γὰρ ὤθεν ἡ κίνησις αὐτή, καὶ οὐ ἔνεκα, καὶ ὡς ἡ οὐσία, τῶν ἐμψύχων σωμάτων ἡ ψυχή.

§ 4 αἰτία. ὅτι μὲν οὖν ὡς οὐσία, δὴ λοιπ' τὸ γὰρ αἴτιον τοῦ εἶναι πάσην ἡ οὐσία, τὸ δὲ ζῆν τοῖς ζῶσι τὸ εἶναι ἑστί, αἰτία δὲ καὶ ἀρχὴ τούτων ἡ ψυχή· ἔτι τοῦ δύναμει ὄντος λόγος ἡ

§ 5 ἐντελέχεια. φανερὸν δ' ὡς καὶ οὐ ἔνεκεν ἡ ψυχὴ αἰτία· ἀσπερ γὰρ δ' νοῦς ἔνεκά του ποιεῖ, τὸν αὐτὸν τρόπον καὶ ἡ φύσις, καὶ τοῦτ' ἑστὶν αὐτῆς τέλος. τοιοῦτον δ' ἐν τοῖς ζῷοις ἡ ψυχὴ κατὰ φύσιν· πάντα γὰρ τὰ φυσικὰ σώματα τῆς ψυχῆς ὀργανα, καὶ καθάπερ τὰ τῶν ζῴων, οὕτω καὶ τὰ τῶν φυτῶν, ὡς ἔνεκα τῆς ψυχῆς οὖντα. δυτικὸς δὲ τὸ οὖν.

§ 6 ἔνεκα, τὰ τε οὖ καὶ τὸ φ. ἀλλὰ μὴν καὶ οἶδεν πρῶτον ἡ κατὰ τόπον κίνησις, ψυχή· οὐ πάσι δ' ὑπάρχει τοῖς ζώσιν ἡ δύναμις αὐτῆς. ἔστι δὲ καὶ ἀλλοῖως καὶ αὐξησίς κατὰ ψυχὴν· ἡ μὲν γὰρ αἰσθήσις ἀλλοίωσις τις εἶναι δοκεῖ, αἰσθάνεται δ' οὖθεν δ' μὴ μετέχει ψυχῆς. ὀμοίως δὲ καὶ περὶ αὐξησίως τε καὶ φθίσεως ἔχει· οὔθεν γὰρ φθίνει οὐδ' αὐξηται ψυκικῶς μὴ τρεφόμενον, τρέφεται δ' οὖθεν δ' μὴ κοινωνεῖ.

§ 7 ζωῆς. Ἐμπεδοκλῆς δ' οὖ καλῶς εἰρήκε τοῦτο, προστιθέει τὴν αὐξησιν συμβάνειν τοῖς φυτοῖς κατὰ μὲν συνρίζωμενοι διὰ τὸ τὴν γην οὕτω φέρεσθαι κατὰ φύσιν, ἀνω δὲ διὰ τὸ 416α.

7. addunt διόπερ τὸ σπέρμα τῶν ζῴων καὶ φυτῶν ὄργανον ἑστιν Um (i.e. 1921) Ald. Basil. et, qui φυτῶν etiam pro ζώων, X. διόπερ τὸ σπέρμα τῶν ζ. καὶ τῶν φ. ὄργανον ἑστι τῆς ψυχῆς ἑστι T Canot. et, transpositis τὸ σπέρμα post τῶν ζώων, V. 9. διαμ SUWX. 17. αὐτῆς EST Tor. 18. ψυχῆ κατὰ φύσιν U Ald. 19. διαμ SUWX. 17. αὐτῆς EST Tor. 18. ψυχῆ κατὰ φύσιν U Ald. Sylb., Bekker. e codd. reliquis ψ. καὶ κατὰ φύσιν. 25. ψυχῆν ἔχει SUX Trend. 29. βιοματινων SUWVX.
it were the same, because, though not one numerically, it con-
tinues one specifically.

The soul then is the cause and basis of the body as alive;
and is so in each of the three senses in which the word cause is
used: that is to say it is so both as the efficient cause from which
movement springs, as the end or final cause and as the real or
essential substance of animate bodies.

That the soul is so as essential substance is evident. In the
case of all objects, the cause of their existence constitutes their
essential substance. Now it is life which constitutes the exist-
ence of all animals, and of these processes of life soul is at once
the cause and origin; and further, in the case of something which
exists potentially, it is the full realization which is the notion or
essential nature.

It is equally clear that soul is cause in the sense of end or
final cause. Like reason, nature acts for the sake of some
object; and this object is its end. Now in the animal world
the soul is naturally something of this character. All natural
bodies are instruments of the soul: and just as it is with the
bodies of animals so also is it with those of plants, all being there
simply for the sake of soul. But in saying that the soul is the
end or final cause, we must remember that the word ‘end’ is
used in two senses, and must understand it as meaning that at
which a thing aims quite as much as that for which it exists.

Lastly, the soul is also cause as being the original source of
local movement, a faculty however which all creatures do not
have. The soul also exhibits phenomena of alteration and
augmentation: for sensation is held to be a form of altera-
tion and nothing possesses this faculty of sense unless it
participate in soul. So also is it with augmentation and
decay: nothing decays or grows in a natural manner except it
receive nutrition: and nothing is nurtured except it partake
of life.

This is a subject in which Empedocles has not expressed
himself correctly. He maintains that the growth of plants
when they strike their roots downwards is due to the fact that
the earth [of which they are composed] is by a natural law car-
rried in this direction: while their growth upwards is caused by
πῦρ ὁσαύτως. οὔτε γὰρ τὸ ἄνω καὶ κάτω καλῶς λαμβάνειν· οὐ γὰρ ταύτῳ πᾶσι τὸ ἄνω καὶ κάτω καὶ τῷ πάντι, ἀλλ’ ὡς ἡ κεφαλὴ τῶν ἔφων, οὕτως αἱ ρίζαι τῶν φυτῶν, εἰ χρῆ τὰ ὀργάνα λέγειν ἑτέρα καὶ ταύτα τοῖς ἔργοις. 5 πρὸς δὲ τούτοις τί τὸ συνεχὸν εἰς τάναντια φερόμενα τὸ πῦρ καὶ τὴν γῆν· διασπασθῆσεται γάρ, εἰ μὴ τι ἐστὶν τὸ κω- λύσον· εἰ δ’ ἐσται, τούτ’ ἐστὶν ἡ ψυχὴ καὶ τὸ αἷμα τοῦ
§ 8 αὐξάνεσθαι καὶ τρέφεσθαι. Δοκεῖ δὲ τισὶν ἡ τοῦ πυρὸς φύσις ἀπλῶς αἰτία τῆς τροφῆς καὶ τῆς αὐξήσεως εἶναι· καὶ γὰρ αὐτὸ φαίνεται μόνον τῶν σωμάτων ἡ τῶν στοιχείων τρεφό- μενον καὶ αὐξόμενον. διὸ καὶ ἐν τοῖς φυτοῖς καὶ ἐν τοῖς ὕψοις ὑπολάβοι τις ἀν τούτῳ εἶναι τὸ ἐργαζόμενον. τὸ δὲ συναιτιον μὲν τῶς ἐστὶν, οὐ μὴν ἀπλῶς γε αἴτιον, ἀλλὰ μάλλον ἡ ψυχή· ἡ μὲν γὰρ τοῦ πυρὸς αὐξήσεις εἰς ἀπει- ρον, ἐφ’ ἀν ἢ τὸ κανόνα, τῶν δὲ φύσει συνισταμένων πάν- των ἐστὶ πέρας καὶ λόγοις μεγέθους τε καὶ αὐξήσεως· ταῦτα
§ 9 δὲ ψυχῆς, ἀλλ’ οὐ πυρὸς, καὶ λόγου μάλλον ἡ ύλης. ἐπει δ’ ἡ αὐτὴ δύναμις τῆς ψυχῆς θρεπτικὴ καὶ γεννητική, περὶ τροφῆς ἀναγκαίον διώρισθαι πρῶτον· ἀφορίζεται γὰρ πρὸς τὰς ἄλλας δυνάμεις τῷ ἐργῷ τούτῳ. Δοκεῖ δ’ εἶναι ἡ τροφή τὸ ἐναντίον τῷ ἐναντίῳ, οὐ πάν δὲ παντὶ, ἀλλ’ ὅσα τῶν ἐναντίων μὴ μόνον γένεσιν ἐξ ἀλλήλων ἔχουσιν ἀλλὰ καὶ αὐξήσεις· γίνεται γὰρ πολλὰ ἐξ ἀλλήλων, ἀλλ’ οὐ πάντα ποσά, οἶνον ὑγίεις ἐκ κάμποντος. φαίνεται δ’ οὖδ’ ἐκεῖνα τῶν
αὐτῶν τρόπων ἀλλήλως εἶναι τροφῆς, ἀλλὰ τὸ μὲν ὑδωρ

416* 3. καὶ τῷ παντὶ uncis incl. Sus. 7. κωλύων ETX Tor. 11. τῶν στοιχείων uncis incl. Tor. 12. αὐξανόμενον SUVWX. 18. δὲ τῆς ψ. ET Tor. 24. πάντα om. SUXy, corr. E. 25. ποσὸ om. UW pr. E.
the fact that their other element, the fire, is borne in this direction. Here Empedocles takes neither 'up' nor 'down' correctly. The 'up' and the 'down' are not the same for all individual objects as for the universe: the head for instance among animals corresponds to the roots in plants, if it be their functions that should determine organs as same and different. Besides, the question rises, what is it that combines elements such as fire and earth when carried in opposite directions. They will be pulled asunder, if there be not something to prevent it, and if there be, then this something is the soul and the cause of growth and nourishment.

There are some who hold that fire alone is the cause of nutrition and growth: because it is evidently the only one among bodies or elements that feeds and increases itself: and hence it might be thought to be the agent for effecting this in plants and animals. Now fire is in a way the concomitant and condition of growth: it is not however absolutely and by itself the cause: rather it is the soul which is so. The increase of fire proceeds without any limit, so long as there is material to burn: whereas in the case of all natural organisms there is an idea which determines their magnitude and increase: and this belongs to the soul and not to the fire, to the ideal form rather than to the indeterminate matter.

As the same faculty of soul is at once nutrient and generative, it is necessary in the first place to determine the nature of nutriment: for it is by nutrition that this faculty is distinguished from the other powers. Nutrition then is thought to consist in the absorption of the opposite by the opposite. This however need not be taken to mean that every opposite is nurtured by every other, but is meant to be applied only to all those opposites that derive not only their origin, but also their increase from one another: for there are many things that originate from one another, e.g. health from sickness, but the change does not always take the form of a quantitative increase. But it appears that not even do such quantitative contraries act as nutriment to one another in the same manner: liquid, for example, serves as nutriment to fire: but fire does not conversely serve as nutriment to liquid. And indeed it

W. AR.
τῷ πυρὶ τροφῆ, τὸ δὲ πῦρ οὐ τρέφει τὸ ὕδωρ. ἐν μὲν οὖν 
τοῖς ἀπλοῖς σώμασι ταῦτ' εἶναι δοκεῖ μᾶλλον τὸ μὲν 
§ 10 τροφῆ τὸ δὲ τρεφόμενον. ἀπορίαν δ' ἔχειν φασὶ γὰρ οἱ 
μὲν τὸ ὄμοιον τῷ ὄμοιῳ τρέφεσθαι, καθάπερ καὶ αὐξά-ζο 
νεσθαι, τοῖς δ' ὠσπέρ εἶπομεν τοῦμπαλων δοκεῖ, τὸ ἑναυτὸν 
τῷ ἑναυτῷ, ὡς ἀπαθοῦς ὄντος τοῦ ὄμοιον ὑπὸ τοῦ ὄμοιον, 
τὴν δὲ τροφὴν μεταβάλλει καὶ πέττεσθαι. ἡ δὲ μετα-
βολὴ πᾶσιν εἰς τὸ ἀντικείμενον ἢ τὸ μεταξ' ἐτὶ πάσχει 
τι ἡ τροφὴ ὑπὸ τοῦ τρεφομένου, ἀλλ' οὐ τοῦτο ὑπὸ τῆς 35 
τροφῆς, ὠσπέρ οὖν ὁ τέκτων ὑπὸ τῆς ὕλης, ἀλλ' ὑπ' ἐκεί-416 
νοι αὐτή' ὁ δὲ τέκτων μεταβάλλει μόνον εἰς ἐνέργειαν εἰς 
§ 11 ἀργίας. πότερον δ' ἐστὶν ἡ τροφὴ τὸ τελευταῖον προσγυμ-
μενον ἢ τὸ πρῶτον, ἔχει διαφοράν. εἰ δ' ἀμφοῦ, ἀλλ' ἡ 
μὲν ἀπεπτος ἡ δὲ πεπεμμένη, ἀμφοτέρως ἄν ἐνδέχομαι τὴν 5 
τροφὴν λέγειν· ἡ μὲν γὰρ ἀπεπτος, τὸ ἑναυτὸν τῷ ἑνα-
ντίῳ τρέφεται, ἡ δὲ πεπεμμένη, τὸ ὄμοιον τῷ ὄμοιῳ. ὁστε 
φανερῶν ὅτι λέγουσι τινα τρόπον ἀμφότεροι καὶ δρόθως καὶ 
§ 12 οὖν ὄρθως. ἐπει δ' οὐθὲν τρέφεται μὴ μετέχουν ζωῆς, τὸ ἐμ-
ψυχον ἄν εἰη σῶμα τὸ τρεφόμενον, ἡ ἐμψυχον, ὡςτε καὶ 10 
§ 13 ἡ τροφὴ πρὸς ἐμψυχόν ἐστὶ καὶ οὐ κατὰ συμβεβηκός. ἐστὶ 
δ' ἔτερον τροφῆ καὶ αὐξητικῷ εἶναι· ἡ μὲν γὰρ ποσὸν τι 
τὸ ἐμψυχον, αὐξητικὸν, ἡ δὲ τόδε τι καὶ οὐσία, τροφῆ 
σώζει γὰρ τὴν οὐσίαν, καὶ μέχρι τούτου ἐστὶν ἐως ἂν καὶ 
τρέφηται· καὶ γενέσεως ποιητικὸν οὐ τοῦ τρεφομένου, ἀλλ' 15 
οἶν τὸ τρεφόμενον· ἡ δὲ γὰρ ἐστὶν αὐτῷ ἡ οὐσία, γενιά δ' 
οὖθεν αὐτὸ ἐαυτό, ἀλλὰ σώζει. ἡ ωθ' ἡ μὲν τοιαύτη τῆς 

seems to be especially in the case of simple bodies that the contraries stand to one another in the relation of nourishment and nourished. Here, however, a difficulty meets us. There are some who on the one hand maintain that like is nurtured by the like, just as the like is increased by the like: while others, as we have said, hold on the other hand that the contrary is so by the contrary, because (they say) the like cannot be affected by the like. The nutriment, they maintain, changes and suffers digestion, and change, they add, always tends towards the opposite or the intermediate. And besides, they argue, the nutriment is affected to some extent by the object which it nurtures, while this is not altered by the nutriment, just as the artisan is not affected by the material on which he operates but this material on the contrary by the artist: the workman only transforming it from inertness into actuality.

The real question here is what is to be regarded as the nutriment: and whether nutriment is to be taken as it ultimately reaches the system or in its first form is a matter that is disputed. If it be allowed to be both, but be in the one case digested, in the other case undigested, it might be possible to describe nutriment in terms of both the theories which have been enunciated. So far in fact as the food is undigested, the contrary is nurtured by the contrary: so far as it is digested, the like is nurtured by the like. Evidently then there is a mixture of truth and error in the two views. But as nothing can be fed and nurtured except it participate in life, it is the animate body as such that receives nutriment: and thus nutriment is relative to an animate being and is essentially determined by such relation.

There is however a difference between the import of nutriment and that of growth. So far as the animate body is something quantitative, it admits of growth, so far as it is a definite individual substance, it requires nutriment. The food in other words preserves the substance and continues to operate so long as this substance is nurtured: and it produces the generation not of the object nourished but of something else resembling it: for the object nourished already exists as a substance, and nothing generates itself but only maintains its own existence.

Thus then this rudimentary psychic form as we have de-
§ 14 τροφῆς οὐ δύναται εἶναι. ἔπει δ' ἐστὶ τρία, τὸ τρεφόμενον καὶ ὁ τρέφεται καὶ τὸ τρέφον, τὸ μὲν τρέφον ἐστὶν ἡ πρώτη ψυχή, τὸ δὲ τρεφόμενον τὸ ἔχον αὐτὴν σῶμα, ὁ § 15 δὲ τρέφεται, ἡ τροφή. ἔπει δὲ ἀπὸ τοῦ τέλους ἀπαντα προσαγορεῦειν δίκαιον, τέλος δὲ τὸ γεννῆσαι οἶον αὐτό, § 16 εἰ ἂν ἡ πρώτη ψυχὴ γεννητικὴ οἶον αὐτό. ἐστὶ δὲ ὁ τρέ- διττόν, ὡσπερ καὶ ὁ κυβερνᾷ, ἡ χεῖρ καὶ τὸ πη- δάλιον, τὸ μὲν κινοῦν καὶ κινούμενον, τὸ δὲ κινοῦν μόνον. πᾶσαν δ' ἀναγκαῖον τροφῆν δύνασθαι πέττεσθαι, ἐργάζεται δὲ τὴν πέψιν τὸ θερμών· διὸ πᾶν ἐμψυχον ἔχει θερμότητα. τύπῳ μὲν οὖν ἡ τροφή τί ἐστὶν εἰρήται· διασαφητέον δ' ἐστὶν ὑστερον περὶ αὐτῆς ἐν τοῖς οἰκείοις λόγοις.

§ 1 V. Διωρισμένων δὲ τούτων λέγωμεν κοινῇ περὶ πάσης αἰσθήσεως. ἡ δ' αἰσθήσις ἐν τῷ κινεῖσθαι τε καὶ πάσχειν συμβαίνει, καθάπερ εἰρήται· δοκεῖ γὰρ ἀλλοιώσις τις εἰ- ναι. φασὶ δὲ τινες καὶ τὸ ὄμοιον ὑπὸ τοῦ ὄμοιου πάσχειν. τοῦτο δὲ πῶς δυνατὸν ἡ ἄδυνατον, εἰρήκαμεν ἐν τοῖς καθόλου τούτων τούτων λόγοις περὶ τοῦ ποιεῖν καὶ πάσχειν. ἔχει δ' ἀπορίαν διὰ τί

33. τε] τὲ STWX.
scribed it, is a power adapted for preserving that which possesses this psychic form in so far as it possesses it: and nutriment enables it to act, so that when deprived of nutriment it is unable to exist. Three elements have here then to be recognised: first, the object nourished; secondly, that with which it is nourished: and thirdly, the power so nourishing it. Of these the last mentioned is the rudimentary or primary soul: the object nourished is the body which contains this soul, while that with which it is nourished is nutriment. (Everything however should be named in reference to the end it realizes, and since the end of this function of the soul is to produce another like itself, the first and rudimentary form of soul would be the generative—generative, that is, of another like itself.) That by which the nutriment is effected is twofold, just as likewise that by which we steer a ship may denote either the hand or the rudder—the one of which is at once moving and moved, the other moving only. Further it is necessary that all nutriment should be able to be digested, and this digestion is produced by heat: and thus everything animate possesses heat.

A sketch has thus been given of the nature of nutriment: it will be necessary however to examine the subject with more detail in the treatise appropriate to it.

CHAPTER V.

The character of sense-perception as a whole is the next subject which it falls to us to discuss. And perception, it was said, takes place as a result of being moved and being impressed: common opinion in fact views it as a sort of qualitative change or alteration. Now it is a doctrine held by some that in an impression like is affected by like. How far this is possible or impossible we have stated in our general discussion on the subject of the active and the passive processes. It suggests however
καὶ τῶν αἰσθήσεων αὐτῶν οὐ γίνεται αἰσθησις, καὶ διὰ τι ἀνευ τῶν ἑξῶν οὐ ποιοῦσιν αἰσθησις, ἐνὸντος πυρὸς καὶ γῆς καὶ τῶν ἄλλων στοιχείων, ὥν ἔστω ἡ αἰσθησις καθ' αὐτὰ ἢ τὰ 5 συμβεβηκότα τούτοις. δῆλον οὖν ὅτι τὸ αἰσθητικὸν οὐκ ἐστὶν ἐνεργείας, ἀλλὰ δυνάμει μόνον. διὸ καθάπερ τὸ καυστὸν οὐ καίεται αὐτὸ καθ' αὐτὸ ἀνευ τοῦ καυστικοῦ· ἐκαίε γὰρ ἂν ἑαυτῷ, καὶ οὐθὲν ἔδειτο τοῦ ἐντελεχεία πυρὸς ὄντος. ἐπειδὴ δὲ τὸ αἰσθάνεσθαι λέγομεν διχῶς (τὸ τε γὰρ δυνάμει ἀκοῦν 10 καὶ ὀρῶν ἀκούει καὶ ὀρῶν λέγομεν, καὶ τοῖς καθεύδουν, καὶ τὸ ἡδη ἐνεργοῦν), διχῶς ἂν λέγοιτο καὶ ἡ αἰσθησις, ἡ μὲν ὡς δυνάμει, ἡ δὲ ὡς ἐνεργείᾳ. ὁμοίως δὲ καὶ τὸ αἰσθητὸν § 3 τὸ τε δυνάμει ὅν καὶ τὸ ἐνεργεία. πρῶτον μὲν οὖν ὡς τοῦ αὐτοῦ ὄντος τοῦ πάσχειν καὶ τοῦ κινεῖσθαι καὶ τοῦ ἐνεργείων 12 λέγωμεν· καὶ γὰρ ἔστιν ἡ κίνησις ἐνεργεία τις, ἀτέλης μέντοι, καθάπερ ἐν ἐτέρους εἴρηται. πάντα δὲ πάσχει καὶ κινεῖται ὑπὸ τοῦ ποιητικοῦ καὶ ἐνεργεία ὄντος. διὸ ἔστι μὲν ὡς ὑπὸ τοῦ ὁμοίου πάσχει, ἔστι δὲ ὡς ὑπὸ τοῦ ἀνομοίου, καθάπερ εἴπομεν· πάσχει μὲν γὰρ τὸ ἀνόμοιον, πεπονθὸς δ' 20 § 4 ὁμοίων ἔστιν. διαφευγόν δὲ καὶ περὶ δυνάμεως καὶ ἐντελεχείας· ὅν γὰρ ἀπλῶς λέγομεν περὶ αὐτῶν. ἔστι μὲν γὰρ οὕτως ἐπιστημον τι ὡς ἂν εἴπομεν ἄνθρωπον ἐπιστημον, ὅτι ὁ ἄνθρωπος τῶν ἐπιστημόνων καὶ ἐχόμεν ἐπιστήμην· ἔστι δ' 417a 7. οὐκ αἰσθάνεται καθάπερ TX. 13. τὸ αἰσθητὸν Vulg. αἰσθάνεσθαι. 16. λέγομεν STUWX. 23. εἴπομεν ETUVW.
at once the question—why is there no perception or sense of the senses themselves, and why do the senses not produce a perception without the help of external objects, when there is contained within them fire and earth and the other elements which are objects of perception either in themselves or in virtue of their properties. Evidently, it follows, the power of sense perception exists not as something actually exercised, but only as something potential. And so the case is parallel to that of combustible material, which is not burnt by itself without the presence of that which can set it on fire: otherwise it would set fire to itself, and there would be no need for the help of actual fire. We must note however that we use the word 'perceive' in two senses. In the case of that which has the power to hear and see, we say it hears and sees, even if it chance to be asleep, just as much as we do in the case of that which is already actually at work. Perception therefore would be similarly used in two senses, on the one hand as in potentiality, on the other hand as in actuality: and this same distinction will in turn apply to the object of perception, which is from one aspect potential, from another actual.

Let us then in the first place agree to regard in our discussion the words "passive impression" "movement" and "activity" as identical: for movement is a species of realized activity, though, as has been elsewhere said, it is imperfect. Now in every instance things are impressed and set in movement by something which is capable of producing an impression and which exists in full activity. And thus an impression is in one sense made by the like, in another sense by the unlike, as has been already said; for it is as unlike that anything suffers an impression: after the impression has been made, it is converted into like.

But, in the second place, a distinction must be drawn with reference to potentiality and actuality; at present we are speaking about them as if they admitted of no variations of meaning. For instance any individual may be described as knowing (1) in the sense in which we should describe a man as knowing, because, i.e., man is included in the class of beings that are intelligent and gifted with knowledge; or (2) an individual might be said to know in the sense in which we speak of a person as knowing
όσ ἡδή λέγομεν ἐπιστήμονα τὸν ἔχοντα τὴν γραμματικήν. 25 (ἐκάτερος δὲ τούτων οὐ τὸν αὐτὸν τρόπον δυνατὸς ἐστιν, ἀλλ' ὁ μὲν InBackground ὁ τὸ γένος τοιούτου καὶ ἡ ύλη, ὁ δ' ὁτι βουλήθεις δυνατὸς θεωρεῖν, ἀν μή τι κωλύσῃ τῶν ἐξωθεῖν) ὁ δ' ἡδή θεωρῶν ἐντελεχεία ὁν καὶ κυρίως ἐπιστάμενος τόδε τὸ Λ. ἀμφότεροι μὲν οὖν οἱ πρῶτοι κατὰ δύναμιν ἐπιστήμονες, 30 ἀλλ' ὁ μὲν διὰ μαθήσεως ἄλλου θεωρεῖς καὶ πολλάκις ἐξ ἐναντίας μεταβαλῶν ἔξως, ὁ δ' ἐκ τοῦ ἔχειν τὴν αἰσθήσιν ἡ τὴν γραμματικήν, μὴ ἐνεργεῖν δ' εἰς τὸ ἐνεργεῖν ἄλλον 417

§ 5 τρόπον. οὐκ ἔστι δ' ἀπλοῦν οὐδὲ τὸ πάσχειν, ἀλλὰ τὸ μὲν φθορά τις ὑπὸ τοῦ ἐναντίου, τὸ δὲ σωτηρία μᾶλλον τοῦ δυνάμει ὁντὸς ὑπὸ τοῦ ἐντελεχεία ὁντος καὶ ὁμοίου, οὕτως ὁς δύναμις ἔχει πρῶς ἐντελέχειαν. θεωροῦν γὰρ γίγνεται τὸ ἔχον 5 τὴν ἐπιστήμην, ὅσπερ ἡ οὐκ ἔστιν ἄλλοιοὐσθαι (εἰς αὐτὸ γὰρ ἡ ἐπίδοσις καὶ εἰς ἐντελέχειαν) ἡ ἔτερον γένος ἄλλοιοὐσεως. διὸ οὐ καλῶς ἔχει λέγειν τὸ φρονοῦν, ὅταν φρονῇ, ἄλλοιοὐσθαι, ὥσπερ οὐδὲ τὸν οἰκόδομον ὅταν οἰκοδομῇ. τὸ μὲν οὖν εἰς ἐντελέχειαν ἄγον ἐκ δυνάμει ὁντος κατὰ τὸ νοοῦν καὶ τὸ φρονοῦν οὐ διδασκάλιαν ἀλλ' ἐτέραν ἐποινυμιὰν ἔχειν δίκαιον. τῷ δ' ἐκ δυνάμει ὁντος μανθάνων καὶ λαμβάνων ἐπιστήμην ὑπὸ τοῦ ἐντελεχεία ὁντος καὶ διδασκαλικοῦ ήτοι οὐδὲ πάσχειν φατέον, ὥσπερ εἰρηται, ἡ δύο τρόπους εἶναι ἀλ-

25. ἐπιστασθαι SX. 28. ὁ δ' ἡδή] τρίτος δ' ὁ ἡδή θεωρῶν Tor. 30. πρῶτοι unc. incl. Tor. 417 b 14. ὥσπερ εἰρηται om. SUX.
only after he has acquired a knowledge of the principles of grammar. Now of these two persons, each possesses the capacity for knowledge in a different sense—the one because the generic character and fundamental nature of man is of this description, the other because if he wished he would be able to apply his knowledge, supposing that no obstacle prevented him. He on the other hand (3) who has advanced so far as to apply his knowledge is in a state of full realization and knows in the strict sense of the word—for instance that this definite thing is A. As compared then with this third, both of these first mentioned possess knowledge only in potentiality: but they do so in different senses, the one because in order to become a man of knowledge he must have been transformed by learning and in many cases changed from the directly contrary state: the other because, while possessing, though not employing (say) perceptive faculties or grammatical principles, he can proceed to use them when he wishes.

Suffering or impression similarly is not used in one single sense. On the one hand, it is equivalent to some sort of destruction by the opposite; on the other hand it is rather the preservation of that which exists potentially by means of the actual and similar, much in the same way in which potential capacity stands to actual reality. That for example which possesses knowledge rises into actual consciousness: and this is either not to be described as alteration (because its advance is towards itself and its own perfect development) or it is a different kind of alteration from that usually signified. Hence it is not correct to say that a thinking being is at the time of thinking undergoing alteration: as little as that the housebuilder is so at the time when he is building. The process therefore which transforms what is potential into what is actual in relation to a reasoning and thinking being should be called not instruction but should be known by some other name; and similarly, with reference to that which, on the basis of what is merely potential, learns and receives knowledge at the hands of that which is actual and capable of teaching, we either must not speak of it as 'suffering' an impression (as has been said) or we must recognise two different forms of alteration, the one a transition into the
λοιώσεως, τήν τε ἐπὶ τᾶς στερητικὰς διαθέσεις μεταβολὴν
§ 6 καὶ τὴν ἐπὶ τᾶς ἔξεις καὶ τὴν φύσιν. τοῦ δ' αἰσθητικοῦ ἡ μὲν
πρώτη μεταβολὴ γίνεται ὑπὸ τοῦ γεννώντος, ὅταν δὲ γεννηθῇ, ἐχει ἡδὴ ὀσπέρ ἐπιστήμην καὶ τὸ αἰσθάνεσθαι. καὶ
tὸ κατ’ ἐνεργειαν δὲ ὀμοίως λέγεται τῷ θεωρεῖν. διαφέρει
dὲ, ὅτι τοῦ μὲν τὰ πουητικὰ τῆς ἐνεργείας ἔξωθεν, τὸ ὀρατὸν καὶ τὸ ἀκουστόν, ὀμοίως δὲ καὶ τὰ λοιπὰ τῶν αἰσθητῶν.
αἰτίων δ' ὅτι τῶν καθ’ ἐκαστον ἡ κατ’ ἐνεργείαν αἰσθησις, ἡ
d' ἐπιστήμη τῶν καθόλου ταύτα. δ’ ἐν αὐτῇ πῶς ἐστὶ τῇ
ψυχῇ. διὸ νοήσαι μὲν ἐπ’ αὐτῷ ὁπόταν βούληται, αἰσθά-
νεσθαι δ’ οὕκ ἐπ’ αὐτῷ, ἀναγκαῖον γὰρ ὑπάρχειν τὸ αἰσθή-
tὸν. ὀμοίως δὲ τοὺτ’ ἔχει καὶ ταῖς ἐπιστήμαις ταῖς τῶν αἰ-
σθητῶν, καὶ διὰ τὴν αὐτὴν αἰτίαν, ὅτι τὰ αἰσθήτα τῶν καθ’
ἐκαστα καὶ τῶν ἔξωθεν. ἀλλὰ περὶ μὲν τούτων διασαφήσαι
§ 7 καὶ ρος γένοιτ’ ἀν καὶ εἰσαύθις. νῦν δὲ διωρίσθω τοσοῦτον, ὅτι
οὐχ ἀπλοῦ ὄντος τοῦ δυνάμει λεγομένου, ἀλλὰ τοῦ μὲν ὀσπέρ ἄν
ἐπομεν τὸν παῖδα δύνασθαι στρατηγεῖν, τοῦ δὲ ὡς τῶν ἐν
ηλικίᾳ οὕτω, οὕτως ἔχει τὸ αἰσθητικὸν. ἐπεὶ δ’ ἀνώνυμος
αὐτῶν ἡ διαφορά, διώρισται δὲ περὶ αὐτῶν ὅτι ἔτερα καὶ 418
πῶς ἔτερα, χρήσθαι ἀναγκαῖον τῷ πάσχει καὶ ἀλλο-
οὐσθαι ὡς κυρίοις ὀνόμασιν. τὸ δ’ αἰσθητικὸν δυνάμει ἐστὶν
ὁν τὸ αἰσθητῶν ἡδὴ ἐνετελεχεία, καθάπερ εἰρηται. πάσχει
μὲν οὖν οὐχ ὀμοίον ὃν, τεπονθὸς δ’ ὀμοίωται καὶ ἐστὶν 5
ὁν ἐκεῖνο.
merely negative phase of a previous state, the other a transition into the established and natural condition.

In the sensitive subject the first form of transition is effected by the generating parent: after birth however the subject born comes to possess sensation in the further way of an intelligent experience. The actual exercise of sense comes to be used in fact as equivalent to thought, with this difference, however, that in the case of sense the objects which stimulate the faculty into action—that is the objects of sight, hearing and of the other senses, come from outside. The reason of this is that sense-perception when in active exercise deals with individual objects, whereas intelligent experience is concerned with universals; and these last are in a way contained within the mind itself. Hence it is within a man's own power to think whenever he wishes: but sense-perception is not thus in his own hands: because the object of sense must be beforehand present. The same holds good also of the sciences that deal with sensible phenomena: and this too for the same reason, because the objects of sense are individual and external.

We must however postpone the fuller discussion of this subject to another occasion. At present we may regard this much as settled—that just as what is described as potential is not used in one single sense, but on the one hand in the sense according to which we should speak of the boy as able potentially to be a general and on the other hand in that according to which we should say that the man in prime of life is potentially so able: so also is it with the power of sense-perception. Since however the distinction in question, although we have settled that the two senses are different and also how they are different, is not recognised by language, we must employ the words impression and alteration as current terms. But, as has been said, the faculty of sense-perception is potentially what the object of sense is actually. During the process of perception then the faculty of sense is not similar to its object; but after the impression, it is assimilated and becomes analogous to it.
§ 1 VI. Λεκτέον δὲ καθ' ἐκάστην αἰσθησίαν περὶ τῶν αἰσθητῶν πρῶτον. λέγεται δὲ τὸ αἰσθητὸν τριχῶς, ὅν δύο μὲν καθ' αὐτὰ φαμεν αἰσθάνεσθαι, τὸ δὲ ἐν κατὰ συμβεβηκός. τῶν δὲ δύο τὸ μὲν ἰδιόν ἐστὶν ἐκάστης αἰσθήσεως, τὸ δὲ κοινὸν.

§ 2 πάσων. λέγω δ' ἰδιὸν μὲν δ' μὴ ἐνδέχεται ἐτέρα αἰσθήσει αἰσθάνεσθαι, καὶ περὶ δ' μὴ ἐνδέχεται ἀπατηθῆναι, οἷον ὁψις χρώματος καὶ ἀκοῇ ψόφου καὶ γεύσις χυμοῦ. ἡ δ' ἀφὴ πλείους μὲν ἔχει διαφοράς· ἀλλ' ἐκάστη γε κρίνει περὶ τούτων, καὶ οὐκ ἀπατᾶται ὅτι χρώμα οὐδ' ὅτι ψόφος.

§ 3 ἄλλα τί τὸ κεχρωσμένον ἢ ποῦ, ἢ τί τὸ ψοφοῦν ἢ ποῦ. τὰ μὲν οὖν τοιαύτα λέγεται ἰδιὰ ἐκάστου, κοινά δὲ κύνης, ἱρεμία, ἀριθμός, σχῆμα, μέγεθος· τὰ γὰρ τοιαύτα οὐδεμιᾶς ἐστὶν ἰδια, ἄλλα κοινὰ πάσας· καὶ γὰρ ἀφῆ τε κύνης.

§ 4 ἐστὶν αἰσθητή καὶ ὅψει. κατὰ συμβεβηκὸς δὲ λέγεται αἰσθητῶν, οἷον εἰ τὸ λευκὸν εἰπὶ Διάρους νύσι· κατα συμβεβηκὸς γὰρ τούτον αἰσθάνεται, ὅτι τῷ λευκῷ συμβεβηκε τούτο οὐ αἰσθάνεται. διὸ καὶ οὐδὲν πάσχει ἃ τοιοῦτον ὑπὸ τοῦ αἰσθητοῦ. τῶν δὲ καθ' αὐτὰ αἰσθητῶν τὰ ἰδια κυρίως ἐστὶν αἰσθητά, καὶ πρὸς ὃ ὅν γίνεται πέφυκεν ἐκάστης αἰσθήσεως.

418. 19. πάσας om. UX || ἀφὴν τε κύνης vulg. ἀφὴν κύνης tis, κατα τε V. 20. post ὅψει editi ante Bekk. καθ' αὐτὰ μὲν οὖν ἐστὶν αἰσθητὰ ταῦτα. 23. ἦν om. SUX.
CHAPTER VI.

In dealing with the senses separately we must begin by a description of their objects. The so-called object of sense-perception may mean three different things, of which two are said to be perceived directly in themselves, the third incidentally and with regard to its concomitants. Of the two first-mentioned, one is special and confined to each one of the senses separately, the other is common to them all. By the special is to be understood that which it is impossible to perceive by any other sense than that appropriated to it and with respect to which that sense cannot be deceived. So it is that colour stands to sight, sound to hearing, flavour to taste: touch, however, it must be added, deals with a number of different qualities. Each single sense in fact discerns these different qualities, and is subject to no delusion as to whether it be a colour or whether it be a sound that it perceives: its only doubt is what it is that is coloured or where it is, or what or where is the body that is sounding. Such are the objects of perception which are said to be peculiar to each separate sense.

The common sensibles are movement, rest, number, figure, magnitude; such properties being peculiar to no one single sense but shared in common by them all. Movement for instance is perceived at once by touch and by sight.

By the term incidental sensible I describe such a case as when a certain white object is perceived as the son of Diaries: for here there is but an incidental or indirect perception of this object, in so far as the object which is perceived is an incident or property of what is white. Hence then the organ of sense is affected in no way by the object of sense so far as it is such and such a person or thing. But among those objects of sense which are perceived directly in themselves, it is those special to the separate senses that are strictly the objects of perception and those for which the essential nature of each sense is naturally adapted.
§ 1 VII. Ὅδε μὲν οὖν ἔστιν ἡ ὁψις, τούτ' ἐστὶν ὤρατόν. ὤρατόν δ' ἐστὶ χρώμα τε, καὶ ὁ λόγος μὲν ἔστιν εἰπεῖν, ἀνώνυμον δὲ τυγχάνει οὖν. δῆλον δὲ ἐσται ὁ λέγομεν προειλθοῦσι μάλιστα. τὸ γὰρ ὤρατὸν ἐστὶ χρώμα. τούτῳ δ' ἐστὶ τὸ ἐπὶ τοῦ καθ' αὐτὸ ὤρατον. καθ' αὐτὸ δὲ οὐ τῷ λόγῳ, ἀλλ' ὅτι ἐν 30 ἑαυτῷ ἔχει τὸ αὐτοῦ τοῦ εἶναι ὤρατόν. πάν δὲ χρώμα κινητικόν ἐστὶ τοῦ κατ' ἐνέργειαν διαφανοῦς, καὶ τούτ' ἐστιν αὐτοῦ 418b ή φύσις. διόπερ οὐχ ὤρατον ἄνευ φωτός, ἀλλὰ πάν τὸ ἐκάστου χρώμα ἐν φωτὶ ὤρατόν. διὸ περὶ φωτὸς πρῶτον λεκτέον τί § 2 ἐστιν. ἐστὶ δὴ τι διαφανεῖς. διαφανὲς δὲ λέγω δ' ἐστι μὲν ὤρατόν, οὐ καθ' αὐτὸ δὲ ὤρατον ὡς ἀπλῶς εἰπεῖν, ἀλλὰ δι' 5 ἀλλότριον χρῶμα. τοιούτων δὲ ἐστιν ἀγρ καὶ ὑδῷ καὶ πολλά τῶν στερεῶν. οὐ γὰρ ἢ ὑδῷ οὖν ἢ ἀγρ διαφανές, ἀλλ' ὅτι ἐστὶ τις φύσις υπάρχουσα ἢ αὐτὴ ἐν τούτοις ἀμφοτέροις καὶ ἐν τῷ αἰδίῳ τῷ ἄνω σώματι. φῶς δ' ἐστιν ἢ τούτων ἐνέργεια τοῦ διαφανοῦς ἢ διαφανεῖς. δυνάμει δὲ ἐν δ' τούτ' ἐστι, καὶ τὸ 10 σκότος. τὸ δὲ φῶς οἶνον χρώμα ἐστὶ τοῦ διαφανοῦς, ὅταν ἡ ἐντελεχεία διαφανεῖς ὑπὸ πυρὸς ἢ τοιούτων οἶνον τὸ ἄνω σώμα· καὶ γὰρ τούτῳ τι υπάρχει ἐν καὶ ταύτων. τί μὲν οὖν τὸ διαφανὲς καὶ τί τὸ φῶς, εἰρηται, ὅτι οὔτε πῦρ οὖθ' ὄλως σώμα οὖθ' ἀπορροῃ σώματος οὔδενός (εἰ ηγὰρ ἀν σώματι τι καὶ 15 οὖτως), ἀλλὰ πυρὸς ἢ τοιούτου τινὸς παρουσίᾳ ἐν τῷ διαφανεῖ· οὖν δὴ γὰρ δύο σώματα ἅμα δυνατῶν ἐν τῷ αὐτῷ εἶναι.
CHAPTER VII.

Sight then has for its object what is visible. This visible itself is colour and something which may be described, although there is no one term by which to name it—its nature will be evident as we proceed. Meanwhile, let us repeat, the visible is colour. This is that which diffuses itself over what is visible in itself, meaning by 'in itself' not that it is so in its very conception, but that it contains within itself the reason of its being visible. Now every colour is disposed to set in movement that which is actually pellucid, this being in fact its nature. Hence colour is not visible without light: the colour on the contrary of every object is only visible in light. And accordingly something must be said in the first place about the character of light.

There is then, we may begin by saying, something which is pellucid. And by pellucid is meant something which is visible, not visible by itself (to speak without further qualification), but visible by reason of some foreign colour which affects its neutral pellucidity. Of this character are air and water and also many among solid bodies, water and air being pellucid not in virtue of their qualities as water or air, but because they both contain the same element as constitutes the everlasting empyrean essence. Light then is the expression of this pellucid qua pellucid: and whenever this pellucidity is present only potentially, there darkness also is present. Light is thus almost as it were the colour of the pellucid when it is realized into full pellucidity by fire or something like the upper substance of the heavens, this upper substance possessing one and the same element with fire. Thus then we have described pellucidity and light: and have shewn light to be neither fire, nor body generally, nor even the effluvium or emanation from any body (since even in this case it would be a body of a kind) but only the presence of fire or something like it in that which is pellucid: two bodies being unable to exist at one and the same time within the same space.
§ 3 δοκεῖ τε τὸ φῶς ἐναντίον εἶναι τῷ σκότει· ἔστι δὲ τὸ σκότος στέρησις τῆς τοιαύτης ἐξέως ἐκ διαφανοῦς, ὥστε δῆλον ὅτι καὶ ἡ τοῦτο παρουσία τὸ φῶς ἔστιν. καὶ οὐκ ὁρθῶς Ἕμπε- 
δοκλῆς, οὐδ' εἰ τις ἄλλας οὕτως εἰρήκειν, ὡς φερομένου τοῦ 
φωτὸς καὶ γιγνομένου ποτὲ μεταξὺ τῆς γῆς καὶ τοῦ περι-
έχοντος, ἡμᾶς δὲ λανθάνοντος· τούτο γάρ ἐστὶ καὶ παρά 
τὴν ἐν τῷ λόγῳ ἀλήθειαν καὶ παρὰ τὰ φαινόμενα. ἐν μι-
κρῷ μὲν γὰρ διάστήματι λάθοι ἄν, ἀπ' ἀνατολῆς δ' ἐπὶ 
§ 4 δυσμᾶς τὸ λανθάνειν μέγα λίαν τὸ αἴτημα. ἔστι δὲ χρώ-
ματος μὲν δεκτικὸν τὸ ἄχρον, ψόφον δὲ τὸ ἄψοφον. 
ἄχρον δ' ἐστὶ τὸ διαφανὲς καὶ τὸ ἀόρατον ἡ τὸ μόλις 
ὁρώμενον, οἷον δοκεῖ τὸ σκοτεινόν. τοιούτων δὲ τὸ διαφανὲς 
μὲν, ἀλλ' οὐχ ὅταν ἡ ἐντελεχεία διαφανεῖς, ἀλλ' ὅταν δυ- 
νάμει· η γὰρ αὐτή φύσις ὅτε μὲν σκότος ὅτε δὲ φῶς 
ἔστιν. οὐ πάντα δὲ ὀρατά ἐν φωτὶ ἐστίν, ἀλλὰ μόνον ἐκάστουν 419 
τὸ οἰκεῖον χρῶμα· ἐνα γὰρ ἐν μὲν τῷ φωτὶ οὐχ ὀράται 
ἐν δὲ τῷ σκότει ποιεῖ αἰσθησιν, οἷον τὰ πυρώδη φαινόμενα 
καὶ λάμποντα (ἀνώνυμα δ' ἐστὶ ταύτα ἐνὶ óνοματι), οἰον 
μῦκης, κέρας, κεφαλαὶ ἵχθυων καὶ λεπίδες καὶ ὀφθαλ- 
μοί· ἀλλ' οὐδενὸς ὀράται τούτων τὸ οἰκεῖον χρῶμα. δὲ ἦν 
§ 5 μὲν οὖν αἰτίαν ταύτα ὀράται, ἀλλος λόγος. νῦν δ' ἐπὶ το-
σοῦτον φανερὸν ἔστιν, ὅτι τὸ μὲν ἐν φωτὶ ὀρώμενον χρῶμα. 
διὸ καὶ οὐχ ὀράται ἄνευ φωτός: τούτο γὰρ ἦν αὐτὸ τὸ 
χρώματι ἐναι τὸ κυνητικῷ ἐναι τοῦ κατ' ἐνέργειαν διαφα-
νοῦς· ἡ δ' ἐντελεχεία τοῦ διαφανοῦς φῶς ἔστιν. σημείων δὲ τοῦ-
του φανερού· ἐάν γὰρ τὰς θέτο ἐξον χρῶμα ἐπ' αὐτήν 
τὴν ὄψιν, οὐκ ὀψεται· ἀλλά τὸ μὲν χρῶμα κυνεὶ τὸ δια-

18. τῇ δὲ ΤΥΨX Trend. 22. τευμομένου ΕΥ. 24. τὴν τοῦ λόγου ἐνάργειαν 
Τορ. || τὴν τοῦ λόγου ETVWη || ἐνάργειαν TWWy. 419α 1. ὀράται Χ. 9. 
καὶ om. EUW. || αὐτο] αὐτῷ Tor.
This explanation of light is confirmed by the ordinary view which regards light as the opposite of darkness. Darkness in fact is really the removal of such a positive quality from what is pellucid, so that light must necessarily be its' presence. Empedocles therefore and any others who have followed him have not described the phenomenon correctly in speaking of the light as moving itself and as coming some time or other, without our knowing it, into existence between the earth and the surrounding air. Such a theory is contrary at once to reason and to experience. Within the limits of a narrow space, such a process might escape our observation: but to imply that it should do so from the rising to the setting sun is to make too great a postulate. It is in fact the colourless which is receptive of colour, just as it is the soundless which is receptive of sound. But such an absence of colour is characteristic of the pellucid and of the invisible or what is scarcely visible (as darkness is generally thought to be). And the pellucid itself is also similarly dark, but it is so not when it is pellucid in actuality, but only so potentially: for it is one and the same element which is at one time darkness, at another time light. It must not however be supposed that light is exclusively the condition of seeing things: it is so only for the peculiar colour of each object. There are in fact some things which are not visible in the light, but admit of being perceived in darkness, as for instance those phosphorescent objects which cannot be denoted by any one single name, but are such things as fungi, horns, fish-heads, scales and eyes—but in none of these is the colour specially belonging to them perceived in darkness. The reason of this is matter for another argument: at present this much is clear that what is perceived in light is colour.

Colour therefore is not visible without the presence of light: this indeed we saw was the essential character of colour that it is calculated to set the actually pellucid in movement: and the full play of this pellucid constitutes light. It is an obvious proof of the existence of this pellucid that if the object be placed close upon the very eye, this object will not be seen. The colour in fact moves the pellucid substance, for instance

W. AR.
ΠΕΡΙ ΨΤΧΗΣ Β.

φανές, οὖν τὸν ἄερα, ὑπὸ τοῦτο δὲ συνεχοῦς ὄντος κυνέται
§ 6 τὸ αἰσθητήριον. οὐ γὰρ καλῶς τοῦτο λέγει Δημόκριτος οἷος- 15
μενος, εἰ γένοιτο κενὸν τὸ μεταξὺ, ὁρᾶσθαι ἂν ἀκριβῶς καὶ
eἰ μύρρης ἐν τῷ οὐρανῷ εἶχ: τοῦτο γὰρ ἀδύνατον ἑστιν. πά-
σχοντος γὰρ τι τοῦ αἰσθητικοῦ γίνεται τὸ ὀράν· ὑπ’ αὐτοῦ
μὲν οὖν τοῦ ὀρωμένου χρώματος ἀδύνατον, λείπεται δὲ ὑπὸ
tοῦ μεταξὺ, ὡστ’ ἀναγκαίων τι εἶναι μεταξὺ· κενοῦ δὲ γενο- 20
§ 7 μένου οὐχ ὅτι ἀκριβῶς, ἀλλ’ ὅλως οὐθὲν ὀφθήσεται. δὲ ἦν
μὲν οὖν αἰτιαν τὸ χρώμα ἀναγκαῖον ἐν φωτὶ ὁρᾶσθαι, εἰρή-
tαι. πῦρ δὲ ἐν ἀμφοῖν ὄραται, καὶ ἐν σκότει καὶ ἐν φωτὶ,
καὶ τοῦτο ἐξ ἀνάγκης· τὸ γὰρ διαφανὲς ὑπὸ τοῦτο γίνεται
§ 8 διαφανές. ὁ δ’ αὐτὸς λόγος καὶ περὶ ψόφου καὶ ὀσμῆς 25
ἔστιν· οὐθὲν γὰρ αὐτῶν ἀπτόμενον τοῦ αἰσθητήριον ποιεῖ τὴν
ἀισθήσιν, ἀλλ’ ὑπὸ μὲν ὀσμῆς καὶ ψόφου τὸ μεταξὺ κυ-
νεῖται, ὑπὸ δὲ τοῦτο τῶν αἰσθητηρίων ἐκάτερον· ὅταν δ’ ἐπ’
αὐτὸ τῆς ἐπιθῆ τὸ αἰσθητήριον τὸ ψοφοῦ ἢ τὸ ὄζων, οὐδεμίαν
ἀισθήσιν ποιήσει. περὶ δὲ ἄφης καὶ γεύσεως ἔχει μὲν 30
ὀμοίως, οὐ διαφέρει δὲ· δὲ ἦν δ’ αἰτίαν, ὑστερον ἐσται δὴλον.
§ 9 τὸ δὲ μεταξὺ ψόφων μὲν ἀήρ, ὀσμῆς δ’ ἀνώνυμον· κοινὸν
γὰρ δὴ τὶ πάθος ἐπ’ ἀέρος καὶ ὑδάτος ἐστιν, ὡσπερ τὸ δια-
φανὲς χρώματι, οὕτω τῷ ἔχοντι ὀσμῆν δ’ ἐν ἀμφότεροις
ὑπάρχει τοῦτοι· διαφέρει τὸ περὶ τούτων ψόφων 35
ἔχειν αἰσθήσιν ὀσμῆς. ἀλλ’ οἱ μὲν ἀνθρώπος καὶ τῶν πεζῶν 419
ὁσα ἀναπνεῖ, ἀδύνατον τὸν ὄσμασθαι μὴ ἀναπνεύσαντα. ἡ δ’ αἰτία
καὶ περὶ τοῦτων ὑστερον λειτήσηται. ὡνὶ δὲ πρῶτον περὶ
ψόφου καὶ ἀκοῆς διορίσωμεν.

μεταξὺ om. SUX. 33. δὴ om. SUVWX. 419§ 4. ἀκοῆς] δοφρήσεως EWXy.
the air, and it is only through this as it extends from the object to the sense that motion can be communicated to the visual organ.

Democritus is therefore not at all correct in thinking, as he does, that if the intermediate space were empty, everything would be fully seen, even an ant should there be one in the sky. This is really an impossibility. Vision is the result of some impression made upon the faculty of sense: an impression which cannot be effected by the colour itself as perceived; and must therefore be due to the medium which intervenes. An intervening substance then of one kind or another there must necessarily be: and were this intervening space made empty, not only will the object not be seen exactly, but it will not be perceived at all.

We have thus shewn why colour must be seen in light. Fire is seen under both conditions, both in darkness and in light: and this necessarily: for it is by means of fire that the potentially pellucid becomes so actually.

This same account holds good likewise of sound and smell. Neither produces perception by actual contact with the organ: the scent and the sound move the intervening medium: and this medium moves in turn each of the two sense-organs. Thus, in this case also, if the sonorous or odorous object be placed close upon the organ itself, it will produce no perception. Nor is this true only of these senses: it is really the case with touch and taste as well, though apparently it is not so—a fact of which the reason will be afterwards evident. This intervening medium is in the case of sound air, in the case of smell it is some element found both in air and water which has no name assigned it, but which, just as the pellucid serves as medium in the case of colour, so in the case of what possesses smell is present as a common quality in both of these. And thus it is that even animals which live in water seem to possess the sense of smell: man and all other animals that breathe cannot smell unless when inhaling air. The reason of this will be stated afterwards: for the present we must first proceed to determine the nature of sound and hearing.
§ 1 VIII. "Εστι δὲ διιτός ὁ ψόφος· ὁ μὲν γὰρ ἐνεργεία τις, ὁ 5 δὲ δύναμις· τὰ μὲν γὰρ ὃς φαμεν ἔχειν ψόφον, οἶον σπόγγον, ἔρια, τὰ δ' ἔχειν, οἶον χαλκὸν καὶ ὃσα στερεά καὶ λεία, ὦτι δύναται ψοφῆσαι. τούτο δ' ἐστιν αὐτοῦ μεταξῦ καὶ τῆς ἀκοῆς
§ 2 ἐμποιήσατο ψόφον ἐνεργείᾳ. γίνεται δ' ὁ κατ' ἐνεργειαν ψό-
φος ἄεὶ τινος πρός τι καὶ ἐν τωι πληγῇ γάρ ἐστιν ἡ ποιητικὴ οὐσία. διὸ καὶ ἀδύνατον ἐνὸς ὃντος γενέσθαι ψόφον· ἐτερον γὰρ τὸ τύπτον καὶ τὸ τυπτόμενον· ὥστε τὸ ψοφοῦν πρὸς τι ψοφεῖ. πληγῇ δ' οὐ γίνεται ἀνευ φοράς. ὥσπερ δ' ἐσπομεν, οὐ τῶν τυχόντων πληγῆ τὸ ψόφος. οὔθενα γὰρ ποιεῖ ψόφον ἔρια ἢν πληγῆ, ἀλλὰ χαλκὸς καὶ ὃσα λεία καὶ κοίλα, 15 ὁ μὲν χαλκός, ὧτι λείος· τὰ δὲ κοίλα τῇ ἀνακλάσει πολ-
lας ποιεῖ πληγάς μετὰ τὴν πρώτην, ἀδύνατοντος ἐξελθεῖν τοῦ κυνηθέντος. ἐτι ἀκουέται ἐν ἀέρι καὶ ὑδατι, ἀλλ' ἂττον.
§ 3 οὖν ἔστι δὲ ψόφον κύριμος ὁ ἀὴρ οὐδὲ τὸ ὕδωρ· ἀλλὰ δεὶ στε-
ρεὼν πληγῆ γενέσθαι πρὸς ἀλληλα καὶ πρὸς τὸν ἀέρα. 20 τούτῳ δὲ γίνεται, ὡταν ὑπομενὴ πληγεῖς ὁ ἀὴρ καὶ μὴ δια-
χυθῇ. διὸ ἐὰν ταχέως καὶ σφοδρῶς πληγῇ, ψοφεῖ· δεὶ γὰρ φθάσαι τὴν κίνησιν τοῦ βαπτίζοντος τὴν θρύπην τοῦ ἀέρος, ὥστερ ἄν εἰ σωρὼν ἡ ὀρμαθὸν ψάμμου τύπτοι τις φερόμε-
§ 4 νον ταχὺ. ἥχῳ δὲ γίνεται, ὡταν ἀπὸ τοῦ ἀέρος ἐνὸς γενομέ- 25 νον διὰ τὸ ἀγγεῖον τὸ διορίσαν καὶ κωλύσαν θρυφηθῆναι πάλιν ὁ ἀὴρ ἀπωσθῇ, ὥσπερ σφαῖρα. ἐοικε δ' ἂεὶ γίνεσθαι ἥχῳ, ἀλλ' οὐ σαφῆς, ἐπεὶ συμβαίνει γε ἐπὶ τοῦ ψόφου

5. ἐνεργείᾳ. Tor. 6. διεόμει E Tor. 15. ἐξομοὶ Ἰ πατάξαν ἢ πληγῇ, ἀλλὰ VX marg. U. 24. ἀν om. STUX. 25. ἀπὸ τοῦ om. SUVX Tor.
CHAPTER VIII:

Sound may be regarded from two aspects, either as potential or as actual: for there are some things which we say have no sound, as for example sponge and wool, whereas we say that others have, as for example bronze and all hard and smooth substances, because they possess potentially the power of making sound: that is, they are able actually to create a sound between the thing sounding and the sense of hearing. As for actual sound, it is always of something on something and within something, for it is a stroke which produces sound. Hence also it is impossible for sound to take place with only one object; since the object striking must be different from the object struck. Thus the object sounding sounds upon something: and the stroke does not take place without some movement. It is not however, as has been already said, the striking of any object whatever that produces sound: wool, for instance, produces no sound when struck, but bronze and all objects that are smooth and hollow do so. Bronze does so because it is smooth: hollow substances produce many sounds after the first blow, from their reverberation, because the air that has been put in movement cannot find an exit. Further, sound is heard in air, and in a less degree in water. It is however neither air nor water that is the essential condition of sound: there must be a percussion of solid bodies against each other and also against the air, as happens when the air that has been struck remains and is not dissipated. Thus the air emits a sound if it be struck quickly and vehemently: that is, the movement of the person striking must precede the dispersion of the air, just in the same way as one would have to strike quickly a heap or line of sand in motion so as to anticipate its dispersion.

An echo is formed when, from air which has been compressed into one mass by some receptacle which has bounded it and prevented it from being dissipated, the air constituting sound is repelled back again, just as a ball may be made to rebound. It appears in fact that an echo is always formed, though it is not always distinct and audible: and this is because the same thing
καθάπερ καὶ ἐπὶ τοῦ φωτός· καὶ γὰρ τὸ φῶς ἀεὶ ἀνακλά
tαι (οὔδὲ γὰρ ἂν ἐγώνητο πάντη φῶς, ἄλλα σκότος ἐξω τοῦ ἧλιονμένου), ἄλλα οὐχ οὐτῶς ἀνακλάται ὦσπερ ἄφι ὑδατος
ή χαλκοῦ ἢ καὶ τινὸς ἄλλου τῶν λείων, ὥστε σκιῶν ποιεῖν,
§ 5 ἢ τὸ φῶς ὁρίζομεν. τὸ δὲ κενὸν ὀρθῶς λέγεται κύριον τοῦ
ἀκούειν. δοκεῖ γὰρ εἶναι κενὸν ὁ ἀήρ, οὔτος δ᾽ ἐστιν ὁ ποιῶν
ἀκούειν, ὅταν κνηθῇ συνεχῆς καὶ εἰς. ἀλλὰ διὰ τὸ ψαθυρὸς<sup>35</sup>
εἶναι οὐ γεγονεῖ, ἀν μὴ λεῖον ἢ τὸ πληγέν. τότε δὲ εἰς γὺ<sup>420<sup>a</sup></sup>
νεται ἁμα διὰ τὸ ἑπίπεδον· ἐν γὰρ τὸ τοῦ λείου ἑπίπεδον.
§ 6 ψυφητικὸν μὲν οὖν τὸ κνητικὸν ἐνὸς ἀέρος συνεχεῖα μέχρι
ἀκοῆς, ἀκοὴ δὲ συμφυής ἀέρι. διὰ δὲ τὸ ἐν ἀέρι εἶναι, κυ
νουμένου τοῦ ἐξω τὸ εἰσω κυνεί. διόπερ οὐ πάντη τὸ ζων ἀκούει, 5
οὔτε πᾶντῃ διέρχεται ὁ ἀήρ· οὐ γὰρ πάντῃ ἔχει ἀέρα τὸ κυ
νησόμενον μέρος καὶ ἐμψυχον. αὐτὸ μὲν δὴ ἄψοφον ὁ ἀήρ
diὰ τὸ εὐθρυππττον' ὅταν δὲ κωλυθῇ θρύπτεσθαι, ἢ τοῦτον
cύνησις ψόφος. ὁ δ᾽ ἐν τοῖς ὠσὶν ἐγκατωκοδόμηται πρὸς τὸ
ἀκώντος εἶναι, ὅπως ἄκριβῶς αἰσθάνηται πάσας τὰς δια-
θυρεαῖς τῆς κυνήσεως. διὰ ταύτα δὲ καὶ ἐν ὑδατὶ ἀκούο-
μεν, ὅτι οὐκ εἰσέρχεται πρὸς αὐτὸν τὸν συμφυή ἀέρα· ἄλλ
οὔδ᾽ εἰς τὸ οὖς διὰ τὰς ἐλικας. ὅταν δὲ τοῦτο συμβῇ, οὐκ
ἀκούει: οὔδ᾽ ἀν ἡ μήνυξς κάμη, ὦσπερ τὸ ἐπὶ τῇ κόρῃ
dέρμα ὅταν κάμη. ἀλλὰ καὶ σημείον τοῦ ἀκούειν ἢ μὴ τὸ 15

happens to sound as happens also in the case of light. For light never ceases to be reflected: otherwise there would not be everywhere light, but (with the exception of that spot on which the sun's rays directly fall) darkness: only while light is thus continually reflected, it is not reflected in the same way as it is from water or bronze or any other polished substance, so as to produce the shadow, by which light is bounded.

Vacuum or empty space is rightly said by some to be the indispensable vehicle of hearing: for the air is held to be empty, and it is this which causes hearing when it is put in movement as one continuous and connected body. At the same time, by reason of the easy dissipation of the air, no sound whatever is produced unless the object struck be smooth and polished: in which case the air is made, through the even surface, one throughout, because the surface of every smooth body is one.

Every object then so constituted as to set in movement the air extending continuously in one stream until it reach the hearing is sonorous, and hearing is itself attached by nature to the air: and because the sound is in the air, the movement of the air without sets in movement the air which is within. And hence an animal does not possess the sense of hearing in all parts of its body, nor does the air penetrate it at all places, because the organ which requires to move itself and is endowed with psychical capacity does not find everywhere that air on which its exercise depends. Thus then in itself the air is by reason of its ready dissipation soundless: but when it is prevented from dispersion, the movement of this compressed air produces sound. And the air contained within the ears is lodged deeply in them so that it may remain unmoved, and may thus perceive exactly all the different kinds of movement. Hence also the reason why we can hear in water, viz. because the water does not enter into the congenital air itself, nor even, in consequence of the convolutions, into the ear itself: indeed, when this does happen, hearing becomes impossible. Nor again is hearing possible in case the membrane of the ear becomes exhausted, just as similarly vision is destroyed when the hard covering or cornea of the pupil is impaired. (It is in fact a test as to whether
ηχεῖν αἰεὶ τὸ ὄνος ὤσπερ τὸ κέρας· αἰεὶ γὰρ οἰκείαν τινὰ κίνησιν ὁ ἀθρὶς κινεῖται ὁ ἐν τοῖς ὁσῖν· ἀλλὰ ὁ ψόφος ἀλλότριος καὶ οὐκ ἔδιος. καὶ διὰ τοῦτο φασὶν ἀκοῦειν τῷ κενῷ καὶ
§ 7 ἠχοῦντι, ὅτι ἀκοῦομεν τῷ ἔχοντι ὀρισμένον τὸν ἀέρα. πότερον δὲ ψοφεὶ τὸ τυπτόμενον ἢ τὸ τύπτον; ἢ καὶ ἀμφω, τρόπον δὲ ἔτερον ἐστὶ γὰρ ὁ ψόφος κίνησις τοῦ δυναμένου κινεῖσθαι τὸν τρόπον τοῦτον ὄντερ τὰ ἀφαλλόμενα ἀπὸ τῶν λείων, ὅταν τις κρούσῃ. οὐ δὴ πάν, ὕσπερ εἰρηται, ψοφεὶ τυπτόμενον καὶ τύπτον, οἶον εἶναι πατάξῃ βελόνη βελόνη· ἀλλὰ δὲ τὸ τυπτόμενον ὀμαλῶν εἶναι, ὡστε τὸν ἀέρα ἀθροῦν
§ 8 ἀφαλλεσθαί καὶ στείεσθαί. αἰ δὲ διαφορὰ τῶν ψοφοῦντων ἐν τῷ κατ' ἐνέργειαν ψόφῳ δηλοῦνται· ὤσπερ γὰρ ἀνευ φωτὸς οὐχ ὁρᾶται τὰ χρώματα, οὕτως οὐδ' ἀνευ ψόφου τὸ ὅξυ καὶ τὸ βαρὺ. ταῦτα δὲ λέγεται κατὰ μεταφορὰν ἀπὸ τῶν ἀπτῶν τὸ μὲν γὰρ ὅξυ καὶ τὴν άισθήσιν ἐν ὀλύγῳ ἥνερτη θάντα, τὸν ἐν πολλῷ ἐπὶ ὀλύγῳ. οὐ δὴ ταχῦ τὸ ὅξυ, τὸ δὲ βαρὺ βραδύ, ἀλλὰ γίνεται τοῦ μὲν διὰ τὸ τάχος ἡ κίνησις τοιαῦτα, τοῦ δὲ διὰ βραδυτῆτα. καὶ ἐσκεῖν ἀνάλογον ἐχεῖν τῷ περὶ τὴν ἀφην ὅξει καὶ ἀμβλύοις οἴον ὡθεῖ διὰ τὸ κινεῖν τὸ μὲν ἐν ὀλύγῳ, τὸ δὲ ἐν πολλῷ, ὡστε συμβαίνει τὸ μὲν ταχὺ τὸ δὲ βραδύ εἶναι. περὶ μὲν οὖν ψόφου
§ 9 ταύτη διωρίσθω. ἡ δὲ φωνῇ ψόφος τίς ἐστιν ἐμψύχου· τῶν 5 γὰρ ἀψύχων οὐθὲν φωνεῖ, ἀλλὰ καθ' ὀμοιότητα λέγεται

we hear or not if the ear continues to sound just like a horn: for the air contained within the ears [though undisturbed as we have seen by outer things] is moved perpetually with some peculiar movement of its own: although the noise coming from outside is something external to the ear and not peculiar to it.) It is then on this account that it is said we hear by means of something void and resonant, because we hear by means of that which contains the air confined within it.

Whether then, we may ask, is it the object striking or the object struck that makes the noise? May we reply that it is both, though each in a different manner? for sound is the movement of anything that can be moved in the same manner as those particles which bound off from smooth surfaces when struck. Everything however, as has been said, does not sound when striking and when struck: for example, a pin does not when struck by another pin: it is necessary that the thing struck should be smooth and even, so that the air may bound off and be agitated in a mass.

The different qualities of sonorous objects are displayed in the actual sounds which they emit. For, just as colours are not visible without light, so in like manner it is impossible to distinguish the acute note and the grave independently of sound. These terms are applied metaphorically from the analogy of objects of touch, the acute or high note moving the sense to a great degree within a short space of time, the grave or low to a small degree within a large extent of time. Thus then it is not a correct account to say that the sharp is rapid or the heavy slow: but the celerity of the action leads to a rapid movement in the one case, just as the tardiness leads to a slow movement in the other. And there does seem to be an analogy between these two forms of sound and the sharp and blunt as perceived by touch: for the sharp pierces, as we may say, while the blunt, as it were, pushes, the one producing its movement in a short, the other in a large expanse of time, and thus as a result the one comes to be quick, the other to be slow. Thus much then on sound in general.

Voice is the sound produced by an animate being: no inanimate object being said to speak except in virtue of the
§ 10 Αέρος κύνησις της ἐστὶν ὁ ψόφος· φωνὴ δὲ ἐστὶ ζώον ψόφος, καὶ οὐ τῷ τυχόντι μορίῳ. ἀλλ' ἐπεὶ πᾶν ψοφεὶ τύπτοντός τινος καὶ τι καὶ ἐν τινι, τούτῳ δ' ἐστὶν ἀήρ, εὐλόγως ἀν φωνοῖ ταῦτα μόνα ὡσα δέχεται τὸν ἁέρα. ἦδη γὰρ τῷ ἀναπνεομένῳ καταχρῆται ἡ φύσις ἐπὶ δύο ἔργα, καθάπερ τῇ γλώττῃ ἐπὶ τῇ γεῦσιν καὶ τῇ διάλεκτῳ, ὅν ἡ μὲν γεῦσις ἀναγκαῖον (διὸ καὶ πλείοσιν ὑπάρχει), ἡ δ' ἐμπνεύει ήνεκα τοῦ εὖ, οὕτω καὶ τῷ πνεύματι πρός τε τήν θερ- 

§ 11 εἰρήσεται) καὶ πρὸς τὴν φωνὴν, ὅπως ὑπάρχῃ τὸ εὖ. ὅργανον δὲ τῇ ἀναπνοῆ ὁ φάρυγξ· οὐ δ' ἠνεκα καὶ τὸ μόριον ἐστι τούτῳ, πλεύμων τούτῳ γὰρ τῷ μορίῳ πλείστον ἔχει τὸν θερμὸν τὰ πεζὰ τῶν ἄλλων. δεῖται δὲ τῆς ἀναπνοῆς καὶ ὁ περὶ τὴν καρδίαν τότος πρῶτος. διὸ ἀναγκαῖον εἰσὶ ἀναπνεομένου εἰςκενή τὸν ἁέρα. ὡστε ἡ πληγή τοῦ ἀναπνεομένου ἁέρος ὑπὸ τῆς ἐν τούτως τοῖς μορίως ψυχῆς πρὸς τὴν καλουμένην ἀρτηρίαν φωνὴ ἐστὶν. οὐ γὰρ πᾶς ζώον ψόφος φωνή, καθάπερ ἐπιστοι (ἐστὶ γὰρ καὶ τῇ γλώττῃ ψοφείν καὶ ὃς οἱ βήτες), ἀλλὰ δεὶ ἐμπυχόν τε ἐίναι τὸ τύπτον καὶ μετὰ φαντασίας τυνὸς' σημαντικὸς γὰρ ὅτι τοὺς ψόφος ἐστὶν ἡ φωνή, καὶ οὐ τοῦ ἀναπνεομένου ἁέρος, ὥσπερ ἡ βης·
similarity between it and the human voice, as is for instance the
case with pipe and lyre and all other inanimate objects which
possess those qualities of pitch and measure and articulation
which seem to characterize the human voice also. Many animals
however do not have a voice, as is the case with all blood-
less animals, and is among sanguineous species the case with
fishes—those which are said to speak, as is the case with the
fishes in the Achelous, only in reality making a noise with their
gills or with something of this kind. And this is only what
might have been expected. Sound indeed is but a movement of
the air: but voice is the sound of a living being, and this too not
with any chance part of the body. But as sound is always the
result of something striking something else and doing so in
something, viz. air, it follows that it is only those objects which
take in air that possess a voice. Now nature uses the air which
has been inspired for two functions, just as it employs the tongue
at once for tasting and articulation—functions of which the one,
viz. taste, is necessary, and thus belongs to the majority of animals,
whereas the other, i.e. intelligible speech, is for ideal ends. In
this same manner, nature employs the breath at once to
regulate the internal heat as something necessary (a fact of
which the reason will be stated elsewhere), and also to frame
speech or voice as something contributing to our nobler ends
in life.

To inhale this breath the organ we employ is the throat,
and this itself is subservient to another part, the lungs. It is in
fact by means of this part that land animals possess more heat
than others. Now the region round about the heart first stands
in need of inhalation: and therefore on inspiration air neces-
sarily presses in. And so the inhaled air when the vital prin-
ciple in these parts of the organism strikes it against the so-called
windpipe is what makes a vocal utterance. For, as has been
said, all the sounds made by animals are not vocal: it is possible
to make a noise even with the tongue or in the way that people
do in coughing: for voice, on the contrary, the organ striking
must be animate and must be accompanied by some mental
image. Voice, in fact, is sound possessed of meaning: it is
not merely a reaction against the air inhaled, as is the case with
§ 12 ἄλλα τούτῳ τύπτει τὸν ἐν τῇ ἀρτηρίᾳ πρὸς αὐτὴν. σημεῖον ὅτι τὸ μῆν δύνασθαι φανερῶ ἀναπνέοντα μηδὲ ἐκπνεύοντα, ἄλλα κατέχοντα· κινεῖ γὰρ τοῦτο ὁ κατέχων. φανερῶν δὲ καὶ διότι οἱ ἰχθύες ἄφωνοι· οὐ γὰρ ἔχουσιν φάρυγγαν. τότε δὲ τὸ μόριον οὐκ ἔχουσιν, οτι οὐ δέχονται τὸν ἄερα οὔτε ἀνα-πνέουσιν. δὴ ἦν μὲν οὖν αἰτίαν, ἐτερὸς ἐστὶ λόγος.

§ 1 IX. Περὶ δὲ ὁσμῆς καὶ ὀσφραντοῦ ἢπτον εὐδιόριστον ἔστι τῶν εἰρημένων· οὐ γὰρ δὴλον ποιῶν τί ἔστιν ἡ ὁσμῆ, οὔτως ὡς ὁ ψόφος ἢ τὸ χρῶμα. αὕτιον δὲ ὅτι τὴν ἀισθήσιν ταύτην οὐκ ἔχομεν ἀκριβῆ, ἄλλα χείρω πολλῶν ζῷων· φαύλως γὰρ ἀν-θρώπως ὁσμαῖ, καὶ οὐθένος αἰσθάνεται τῶν ὀσφραντῶν ἄνευ τοῦ λυπηροῦ ἢ τοῦ ἴδεος, οὐκ οὖν οὗτος ἀκριβοῦς τοῦ αἰσθη-

§ 2 τηρίου. εὐλογοῦν δὲ οὖτω καὶ τα σκληρόφθαλμα τῶν χρωμά-
tων αἰσθάνεσθαι, καὶ μὴ διαδήλους αὐτοῖς εἶναι τὰς δια-
φορὰς τῶν χρωμάτων πλὴν τῷ φοβερῷ καὶ ἀφόβῳ. οὖτω δὲ καὶ τὰς ὁσμὰς τὸ τῶν ἀνθρώπων γένως· έπει δὲν γὰρ ἀνάλογον ἔχειν πρὸς τὴν γεύσιν καὶ ὀμοίας τὰ εἴδη τῶν χυμῶν τοῖς τῆς ὁσμῆς, ἄλλα ἀκριβεστέραν ἔχομεν τὴν γεύ-
σιν διὰ τὸ εἶναι αὐτὴν ἀφήν τινα, ταύτην δὲ ἔχειν τὴν αἰ-
σθήσιν τοῦ ἀνθρώπου ἀκριβεστάτην· ἐν μὲν γὰρ ταῖς ἄλλαις λείπεται πολλῶν τῶν ζῷων, κατὰ δὲ τὴν ἀφὴν πολλῷ τῶν ἄλλων διαφερόντως ἀκριβοῦ. μὲν καὶ φρονιμωτάτον ἔστι τῶν ζῷων. σημείον δὲ τὸ καὶ ἐν τῷ γένει τῶν ἀνθρώπων παρὰ τὸ αἰσθητήριον τούτῳ εἶναι εὐφνεῖς καὶ ἀφνεῖς, παρ’ ἄλλο
coughing: rather with this air we strike the air within the wind-
pipe against the windpipe itself.

This explanation of the voice is confirmed by the fact that it
is impossible to speak when inhaling air or respiring, but only
when we hold the breath: because in checking thus the breath
we move the air that has been taken in. This also explains why
fishes are devoid of voice: viz. because they have no windpipe,
this organ itself being absent because fishes do not inhale the air
nor yet respire—a fact of which the reason must be discussed
elsewhere.

CHAPTER IX.

Smell and its object are less easy to determine than the
other senses which we have discussed: we do not see, in fact,
what is the specific character of smell so clearly as we do that of
sound or colour. The reason of this is that this sense is not
developed in us to nearly the same degree of delicacy as it is in
other animals. Man’s sense of smell is really poor: he never
perceives the scent of anything odoriferous unless when it is
accompanied by either pleasure or pain—a fact which seems to
point to a want of delicate exactness in the organ. It is, we may
suppose, with similar limitations that hard-eyed animals perceive
colours: we may imagine, that is, that they become conscious of
the different kinds of colours only in so far as they create fear or
its opposite: and it is in a correspondingly indirect fashion that
men perceive smells. And thus, while the sense of smell is
analogous to the sense of taste, and the specific kinds of flavour
resemble the different sorts of odour, we possess the sense of
taste in a condition of greater perfection, because taste is itself a
species of the sense of touch: and in man the sense of touch
reaches the greatest sensibility. As regards the other senses, man
falls short of many animals: in touch he far surpasses them in
the delicacy of his perceptions. Hence also man is the most
intelligent of animals. A proof of this is that, within the human
species, men are of good or bad natural parts in virtue of this
very organ of sense and of no one other sense: the hard-fleshed
ΠΕΡΙ ΨΤΧΗΣ Β.

δὲ μηδέν οἱ μὲν γὰρ σκληρῶσαρκοι ἀφυεὶς τὴν διάνοιαν, 25
§ 3 οἱ δὲ μαλακῶσαρκοι ἐφυεὶς. ἔστι δ’, ὁσπερ χυμὸς οἱ μὲν
gλυκὺς οἱ δὲ πυκρός, οὐτω καὶ ὁσμαὶ. ἀλλὰ τὰ μὲν ἔχουσι
τὴν ἁνάλογον ὁσμὴν καὶ χυμὸν, λέγω δὲ οἶδο γλυκεῖαν
ὁσμὴν καὶ γλυκῶν χυμὸν, τὰ δὲ τοῦπαντίον. ὁμοίως δὲ καὶ
dρυμεία καὶ αὐστηρὰ καὶ οξεία καὶ λιπαρὰ ἐστὶν ὁσμή. 30
ἀλλ’ ὁσπερ εἶπομεν, διὰ τὸ μὴ σφόδρα διαδήλους εἶναι
tὰς ὁσμᾶς ὁσπερ τοὺς χυμοὺς, ἀπὸ τοὺτων εἰληφε τὰ ὁνό-
ματα καθ’ ὁμοιότητα τῶν πραγμάτων’ ἡ μὲν γὰρ γλυκεῖα, 421b
κρόκον καὶ μέλιτος, ἡ δὲ δρυμεία, θύμον, καὶ τῶν τοιούτων’
§ 4 τὸν αὐτὸν δὲ τρόπων καὶ ἐπὶ τῶν ἄλλων. ἐστὶ δ’ ὁσπερ
ἡ ἀκοὴ καὶ ἐκάστη τῶν αἰσθήσεως, ἡ μὲν τοῦ ἀκούστου
καὶ ἀνηκούστου, ἡ δὲ τοῦ ὀρατοῦ καὶ ἀοράτου, καὶ ἡ ὁσφρή- 5
ςις τοῦ ὀσφραντοῦ καὶ ἀνοσφραντοῦ. ἀνὸσφραντον δὲ τὸ μὲν
παρὰ τὸ ὄλως ἀδύνατον ἐχειν ὁσμήν, τὸ δὲ μικρὰν ἐχου
§ 5 καὶ φαύλην. ὁμοίως δὲ καὶ τὸ ἄγευστον λέγεται. ἐστὶ δὲ
καὶ ἡ ὁσφρησις διὰ τοῦ μεταξὺ, οἶδον ἁέρος ἡ ὦδατος’ καὶ
gὰρ τὰ ἐνυδρα δοκοῦσιν ωσμῆς αἰσθάνεσθαι. ὁμοίως δὲ καὶ 10
τὰ ἐναιμα καὶ τὰ ἀναιμα, ὁσπερ καὶ τὰ ἐν τῷ ἄερι καὶ
γὰρ τοῦτων ἐνα πόρρωθεν ἀπαντᾶ πρὸς τὴν τροφὴν ὑποσμα.
§ 6 γυνόμενα. διὸ καὶ ἀπορον φαίνεται, εἰ πάντα μὲν ὁμοίως
ὁσμᾶτα, ὁ δ’ ἄνθρωπος ἀναπνεύων μὲν, μὴ ἀναπνεύων δὲ
ἀλλ’ ἐκπνεύων ἡ κατέχων τὸ πνεύμα οὐκ ὁσμᾶτα, οὔτε 13
πόρρωθεν οὔτ’ ἐγγύθεν, οὔδ’ ἂν ἐτὶ τοῦ μικτήρος ἐντὸς τεθῆ.
καὶ τὸ μὲν ἐπὶ αὐτῷ τιθέμενον τῷ αἰσθητήρῳ ἀναίσθητον
εἶναι κοινὸν πάντων’ ἀλλὰ τὸ ἄνευ τοῦ ἀναπνεύσμα ἡ αἰσθά-
νεσθαι ἰδιον ἐπὶ τῶν ἄνθρωπων’ δήλον δὲ πειρωμένοις. ὡστε
τὰ ἀναιμα, ἐπειδή οὐκ ἀναπνεύσουσι, ἔτεραν ἂν τῶν ἀισθήσεων 20

421b 2. κρόκου] ἀπὸ τοῦ κρόκου Ε. Trend. Bekk., ἀπὸ om. STUVWX. 8. καὶ
tὸ φ. ETUV Tor. 10. ὁμοίως δὲ] ἀπὸ om. ETW, ὁμοίως καὶ ἐναιμα Tor. 13.
being dull of understanding, while the soft-fleshed are gifted with good natural ability.

Smells are like flavours, one sweet, another bitter. While however, in some bodies smell and taste correspond, both for example being sweet, in others they are opposed to one another. There are also smells which are pungent, and harsh, and sharp, and oily. But as we have said, because smells are not so clearly distinguishable as flavours, they have received their names from these latter in virtue of the similarity in the things. Thus the smell of saffron and the smell of honey are alike called sweet, that of thyme and such-like objects is called pungent, and so similarly in other cases.

[There is a further point of resemblance on the part of smell.] Just as hearing perceives at once the audible and the inaudible, vision the visible and the invisible, and so also with each one of the other senses; smell similarly perceives at once the odorous and the inodorous, whether, as is the case also with what is tasteless, the object be inodorous because it is utterly impossible that it should have a smell, or simply because it has a faint and bad smell.

Like the other senses, smell also forms its perceptions through some intervening medium, as for example, air and water: for water-animals as well as land are held to have the sense of smell. This also is the case with blood-possessing and bloodless animals, and further with those which fly in air, many of them being brought from a great distance to their food after having smelled it. And hence in fact it appears to be a disputed question whether all animals smell in the same manner. Man only perceives a smell while inhaling the breath: when not inhaling but breathing it forth or checking it, he has no sense of smell, no matter whether the object be far away or close at hand, nor even if it should be placed on the inside of the nostril. And it is indeed a fact common to all animals that an object placed actually on the organ itself is not perceived: but the inability to perceive an odour without inhaling breath is a trait peculiar to man, as will in fact be found on trial. And thus, we might conclude, bloodless animals as not inhaling breath must have some other sense beyond those we have mentioned.
ἐκοι παρὰ τὰς λεγομένας. ἀλλ' ἀδύνατον, εἴπερ τῆς ὁσμῆς αἰσθάνεται· ἡ γὰρ αἰσθήσεις καὶ δυσώδεις καὶ εὐώδεις ὁσφηνίς ἐστιν. ἔτι δὲ καὶ φθειρόμενα φαίνεται ὑπὸ τῶν ἱσχυρῶν ὁσμῶν ψ' ἀυπερ ἀνθρωπος, οἷον ἁσφάλτου καὶ θείου καὶ τῶν τοιούτων. ὁσφραίνεσθαι μὲν οὖν ἀναγκαῖον, 25

§ 7 ἀλλ' οὖν ἀναπνέοντα. έοικε δὲ τοῖς ἀνθρώποις διαφέρειν τὸ αἰσθητήριον τούτο πρὸς τὸ τῶν ἄλλων ζωῆν, ἁσπερ τὰ ὀμματα πρὸς τὰ τῶν σκληροφθάλμων τὰ μὲν γὰρ ἔχει φράγμα καὶ ἁσπερ ἐλυτρον τὰ βλέφαρα, ἀ μὴ κυνή-ςας μηδ' ἀναστάσας οὖν ὁράτι· τὰ δὲ σκληροφθάλμαμα οὐδὲν ἐξ ἐξεὶ τοιοῦτον, ἀλλ' εὐθέως ὁρᾶ τὰ γυνόμενα ἐν τῷ δια-φανεί. οὐτῶς οὖν καὶ τὸ ὁσφραντικὸν αἰσθητήριον τοῖς μὲν ἀκάλυφες εἶναι, ἁσπερ τὸ ὀμμα, τοῖς δὲ τῶν ἀέρα δεχο-422a μένοις ἔχειν ἐπικάλυμμα, ὁ ἀναπνεοῦντων ἀποκαλυπτεσθαί,

§ 8 διευρυνομένων τῶν φλεβῶν καὶ τῶν πόρων. καὶ διὰ τοῦτο τὰ ἀναπνέοντα οὖν ὀσμάται ἐν τῷ ύγρῷ ἀναγκαῖον γὰρ ὁσφρανθῆναι ἀναπνέοντα, τούτο δὲ ποιεῖν ἐν τῷ ύγρῷ, ἀδύνατον. ἔστι δ' ἡ ὀσμὴ τοῦ χηρου, ἁσπερ ὁ χυμὸς τοῦ ύγροῦ· τὸ δ' ὁσφραντικὸν αἰσθητήριον δυνάμει τοιοῦτον.

§ 1 Χ. Τὸ δὲ γενοστὸν ἐστὶν ἄπτων τι· καὶ τοῦτ' αἰτίων τοῦ μὴ εἶναι αἰσθητῶν διὰ τοῦ μεταξὺ ἀλλοτρίων ὄντος σώματος· οὐδὲ γὰρ η ἀφύ. καὶ τὸ σῶμα δὲ ἐν ὃ ὁ χυμὸς, τὸ γενο-10 στὸν, ἐν ύγρῷ ὡς υλη· τούτῳ δ' ἄπτων τι. διὸ κἂν εἰ ἐν υδατι ήμεν, ὑγθανόμεθα ἀν ἐμβληθέντος τοῦ γλυκεός,

§ 2 οὖν ἤν δ' ἄν ἡ αἰσθήσεις ἕμιν διὰ τοῦ μεταξύ, ἀλλὰ τῷ μιχθῆναι τῷ ύγρῷ, καθάπερ ἐπὶ τοῦ ποτοῦ. τὸ δὲ χρώμα

22. ἡ γὰρ τοῦ ὁσφραντοῦ omnes libri. δυσώδης καὶ εὐώδης T. δυσ. καὶ εὐώδιας W.
This, however, is impossible, so far as they actually have a sense of smell; and their perception of what is pleasant or disagreeable is the sense of smell. And further, such animals are found to be destroyed by the same violent odours as destroy men, such as asphalt and brimstone, and the like; so that (it follows) these bloodless animals must also have the sense of smell, although it be without inhaling breath.

There seems at the same time to be a difference between this organ as possessed by man and as possessed by other animals, similar to that between the visual organs of men and those of hard-eyed animals. The former have a protection and, as it were, an envelope in the eyelids, which must be moved and drawn apart in order to enable the animal to see, whereas hard-eyed animals have nothing of this kind but see at once what happens in the medium of the pellucid. Similarly the organ of smell is, in the case of some animals, uncovered just as is the eye, while, in the case of those inhaling air, it has a covering which is opened out on drawing breath, by the dilatation of the veins and pores. Hence animals that inhale air cannot perceive a smell in water, because in order to smell they must inhale and this is impossible in water. Smell, it should be added, is of what is dry, just as taste is of what is liquid, and the organ of the sense of smell is potentially of such a nature.

CHAPTER X.

Taste has for its object something tangible, and, for this reason, it is perceived as little as the object of touch through the medium of any foreign body. And the substance in which flavour lies—that is to say, the gustable—is contained in what is moist as its material substratum, and the moist itself is something tangible. Thus, were we in the water, and were any thing sweet cast into it, we should perceive it, the perception in this case being the result, not of the intervening medium, but simply of the mingling of the sweet thing with the water, as is the case with what we drink. Colour, however, is not perceived by a
οὖχ οὖτως ὁρᾶται τῷ μέγυνσθαι, οὐδὲ ταῖς ἀπορροήσεσί. ὥσ ἡ
μὲν οὖν τὸ μεταξὺ οὐθέν ἐστιν· ὥσ δὲ χρώμα τὸ ὁρᾶτον, οὖτω
τὸ γενοῦτον ὁ χυμὸς. οὐθέν δὲ ποιεῖ χυμοῦ αἰσθησιν ἄνευ
/vndōτητος, ἀλλ' ἔχει ἐνεργεία ἢ δυνάμει ύγρότητα, οἶον τὸ
ἀλμυρὸν' εὐτηκτόν τε γάρ αὐτό καὶ συντηκτικὸν γλώττης.
§ 3 ὥστερ δὲ καὶ ἡ ὄψις ἐστὶ τοῦ τε ὁρᾶτον καὶ τοῦ ἀοράτου (τὸ
γάρ σκότος ἀοράτου, κρίνει δὲ καὶ τοῦτο ἡ ὄψις), ἔτι τοῦ
λίαν λαμπροῦ (καὶ γάρ τοῦτο ἀοράτου, ἄλλον δὲ τρόπον τοῦ
σκότους), ὁμοίως δὲ καὶ ἡ ἀκοὴ ψόφου τε καὶ σιγής, ὅπν
τὸ μὲν ἄκουστον τὸ δ' οὖν ἄκουστόν, καὶ μεγάλου ψόφου,
καθάπερ ἡ ὄψις τοῦ λαμπροῦ' (ὕστερ γὰρ ὁ μικρὸς ψόφος
ἀνήκουστος, τρόπον τινὰ καὶ ὁ μέγας τε καὶ ὁ βίαιος')
ἀοράτον δὲ τὸ μὲν ὅλως λέγεται, ὅστερ καὶ ἐπὶ ἄλλων τὸ
ἀδύνατον, τὸ δ', εἰών πεφυκός μὴ ἔχει ἢ φαύλως, ὅστερ
τὸ ἀπονῦκαι τὸ ἀπόρημον' οὖτω δὴ καὶ ἡ γεύσις τοῦ γευστοῦ
τε καὶ ἀγεύστον' τοῦτο δὲ τὸ μικρὸν ἢ φαύλου ἔχουν χυμὸν
ἡ ὕθαρτικὸν τῆς γεύσεως. δοκεῖ δ' εἶναι ἀρχὴ τοῦ ποτὸν καὶ
ἀποτοῦν γεύσις γάρ τις ἀμφότερα· ἀλλὰ τὸ μὲν φαύλῃ
§ 4 καὶ ὕθαρτική τῆς γεύσεως, τὸ δὲ κατὰ φύσιν' ἔστι δὲ κοι-
νοῦν ἀφῆς καὶ γεύσεως τὸ ποτὸν. ἐπεὶ δ' ὕγρον τὸ γευστὸν,
ἀνάγκη καὶ τὸ αἰσθητήριον αὐτοῦ μήτ' ὕγρον εἶναι ἐντελε- 422b
χεία μήτ' ἀδύνατον ὕγραινεσθαι' πάσχει γάρ τι ἡ γεῦ-
σις ὑπὸ τοῦ γευστοῦ, ἢ γευστὸν. ἀναγκαῖον ἀρα ὑγρανθήναι
τὸ δυνάμενον μὲν ὑγραινεσθαι σωζόμενον, μῆ ὕγρον δὲ, τὸ
19. τηκτόν SUX. 29. τὸ om. ETU. 422b r. καὶ om. STVX.
similar process of combination nor by emanation. Here then, in regard to taste, there is nothing corresponding to a mediating substance, but, on the other hand, as the object of vision is colour, so the object of taste is flavour. Now nothing produces the sense of flavour without moisture; everything that does so, possesses moisture either actually or potentially. So it is, for instance, with the saltish; for it is easily dissolved and it readily combines with the moisture of the tongue.

[In its objects, taste is as comprehensive as sight or hearing.] Sight, we saw, is concerned at once with the visible and invisible (darkness, for instance, is invisible, but is nevertheless distinguished by the eyesight), and also with the excessively bright, which is likewise invisible, though in another manner than darkness. Hearing, in like manner, perceives both sound and silence (of which the one is audible, the other inaudible), and is also directed to excessive noise, just as sight dealt with the overbrilliant, great and violent noise being inaudible much in the same way as the slight and feeble. And here further it should be noted that the name invisible is used not only to denote that which is absolutely and entirely so, in the manner in which we use the word impossible in other cases; it denotes also that which does not possess its normal qualities or possesses them only imperfectly, as we speak of something as without feet or without kernel. Taste then, has in this same way a perception at once of the sapid and the insipid, meaning by this last that which has a small and feeble flavour or a flavour which destroys taste altogether. Of this distinction the drinkable and undrinkable is thought to be the origin, for taste embraces both, although there is this difference, that the one is destructive and injurious to the taste, while the other is naturally adapted to it. And the potable or drinkable is common at once to touch and taste.

The object of taste being liquid, it follows that the organ which perceives it must be neither actually moist nor yet incapable of being rendered moist: for the taste is affected in some way by the object of taste as such. Hence it is necessary that the organ of taste which admits of being moistened should be rendered moist without losing anything of its own nature and
γενοτικοί αἰσθητήριοι. σημείον δὲ τὸ μὴτε καταξηρον οὖσαν 5
tὴν γλώτταν αἰσθάνεσθαι μὴτε λίαιν υγράν' αὕτη γὰρ ἀφὴ
γίνεται τοῦ πρώτου ύγροῦ, ὡσπερ ὅταν προγευματίσας τις
ισχυροῦ χυμοῦ γεύηται ἐτέρου' καὶ ὁδὸν τοὺς κάμνουσι πικρὰ
πάντα φαίνεται διὰ τὸ τῇ γλώττῃ πλήρει τοιαύτῃς ύγρό-
§ 5 τητος αἰσθάνεσθαι. τὰ δ' εἴδη τῶν χυμῶν, ὡσπερ καὶ ἐπὶ 10
τῶν χρωμάτων, ἀπλὰ μὲν τάναντια, τὸ γλυκῦ καὶ τὸ πι-
κρόν, ἔχομενα δὲ τοῦ μὲν τὸ λιπαρόν, τοῦ δὲ τὸ ἀλμυρῶν
μεταξὺ δὲ τούτων τὸ τε δρμό καὶ τὸ αὐστηρόν καὶ στρυφνόν
καὶ ὧξ'· σχέδου γὰρ αὕται δοκοῦσιν εἶναι διαφοραί χυμῶν.
ὡστε τὸ γενοτικὸν ἐστὶ τὸ δυνάμει τοιοῦτον, γενοτικὸν δὲ τὸ 15
ποιητικὸν ἐντελεχείᾳ αὐτοῦ.

§ 1 XI. Περὶ δὲ τοῦ ἀπτοῦ καὶ ἀφῆς ὁ αὐτὸς λόγος. εἰ γὰρ
ἡ ἀφὴ μὴ μία ἐστὶν αἰσθήσις ἀλλὰ πλείως, ἀναγκαῖον καὶ τὰ
ἀπτὰ αἰσθητὰ πλεῖω εἶναι. ἔχει δ' ἀπορίαν πότερον πλείως
εἰσὶν ἡ μία, καὶ τί τὸ αἰσθητήριον τὸ τοῦ ἀπτοῦ ἀπτικὸν, 20
πότερον ἡ σαρξ καὶ ἐν τοῖς ἄλλοις τὸ ἀνάλογον, ἡ οὖ, ἀλλὰ
τούτο μὲν ἐστὶ τὸ μεταξὺ, τὸ δὲ πρῶτον αἰσθητήριον ἄλλο τί
§ 2 ἐστὶν ἑντός. πᾶσα τε γὰρ αἰσθήσις μιᾶς ἐναντιώσεως εἶναι
dοκεῖ, ὁδὸν ὑψὶς λευκοῦ καὶ μέλανος καὶ ἀκοὴ ὑξέος καὶ
βαρέος καὶ γεύσις πικροῦ καὶ γλυκέος· ἐν δὲ τῷ ἀπτῷ 25
πολλαὶ ἐνείσου ἐναντιώσεις, θερμὸν πυρρόν, ξηρὸν ύγρόν,
σκληρὸν μαλακόν, καὶ τῶν ἄλλων ὥσα τοιαύτα. ἔχει δὲ
τινα λύσιν πρὸς γε ταὐτήν τὴν ἀπορίαν, ὅτι καὶ ἐπὶ τῶν

8. χυμοῦ om. E. 17. καὶ περὶ ἀφῆς ΕΤυ Τορ. 20. ἀπτοῦ ἀπτικῶν
ἀπτικοῦ ESTUVXy, ἀπτοῦ W. 26. εἰσὶν STUXV.
without being moistened in itself. This is confirmed by the fact that the tongue has no sense of taste when it is either very dry or very moist: for in this latter case, it is the moisture with which the tongue has been previously imbued that is touched, rather than the flavour applied to it that is tasted. The case, in fact, is just like what happens when one, after having tasted beforehand some strong flavour, proceeds to taste some other substance, or to the way in which everything seems bitter to the sick because the tongue with which they taste is filled with flavour of this bitter character.

The specific kinds of flavours are, as in the case of colours, firstly, simple opposites, viz. the sweet and bitter: secondly, the flavours allied to each of these—i.e. the oily and the saltish: thirdly, the flavours intermediate between these, viz. the pungent, the rough, the astringent and the piquant: these being in fact the different flavours which are generally recognised. Thus then the faculty of taste is that which is potentially of this character: the object of taste is that which makes it actually so.

CHAPTER XI.

Touch and its object may be considered in the same way. Thus if touch be not one single sense but a variety of senses, the objects of touch must be also several. And it is in fact a question whether the sense of touch includes several senses or whether it is one sense only, as also what is the organ which is adapted to perceive the tangible, whether, e.g., it is the flesh and in the case of other animals some corresponding part, or whether, on the other hand, this is merely the intervening medium, the ultimate organ of sense being something else which is within. For, while all the other senses are held to be related to some pair of opposites—sight, for example being directed to the white and black, hearing to the acute and grave, taste to the bitter and the sweet—the object of touch presents us with many pairs of opposites—such as hot and cold, dry and moist, hard and soft, and others of like character.

A partial solution of this difficulty lies in the consideration
άλλων αἰσθησεών εἰσιν ἑναντίωσεις πλείους, οἷον ἐν φωνῇ οὐ μόνον ὅξυτης καὶ βαρύτης, ἀλλὰ καὶ μέγεθος καὶ μικρότης καὶ λειτούργης καὶ τραχύτης φωνῆς καὶ τουαθθ' ἔτερα. εἰσὶ δὲ καὶ περὶ χρώμα διαφοράι τοιαῦται ἔτεραι. ἀλλὰ τί τὸ ἐν τὸ ὑποκείμενον, ὁσπερ ἄκοη ψόφος, οὖτω τῇ ἀφῇ, οὐκ ἔστων
§ 3 ἐνδηλον. πότερον δ' ἐστὶ τὸ αἰσθητήριον ἐντὸς, ἢ οὗ, ἀλλ' εὐθέως ἡ σάρξ; οὐδὲν δοκεῖ σημεῖον εἶναι τὸ γίνεσθαι τὴν Αισθησιων ἀμα θυγανομένων. καὶ γὰρ νῦν εἰ τις περὶ τὴν σάρκα περιτείνειν οἷον ύμένα ποιήσας, ὀμοίως τὴν αἰσθησιων εὐθέως ἄφαμενον ἑνοημαίνειν κατοι δήλον ὡς οὐκ ἔστων ἐν
§ 4 τούτῳ τὸ αἰσθητήριον ἐκ δὲ καὶ συμφυεial γένουσι, θάττων ἐτὶ 5 δικνώτ' ἢ ἡ αἰσθησις. διό τὸ τοιούτω μόριον τοῦ σώματος ἐοικεν οὕτως ἔχειν ἁσπερ ἄν εἰ κύκλω ἡμῖν περιπεφύκει ὁ ἄηρ. ἐδικουμεν γὰρ ἄν ἐνί τινι αἰσθάνεσθαι καὶ ψόφον καὶ χρώματος καὶ ὁσμῆς, καὶ μία τις αἰσθησις εἶναι ὑψος ἄκοη ὁσφρήσις, νῦν δὲ διὰ τὸ διωρίσθαι δι' οὗ γίνονται αἱ κινήσεις, 10 φανέρα τὰ εἰρήμενα αἰσθητήρια ἔτερα ὑμτα. ἐπὶ δὲ τῆς ἄφῆς τοῦτο νῦν ἄδηλον εἰς ἀέρος μὲν γὰρ ἡ ὑδατος ἀδύνατον συ- στηναι τὸ ἐμφυχον σώμα. δεὶ γὰρ τι στερεῦν εἶναι. λείπεται δὴ μικτὸν εἰς γῆς καὶ τοῦτων εἶναι, οἷον βούλεται ἡ σάρξ καὶ τὸ ἀνάλογον ὥστε ἀναγκαῖον καὶ τὸ σῶμα εἶναι μεταξύ τοῦ ἀπτικοῦ προσπεφυκός, δι' οὗ γίνονται αἱ αἰσθήσεις πλείους
§ 5 οὐσαι. δηλοὶ δ' ὅτι πλείους ἢ ἐπὶ τῆς γλώττης αἵρ' ἀπαντῶν γὰρ τῶν ἀπτών αἰσθάνεται κατὰ τὸ αὐτὸ μόριον καὶ χυμοῦ. εἰ μὲν οὖν καὶ ἡ ἀλλή σάρξ ἑσθάνετο τοῦ χυμοῦ, ἐδοκεί αὖ

34. δήλον ΣΥΧ. 423a 2. νῦν om. ΣΥ. 4. ἄφαμενοι ἄφαμενοι conj. Trend. ἄφαμενοι conj. Tor. 10. κινήσεις κινήσεις καὶ αἱ αἰσθήσεις U. 15. καὶ εἶναι καὶ Ε.
that in the case of the other senses also there are several pairs of opposites. Thus in sound we recognise not only the high or low pitch of the notes, but also their strength and weakness, their roughness and their smoothness, and so forth. Colour similarly has a number of different aspects. Still this consideration does not let us see what is the one common object falling to the sense of touch as sound falls under hearing.

Another question which suggests itself with reference to touch is whether its organ is within, or whether it is not within, but is immediately the flesh. No conclusion can be drawn from the fact that the perception of touch takes place simultaneously with actual contact. If we were to frame a membrane-like substance and stretch it over the flesh, we should still, no less than before, perceive the object immediately after touching it. Yet it is evident the organ of sense is not contained within this: and of course if the membrane were naturally united with the flesh, the perception would pass through it still more rapidly.

This part then of the body seems to be related to us much in the same way as if air were to encircle us about: we should then be thought to perceive both sound and colour and odour by one single medium, and sight, hearing and smell would be regarded as but one single sense. Now however, as matters stand, by reason of the difference in the organs by which the movements are effected, the organs of sense which we have mentioned are clearly seen to be different from one another. With regard to touch, however, this point is obscure. For it is impossible that the animate body which feels touch should be composed of air or water, seeing that it must be something compact. It remains then that it should be compounded of earth and such like elements as the flesh and its counterpart is understood to be. The body then must be simply the natural medium for the sense of touch, as the means by which its sensations, which are several in number, are communicated. The multiplicity of these sensations is shewn by the sense of touch located in the tongue: for here at one and the same part is located the sense at once of all tangible objects and of flavour. Were then the rest of the flesh to perceive flavour also, taste and touch would appear to be one and the same: whereas, as matters stand, they are
§ 6 δύο διὰ τὸ μὴ αντιστρέφειν, ἀπορήσειε δ᾽ ἂν τις, εἰ πάν σῶμα βάθος ἔχει· τοῦτο δ᾽ ἐστὶ τὸ τρίτον μέγεθος· ὥν δ᾽ ἐστὶ δύο σωμάτων μεταξὺ σώμα τι, οὐκ ἐνδέχεται ταῦτα ἀλλήλων ἀπτεσθαι· τὸ δ᾽ ὑγρὸν οὐκ ἔστιν ἀνευ σώματος, οὐδὲ τὸ διερόν, ἀλλ᾽ ἀναγκαῖον ὑδωρ εἶναι ἣ ἔχειν ὕδωρ· τὰ δὲ 25 ἀπτόμενα ἀλλήλων ἐν τῷ ὑδατι, μὴ ἑηρῶν τῶν ἄκρων ὑπ᾽ ἑων, ἀναγκαῖον ὕδωρ ἔχειν μεταξὺ, οὐ ἀνάπλεα τὰ ἐσχατα· εἰ δὲ τούτο ἀληθές, ἀδύνατον ἄψασθαι ἄλλο ἄλλον ἐν ὑδατι. τὸν αὐτὸν δὲ τρόπον καὶ ἐν τῷ ἀέρι (ὀρμοίως γὰρ ἔχει ὁ ἄηρ πρὸς τὰ ἐν αὐτῷ καὶ τὸ ὕδωρ πρὸς τὰ ἐν τῷ ὑδατι. λανθάνει δὲ μᾶλλον ἡμᾶς, ὥσπερ καὶ τὰ ἐν τῷ ὑδατι ἐξάρα, § 7 εἰ διερὸν διεροῦ ἀπτεται)· πότερον οὖν πάντων ὁμοίως ἐστὶν ἡ 423 b αἰσθησις, ἡ ἄλλων ἄλλως, καθάπερ νῦν δοκεῖ ἡ μὲν γεύσις καὶ ἡ ἁφῇ τῷ ἀπτεσθαί, αἱ δ᾽ ἄλλαι ἀποθεν; τὸ δ᾽ οὐκ ἔστιν, ἄλλα καὶ τὸ σκληρὸν καὶ τὸ μαλακὸν δι᾽ ἐπέρων αἰσθανόμεθα, ὥσπερ καὶ τὸ ψοφητικόν καὶ τὸ ὄρατον καὶ τὸ 5 ὀσφραντών ἄλλα τὰ μὲν πόρρωθεν, τὰ δ᾽ ἐγγύθεν· διὸ λανθάνει, ἐπεὶ αἰσθανόμεθα γε πάντων διὰ τοῦ μέσου ἄλλ᾽ ἐπὶ τούτων λανθάνει. καίτοι καθάπερ εἰπαμεν καὶ πρότερον, καὶ εἰ δι᾽ ὑμένου αἰσθανοίμεθα τῶν ἀπτῶν ἀπάντων λανθανοντος ὅτι διειργεῖ, ὁμοίως οὖν ἔχουμεν ὥσπερ καὶ νῦν ἐν τῷ ὑδατι καὶ ἐν τῷ ἀέρι· δοκοῦμεν γὰρ αὐτῶν ἀπτεσθαί § 8 καὶ οὐδὲν εἶναι διὰ μέσου. ἀλλὰ διαφέρει τὸ ἀπτὸν τῶν ὀρατῶν καὶ τῶν ψοφητικῶν, ὅτι ἐκείνων μὲν αἰσθανόμεθα τῷ τῷ μεταξὺ ποιεῖν τι ἡμᾶς, τῶν δὲ ἀπτῶν οὐχ ὑπὸ τοῦ με-
actually two, because the organs of the one sense cannot take
the place of those of the other.

There is a question which might be started here. Every body, it
will be granted, possesses depth, that is, is of the third dimension,
and two bodies with some third body between them can never
come into contact with one another. Now neither the moist nor
the fluid can exist independently of water: they must either be
or have water. But those objects which touch one another in
water, seeing that the edges are not dry, must necessarily have
between them water with which the extremities are filled. If
however this be true, then it is impossible for one object really
to be in contact with another in water, and the same thing holds
good with objects in the air: the air standing in the same
relation to the objects in it as that in which water stands to
the objects in water, although we rather fail to notice, just like
aquatic animals, whether the fluid touches on the fluid.

The question then naturally arises whether there is one
mode of sensation for all objects equally, or whether different
kinds of objects are perceived in different manners. Popular
thought accepts the latter view, and holds that the perceptions of
touch and taste take place through immediate contact with their
object, while the other senses operate at a distance. This how-
ever is not really the case. We really perceive both the hard
and soft through media, just as we also do the sonorous, the
visible, and odorous: the only difference being that in the one
case the objects are further off, in the other case more close at
hand. And thus, by reason of the close proximity, the fact
escapes our notice, the real truth being that we perceive all
objects through the intervention of some medium, although we
fail to observe it in the senses we have mentioned. Yet, as we
said before, were we to perceive all the objects of touch through
a membrane of whose intervention we were unconscious, we
should be in the same condition as we are in now both in water
and in air, in which we imagine ourselves to touch the very
objects themselves, and think of no intervening medium.

There is, however, this difference between the object of touch
and the objects of sight and sound, that, in the case of the latter,
perception is the result of some action on the part of the
medium towards us, whereas in regard to the objects of touch we perceive not by means of, but along with the medium; just like a man who has been struck through his shield, where it is not the shield which by being struck has hit the man, but the two which have been struck together. Altogether, in short, the flesh and tongue seem to stand in the same relation to touch as that in which air and water do to sight, hearing, and smell. In the one case too, as little as in the other, would perception ensue on direct contact with the organ of sensation, as for instance by placing a white object on the very extremity of the eye. From this it is evident that the organ of touch is internal. For the same thing must happen in regard to touch as in regard to other senses. There, when anything is placed upon the actual organ, no perception follows; it is however perceived when placed upon the flesh, and hence, we may infer, it is the flesh which serves as medium for the sense of touch.

It is then the different qualities of body *qua* body that are apprehended by the touch; such qualities being those which distinguish the different elements, viz. hot and cold, dry and moist, concerning which we have spoken before now in our Treatise on the Elements. And the organ fitted to perceive them by the touch and that in which what is called touch primarily inheres is a part which is in capacity what the objects of touch are in full actuality. For perception is a sort of passive impression, and thus the object which is acting makes the organ, which is potentially the same with it, to be actually so as well. Thus we do not perceive that which is hot or cold, or hard or soft to the same degree as we ourselves are, while we perceive the states that pass into extremes, sense-perception being as it were a sort of mean between the opposition in the things of sense. And hence it is that sense discriminates its objects; that which occupies the mean judging of the two extremes because it becomes for each of them its opposite. And just as that which is to perceive the white and black must be actually neither of them but potentially both, as is similarly the case with the other senses, so also, in the special case of touch, it should be neither hot nor cold.
αοράτου ἦν πως ἦ ὄψις, ὁμοίως δὲ καὶ αἱ λοιπαὶ τῶν ἀντι-
κεμένων, οὕτω καὶ ἦ ἄφιη τοῦ ἀπτοῦ καὶ ἀνάπτου ἄναπτον
δ’ ἐστὶ τὸ τε μικράν ἔχον πάμπαν διαφοράν τῶν ἀπτῶν,
οἷν πέπονθεν ὁ ἀήρ, καὶ τῶν ἀπτῶν αἱ υπερβολαί, ὦσπερ
tὰ φθαρτικά. καθ’ ἐκάστην μὲν οὖν τῶν αἰσθήσεων εἰρηται τύπω.

XII. Καθόλου δὲ περὶ πάσης αἰσθήσεως δεῖ λαβεῖν ὅτι
ἡ µὲν αἰσθησίς ἐστὶ τὸ δεκτικὸν τῶν αἰσθητῶν εἰδῶν ἄνευ τῆς
ὕλης, οἷον ὁ κηρὸς τοῦ δακτυλίου ἄνευ τοῦ σιδήρου καὶ τοῦ
χρυσοῦ δέχεται τὸ σημεῖον, λαμβάνει δὲ τὸ χρυσὸν ἡ τὸ
χαλκοῦ σημεῖον, ἀλλ’ οὐχ ἡ χρυσὸς ἡ χαλκός. ὁμοίως δὲ
καὶ ἡ αἰσθήσις ἐκάστου ὑπὸ τοῦ ἔχοντος χρῶμα ἡ χυμὸν ἡ
ψόφον πάσχει, ἀλλ’ οὐχ ἡ ἐκαστον ἐκείνων λέγεται, ἀλλ’
§ 2 ἡ τοιοῦτο, καὶ κατὰ τὸν λόγον. αἰσθητήριον δὲ πρῶτον ἐν
ἡ ἡ τοιαύτη δύναμις. ἐστὶ μὲν οὖν ταὐτὸν, τὸ δ’ εἶναι ἐτε-
ρον’ μέγεθος μὲν γὰρ ἄν τι εἶ ὁ αἰσθανόμενον’ οὐ μὴν τὸ
γε αἰσθητικὸ εἶναι, οὐδ’ ἡ αἰσθήσις µέγεθος ἐστιν, ἀλλὰ λό-
§ 3 γος τις καὶ δύναμις ἐκείνου. φανερὸν δ’ ἐκ τοῦτον καὶ διὰ
tὶ ποτε τῶν αἰσθητῶν αἱ υπερβολαὶ φθείρουσι τὰ αἰσθητή-
ρια· ἐὰν γὰρ ἡ ἱσχυροτέρα τοῦ αἰσθητηρίου ἡ κίνησις, λύε
tαι ὁ λόγος, (τοῦτο δ’ ἦν ἡ αἰσθήσις), ὦσπερ καὶ ἡ συμ-
§ 4 φωνία καὶ ὁ τόνος κρούομενον σφόδρα τῶν χορδῶν. καὶ διὰ

18. εἰδῶν om. SUX. Tor. 24. τῶν om. E. 25. ταυτὰ SX. ταυτῶν
EUVW. 28. ἐκεῖνο E. 31. ἦν om. ETW.
why plants possess no sense-perception although they have a
psychic element and are impressed in some degree by things
tangible, becoming, as they do, both hot and cold. The reason
is that they do not possess that faculty (which sense implies)
of acting as a mean between extremes, and have no funda-
mental capacity for receiving the form only of the things of
sense: but that on the contrary, at the same time as they receive
the form of anything, they receive the matter likewise.

The question might be further raised whether that which
is without the sense of smell could be affected by odour, or that
which is without the faculty of vision by colour, and so on, in
like cases. In answer to this we may reply that if the object
of smell be odour, it is the sense of smell (if anything) which
odour calls into exercise; and therefore none of those objects
that are without the faculty of smell can be affected by odour,
(the same account being given also of the other senses); nor
indeed can any of those objects which have the faculties of
sense perceive anything except in so far as they have some
particular sensitive capacity. The matter will be clear also in
the following manner. Neither light, nor darkness, nor sound,
nor smell, can produce any effect on bodies, although the sub-
stance in which they are contained may do so, just as it is the
air which accompanies thunder that breaks up trees. Tangible
qualities, however, and flavours do themselves act on bodies;
otherwise, in fact, by what would things inanimate be affected
and altered? Will not then, it may be said, other sensible
qualities act also in this manner? Or is the truth this—that
every body cannot be affected by smell and sound; and those
objects which are affected by them (as, for instance, air,) are
indefinite and shifting: for the air gives out odour as if it had
been subject to an impression. What then, it may be said, is
smell but an impression of this same kind? And to this we
must reply that smelling over and beyond this mere impression
means perceiving, whereas the impression of the air only makes
it quickly perceptible.
ΑΡΙΣΤΟΤΕΛΟΥΣ

ΠΕΡΙ ΨΥΧΗΣ Γ.

§ 1 Ὅτι δ' οὖν ἐστιν αἰσθησις ἐτέρα παρὰ τὰς πέντε (λέγω δὲ ταύτας ὡμων, ἄκοιν, ὀσφρήσιν, γεῦσιν, ἀφήν), ἐκ τῶν δὲ πιστεύσεων ἂν τις. εἰ γὰρ παντὸς οὗ ἔστιν αἰσθησις ἀφήν, καὶ νῦν αἰσθησιν ἔχομεν (πάντα γὰρ τὰ τοῦ ἀπτοῦ ἢ ἀπτοῦ πάθῃ τῇ ἀφῇ ἢμῖν αἰσθητά ἐστιν), ἀνάγκη τ' εἴπερ ἐκλείπει τις αἰσθησις, καὶ αἰσθητηρίων τι ἢμῖν ἐκλείπειν· καὶ ὅσον μὲν αὐτῶν ἀπτόμενοι αἰσθητάνομεθα, τῇ ἀφῇ αἰσθητά ἐστιν, ἣν τυγχάνομεν ἔχοντες· ὃσα δὲ διὰ τῶν μεταξεῖ, καὶ μὴ αὑ- τῶν ἀπτόμενοι, τοῖς ἀπλοῖς, λέγω δ' οἶνον ἀέρι καὶ ὦδατι.

§ 2 ἔχει δ' οὖτως, ὧστε εἰ μὲν δὲν ἐνός πλείω αἰσθητά ἐτερα ὄντα ἄλληλαν τῷ γένει, ἀνάγκη τὸν ἔχοντα τὸ τουτόν αἰσθητή- ριον ἀμύφοιν αἰσθητικὸν εἶναι· οἴον εἰ εξ ἀέρος ἔστι τὸ αἰσθη- τήριον, καὶ ἐστιν ὁ ἅπτρι καὶ ψόφου καὶ χρόας· εἰ δὲ πλεῖον τοῦ αὐτοῦ, οἴον χρόας καὶ ἅπτρι καὶ ύδωρ (ἀμφω γὰρ διαφάνη), 425α καὶ ὁ τὸ ἐτερον αὐτῶν ἔχων μόνον αἰσθητήσεται τοῦ δὲ ἀμ-

§ 3 φοίν. τῶν δὲ ἀπλῶν ἐκ δύο τούτων αἰσθητήρια μόνον ἔστιν,

424b 22. τωτῶν EW. τῶν δὲ θηλόν SX. 27. αὐτῶν] αὐτοῖς TW. 29. ἀπλοῖς διαστήμασι λ. TWy. 425a 2. αἰσθηθήσεται ἀμφοῖν Bekk., τοῖς ἀμφοῖν L., τοῦ δὲ ἀμφοῖν TW.
BOOK THIRD.

CHAPTER I.

The five senses just enumerated—sight, hearing, smell, taste and touch—would seem to comprise all our perceptive faculties and to leave no further sense to be explained. The following considerations will help to make this clear. Let it be granted that we, as matters stand, perceive everything of which touch is the appropriate sense, since all the properties of the tangible as such are perceived by us through touch: and let it be allowed, further, that the absence of any faculty of sense-perception involves the absence of the corresponding organ. Now all those objects which are naturally known by actual contact are perceived through the sense of touch, and this we actually possess: those objects, on the other hand, which are known through media without contact on our part, are perceived through the elements such as air and water. (Thus if several objects of sense, different in kind from one another, are perceived through one such element, it follows of necessity that any one possessing one such organ must have the power also of perceiving both qualities: so that for instance, if the organ is composed of air, and air is the medium both of sound and colour, the one organ will perceive both qualities. If, on the other hand, there be several elements acting as media to one and the same object—for instance, both air and water, as being both pellucid, act as media for colour—the possession of one only of these media will ensure the perception of that which can be seen through one or other medium.) Now it is from these two alone among the elements—that is, air and water—that the organs of sense
§ 4 ἀν μηθὲν εἶναι αἰσθητήριον ἔξω ὦδατος καὶ ἄερος. ταῦτα δὲ καὶ τῶν ἔχουσιν ἐνια ζῷα. πάντα ἄρα αἱ αἰσθήσεις ἔχονται ὑπὸ τῶν μὴ ἀτελῶν μηδὲ πεπηραμένων· φαίνεται γὰρ καὶ ἡ ἀσπάλαξ ὑπὸ τὸ δέρμα ἔχουσα ὀφθαλμοὺς· ὥστε εἰ μὴ τι ἐτερὸν ἔστι σῶμα, καὶ πάθος δὲ μηθενὸς ἐστὶ τῶν ἐνταῦθα

§ 5 σωμάτων, οὐδεμία οὐκ ἐκλείπει αἰσθήσεις. ἀλλὰ μὴν οὐδὲ τῶν κοινῶν οἶν τι εἶναι αἰσθητήριον τι ἰδιον, ἃν ἐκάστη αἰσθησία αἰσθανόμεθα κατὰ συμβεβηκός, οἶον κινήσεως, στάσεως, σχήματος, μεγέθους, ἁριθμοῦ, ἐνὸς· ταῦτα γὰρ πάντα κινήσεις αἰσθανόμεθα, οἰον μέγεθος κινήσεως· ὡστε καὶ σχῆμα· μέγεθος γὰρ τι τὸ σχῆμα· τὸ δὲ ἧρεμον τῷ μὴ κινεῖσθαι· ὃ δὲ ἁριθμὸς τῇ ἀποφάσει τοῦ συνεχοῦς καὶ τοῖς ἰδίοις· ἐκάστη γὰρ ἐν αἰσθάνεται αἰσθήσεως. ὡστε δὴ λοι ὅτι ἀδύνατον ὄτου ἰδιαν αἰσθήσεως εἶναι τούτων, οἴον κινήσεως· οὕτω γὰρ ἐσται

§ 6 ὡσπερ νῦν τῇ ὅσφει τὸ γλυκὸ αἰσθανόμεθα· τοῦτο δὲ ὅτι ἀμφότεροι ἔχοντες τυχάνομεν αἰσθήσεως, ἥ καὶ ὅταν συμπέσωσιν ἀμα γνωρίζομεν. εἰ δὲ μὴ, οὐδαμῶς ἂν ἀλλὰ ἡ κατὰ συμβεβηκός ἡσθανόμεθα, οἴον τὸν Κλέωνος νῦν οὐχ ὅτι

are constructed. (Thus the pupil of the eye consists of water: the organ of hearing is composed of air: the sense of smell depends on one or other of these two.) As for fire, on the other hand, it is either a constituent in no one of the organs of sense or it is a common element in all, as there is no faculty of sense which can act independently of heat; and as regards earth, it is either present in none of the organs, or it is chiefly incorporated in a special manner with the touch. Hence then no element is left to act as an organ of sense-perception outside air and water. Now, as matter of fact, several animals do possess the organs so constituted. Thus, then, we may venture to conclude, all the senses are possessed by those animals which are not imperfect nor mutilated: even the mole is found to have eyes underneath its skin. And thus, unless there exist bodies differing from those we know, and unless there are properties of substances which are found in none of those around us, it would follow that no sense whatever can be wanting to us.

Nor can there, in the next place, be any one special organ for those common properties which we perceive in connection with each perception—such properties, viz., as movement, rest, figure, magnitude, number and unity. All of these are perceived as some modification or other of movement. Thus, for instance, magnitude is perceived in connection with such movement, and this also is the case with figure (a kind of magnitude) while rest is perceived by the absence of movement. Number, on the other hand, is apprehended by the negation of continuity, as also by the individual senses, because the object of each sensation is a unit. It is, therefore, clearly impossible that there should be any one particular sense attached to any of these forms, as for instance movement. Were there in fact such a special sense appropriated to the common sensibles, we should perceive them only in the way in which we now perceive something to be sweet through seeing it—because, that is, we happen to possess from past experience a perception of two qualities united in one object, and thereby, when the two qualities coexist, we know them together. Apart, indeed, from such co-existence of the two qualities, we should have no perception of them except incidentally, just as we know the son of Cleon, not as
§ 7 Κλέωνος εἶναι. τῶν δὲ κοινῶν ἤδη ἐξομεν αἰσθήσιν κοινήν, οὐ γε οὐδὲν γὰρ ἦν ὡσθανόμεθα ἀλλ' ἤ οὖτως ὄστρεν εὑρηταί τῶν Κλέωνος κοινῶν ἡμᾶς ὤραν. τὰ δὲ ἀλλήλων ἔδιωκα κατὰ συμβεβηκός αἰσθάν-σονται αἰ αἰσθήσεις, οὐχ ἢ αὐταί, ἀλλ' ἢ μία, ὅταν ἂμα γένηται ἡ αἰσθήσις ἐπὶ τοῦ αὐτοῦ, οἴον χολήν ὅτι πικρα 425b καὶ ξανθήν ὃ δὲ ἐτέρας γε τὸ εἰπέων ὅτι ἄμφω ἐν διὸ καὶ ἀπατᾶται, καὶ εἰν ἢ ξανθόν, χολήν οἴεται § 8 εἶναι. ζητήσεις δ' ἄν τις τίνος ἕνεκα πλείους ἐξομεν αἰσθήσεις, ἀλλ' οὐ μίαν μόνην. ἢ ὑπὸς ἔκτον λανθάνη τὰ ἀκολουθοῦντα καὶ κουνά, οἴον κίνησις καὶ μέγεθος καὶ ἀριθμός· εἰ γὰρ ἢν ἢ ὤψις μόνη, καὶ αὐτή λευκοῦ, ἐλαύνθανεν ἄν μᾶλλον καὶ ἐδόκει ταύτο εἶναι πάντα διὰ τὸ ἀκολουθεῖν ἀλλήλοις ἂμα χρώμα καὶ μέγεθος. νῦν δ' ἐπεί καὶ ἐν ἐτέρῳ αἰσθητῷ τὰ κοινὰ ὑπάρχει, δῆλον ποιεῖ ὅτι ἄλλο τι ἕκαστον αὐτῶν.

II. Ἐπεί δ' αἰσθανόμεθα ὅτι ὄρῳμεν καὶ ἀκούομεν, ἀνάγκη

χολὴ STUVWXy. 5. μόνον SUX. [ἡ ἔτος] ἡ TVWXy. 8. καὶ]
such, but as a white object, to which it is an incidental concomitant, to be the son of Cleon. But when we reach the common sensibles we find we have a common perception of them which enters into all the senses, not a perception incidentally united with some single sense. There is, therefore, no one special sense assigned to the common properties of objects of sensation; for were there only such a special sense, we should never perceive them except in that incidental manner in which, as has been said, we see through something white the son of Cleon. At the same time, the faculties of sense do perceive the qualities that belong to adjacent senses incidentally, but they do so not as separate senses in themselves, but in so far as they meet in one, when one perception takes place simultaneously with another in regard to the same object. It is, for instance, in this manner that sense perceives gall to be both bitter and yellow: it is not the part of any separate sense to say that both qualities are in union: this, indeed, is just the reason why people are deceived, and led to suppose that if a fluid be yellow it must be gall.

The question may now be raised, why is it that we have several senses, and not one only, in order to perceive these common properties of sense? The reason may be that it is to prevent the common qualities associated with particular sensations, such as motion, magnitude, and number, escaping possibly our observation. Were sight the only sense which we possessed, restricted, say, for instance, to white colour, all other qualities would readily escape our notice, and would be thought to be the same with the reports of particular sensations, in consequence of the manner in which such qualities as colour and magnitude accompany each other. On the other hand, with the arrangement which prevails, the presence of the common qualities in other objects of sensation makes it evident that each of them is different.

CHAPTER II.

In addition to actually seeing and hearing, we perceive also that we see and that we hear. We must then perceive that we
15. η E. Tor., om. ceteri. 16. άνειοιν LUWX. 17. τοιούτου] coni. Tor. δετέον, vel δετέον, ego τοϋτος δετέον. 27. ού το αυτό αυτάς EL. Tor. || ούν ο ψόφος ο ELW. Tor. 426a 1. άν] ωστ' TW. || φύσειν SUVX. 2. ει δ'] δη ELSTUVXy.
see either by means of eye-sight itself or by some other sense. In the latter case, however, there will be one and the same sense relating to the eye-sight and to the colour which is its object: and thus there must either be two senses concerned with one and the same object or the sense must itself possess the perception of itself. And, further, even if the sense which thus perceives sight were different from sight itself, this would either involve another sense ad infinitum or there must at last be a sense which perceives its own action. We must, therefore, ascribe this faculty of sense-perception to the original sense itself.

Here, however, a difficulty meets us. To perceive anything by sight is, it may be said, to see: and it is colour, or what possesses colour, that is seen. Hence, it may be thought, the original sense must, in order to perceive the seeing organ, possess colour also. The difficulty so raised shews that perception by sight is not used in one single sense; even when we see nothing we are still able to distinguish by the eye-sight both darkness and light, though not, it is true, in the same manner. Further, however, there is a sense in which the organ of sight may be said to be coloured: because the perceptive organ is in each case suited to receive the object of sense without the matter of which it is composed. Hence in fact the reason why, even after the objects of sense have passed away, the perceptions and the images which represent them continue to subsist within the perceptive organs.

The object of sense is in fact, at the moment when it is perceived, identical with the actual exercise of sense-perception, although it is true the aspect which the former presents to us is different from that of the latter. Thus it is, for example, with sound as actually expressed and hearing as actually exercised: one possessed of the sense of hearing need not actually hear, and that which is capable of producing sound need not be always actually sounding: it is only when that which is capable of hearing actually realizes itself, and that which is capable of sounding actually expresses sound, that at one and the same time hearing in full activity and sound in full activity are attained, so that there would be said to be hearing on the one side, sounding on the other. Now, if it be in the object as it is
μένω, ἀνάγκη καὶ τὸν ψόφον καὶ τὴν ἀκοὴν τὴν κατ' ἐνέργειαν ἐν τῇ κατὰ δύναμιν εἶναι ἡ γὰρ τοῦ ποιητικοῦ καὶ κυητικοῦ ἐνέργεια ἐν τῷ πάσχοντι ἔγγίνεται. διό οὐκ ἀνάγκη τὸ κινοῦν κωπεῖσθαι. ἢ μὲν οὖν τοῦ ψοφητικοῦ ἐνέργεια ἐστὶ ψόφος ἡ ψόφησις, ἢ δὲ τοῦ ἀκουστικοῦ ἀκοὴ ἡ ἀκοοῦσις· διττὸν γὰρ ἡ

6 ἀκοὴ, καὶ διττὸν ὁ ψόφος. ὁ δ’ αὐτὸς λόγος καὶ ἐπὶ τῶν ἄλλων αἰσθητῶν καὶ αἰσθητῶν. ὥσπερ γὰρ ἡ ποίησις καὶ ἡ πάθησις ἐν τῷ πάσχοντι ἄλλ’ οὖν ἐν τῷ ποιοῦντι, οὕτω καὶ ἡ τοῦ αἰσθητοῦ ἐνέργεια καὶ ἡ τοῦ αἰσθητικοῦ ἐν τῷ αἰσθητικῷ. ἄλλ’ ἐπὶ ἐνίων μὲν ὁμόρασται, οἷον ἡ ψόφησις καὶ ἡ ἀκοοῦσις, ἐπὶ δὲ ἐνίων ἀνώνυμου θάτερον ὁρασίς γὰρ λέγεται ἡ τῆς ὤψεως ἐνέργεια, ἡ δὲ τοῦ χρῶματος ἀνώνυμος, καὶ γεῦσις ἡ τοῦ

7 γευστικοῦ, ἡ δὲ τοῦ χυμοῦ ἀνώνυμος. ἐπεὶ δὲ μία μὲν ἔστιν ἐνέργεια ἡ τοῦ αἰσθητοῦ καὶ ἡ τοῦ αἰσθητικοῦ τὸ δ’ εἶναι ἐτερον, ἀνάγκη ἀμα φθειρεσθαι καὶ σώζεσθαι τὴν οὕτω λεγομένην ἀκοὴν καὶ ψόφον, καὶ χυμὸν δὴ καὶ γεῦσιν καὶ τὰ ἀλλα ὁμοίως τὰ δ’ δε κατὰ δύναμιν λεγόμενα οὖκ ἀνάγκη.

8 ἀλλ’ οἱ πρῶτοι φυσιολόγοι τοῦτο οὐ καλῶς ἐλεγον, οὐθέν 20 οἰόμενοι οὔτε λευκὸν οὔτε μέλαν εἶναι ἄνευ ὤψεως, οὐδὲ χυμὸν ἄνευ γεύσεως. τῇ μὲν γὰρ ἐλεγον ὀρθῶς, τῇ δ’ οὐκ ὀρθῶς· διχῶς γὰρ λεγομένης τῆς αἰσθήσεως καὶ τοῦ αἰσθητοῦ, τῶν μὲν κατὰ δύναμιν τῶν δὲ κατ’ ἐνέργειαν, ἐπὶ τούτων μὲν συμβαίνει τὸ λεχθὲν, ἐπὶ δὲ τῶν ἐτέρων οὐ συμπ-

11. ἐνέργεια καὶ ἡ τοῦ αἰσθητικοῦ om. TUW. 15. ἔστιν ἡ ἐνεργεία; E. Tor.
20. πρῶτοι UVW.
being produced that both movement and productive action as well as receptivity take place, it follows that both actual sound and actual hearing must be contained in that which is potential: for it is in what is passive that the action of what is able to create and move displays itself—a fact from which it follows as a corollary that the cause of movement need not itself be moved. Thus then the actual expression of the sonorous is sound or sounding, the actualization of the capacity to hear is hearing as completed or in process: both sound and hearing being taken in a twofold sense. The same account holds good also of other senses and their objects. For just as creative action and passive receptivity are manifested in the subject which receives impressions, not in the object which produces them, so also the actualization at once of the object and of the faculty of sense lies in the faculty of sense. Sometimes both states have names assigned them, as is the case with the terms ‘sounding’ and ‘hearing’: sometimes again the one or other is without a name. Thus the actual exercise of sight is known as seeing, but the actual existence of colour when perceived has no distinctive name; and so similarly the actual operation of the gustatory faculty is known as tasting, while flavour, when actually felt, is without any characteristic name. Thus then, since the object and the faculty of sense-perception are as actually operative fundamentally one, though differing in the aspect which they respectively present, it follows that hearing and sound when used in this sense must be destroyed and preserved together, and so also must it be with flavour and taste and with the object and the organ of the other senses: while, on the other hand, if object and organ be understood as in potentiality, there is no necessity that this should happen.

This relation of the object to the subject of sensation was not rightly comprehended by the early natural philosophers. They thought that there was nothing white or black apart from vision, and no flavour independently of taste. And in so thinking they were partly right, but they were also partly wrong. For perception and its object are words employed in two senses, on the one hand as potential, on the other hand as actual: and although in the latter of these senses their assertion was correct, in the
όντως. εἰ δ' ἡ συμφωνία φωνή τίς ἔστιν, ἡ δὲ φωνὴ καὶ ἡ ἀκοὴ ἐστὶν ὁς ἐν ἐστὶ καὶ ἐστὶν ὁς οὐχ ἐν τοῦ αὐτοῦ, λόγος δ' ἡ συμφωνία, ἀνάγκη καὶ τὴν ἀκοὴν λόγον τινὰ εἶναι. καὶ διὰ τοῦτο καὶ φθείρει ἐκαστὸν ὑπερβάλλουν, καὶ τὸ ὐξὺ καὶ τὸ βαρὺ, τὴν ἀκοὴν ὁμοίως δὲ καὶ ἐν χυμοῖς τῆς γεύσις, καὶ ἐν χρώμασι τῆς ὄψιν τὸ σφόδρα λαμπρὸν ἦς ζοφερόν, καὶ ἐν ὀσφρῆσι η ἱσχυρὰ ὀσμὴ καὶ γλυκεῖα καὶ πικρά, ὡς λόγου τῶν ὄντως ὑπὸ τῆς αἰσθήτησις. διὸ καὶ ἡδέα μὲν, ὅταν εἰλικρινῆ καὶ ἀμυγῇ ἀγνηταί εἰς τῶν λόγων οἰον τὸ ὢξὺ ἢ γλυκὺ ἢ ἀλμυρὸν· ἢδέα γὰρ τότε. ὅλως δὲ μᾶλλον τὸ μικτὸν ἰμμφωνία ἦ τὸ ὢξὺ ἢ βαρὺ, ἀφῆ δὲ τὸ θερμαντόν ἢ ψυκτόν· ἦ δ' αἰσθήσις ὁ λόγος· ὑπερβαλλον· λοντα δὲ λυπεῖ ἢ φθείρει. ἐκάστη μὲν οὐν αἰσθήσις τοῦ ὑποκειμένου αἰσθητοῦ ἐστὶν, ὑπάρχουσα εντὸς αἰσθητηρίῳ ἢ αἰσθητήριῳ, καὶ κρίνει τάς τοῦ ὑποκειμένου αἰσθητοῦ διαφοράς, οἰον λευκὸν μὲν καὶ μέλαν ὄψιν, γλυκὺ δὲ καὶ πικρὸν γεύσις. ὁμοίως δ' ἔχει τοῦτο καὶ ἐπὶ τῶν ἀλλῶν. ἐπεὶ δὲ καὶ τὸ λευκὸν καὶ τὸ γλυκὸ καὶ ἐκαστὸν τῶν αἰσθητῶν πρὸς ἐκαστὸν κρίνομεν, τίνι καὶ αἰσθανόμεθα ὅτι διαφέρει; ἀνάγκη δὴ αἰ- § 11 σθήσει· αἰσθητὰ γάρ ἐστιν. ἢ καὶ δὴ λον ὅτι ἢ σάρξ ὁυκ ἐστι 15 τὸ ἐσχατὸν αἰσθητήριον· ἀνάγκη γὰρ ἦν ἀπτόμενον αὐτοῦ

27. δ' ἡ συμφ. 31. ὁμοίως δὲ όμ. STUWWXy. ὑπερβαλλον· λοντα δὲ pr. E. SXy Trend. 426b. τοῦ ὑποκειμένου αἰσθητοῦ ἐστὶν, ὑπάρχουσα εντὸς αἰσθητηρίῳ ἢ αἰσθητήριῳ, καὶ κρίνει τάς τοῦ ὑποκειμένου αἰσθητοῦ διαφοράς, οἰον λευκὸν μὲν καὶ μέλαν ὄψιν, γλυκὺ δὲ καὶ πικρὸν γεύσις. ὁμοίως δ' ἔχει τοῦτο καὶ ἐπὶ τῶν ἀλλῶν. ἐπεὶ δὲ καὶ τὸ λευκὸν καὶ τὸ γλυκὸ καὶ ἐκαστὸν τῶν αἰσθητῶν πρὸς ἐκαστὸν κρίνομεν, τίνι καὶ αἰσθανόμεθα ὅτι διαφέρει; ἀνάγκη δὴ αἰ- § 11 σθήσει· αἰσθητὰ γάρ ἐστιν. ἢ καὶ δὴ λον ὅτι ἢ σάρξ ὁυκ ἐστι 15 τὸ ἐσχατὸν αἰσθητήριον· ἀνάγκη γὰρ ἦν ἀπτόμενον αὐτοῦ

426b. τοῦ ὑποκειμένου αἰσθητοῦ ἐστὶν, ὑπάρχουσα εντὸς αἰσθητηρίῳ ἢ αἰσθητήριῳ, καὶ κρίνει τάς τοῦ ὑποκειμένου αἰσθητοῦ διαφοράς, οἰον λευκὸν μὲν καὶ μέλαν ὄψιν, γλυκὺ δὲ καὶ πικρὸν γεύσις. ὁμοίως δ' ἔχει τοῦτο καὶ ἐπὶ τῶν ἀλλῶν. ἐπεὶ δὲ καὶ τὸ λευκὸν καὶ τὸ γλυκὸ καὶ ἐκαστὸν τῶν αἰσθητῶν πρὸς ἐκαστὸν κρίνομεν, τίνι καὶ αἰσθανόμεθα ὅτι διαφέρει; ἀνάγκη δὴ αἰ-
former it does not hold good. They, however, maintained their doctrines without any qualification whatever, when they were really dealing with terms which are not employed in so unambiguous a manner. [Perception does, however, always involve a close relation between the subject and the object, as may be seen by reference to sound and hearing.] Harmony, it will be granted, is a species of vocal sound; and sound and hearing are in one sense identical (though it is true there is another sense in which they are not the same). Now, since harmony is a ratio, hearing, it follows, must be also a sort of ratio. This is in fact the reason why every excess, whether it be high or low, destroys hearing; just as similarly every excess in flavours destroys taste, every excess among colours, whether over-brilliant or over-dark, destroys vision, or just again as all violent odours, whether sweet or bitter, destroy the sense of smell. Perception, in fact, always involves a sort of ratio between the object and the faculty of sense. Hence also it is that flavours are pleasant, when, being pure and unblended, they are combined in definite proportions, as is the case with what is piquant, or sweet, or saltish—flavours which are pleasant when combined in due proportions, and that in general the mixed and blended is attended with the greater pleasure. Harmony, for example, brings us more pleasure than the single bass or treble, and to the sense of touch a moderate temperature is pleasanter than what is simply either hot or cold. Sense-perception thus involves this relative proportion: while those objects which exceed this ratio either produce pain or destroy the action of sense.

Each single sense; we have before remarked, apprehends the object appropriated to it: and existing in its organ of sense as such it judges of the distinctions in the object which is subject to it. Eye-sight, for instance, judges of the white and black, taste of what is sweet and bitter, and so on. But furthermore, we discriminate between what is white and what is sweet and between each of the objects of sense in comparison with every other: and thus the question rises, what is it which enables us to apprehend this difference? It must be sense: because the qualities to be compared are objects of sense. But if sense be the power which thus distinguishes the different qualities of
κρίνειν τὸ κρίνον. οὔτε δὴ κεχωρισμένος ενδέχεται κρίνειν ὅτι ἐτερον τὸ γλυκὸ τοῦ λευκοῦ, ἀλλὰ δὲ εἰνὶ τοι ἁμφὶ δῆλα εἶναι. οὔτω μὲν γὰρ κἂν εἰ τοῦ μὲν ἐγὼ τοῦ δὲ σὺ αἰσθοῦν, δῆλον ἂν εἰπ̄ ὅτι ἐτερα ἀλλήλων. δὲὶ δὲ τὸ ἐν λέγειν ὅτι २ο ἐτερον ἐτερον γὰρ τὸ γλυκὸ τοῦ λευκοῦ. λέγει ἄρα τὸ αὐτὸ.

§ 12 ὥστε ὡς λέγει, οὔτω καὶ νοεῖ καὶ αἰσθάνεται. ὃτι μὲν οὖν οὐχ οἶν τε κεχωρισμένοις κρίνειν τὰ κεχωρισμένα, δῆλον' ὅτι δ' οὖν ἐν κεχωρισμένῳ χρόνῳ, ἐνετείθεν. ὥσπερ γὰρ τὸ αὐτὸ λέγει ὅτι ἐτερον τὸ ἀγαθὸν καὶ τὸ κακὸν, οὔτω καὶ ὅτε θά- २५ τερον λέγει ὅτι ἐτερον, καὶ θάτερον, οὐ κατὰ συμβεβηκός τὸ ὅτε' λέγω δ', οἶν νῦν λέγω ὅτι ἐτερον, οὐ μέντοι ὅτι νῦν ἐτερον ἀλλ' οὔτω λέγει, καὶ νῦν, καὶ ὅτι νῦν ἁμα ἄρα. ὥστε

§ 13 ἀχωριστον καὶ ἐν ἀχωριστῳ χρόνῳ. ἀλλὰ μὴν ἁδύνατον ἁμα τὰς ἐναντίας κινήσεις κινεῖσθαι τὸ αὐτὸ ἦ ἁδιαιρέτον καὶ ἐν 3ο ἁδιαιρέτῳ χρόνῳ. εἰ γὰρ γλυκῷ οὐδὲ κινεῖ τὴν αἰσθήσιν ἦ τὴν νόησιν, τὸ δὲ πικρὸν ἐναντίως, καὶ τὸ λευκὸν ἐτέρως. 4२७ ἄρ' οὖν ἁμα μὲν καὶ ἁριμμὸ ἁδιαιρέτον καὶ ἀχωριστον τὸ κρίνον, τὸ εἶναι δὲ κεχωρισμένον; ἐστι δὴ πως ὡς τὸ διαι- ρετον τῶν διηρημένων αἰσθάνεται, ἐστι δ' ὡς ἦ ἁδιαιρέτον τὸ
objects, it is evident that the mere fleshly organism is not the ultimate organ of sense-perception: because in that case the discriminating faculty would have to distinguish on merely coming into contact with the sensible object. Thus then it is impossible for the senses taken apart from one another, to decide that what is (say) sweet is different from what is white: on the contrary, both the qualities must be exhibited to some one faculty. It is just in fact as if I were to perceive the one and you the other; it would then be evident that our two perceptions are different from one another: but still it would be necessary to have some one referee to assert the difference: and just in the same way as such an assertion is made, do thought and perception also operate.

It is clear then that the separate senses cannot apart pass judgment on separate perceptions. Nor, further, can such a judgment be passed at different times. Just as it is one and the same principle which asserts that the good and bad are different, so further when it maintains the one to be different it also at the same time maintains the other to be so also. Nor is this identity of time simply incidental: it is not, that is, as if its assertion were merely like saying "I at present assert the difference," without adding also that "the difference holds good at present"—rather the one principle, which thus distinguishes both, maintains at present the difference, and maintains it to hold good at present: that is to say, it makes the two statements simultaneously; so that its judgment is inseparable, and made in a single inseparable moment of time.

But, it may be said, the same thing, cannot as undivided and within an undivided point of time be at one and the same time moved with contrary movements. Yet if a quality be sweet it moves sense or thought in such and such a manner, while what is bitter does so in a contrary manner, and what is white must do so in a manner different from both. Must not then the discriminating faculty be simultaneously on the one hand numerically one and undivided, but on the other hand separated in the mode of its existence? The truth is, there is a sense in which this distinguishing principle perceives what is divided as divided, while in another sense it does so as one un-
§ 14 εἶναι μὲν γὰρ διαιρετόν, τόπως δὲ καὶ ἄριθμῷ ἄδιαιρετον. ἣ 5
οὐχ οἶνον τε; δυνάμει μὲν γὰρ τὸ αὐτὸ καὶ ἄδιαιρετον τά-
ναντία, τῷ δὲ εἶναι οὐ, ἀλλὰ τῷ ἑνεργείοςθαί διαιρετόν, καὶ
οὐχ οἶνον τε ἁμα λευκὸν καὶ μέλαν εἶναι, ὡστ' οὐδὲ τὰ εἶδη
§ 15 πάσχειν αὐτῶν, εἰ τοιοῦτον ἡ αἰσθησις καὶ ἡ νόησις. ἀλλ' ὃσπερ ἦν καλοῦσι τινες στυγμῆν, ἣ μία καὶ ἦ δύο, ταύτῃ 10
καὶ διαιρετήν. ἦ μὲν οὖν ἄδιαιρετον, ἐν τὸ κρίνον ἐστι καὶ ἁμα,
ἦ δὲ διαιρετὸν ὑπάρχει, διὸ τῷ αὐτῷ χρῆται σημεῖο ἁμα.
ἤ μὲν οὖν δυσὶ χρῆται τῷ πέρατι, δύο κρίνει καὶ κεχωρι-
σμένα ἐστιν ὡς κεχωρισμένῳ ἦ δὲ ἐν, ἐνὶ καὶ ἁμα. περὶ
μὲν οὖν τῆς ἁρχῆς ἦ φαμεν τὸ ζώον αἰσθητικὸν εἶναι, διω- 15
ῥίσθω τὸν τρόπον τούτον.

III. Ἡπεὶ δὲ δύο διαφοραῖς ὀρίζονται μάλιστα τῆς ψυχῆς,
κινήσει τε τῇ κατὰ τόπον καὶ τῷ νοεῖν καὶ τῷ κρίνει καὶ
αισθάνεσθαι, δοκεῖ δὲ καὶ τὸ νοεῖν καὶ τὸ φρονεῖν ὃσπερ
αισθάνεσθαι τι εἶναι' ἐν ἀμφοτέροις γὰρ τούτους κρίνει τι ἦ
ψυχῆ καὶ γυνώριζει τῶν ὄντων καὶ οἱ γε ἁρχαῖοι τὸ φρο-

6. διαιρετόν καὶ ἄδιαιρετόν UWy Ald. Sylb. Tor. 10. ὃσπερ ἐν καλοῦσι
τινες στυγμῆν coni. Trend. 11. καὶ ἄδιαιρετόν καὶ διαιρετήν' ἦ κ.τ.λ. Tor. 12.
κεχωρισμένω ELT, ὃς κέκωρισμένων VS. 16. ἀρίσθω E.
divided faculty; because while it is divided in its application or its mode of being, it is in regard of its seat of action and as viewed numerically one single undivided principle. Or is this really impossible? Potentially, it may be said, the same subject, and that one undivided, may present opposite qualities: but this cannot be the case with its definite existence; in its operation and working these characteristics are divided. The same thing, in fact, cannot be at once black and white: and so, if perception and thought be nothing but a passive reception of such qualities, they cannot be impressed at one and the same time with the forms which represent these contraries.

To this objection it may be replied that the matter stands just as with the point (as some describe it), which, so far as it is one, may be regarded as undivided, while so far as it is two, it is divided. So far then as the principle of judgment is undivided, so far it is one single faculty acting in one moment: so far as it shows itself divided, it uses the same point twice at two simultaneous times. So far then as our faculty of discrimination makes use of the termination of this point as two, it distinguishes two qualities, and the objects are separated as the faculty is separated; while so far as it is one single faculty, it judges by one single act and within a single point of time.

Thus much on the principle through which, according to our view, the living being is endowed with powers of sense-perception.

CHAPTER III.

Two differentiae are chiefly used to characterize the soul—local movement on the one hand, thought discrimination and perception on the other. The popular mind thus comes to look at thought and understanding as a kind of sense-perception, on the ground that at once in thought and in sense the soul distinguishes and cognizes things. And in fact the older thinkers actually identify
νεών καὶ τὸ ἀισθάνεσθαι ταύτον εἶναι φασίν, ὡσπερ καὶ Ἐμ-
pedoklῆς εἴρηκε "πρὸς παρένι γὰρ μῆτις ἄξεσθαι ἀνθρώ-
pοισιν" καὶ ἐν ἄλλοις "ὀθεν σφύσιν αἰεὶ καὶ τὸ φρονεῖν ἀλ-
λοια παρίσταται." τὸ δ' αὐτὸ τούτων βούλεται καὶ τὸ Ὀμή-

§ 2 ρου "τοῖος γὰρ νόσος ἐστίν." πάντες γὰρ οὗτοι τὸ νοεῖν σωμα-
tικῶν ὡσπερ τὸ ἀισθάνεσθαι ὑπολαμβάνουσιν, καὶ ἀισθάνε-
σθαί τε καὶ φρονεῖν τῷ ὁμοίῳ τὸ ὄμοιον, ὡσπερ καὶ ἐν τοῖς
κατ' ἀρχάς λόγοις διωρίσαμεν. καίτοι ἔδει ᾗμα καὶ περὶ
tοῦ ἦπατησθαί αὐτούς λέγειν ὀικειότερον γὰρ τοῖς ζῷοις, 427b
καὶ πλεῖον χρόνον ἐν τούτῳ διατελεῖ ἡ ψυχή. διὸ ἀνάγκη
ητοῖ ὡσπερ ἕνοι λέγονσι, πάντα τὰ φαινόμενα εἶναι ἀληθῆ,
ἡ τὴν τοῦ ἀνομοίου βίειν ἀπάτην εἶναι· τούτῳ γὰρ ἐναντίον τῷ
τὸ ὀμοίον τῷ ὁμοίῳ γνωρίζειν· δοκεῖ δὲ καὶ ἡ ἀπάτη καὶ s
§ 3 ἡ ἐπιστήμη τῶν ἐναντίων ἡ αὐτή ἐστι. ὅτι μὲν οὐν οὐ ταὐ-
tοῦ ἐστί τὸ ἀισθάνεσθαι καὶ τὸ φρονεῖν, φανερῶν τοῦ μὲν
γὰρ πάσι μέτεστι, τοῦ δὲ ὀλγοῖς τῶν ζῴων. ἀλλ' οὔδε τὸ
νοεῖν ἐν ἦ τοῦ ὀρθῶς καὶ τοῦ μὴ ὀρθῶς, τὸ μὲν ὀρθῶς
φρόνησι καὶ ἐπιστήμη καὶ δόξα ἀληθῆς, τὸ δὲ μὴ ὀρθῶς 10
tάναντία τούτων· οὔδε τούτῳ δ' ἐστὶ ταύτω τῷ ἀισθάνεσθαι· ἡ
μὲν γὰρ αἰσθήσεις τῶν ἑδίων αἰεὶ ἀληθῆς, καὶ πάσιν ὑπάρ-
χει τοῖς ζῷοις, διανοεῖσθαι δ' ἐνδέχεται καὶ ψευδῶς, καὶ
§ 4 οὔδεν ὑπάρχει φ' μὴ καὶ λόγοι· φαντασία γὰρ ἔτερον καὶ

25. βούλεται τοῦτος STUWVY. 26. τοῖς γὰρ νόσος ἐστίν ἐπιχοθηνίων
ἀνθρώπων, οἷον ἐπ' ἑμαρ ἔγησιν πατήρ ἀνδρῶν τε θεῶν τε Ald Sylb. 427b 2.
toûtous STVY. 5. τῷ ὁμοίῳ τὸ ὄμοιον Trend. 11. ταύτων L. τὸ αὐτὸ STUVWX.
thought with sense-perception. Thus, for example, Empedocles maintains:

"Wisdom increases to men according to what they experience."

And in another passage he observes:

"Hence variation of thought presents itself ever before them."

To similar effect also are the words of Homer:

"Of such kind is the reason."

All these writers, in fact, understand thought to be something bodily, just like sense-perception: and they suppose perception and thought lie in the apprehension of the like by the like, as was laid down at the beginning of this treatise. They should, however, before thus identifying sense and thought, have discussed the nature of error and misconception, a state which is somewhat distinctively [in opposition to inanimate things which cannot err] the condition of living beings, and in which the soul continues for a considerable length of time. Thinkers, then, who thus identify sense and thought must either, as some do, maintain all presentations of the senses to be true, or they must explain misconception through contact on the part of the dissimilar, this being the opposite of knowing like by like. But this latter explanation is entirely at variance with the ordinary view, that in reference to contraries the knowledge and the misapprehension of them are one and the same.

Manifestly, then, thought is not the same as sense-perception. The latter is possessed by all animals without exception: the former is the property of but a few. But neither again is thought as a process leading to results now correct, now incorrect—correct thought being understanding, scientific knowledge, and true opinion, incorrect thought their opposites—neither is this process of thought identical with sense-perception. The perception of the qualities peculiar to each sense is always true, and is an attribute of every animal: thought, on the contrary, may be false as well as true, and is possessed by no animals that do not have as well intelligible language.

[Imagination, indeed, the animal does have,] but this is different at once from sense-perception and from understanding:
αισθήσεως καὶ διανοίας· αὐτὴ τε οὐ γίγνεται ἀνευ αἰσθή-
σεως, καὶ ἂνευ ταύτης οὐκ ἔστω ὑπόληψις. ὅτι δὲ οὐκ ἔστων
ἡ αὐτὴ νόησις καὶ ὑπόληψις, φανερόν. τούτῳ μὲν γὰρ τὸ
πάθος ἐφ’ ἡμῖν ἐστίν, ὅταν βουλώμεθα (πρὸ ομμάτων γὰρ
ἔστι ποιήσασθαι, ὡσπερ οἱ ἐν τοῖς μνημονικοῖς τιθέμενοι καὶ
εἰδωλοποιοῦντες), δοξάζων δὲ οὐκ ἐφ’ ἡμῖν· ἀνάγκη γὰρ ἡ
ψευδεσθαι ἡ ἀληθεύειν. ἐτὶ δὲ οἴτωσιν ἐν καὶ δὲν ἑαυτῶν
tι ἡ φοβερόν, εὐθὺς συμπάσχομεν, ὅμως δὲ καὶ ἱεροὶ ἀπο-
λέον· κατὰ δὲ τὴν φαντασίαν ἀσαῦτως ἔχομεν ὡσπερ ᾗ
§ 5 οἱ θεώμενοι ἐν γραφῇ τὰ δεινὰ ἡ θαρραλέα. εἰσὶ δὲ καὶ
αὐτῆς τῆς ὑπολήψεως διαφορὰ, ἐπιστήμη καὶ δόξα καὶ
frainness καὶ τάναντία τούτων, περὶ δὲν τῆς διαφορᾶς ἔτε-
ρος ἐστω λόγος. περὶ δὲ τοῦ νοεῖν, ἐπεὶ ἕτερον τοῦ αἰσθάνε-
σθαι, τούτου δὲ τὸ μὲν φαντασία δοκεῖ εἶναι τὸ δὲ ὑπόλη-
ψις, περὶ φαντασίας διορίσαντος οὕτω περὶ θατέρου λεκτέον.
§ 6 εἰ δὴ ἐστὶν ἡ φαντασία καθ’ ἢν λέγομεν φάντασμα τι 428
ἡμῶν γίγνεσθαι καὶ μὴ εἰ τι κατὰ μεταφορὰν λέγομεν,
μία τίς ἐστὶ τούτων δύναμις ἡ ἔξις, καθ’ ἢν κρίνομεν καὶ
ἀληθεύομεν ἡ ψευδόμεθα. τουλαχίστον δὲ εἰσὶν αἰσθήσεις, δόξα,
§ 7 ἐπιστήμη, νοῦς. ὦτι μὲν οὖν οὐκ ἐστὶν αἰσθήσεις, δήλον ἐκ 5
τῶνδε. αἰσθήσεις μὲν γὰρ ἦτοι δύναμις ἡ ἐνέργεια, οἶον ὦμος
καὶ ὀρασίς, φαίνεται δὲ τι καὶ μηδετέρον ὑπάρχοντος τοῦ-
των, οἶον τὰ ἐν τοῖς ὑπόνοις. εἴτε αἰσθήσεις μὲν ἢ ἂν πάρεστι,
and while imagination does not come into existence independently of sense-perception, conception is not found without the aid of imagination. But that imagination is a different kind of thought from conception or reflection is quite evident. Imagination is a condition subject to our own control whenever we desire—we can represent an object before our eyes just in the way those do who, in the exercise of memory, depict something with which the fact to be recalled has been associated—but conception or the forming an opinion does not in this way depend on us because it must needs be either true or false. And, further, when we form the opinion that something is terrible or fearful, we at the same time experience a feeling of fear along with it; and the result is similar when we think anything fitted to excite our confidence: whereas, with respect to merely forming an image of anything, our condition is simply like that of those who see scenes of terror and of courage portrayed in pictures. And, again, conception includes a number of specific forms—scientific knowledge, opinion, understanding, and their opposites, the difference between which will be dealt with elsewhere. Thought, on the other hand, is regarded as different from sense-perception, and is considered to embrace under itself two main forms—viz., imagination and conception. We will therefore, first of all, settle the nature of imagination, and then proceed to the consideration of the other faculty.

Imagination, then, as that faculty in respect of which we say an image or mental picture presents itself before us, and not as it may be understood in any metaphorical or wider sense, might be supposed to be some one of those faculties or states through which we judge and conclude towards that which is true or false. Such faculties are sense-perception, opinion, scientific knowledge, reason.

The following facts, however, shew that imagination is not identical with sense-perception. (1) Sense-perception may be taken either as potential or as actual, as we see, for instance, in the eyesight on the one hand, actual seeing on the other: but a picture of imagination presents itself without the presence of sense-perception in either of these forms, as for instance is the case with our visions in sleep. (2) Again, sense-perception is
περι ΨΥΧΗΣ Γ.

φαντασία δ' οὐ. εἰ δὲ τῇ ἐνεργείᾳ τὸ αὐτὸ, πᾶσιν ἃν ἐνδεχομαι τοὺς θερίως φαντασίαν ὑπάρχειν· δοκεῖ δ' οὐ, οἶδ' 10 μύρμηκε μὲν ἢ μελίττη, σκῶληκι δ' οὐ. εἶτα αἰ μὲν ἄλγεθεὶς αἰεί, αἱ δὲ φαντασία γίνονται αἰ πλείους πευδεῖς. ἐπεί' οὖδε λέγομεν, ὅταν ἐνεργῶμεν ἀκριβῶς περὶ τὸ αἰσθητὸν, ὅτι φαίνεται τοῦτο ἡμῖν ἀνθρωποῖς· ἀλλαὶ μᾶλλον ὅταν μὴ ἐναργῶς αἰσθανώμεθα, τότε ἡ ἀλήθης ἡ ψευδής, καὶ ὀπερὸν δὲ 15 § 8 ἐλέγομεν πρότερον, φαίνεται καὶ μῦνοιν ὀράματα. ἀλλὰ μὴν οὖδὲ τῶν αἰεὶ ἀληθεύοντων οὐδεμία ἔσται, οἶδ' ἐπιστήμην ἡ νοῦς· ἔστι γὰρ φαντασία καὶ ψευδής. λείπεται ἀρα ἰδεῖν εἰ δόξα· γίνεται γὰρ δόξα καὶ ἀλήθης καὶ ψευδής. ἀλλὰ δόξη μὲν ἔσται πίστις (οὐκ ἐνδεχεται γὰρ δοξάζοντα οἷς 20 δοκεῖ μὴ πιστεύειν), τῶν δὲ θηρίων οὐθενὶ ὑπάρχει πίστις, φαντασία δὲ πολλοῖς. ἐτι πάση μὲν δόξη ἀκολουθεὶ πίστις, πίστει δὲ τὸ πεπείσθαι, πειθοὶ δὲ λόγοις· τῶν δὲ θηρίων § 9 ἐνίοις φαντασία μὲν ὑπάρχει, λόγος δ' οὐ. φανερον τούνων· ὅτι οὖδὲ δόξα μετ' αἰσθήσεως, οὖδὲ δι' αἰσθήσεως, οὖδὲ 25 συμπλοκὴ δόξης καὶ αἰσθήσεως φαντασία ἂν εἴη, διὰ τε ταύτα καὶ δῆλον ὅτι οὐκ ἄλλου τινὸς ἔστιν ἡ δόξα, ἀλλ' ἐκείνων ἔστιν οὐ καὶ αἰσθησίς· λέγω δ', ἐκ τῆς τοῦ λευκοῦ δόξης καὶ αἰσθήσεως ἡ συμπλοκὴ φαντασία ἐστίν' οὗ γὰρ δὴ ἐκ τῆς δόξης μὲν τῆς τοῦ ἀγαθοῦ, αἰσθησίς δὲ τῆς τοῦ 30 λευκοῦ. τὸ οὖν φαίνεσθαι ἔστι τὸ δοξάζειν ὀπερ αἰσθάνεται 428 ξ 10 μὴ κατὰ συμβεβηκός. φαίνεται δὲ καὶ ψευδή, περὶ δὲν
always ready to hand, imagination is not so. But (3) were they as actually realized identical, imagination might be possessed by every animal. This, however, is not generally thought to be the case: the bee and ant would seem to have imagination, the worm would seem to be without it. (4) Further, the perceptions of the senses are as such always true, our pictures formed by imagination are to a great extent false. And, lastly, we do not, when our senses are vigorously and carefully directed towards their object, say that such and such a thing "appears" the image of a man: it is only when we do not perceive the object clearly that the question of its truth or falsity arises. And, as we said before, pictures of imagination present themselves even to those whose eyes are closed.

Neither, again, is imagination any of those faculties which invariably reveal us truth: as, for example, scientific knowledge or thought: because imagination may be false as well as true.

It remains for us, then, to see whether opinion, which is both true and false, can be identified with imagination. But opinion is followed by belief: it is impossible, when holding an opinion, not to believe the views we have. Belief, however, is an attribute of no brute beast, whereas imagination is possessed by many. Besides, every opinion is accompanied by belief, belief by conviction, and conviction by reason; and while imagination is a property of some animals, reason is of none. It is clear, then, that imagination is neither opinion attended by sense-perception, nor acquired through sense-perception, nor again is it the combination of opinion and sense-perception. And from the facts already stated it is further evident that this opinion does not refer to something other than the object of sensation, but is restricted to that of which we have perception. Thus, for instance, it must be the combination of the opinion of white and of the sensation of white which constitutes imagination: it cannot be the result of the opinion of good and the sensation of white.

The result of such a theory would be that imagining is the direct thinking or conceiving of the object of perception. Such a result, however, is directly at variance with facts. Objects in regard to which a man's opinion or conception is quite correct, assume an image which is altogether false: the sun, for exam-
έμα υπόληψιν ἀληθῆ ἔχει, οἷον φαίνεται μὲν ὁ ἦλιος πο-
διαῖς, πέπεισται δὲ εἶναι μεῖζων τῆς οἰκουμένης· συμβαί-
νει οὖν ήτοι ἀποβεβληκέναι τὴν ἔαντον ἀληθῆ δόξαν, ήν εἰκε σωζομένου τοῦ πράγματος, μή ἐπιλαθόμενου μηδὲ μεταπε-
σθέντα, ἢ εἰ ἐτι ἔχει, ἀνάγκη τὴν αὐτὴν ἀληθῆ εἶναι καὶ
ψευδῆ. (ἀλλὰ ψευδῆς ἐγένετο, ὅτε λάθοι μεταπεσοῦν τὸ πρᾶ-
γμα.) οὔτ' ἄρα ἐν τι τούτων ἐστὶν οὔτ' ἐκ τούτων ἡ φαντα-
§ 11 σία. ἀλλ' ἐπειδὴ ἐστὶ κυνηθέντος τοῦτι κωνέσθαι ἔτερον ὑπὸ 10
tούτου, ἡ δὲ φαντασία κίνησις τις δοκεῖ εἶναι καὶ οὐκ ἄνευ
αἰσθήσεως γύνεσθαι ἀλλ' αἰσθανομένοις καὶ ὣς αἰσθήσις
ἐστίν, ἐστὶ δὲ γίνεσθαι κίνησιν ὑπὸ τῆς ἐνεργείας τῆς αἰσθή-
σεως, καὶ ταύτην ὁμοίαν ἀνάγκη εἶναι τῇ αἰσθήσει, εἰ ἄν
αὐτῇ ἡ κίνησις οὔτε ἄνευ αἰσθήσεως ἐνδεχομένη οὔτε μὴ αἰ-
σθανομένοις υπάρχειν, καὶ πολλὰ κατ' αὐτὴν καὶ ποιεῖν
§ 12 καὶ πάσχειν τὸ ἔχον, καὶ εἶναι καὶ ἀληθῆ καὶ ψευδῆ. τούτο
dὲ συμβαίνει διά τάδε. ἡ αἰσθήσις τῶν μὲν ἓδιων ἀληθῆς
ἐστὶν ἢ ὅτι ὀλίγωστον ἔχουσα τὸ ψεύδος. δεύτερον δὲ τοῦ
συμβεβηκέναι ταύτα· καὶ ἐνταῦθα ἥδη ἐνδέχεται διαψεύ-
δεσθαι· ὅτι μὲν γὰρ λευκὸν, οὐ ψεύδεται, εἰ δὲ τούτο τὸ
λευκὸν ἢ ἄλλο τι, ψεύδεται. τρίτον δὲ τῶν κοινών καὶ ἐπομέ-
νων τοῖς συμβεβηκόσιν, οὐς υπάρχει τὰ ὅιδα· λέγω δ' ὅιον
κίνησις καὶ μέγεθος, ᾧ συμβεβήκε τοῖς αἰσθητοῖς, περὶ ᾧ
§ 13 μάλιστα ἥδη ἐστὶν ἀπατηθῆναι κατὰ τὴν αἰσθήσιν. ἡ δὲ 25

4. πέπεισται STUX Tor., πεπίστευται EVWy Trend. | μεῖζω ESTV Tor.
6. ἐπιλαθόμενον LTUVWX. 8. ἐγένετο LSUVXY. 12. αἰσθητοῖς estw
TUVW. 19. συμβεβηκότος X, τοῦ ὃ συμβεβήκε καὶ ταῦτα Ald. Sylb., τοῦ δ' συμβεβήκε
τούτως coni. Tor. 21. διαψεύδεται SUVXY. 24. ἂ ante συμβ. om. STUVWX.
ple, bears the image of being but a foot in its diameter, while at the same time the observer is convinced that it is larger than the earth. Here, then, [imagination and opinion are at variance, and if imagination be opinion] one of two things must result. Either, we must say, the man, in having this imagination, must have thrown off the true opinion which he had in presence of the fact while it remained unaltered, unless we are to suppose that he has forgotten or been led to change his views, or if he still preserves his opinion, then it follows necessarily that the same opinion is true and false. (Of course, it might be said that an opinion previously true would become false, in case the object were to alter in its character without our cognizance.)

Imagination, then, is not to be identified with any of these faculties, nor is it the result of their combination. It is, however, a law of nature that whenever one object is moved, another is moved by it. Now imagination is thought to be a form of movement, and is believed to be dependent on the senses so far as to arise only in those who perceive, and relatively to the objects of perception. And while such movement must result from sense as actually realized, and must itself be like the sense-perception, this movement, it follows, can neither exist without sense-perception nor can it be the property of any that do not have perceptive powers. It follows, further, that the possessor of this faculty may be both active and receptive in many ways regarding it, and the imagination itself may be both true and false. This results from the following considerations. The perception of the particular qualities of sense is true or marked by falsity only to the smallest possible degree. But, secondly, there is the perception of the concomitance of these qualities. And here error is possible: for while sense is never mistaken in that the object is for instance white, it may be mistaken as to whether it is this thing or some other object that is white. Thirdly, we must note the perception of the common sensibles—that is, of those properties which are associated with the objects to which the particular qualities belong—such objects, namely, of perception as movement and magnitude, which are concomitants of sensible phenomena, and with respect to which it is particularly possible to be deceived in our perception. Such,
κίνησις ἡ ὑπὸ τῆς ἐνεργείας γυνομένη διούσει τῆς αἰσθήσεως τῆς ἀπὸ τούτων τῶν τριῶν αἰσθήσεων, καὶ ἡ μὲν πρώτη παρούσης τῆς αἰσθήσεως ἀλήθης, αἱ δ' ἑτεραὶ καὶ παρούσης καὶ ἀπούσης εἶναι ἄν ψευδεῖς, καὶ μάλιστα ὅταν πόρρω τὸ αἰσθητὸν ἦ. εἰ οὖν μηθέν μὲν ἀλλὰ ἔχει τὰ εἰρημένα ἢ ἡ φαντασία τασίᾳ, τοῦτο δ' ἑστὶ τὸ λεχθὲν, ἡ φαντασία ἄν εἰ ἡ κίνησις 420§
§ 14 ὑπὸ τῆς αἰσθήσεως τῆς καὶ ἐνεργείαν γυνομένην. ἐπεὶ δ' ἡ ὅψις μάλιστα αἰσθησίς ἑστι, καὶ τὸ ὅνωμα ἀπὸ τοῦ φάον
§ 15 εἰληφεῖν, ὅτι ἄνευ φωτός οὐκ ἑστιν ἑιδὼν. καὶ διὰ τὸ ἐμμένειν καὶ ὁμοίως εἶναι ταῖς αἰσθήσεσι, πολλὰ καὶ αὐτὰς πράτ-5 τει τὰ ζῷα, τὰ μὲν διὰ τὸ μὴ ἐχεῖν νοῦν, οἶνον τὰ θηρία, τὰ δὲ διὰ τὸ ἐπικαλύπτεσθαι τῶν νοῶν ἐνιότερο πάθει ἡ νόσοις ἡ ὑπνώ, οἰον οἱ ἀνθρώποι. περὶ μὲν οὖν φαντασίας, τί ἑστι καὶ διὰ τί ἑστιν, εἰρήσθω ἐπὶ τοσοῦτον.

IV. Περὶ δὲ τοῦ μορίου τοῦ τῆς ψυχῆς ἐγανόσκει τὸ ἡ 10 ψυχῆ καὶ φρονεῖ, εἰτε χωριστοῦ ὁντος εἰτε καὶ μὴ χωριστοῦ κατὰ μέγεθος ἀλλὰ κατὰ λόγον, σκεπτέον τίν ἔχει δια-
§ 2 φοράν, καὶ πῶς ποτὲ γίνεται τὸ νοεῖν. εἰ δὴ ἑστὶ τὸ νοεῖν ἄσπερ τὸ αἰσθάνεσθαι, ἡ πάσχειν τι ἀν εἰ ἡ ὑπὸ τοῦ νοητοῦ
§ 3 ἡ τι τοιούτον ἑτερον. ἀπαθῆς ἁρα δει εἶναι, δεκτικὸν δὲ τοῦ 15 εἴδους καὶ δυνάμει τοιοῦτον ἀλλὰ μὴ τοῦτο, καὶ ὁμοίως ἔχειν,

then, being the varying degrees of truth in sense-perception, there will be a difference in the movement which results from the exercise of each of these three perceptive faculties. Thus the movement in the first instance is true while the perception itself is present: the movements in the other two cases might be both in the presence and in the absence of the sensation possibly false: and this especially in any case in which the object of sensation is far distant from its organ.

Thus, then, if there be nothing but imagination which possesses the attributes that have been mentioned, and this be the faculty we have described, imagination will be a movement resulting from the actual operation of the faculty of sense. And, further, since it is the eye-sight that is the most important sense, imagination has received its name from 'light,' because without light it is impossible to see. And because the pictures of imagination continue to subsist in a way resembling the perceptions of the senses, animals act frequently in accordance with the pictures which imagination offers, some (as is the case with brute beasts) because they have no faculty of reason, others because their reason is at times obscured by passion, or disease, or sleep, as is the case with man. And here we conclude our account of the nature and conditions of imagination.

CHAPTER IV.

We must next discuss the cognitive and thinking part of soul, whether it be separated from our other mental faculties or whether it is not separated physically, but be so only by thought and abstraction, and inquire what is the specific character of thought, and how it is that at some stage or another thought begins to operate.

Thinking, we may assume, is like perception, and, if so, consists in being affected by the object of thought or in something else of this nature. Like sense then, thought or reason must be not entirely passive, but receptive of the form—that is, it must be potentially like this form, but not actually identical with it: it will stand, in fact, towards its objects in the same relation as
18. ἐπείδὴ ΣUVWXy. 25. γὰρ ἂν τις ΛSTUWX. 429 b. ὅλον 
τοῦ ψ. STVXY. 6. ὡς ὁ ἐπΤ. ELTUVX Tor. 8. ὀμοίως pr. om. pr. 
E Tor.
that in which the faculty of sense stands towards the objects of perception. Reason therefore, since it thinks everything must be free from all admixture, in order that, to use the phrase of Anaxagoras, it may rule the world—that is, acquire knowledge: for the adjacent light of any foreign body obstructions it and eclipses it. Its very nature, then, is nothing but just this comprehensive potentiality: and the reason—that is, that function through which the soul is ratiocinative and frames notions—is therefore, previously to the exercise of thought, actually identical with nothing which exists.

This consideration shews how improbable it is that reason should be incorporated with the bodily organism: for if so, it would be of some definite character, either hot or cold, or it would have some organ for its operation, just as is the case with sense. But, as matter of fact, reason has nothing of this character. There is truth, too, in the view of those who say the soul is the source of general ideas: only it is soul not as a whole but in its faculty of reason: and the forms or ideas in question exist within the mind, not as endowments which we already possess, but only as capacities to be developed.

The difference, however, between the impassivity of the faculty of reason and of the faculty of sense is clear from a consideration of the organs and the processes of sense-perception. Sense, for example, is unable to acquire perception from an object which is in too great excess—cannot, to take an instance, perceive sound from extremely loud noises, nor see nor smell anything from too violent colours and odours. Reason, on the contrary, when it applies itself to something extremely intellectual, does not lessen but rather increases its power of thinking inferior objects, the explanation being that the faculty of sense is not independent of the body, whereas reason is separated from it. And since reason becomes each of its objects in the sense in which he who is in actual possession of knowledge is described as knowing—this resulting when he can apply his knowledge by himself—the reason as a developed capacity is similar to what it was previously as a mere unformed faculty though not the same as what it was before it learned or
πρὶν μαθεῖν ἡ εὑρεῖν καὶ αὐτὸς δὲ αὐτὸν τότε δύναται νο-
§ 7 εἰν. ἔπει δ’ ἄλλο ἑστὶ τὸ μέγεθος καὶ τὸ μεγέθει εἰναι καὶ ἰο
ὑδὼρ καὶ ὑδατι εἰναι’ (οὔτω δὲ καὶ ἐφ’ ἐτέρων πολλῶν, ἄλλ’
οὐκ ἔπι πάνων’ ἐπ’ ἐνών γὰρ ταῦτάν ἑστὶ’) τὸ σαρκὶ εἰναι
καὶ σάρκα ἡ ἄλλω ἡ ἄλλως ἔχοντι κρίνει’ ἡ γὰρ σάρξ
οὐκ ἀνευ τῆς ύλης, ἄλλ’ ὠσπερ τὸ σιμόν, τόδε ἐν τῷ ὁ.
τῷ μὲν οὖν αἰσθητικῷ τὸ θερμὸν καὶ τὸ ψυχρὸν κρίνει καὶ ὁν 15
λόγος τις ἡ σάρξ’ ἄλλω δὲ ἦτοι χωριστῷ, ἡ ὡς ἡ κεκλα-
σμένη ἔχει πρὸς αὐτὴν ὅταν ἐκταθῇ, τὸ σαρκὶ εἰναι κρί-
§ 8 νει. πάλιν δ’ ἔπι τῶν ἐν ἀφαρέσει οὖν τὸν τὸ εὐθύ ὡς τὸ
σιμόν’ μετὰ συνεχοῦς γάρ· τὸ δὲ τῇ ἡν εἰναι, εἰ ἐστὶν ἐτέρων
τὸ εὐθεὶα εἰναι καὶ τὸ εὐθύ, ἄλλω’ ἐστω γὰρ δνάς. ἐτέρῳ 20
ἀρὰ ἡ ἐτέρως ἔχοντι κρίνει. καὶ ὅλως ἀρὰ ὡς χωριστὰ τὰ
§ 9 πράγματα τῆς ύλης, οὔτω καὶ τὰ περὶ τῶν νοῦν. ἀπορήσειε
δ’ ἀν τις, εἰ δ’ νοὺς ἀπλοῦν ἑστὶ καὶ ἀπαθὲς καὶ μηθὲν μηθὲν
ἔχει κοινὸν, ὠσπερ φησίν Ἀναξαγόρας, πὼς νοήσει, εἰ τὸ
νοεῖν πάσχειν τὶ ἔστιν. ἡ γὰρ τι κοινὸν ἀμφοῖν ὑπάρχει, τὸ 25
§ 10 μὲν ποιεῖν δοκεῖ τὸ δὲ πάσχειν. ἐτὶ δ’ εἰ νοητὸς καὶ αὐτὸς.
ἡ γὰρ τοῖς ἄλλοις ὁ νοὺς ὑπάρξει, εἰ μὴ κατ’ ἄλλο αὐτὸς

11. καὶ τὸ ύδατι E. 13. ἔχοντι om. ELSUV. || κρίνει ὁ νοὸς η EL Ald.
16. ἡ om. SUVWX. 20. ἄλλο TVX Bz. 21. καὶ om. LSTUVX. ||
ἀρὰ om. pr. E. 23. ἄπλοις V.
discovered: and it may in this final stage be said to think itself.

[The difference between sense and reason may be exhibited also in this manner.] There is a difference between magnitude as a simple fact and magnitude as a real notion, just as there is between water and its essential being: as indeed a similar difference holds good in most things, though not in all, there being some abstract objects in which matter and form combine together into one. It is then either by a different faculty, or by a faculty differently applied, that the mind judges of the essential nature of flesh and simple flesh itself, because flesh does not exist independently of matter, but is, like snubnosedness, a definite fact in concrete expression. With the faculty of sense it discriminates the hot and cold and those qualities of which flesh presents us with a certain aspect, whereas with another faculty, either separated from the former or standing to it in the same relation as the bent line to the same line when straightened, it judges of the essential notion of flesh.

And this distinction holds good also of abstract conceptions. The actual straight line, as occupying continuous space, resembles the concrete materially expressed snubnose; whereas the essential idea, if we allow a difference between the notion of straightness and the simple straight line, must be recognised by some other faculty. And now suppose that we define the idea of straightness as duality. It must be with a different or differently applied faculty that mind judges of this real idea: and generally just as the forms of sense can be separated from the matter in which they are embodied, so also can we draw a distinction between the different applications of thought.

The question might, however, here be raised—How, if reason is uncompounded and unaffected by impressions, and has, as Anaxagoras maintains, no community with other objects—how is it to think objects, if thinking be a sort of receptivity; for it is only in so far as there is something common to two objects that the one is thought to produce, the other to receive an impression. And the further question might be raised whether reason itself can be an object of thought. For either reason must be an attribute of other things as well, in case it be held
νοητός, ἐν δὲ το το νοητὸν εἰδει, ἡ μεμυγμένον τι ἕξει, ὁ
§ 11 ποιεῖ νοητὸν αὐτὸν ὁσπέρ τάλλα. ἡ το μὲν πάσχειν κατὰ
κοινὸν τι. διδεὶ εἰρήται πρότερον, ὅτι δυνάμει πώς ἐστι τὰ νοητὰ 30
ὁ νοῦς, ἀλλὰ ἐντελεχεία οὐδὲν, πρὶν ἄν νοῆ. δεῖ δὲ οὕτως ὁσ-
πέρ ἐν γραμματείᾳ ὃ μηθὲν ὑπάρχει ἐντελεχεία γεγραμ- 430
§ 12 μένον. ὅπερ συμβαίνει ἐπὶ τοῦ νοῦ. καὶ αὐτὸς δὲ νοητὸς ἔστιν
ὁσπέρ τὰ νοητὰ. ἐπὶ μὲν γὰρ τῶν ἄνευ ἔλεις τὸ αὐτὸ ἐστὶ
tὸ νοοῦν καὶ τὸ νοούμενον. ἡ γὰρ ἐπιστήμη ἡ θεωρητικὴ καὶ
tὸ οὕτως ἐπιστήτον τὸ αὐτὸ ἐστιν. τοῦ δὲ μὴ ἄει νοεῖν τὸ αὐ- 5
tιον ἐπισκεπτέον. ἐν δὲ τοῖς ἔχονσιν ἔλειν δυνάμει ἐκαστὸν
ἔστι τῶν νοητῶν. ὃς τε ἐκέωνοι μὲν οὐχ ὑπάρξει νοῦς (ἀνευ
γὰρ ἔλεις δύναμις ὁ νοῦς τῶν τοιούτων), ἐκεῖνῳ δὲ τὸ νοητὸν
ὑπάρξει,

V. Ἐπεὶ δ' ὁσπέρ ἐν ἀπάσῃ τῇ φύσει ἐστὶ τι τὸ μὲν 10
ἔλει ἐκαστῷ γένει (τοῦτο δὲ τὸ πάντα δυνάμει ἐκεῖνα), ἔτερον
dὲ τὸ αὐτίον καὶ ποιητικόν, τῷ ποιεῖν πάντα, οἶον ἡ τέχνη

to be an object of thought not through anything outside itself, but simply in and by itself, and supposing that the object of thought is always something homogeneous: or it must have some element compounded with it which makes it capable of being thought like other real things. Or may we not rather hold that the receptivity of reason is possible only in virtue of some common element? And hence it has been already said that reason is in a way potentially one with the ideas of reason, though it is actually nothing but a mere capacity before the exercise of thought. We must suppose, in short, that the process of thought is like that of writing on a writing-tablet on which nothing is yet actually written.

Thus the reason can be thought just in the same way as can objects of thought generally. [For such objects of thought are either immaterial or material.] Now in the case of immaterial objects, the subject thinking and the object thought are one and the same: just as speculative science is equivalent to the objects and ideas of speculative knowledge (a fact, it is true, which leaves the question—why we do not always think, to be investigated). In the case, on the contrary, of those objects which are imbedded in matter, each of the ideas of reason is present, if only potentially and implicitly. And thus reason is not to be regarded as belonging to and governed by the things of sense (reason being a faculty independent of the matter of such objects), but the world of thought must be regarded as belonging to and regulated by reason.

CHAPTER V.

The same differences, however, as are found in nature as a whole must be characteristic also of the soul. Now in nature there is on the one hand that which acts as material substratum to each class of objects, this being that which is potentially all of them: on the other hand, there is the element which is causal and creative in virtue of its producing all things, and which stands towards the other in the same relation as that in which art
πρὸς τὴν ὑλὴν πέπονθεν, ἀνάγκη καὶ ἐν τῇ ψυχῇ ὑπεξειρέσθαι ταύτας τὰς διαφοράς. καὶ ἐστὶν ὁ μὲν τοιούτος νοῦς τῷ πάντα γίνεσθαι, ὁ δὲ τῷ πάντα ποιεῖν, ὡς ἔξις τις, οἴον τὸ φῶς τρόπον γάρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει ὄντα χρώματα ἐνεργεῖα χρώματα. καὶ οὕτος ὁ νοῦς χωριστὸς καὶ ἂν γὰρ τιμιωτέρον τὸ ποιοῦν τοῦ πάσχοντος καὶ ἡ ἀρχὴ τῆς ὑλῆς. τὸ δ' αὐτὸ ἐστὶν ἡ κατ' ἐνέργειαν ἐπιστήμη τῷ πράγματι ἡ δὲ κατὰ δύναμιν χρῶν ἑκτέρα ἐν τῷ ἐνί, ὅλως δὲ οὐδὲ χρόνῳ, ἀλλ' οὖν ὅτε μὲν νοεῖ ὅτε δ' οὐ νοεῖ. χωρισθεὶς δ' ἐστὶ μόνον τοῦθ' ὁπερ ἔστιν, καὶ τοῦτο μόνον ἀθάνατον καὶ άθανόν. οὐ μημονεύομεν δ' ὅτι τοῦτο μὲν ἀπαθεῖς, ὁ δὲ παθητικὸς νοῦς φθαρτός, καὶ ἁνευ τούτου οὐδέν νοεῖ.

VI. Η μὲν οὖν τῶν ἀδιαμέτρων νόησις εἰς τούτοις, περὶ ά οὖν ἐστὶ τῷ ψεῦδος. εἰς οἷς δὲ καὶ τῷ ψεῦδος καὶ τῷ ἀληθείς, σύνθεσὶς τις ηὔθη νομίμων οὕσπερ εἰς οὖν, καθάπερ Ἐμπεδοκλῆς ἐφη "ἡ πολλῶν μὲν κόροις ἀναιχεῖνες ἐβλάστησαν," ἐπειτα συντίθεσθαι τῇ φιλίᾳ. οὔτω καὶ ταύτα κεχωρισμένα καὶ διάμετρος. οὖν τὸ ἀσύμμετρον καὶ ἡ διάμετρος. οὖν δὲ γενο-

stands towards the materials on which it operates. Thus reason is, on the one hand, of such a character as to become all things, on the other hand of such a nature as to create all things, acting then much in the same way as some positive quality, such as for instance light: for light also in a way creates actual out of potential colour.

This phase of reason is separate from and uncompounded with material conditions, and, being in its essential character fully and actually realized, it is not subject to impressions from without: for the creative is in every case more honourable than the passive, just as the originating principle is superior to the matter which it forms. And thus, though knowledge as an actually realized condition is identical with its object, this knowledge as a potential capacity is in time prior in the individual, though in universal existence it is not even in time thus prior to actual thought. Further, this creative reason does not at one time think, at another time not think: [it thinks eternally:] and when separated from the body it remains nothing but what it essentially is: and thus it is alone immortal and eternal. Of this unceasing work of thought, however, we retain no memory, because this reason is unaffected by its objects; whereas the receptive passive intellect (which is affected) is perishable, and can really think nothing without the support of the creative intellect.

CHAPTER VI.

With regard then to the exercise of reason, the thinking of isolated single terms falls within a sphere in which there is no falsity: when, on the other hand, we find both falsity and truth, there we reach a certain combination of ideas as constituting one conception: much in the same way as Empedocles said: "Thereupon many there were whose heads grew up neckless entirely:" but were afterwards brought together by friendship. In a corresponding fashion is it that those notions which are originally separate are afterwards connected, as is, for instance, the case with the two notions incommensurate and
μένων ἡ ἑσομένων, τοῦ χρόνον προσεννώθην καὶ συντιθεὶς. τὸ 430
γὰρ ψεῦδος ἐν συνθέσει ἀεὶ καὶ γὰρ ἄν τὸ λευκὸν μὴ λευ-
κόν, τὸ μὴ λευκὸν συνέθηκεν. (ἐνδέχεται δὲ καὶ διαίρεσιν
φάναι πάντα.) ἀλλ' οὐν ἔστι γε οὐ μόνον τὸ ψεῦδος ἡ ἀληθεία,
ὅτι λευκὸς Κλέων ἐστίν, ἀλλὰ καὶ ὅτι ἦν ἡ ἔσται. τὸ δὲ ἐν 5
§ 3 ποιοῦν, τοῦτο ὁ νοῦς ἑκαστοῦν. τὸ δ' ἀδιαίρετον ἐπεὶ διχῶς, ἡ
δυνάμει ἡ ἐνεργεία, οὐθὲν κωλύει νοεῖν τὸ ἀδιαίρετον, ὅταν
νοῇ, τὸ μῆκος (ἀδιαίρετον γὰρ ἐνεργεία) καὶ ἐν χρόνῳ ἀδιαί-
ρετῶν ὁμοίως γὰρ ὁ χρόνος διαιρετὸς καὶ ἀδιαιρετὸς τῷ
μῆκει. οὐκοῦν ἔστιν εἰπεῖν ἐν τῷ ἡμίσει τί ἐνόει ἐκατέρων οὐ ἃ
γὰρ ἐστιν, ἄν μὴ διαιρεθῇ, ἀλλ' ἡ δυνάμει. χωρὶς δ' ἐκα-
tερον νοῶν τῶν ἡμίσεων διαιρεῖ καὶ τὸν χρόνον ἀμα': τότε
δ' οἰονεὶ μῆκη. εἰ δ' ὡς εξ ἄμφοις, καὶ ἐν τῷ χρόνῳ τῷ
§ 4 ἐπ' ἄμφοις. τὸ δὲ μὴ κατὰ ποσὸν ἀδιαίρετον ἀλλὰ τῷ εἰ-
δει νοεῖ ἐν ἀδιαιρέτῳ χρόνῳ καὶ ἀδιαιρέτῳ τῆς ψυχῆς 15
κατὰ συμβεβηκός δὲ, καὶ οὐχ ἣ ἐκεῖνα διαιρετά, ὃ νοεῖ
καὶ ἐν τῷ χρόνῳ, ἀλλ' ἣ ἀδιαιρετα. ἐνεστι γὰρ καὶ τούτοις
ti ἀδιαιρετόν, ἀλλ' ἰσως οὐ χωριστῶν, ο νοεῖ ἐνα τὸν χρόνον
καὶ τὸ μῆκος. καὶ τοῦθ' ὁμοίως ἐν ἀπαντί ἐστι τῷ συνεχέι

430b 2. τὸ μὴ λευκὸν λευκὸν σ. Trend. 4. πάντα] ταῦτα coni. Τό. 7.
tο ἀδ'] τὸ διαιρετῶν ἢ ἀδιαιρετῶν conj. Tor. 10. ἐφ'ες L. Tor., ἐφ'ες SVX, ἐφ'ες y,
ἐφ'ες T U W. 13. μῆκει STV.
diagonal. Should the notions in question be, however, related to
the past or to the future, thought then adds on the idea of time
to that of mere connection. Falsehood, in fact, always involves
combination and connection: even in asserting the white to be
not white we bring not-white into a combination. It should be
added, at the same time, that all this process might be described,
not as combination, but rather as disjunction or division. Any-
how it follows that truth or falsehood is not limited to saying
that "Cleon is white," but includes the judgment that he was
or will be: and the process of thus reducing our ideas into
the unity of a single judgment is in each case the work of
reason.

Further light is thrown upon this unity of thought by con-
sidering that the indivisible and continuous presents itself before
us in two forms, either as potential or as actual. There is there-
fore nothing to prevent us conceiving extended and thus di-
visible space, at the time when we think it, as indivisible (because
as it actually exists it is thus indivisible): and also doing so
within an indivisible moment of time, because time, just as
extended length, may be conceived of either as divided or as
undivided. And therefore it is impossible to state what was
thought in each of the two halves of time: because, unless it be
divided, there is no such half existing actually, but only poten-
tially: although, in so far as the reason thinks of the two halves
separately, it divides the time likewise, and thinks it just as two
lengths. If, on the other hand, the reason think its object as
consisting of two halves, then it thinks them also in a time which
is spread over two halves.

With respect to what is indivisible, not quantitatively but
specifically, this the reason thinks within an undivided space of
time and with the undivided action of the soul [and this not as
an essential property of the object which is indivisible], but as
an incidental concomitant of the mental process, and thus not in
so far as the mental action and the time are divisible, but rather
in so far as they are indivisible. For in such objects also there
is something which is indivisible, though perhaps it cannot be
separated from its setting—something which makes the time and
the length into one; and this also is the case with everything
§ 5 καὶ χρόνῳ καὶ μήκει. ἦ δὲ στιγμὴ καὶ πᾶσα διαίρεσις, καὶ τὸ οὕτως ἄδιαίρετον, δηλοῦται ὁσπερ ἡ στέρησις. καὶ ὁμοιος ὁ λόγος ἐπὶ τῶν ἄλλων, οἷον πῶς τὸ κακὸν γνωρίζει ἦ § 6 τὸ μέλαν τῷ ἐναντίῳ γὰρ πῶς γνωρίζει. δεὶ δὲ δυνάμει εἶναι τὸ γνωρίζον καὶ ἐν εἶναι ἐν αὐτῷ. εἰ δὲ τινὶ μὴ ἐστὶν ἐναντίων τῶν αἰτίων, αὐτὸ ἐαυτὸ γινώσκει καὶ ἐνέργεια ἐστὶ 25 § 7 καὶ χωριστῶν. ἔστι δ' ἦ μὲν φάσις τι κατὰ τινος, ὁσπερ ἡ κατάφασις, καὶ ἀληθῆς ἡ ψευδῆς πᾶσα: ὁ δὲ νοῦς οὐ πᾶς, ἄλλ' ὁ τοῦ τί ἐστι κατὰ τὸ τί ἦν εἶναι ἀληθῆς, καὶ οὐ τί κατὰ τινος· ἄλλ' ὁσπερ τὸ ὅραν τοῦ ἱδίου ἀληθές, εἰ δ' ἄνθρωπος τὸ λευκὸν ἦ μῆ, οὐκ ἀληθές ἀεί, οὕτως ἔχει ὅσα 30 ἀνευ ἥλιος.

VII. Τὸ δ' αὐτὸ ἐστὶν ἦ κατ' ἐνέργειαν ἐπιστήμη τῷ πράγματι. ἦ δὲ κατὰ δύναμιν χρόνῳ προτέρα ἐν τῷ ἔνι, ὅλως δὲ οὐδὲ χρόνῳ· ἔστι γὰρ εἷς ἐνενεχεῖα, οὕτως πάντα τὰ γνώμενα. φαίνεται δὲ τὸ μὲν αἰσθητὸν ἐκ δυνάμει οὐτοῦ τοῦ αἰσθητικοῦ ἐνέργεια ποιοῦν· οὐ γὰρ πάσχει οὐδὲ ἀλλοιοῦται. 5 διὸ ἄλλο εἶδος τούτῳ κινήσεως· ἦ γὰρ κίνησις τοῦ ἀτελοῦς

continuous, whether it be so in time or space. But as for the
point and everything which is thus arrived at by division, and
yet is in this sense indivisible, its character comes to be eluci-
dated in the same way as negation.

A similar account holds good of other cases. How, for
instance, do we come to know evil or black? We may say
it is through their opposites. And thus the cognitive faculty
must be in such cases potentially both qualities, while at
the same time it remains at unity within itself. If, however,
there be a causal mental force, which has no contrary op-
posed to it, such a faculty knows itself by its own agency, and
is realized in full activity and independently of all bodily con-
ditions. And thus while every statement, as for instance an
affirmation, asserts something of something else, and is in every
case either true or false, reason is not in every case placed
between the alternatives of truth and falsehood: the conception
of the notion in its real nature is intrinsically true, and is
not merely an assertion that something belongs to something
else. Just in fact as the seeing of the particular quality of sense
is always true, while the judgment, whether the white colour is
or is not a man is not always true: so similarly the conceptions
which are entirely independent of material surroundings are as
such always true.

CHAPTER VII.

Actual knowledge has thus been shewn to be identical with
the object of knowledge. Potential knowledge is, it is true, in
point of time earlier in the individual, although absolutely it
is not even so in time, because it is from something actually
existing that everything which comes into being is derived. It
appears, however, that in sense-perception it is a potential faculty
of sense which the sensible object transforms into actuality: in
fact, the faculty is not affected or altered by the object of sense
[—rather it is realized by its object]. Hence, then, the movement
implied in sense-perception is different from ordinary move-
ἐνέργεια ἥν, ἣ δ' ἀπλῶς ἐνέργεια ἐτέρα ἥ τοῦ τετελεσμένου. § 2 τὸ μὲν οὖν αἰσθάνεσθαι ὁμοιὸν τῷ φάναι μόνον καὶ νοεῖν όταν δὲ ἡδο ἡ λυπηρὸν, οἴον καταφάσα ἡ ἀποφάσα, διώκει ἡ φεύγει. καὶ ἔστι τὸ ἡδεσθαι καὶ λυπεύσθαι τὸ ἐνερ-

γείν τῇ αἰσθητικῇ μεσότητι πρὸς τὸ ἀγαθὸν ἡ κακόν, ἡ τοι-

αὐτα. καὶ ἡ φυγὴ δὲ καὶ ἡ ὀρέξα τοῦτο ἡ κατ' ἐνέργειαν,

καὶ οὐχ ἐτερον τὸ ὀρεκτικὸν καὶ φευκτικὸν, οὔτ' ἀλλήλων οὔτε

§ 3 τοῦ αἰσθητικοῦ' ἀλλὰ τὸ εἶναι ἀλλο. τῇ δὲ διανοητικῇ ψυχῇ
tὰ φαντάσματα ὁμοία αἰσθήματα ὑπάρχει. όταν δὲ ἀγαθὸν 15

ἡ κακόν φήσῃ ἡ ἀποφήσῃ, φεύγει ἡ διώκει. διὸ οὐδέποτε

νοεῖ ἀνευ φαντάσματος ἡ ψυχή' ἡσπερ δὲ ὁ ἄηρ τὴν κό-

ρην τοιανδι ἐποίησεν, αὐτὴ δ' ἐτερον' καὶ ἡ ἀκοή ὠσαύτως'
tὸ δὲ ἐσχατὸν ἐν, καὶ μία μεσότης' τὸ δ' εἶναι αὐτῇ

§ 4 πλεῖω. τίνι δ' ἐπικρίνει τί διαφέρει γλυκυ καὶ θερμόν, 20

ἐἴρηται μὲν καὶ πρότερον, λεκτέον δὲ καὶ ὀδε. ἐστι γὰρ ἐν
tὶ οὖτω δὲ καὶ ὡς ὄρος, καὶ ταύτα ἐν τῷ ἀνάλογον καὶ
tῷ ἀριθμῷ ὅν ἔχει πρὸς ἐκάτερον, ὡς ἐκεῖνα πρὸς ἀλ-

ληλα: τί γὰρ διαφέρει τὸ ἀπορεῖν πῶς τὰ μὴ ὀμογενὴ κρίνει

ment: for while movement is, as we have seen before, only the realization of something while incomplete, realization taken absolutely is something different, as relating to that which has been completed.

Sense-perception, then, in itself is like mere simple assertion and conception: when, however, the sense perceives something as pleasant or painful, it, so to speak, affirms or denies it—that is, pursues or avoids it. Pleasure and pain, then, are due to the operation of the medium state involved in sense-perception upon that which is good or bad, as such: and pursuit and aversion are equivalent to this state as actual and realized. And thus the faculty of desire and of aversion are not different either from one another or from the faculty of sense: although, indeed, the mode in which they manifest themselves is different. So similarly to the understanding the images of sense-impressions are related just as the impressions themselves are to sense: it is only when the mind proceeds to assert something to be good or bad that it either pursues or avoids its object.

The soul, then, never thinks of anything as good or bad without the help of images of sense. [But this sensuous image is only a condition of its exercise]: it is simply like the air which makes the pupil of such and such a character, while the pupil itself remains different from it, in the same manner as it is also with the hearing: and all the while the ultimate faculty and equalizing medium remain one, although their modes of manifestation may be several.

This ultimate unity is, further, that by which the mind comes to distinguish between separate sensations, such as sweet and hot. This has been already explained, but we may state the matter also in the following manner. There is a unity which stands towards the different sensations much in the same manner as anything which serves as limit to a series: while, further, the ideas themselves are one by the proportion and the numerical relation which makes each stand towards the other in the same relation as that in which the outward qualities are associated with one another. And here, let it be granted, it makes no difference whether we ask how this unity judges of objects that do not fall within one and the same genus, or, on the other
η τάναντία, οίνον λευκόν καὶ μέλαν; ἕστω δὴ ὡς τὸ Α τὸ λευκὸν πρὸς τὸ Β τὸ μέλαν, τὸ Γ πρὸς τὸ Δ ὡς ἐκεῖνα πρὸς ἀλληλαίαν ὡστε καὶ ἐναλλάξει. εἰ δὴ τὰ ΓΔ εἴνει εἰῇ ὑπάρχοντα, οὕτως ἔξει ὡστερ καὶ τὰ ΑΒ, τὸ αὐτὸ μὲν καὶ ἐν, τὸ δὲ εἴναι οὐ τὸ αὐτό, κάκεινον ὁμοίως. ὁ δὲ αὐτὸς λόγος καὶ εἰ τὸ μὲν Α τὸ γλυκὸν εἴη, τὸ δὲ Β τὸ λευκόν.

§ 5 κόν. τὰ μὲν οὖν εἴδη τὸ νοητικὸν ἐν τοῖς φαντάσμασι νοεῖ, καὶ ὡς ἐν ἐκείνους ὁρίσται αὐτῷ τὸ διωκτὸν καὶ ψευκτὸν, καὶ ἐκτὸς τῆς αἰσθήσεως, ὅταν ἑπὶ τῶν φαντασμάτων ἦν, κωνίαται, οἴον αἰσθανόμενος τὸν φρυκτὸν ὅτι πῦρ, τῇ κοινῇ.

§ 6 γνωρίζει ὁρῶν κωνίμενον, ὅτι πολέμιος. ὅτε δὲ τοῖς ἐν τῇ ψυχῇ φαντάσμασιν ἡ νοήμασιν ὀστερ ὁρῶν λογίζεται καὶ βουλεύεται τὰ μέλλοντα πρὸς τὰ παρόντα· καὶ ὅταν εἴπῃ ὡς ἐκεῖ τὸ ἥδυ ἡ λυπηρόν, ἑνταῦθα φεύγει ἡ διώκει, καὶ ὅλως ἐν πράξει. καὶ τὸ ἀνευ δὲ πράξεως, τὸ ἀληθὲς καὶ τὸ ψευδὸς ἐν τῷ αὐτῷ γένει ἐστὶ, τῷ ἁγαθῷ καὶ κακῷ.

§ 7 ἀλλὰ τὸ γε ἀπλῶς διαφέρει καὶ τυί. τὰ δὲ ἐν ἀφαίρεσει λεγόμενα νοεῖ ὡστερ ἄν εἰ τὸ σιμών, ἦ μὲν σιμών,

hand, contraries, such as black and white [which do thus belong to one and the same conception]. [Consider, then the question, first of all, relatively to homogeneous objects and conceptions.] Whatever be the relation in which A (the objective quality white) stands to B (objective black); C and D [the idea of white and the idea of black] will stand to one another in the same relation as the former pair. (Hence, of course, also *alternando:* A will stand to C as B to D.) If, then, C and D attach themselves to some one act of mind, they will hold themselves just as A and B—that is, they will be one and the same, though their aspect or mode of existence differs; and the sameness and unity which thus attaches to them will be simply like that of the actual concrete qualities. And the same proportion would result were we to make A represent the sweet and B the white.

Thus then the reason, while employing as its materials the images of sense, grasps from among them general ideas; and in the same manner as it determines for itself within these images what is to be pursued and what avoided, so also outside the actual perception of these objects it is, when engaged merely with the images of sense, stirred up to action. [Thus then the practical reason, in dealing with the perceptions and the images of sense, translates them into ideas of what is good and evil] much in the same way as a man on perceiving a torch-light, which sense presents to himself simply as a fire, comes, by the action of the central sense, when he sees it moved, to know that it signifies the approach of an enemy. Similarly also, when dealing with mere images or notions in the mind, we calculate as if we had the facts before our eyes, and deliberate upon the future in relation to the present. And, further, when the reason in the speculative sphere asserts something to be pleasant or painful, within the practical sphere it pursues it or avoids it, and, in a word, steps forth into action. Independently, however, of action, truth and falsehood are of the same character as good and evil: but they differ in so far as the two former are absolute, the two latter relative to some person or object.

As for so-called abstractions, the mind thinks them just as it might snubnosedness: for just as quininedin the mind cannot conceive this abstractedly and but *qua* hollow can by
ΠΕΡΙ ΨΤΧΗΣ Γ.

οὗ κεχωρισμένως, ἥ δὲ κολλὼν, εἰ τις ἐνοεὶ ἐνεργείᾳ, ἀνευ τῆς σαρκὸς ἀν ἐνοεῖ ἐν ἥ τὸ κολλὼν. οὖτω τὰ μαθηματικὰ 15 § 8 οὗ κεχωρισμένα ὡς κεχωρισμένα νοεῖ, ὅταν νοῇ ἐκεῖνα. ὅλως δὲ ὁ νοῦς ἐστιν ὁ κατ’ ἐνέργειαν τὰ πράγματα νοῶν. ἀρα δ’ ἐνδέχεται τῶν κεχωρισμένων τί νοεῖν ὄντα αὐτὸν μὴ κεχωρισμένον μεγέθους, ἢ οὐ, σκεπτέον ὑστερον.

VIII. Νῦν δὲ περί ψυχῆς τὰ λεγόμενα συγκεφαλαιωσάντες, εἶπομεν πάλιν ὅτι ἡ ψυχή τα ὄντα πώς ἐστι πάντα. ἡ γὰρ αἰσθητὰ τὰ ὄντα ἡ νοητά, ἐστι δ’ ἡ ἐπιστήμη μὲν τὰ ἐπιστητὰ πως, ἡ δ’ αἰσθησις τὰ αἰσθητα’ πῶς δὲ τούτο, § 2 δεὶ ζητεῖν. τέμνεται οὖν ἡ ἐπιστήμη καὶ ἡ αἰσθησις εἰς τὰ πράγματα, ἡ μὲν δυνάμει εἰς τὰ δυνάμει, ἡ δ’ ἐνετελε- 25 χεια εἰς τὰ ἐνετελεχεία. τῆς δὲ ψυχῆς τὸ αἰσθητικὸν καὶ τὸ ἐπιστημονικὸν δυνάμει ταῦτα ἐστι, τὸ μὲν ἐπιστητὸν τὸ δὲ αἰσθητὸν. ἀνάγκη δ’ ἡ αὐτὰ ἡ τὰ εἰδὴ εἶναι. αὐτὰ μὲν γὰρ δὴ οὐ. οὐ γὰρ ὁ λίθος ἐν τῇ ψυχῇ, ἀλλὰ τὸ εἶδος. ὡστε ἡ ψυχή ὁσπερ ἡ χείρ ἐστων καὶ γὰρ ἡ χεῖρ ὁργάνων ἐστιν ὀργάνων, καὶ ο νοῦς εἶδος εἰδῶν καὶ ἡ αἰ- § 3 σθησις εἶδος αἰσθητῶν. ἐπεὶ δὲ οὐδὲ πράγμα οὔθεν ἐστὶ παρὰ τὰ μεγέθη, ὡς δοκεῖ, τὰ αἰσθητα κεχωρισμένον, ἐν τοῖς εἴδεσι τοῖς αἰσθητοῖς τὰ νοητα ἐστι, τὰ τε ἐν ἀφαι- 5

an effort of thought conceive it without the flesh in which the
hollowness inheres; so in like manner the mind, in thinking of
mathematical forms, conceives them, though not really separated
from objects, as if they were so separated. And in general, in
fact, reason is the faculty which thinks things in their reality
and truth. But as to whether the reason can think anything
that is abstract unless it be itself abstract and independent of
magnitude—that is a question which must be discussed at a
later stage.

CHAPTER VIII.

We will now sum up the conclusions we have made about
the soul. The soul, we have seen, is in a way all existing
things. For the objects of existence are either objects of sense
or objects of thought: and while science is in a way identical
with the objects of thought, sense again is one with the objects
of sense. How this comes about is a point we must investi-
gate.

Scientific thought and sense-perception thus spread themselves
over objects, potential sense and science relating to things poten-
tial, actual to things actual. Now the sensitive and the scien-
tific faculty in the soul are potentially these objects—that is to
say, the objects of scientific thought on the one hand, the objects
of sense on the other. It must be then either the things them-
selves or their forms with which they are identical. The things
themselves, however, they are not: it is not the stone, but simply
the form of the stone, that is in the soul. The soul, therefore,
is like the hand: for just as the hand is the instrument through
which we grasp other instruments, so also reason is the form
through which we apprehend other forms, while sense-perception
is the form of the objects of sense.

[The forms of reason are not however something different
from the things of sense.] As there is, according to the common
opinion, no object outside the magnitudes of sense, it follows
that the ideas of reason are contained in the forms of sense, both
the so-called abstract conceptions and the various qualities and
πέρι ψυχής. 

IX. Ἐπει δὲ ἡ ψυχή κατὰ δύο ὁρισται δυνάμεις ἡ τῶν ἰδίων, τῷ τε κριτικῷ, διανοίας ἐργον ἐστὶ καὶ αἰσθήτως, καὶ ἐτι τῷ κυνείν τὴν κατὰ τόπον κίνησιν, ἡ δὲ μὲν αἰσθήτως καὶ νοῦ διωρίστω τοσάτα, ἡ δὲ τοῦ κυνοῦντος, τί ποτὲ ἐστι τῆς ψυχῆς, σκεπτέον, πότερον ἐν τῷ μόριον αὐτῆς χωριστῶν ὥστε ἡ μεγέθει ἡ λόγως, ἡ πᾶσα ἡ ψυχή, κἂν εἰ μόριον τι, πότερον ἵδιον τῷ παρὰ τὰ εἰσθότα λέγει—§ 2 σοθα καὶ τὰ εἰρημένα, ἡ τούτων ἐν τῷ. ἔχει δὲ ἀπορίαν εὐθὺς πῶς τε δεὶ μόρια λέγειν τῆς ψυχῆς καὶ πόσα. τρόπον γὰρ τῶν ᾧς ἐπειράσαντας, καὶ οὐ μόνον ἀ τινὲς λέγουσι διοριζοντες, λογιστικώς καὶ θυμικώς καὶ ἐπιθυμητι-κόν, οἱ δὲ τῷ λόγῳ ἔχον καὶ τῷ ἄλογον κατὰ γάρ τὰς

attributes that determine sensible phenomena. And further, without the aid of sense-perception we never come to learn or understand anything; and whenever we consider something in the mind, we must at the same time contemplate some picture of the imagination: for the pictures of the imagination correspond to the impressions of the senses, except that the former are without material embodiment.

At the same time imagination is something different from affirmation and negation, for it is only by a combination of ideas that we attain to truth and falsehood. But, it may be asked, in what respect will our primary ideas differ from mere images of sense? And to this, perhaps, we may reply that they are, as little as other ideas which we frame, mere images of sense, although never framed without the help of such representative images.

CHAPTER IX.

The soul of animals is, as we have seen before, characterized by two capacities—on the one hand, the cognitive discriminative faculty as shared by understanding and by sense, on the other hand, the faculty of local movement. The nature of sense and intellect has been so far settled: we must now investigate the motive faculty of the soul, and ask whether it is some distinct part of it, separable either actually or by abstraction, or whether, on the contrary, it be the soul taken as a whole: and further, if it be some one part of the soul, whether it be some special part different from these usually recognised and enumerated, or whether, on the contrary, it is some one of these which have been stated.

An immediate question which arises is—in what sense are we to speak of parts of the soul, and how many are there of them. From one point of view such parts appear innumerable, and not confined merely to the “rational,” “spirited,” and “appetitive” parts which some distinguish, or the rational and irrational which others enumerate. The characteristics, on the ground of which they distinguish these, shew also other parts further dis-
διαφορᾶς δὲ ἃς ταῦτα χωρίζουσι, καὶ ἄλλα φανεῖται μόρια μείζω διάστασιν ἔχοντα τούτων, περὶ δὲ καὶ νῦν εἰρηται, τὸ τε θρεπτικόν, ὃ καὶ τοῖς φυτοῖς ὑπάρχει καὶ πᾶσι τοῖς ζῴωσι, καὶ τὸ αἰσθητικὸν, ὃ οὔτε ὃς ἀλογον οὔτε 30
§ 3 ὁς λόγον ἔχον θείη ἄν τις ῥαδίως. ἐτε δὲ τὸ φανταστικόν,
ὁ τῷ μὲν εἶναι πάντων ἔτερον, τίνι δὲ τούτων ταῦτον ἢ ἔτε- 432b
ρον, ἔχει πολλὴν ἀπορίαν, εἰ τις θήσει κεχωρισμένα μό-
ρια τῆς ψυχῆς. πρὸς δὲ τούτων τὸ ὑρεκτικόν, ὃ καὶ λόγῳ
καὶ δυνάμει ἐτερον ἂν δόξειεν εἶναι πάντων. καὶ ἄτοπον δὴ
tοῦτο διασπᾶν' ἐν τῷ λογιστικῷ γὰρ ἡ βούλησις γίνεται, 5
καὶ ἐν τῷ ἀλόγῳ ἢ ἐπιθυμία καὶ ὁ θυμός: εἴ δὲ τρία ἡ
§ 4 ψυχῆ, ἐν ἑκάστῳ ἔσται ὀρέξεις. καὶ δὴ καὶ περὶ οὐ νῦν ὁ
λόγος ἐνέστηκε, τί τὸ κινοῦν κατὰ τόπον τὸ ζῷον ἐστων; τὴν
μὲν γὰρ καὶ αὐξήσιν καὶ φθίσιν κίνησιν, ἀπασω ὑπάρχου-
σαν, τὸ πᾶσιν ὑπάρχουν δόξειεν ἂν κινεῖ τὸ γεννητικὸν καὶ
θρεπτικόν. περὶ δὲ ἀναπνοῆς καὶ ἐκπνοῆς καὶ ὑπνοῦ καὶ
ἐγρηγόρευσις ὑπερον ἐπισκεπτεύον' ἔχει γὰρ καὶ ταῦτα πολ-
§ 5 λὴν ἀπορίαν. ἀλλὰ περὶ τῆς κατὰ τόπον κινήσεως, τί τὸ
κινοῦν τὸ ζῷον τὴν πορευτικὴν κίνησιν, σκέπτεον. ὅτι μὲν οὐν
οὐχ ἡ θρεπτικὴ δύναμις, δῆλον' ἀεὶ τα γὰρ ἑνεκά τοῦ ἡ κίνη-
σις αὐτὴ, καὶ ἡ μετὰ φαντασίας ἡ ὀρέξεως ἐστων' οὐθὲν γὰρ
μὴ ὀρεγόμενον ἢ φεύγων κινεῖται ἀλλ' ἡ βία. ἐτι κἂν τὰ
φυτὰ κινητικὰ ἢν, κἂν ἔχε τι μόριον ὀργανικὸν πρὸς τῆν
§ 6 κίνησιν ταῦτην. ὀμοίως δὲ οὐδὲ τὸ αἰσθητικὸν πολλὰ γὰρ
ἔστι τῶν ζῴων ἃ αἰσθηθον μὲν ἔχει, μόνιμα δ᾿ ἐστὶ καὶ ἀκι-
νητα διὰ τέλους. εἰ οὖν ἡ φύσις μήτε ποιεῖ μάτην μηθὲν
μῆτε ἀπολείπει τι τῶν ἀναγκαίων, πλὴν ἐν τοῖς πηρώμασι

27. ταῦτα EL. || φανεῖται TUWXy. 432b 4, 5. δὴ τὸ[τοῦτο] διασπᾶν. Tor.
tοῦτο φάναι διασπᾶν VW. 9. ἀπασων ὑπάρχουσαν αἱ πᾶσιν ὑπάρχουσι
LSTUVXy. 22. τι om. LSTUWXY.
tant from each other than these are—the parts in question being just those which we have before described—the vegetative, which is an attribute at once of plants and every animal—the sentient, which cannot be easily classed either as rational or irrational—and, further, the imaginative faculty, which is different in its action and aspect from all, while with which of them is it either the same or different is a question full of perplexities, if we assume so many distinct parts of soul. Besides these, there is the conative or desiring faculty, which would seem to be different from all, both in its conception and in its capacity for action. Now, it is absurd to parcel this out in the manner indicated. The settled wish [which is one of its aspects] constitutes itself within the rational part of soul, while the appetite and passion, which are its other factors, lie within the sphere of the irrational. And thus, if there be three parts of the soul, desire will have to be present in each of them.

To return, then, to our original question—What is the part that communicates local movement to the animal? As for the movements of growth and decay, they would seem, as they are the attributes of all animals, to be caused by those powers of production and nutrition which characterize all animal life: and with regard to respiration and exspiration, as also sleep and waking, we must investigate their nature on another occasion, as they are marked by many difficulties. Our present task is to investigate the nature of local movement, and see what it is that moves the animal in the way of progressive movement. Evidently it is not the mere vegetative capacity which does so. Local movement is always directed to some end, and is accompanied either by a representative image or by a desire, since nothing—unless indeed its movement be the result of force—moves without seeking either to gain or to escape something. And further, plants would be capable of local movement and would possess some part instrumental for this movement.

As little is it the faculty of sense which causes local movement. There are many animals which possess sense powers and yet continue throughout fixed and unmoved. But nature makes nothing without a purpose, nor leaves anything, mutilated and imperfect forms excepted, without that which it requires. Now
καὶ ἐν τοῖς ἀτελέσιν· τὰ δὲ τοιαῦτα τῶν ζῴων τέλεια καὶ οὔ πηρώματα ἐστίν· σημεῖον δ' ὅτι ἐστι γεννητικὰ καὶ ἀκμὴν ἔχει καὶ φθίσιν· ὥστ' εἰχεν ἂν καὶ τὰ ὄργανικα μέρη τῆς

§ 7 πορείας. ἀλλὰ μὴν οὐδὲ τὸ λογιστικὸν καὶ ὁ καλούμενος νοῦς ἐστίν ὁ κινῶν· ὁ μὲν γὰρ θεωρητικὸς οὐθὲν νοεῖ πρακτῶν, οὐδὲ λέγει περὶ φευκτοῦ καὶ διωκτοῦ οὐθέν, ἡ δὲ κίνησις ἡ φεύγοντὸς τι ἡ διώκοντὸς τι ἐστίν. ἀλλ' οὐδ' ὅταν θεωρῆ τι τοιοῦτον, ἡδ' κελεύει φεύγειν ἡ διώκειν, οἶον πολλάκις διανοεῖται φοβερόν τι ἡ ἡδ' ὁ θεομαχός διανοεῖσθαι, ἡ δὲ καρδία

§ 8 κινεῖται, ἐν δ' ἡδ', ἕτερον τι μόριον. ἐτὶ καὶ ἐπιτάττοντος τού νοῦ καὶ λεγοῦσης τῆς διανοίας φεύγειν τι ἡ διώκειν οὐ κινεῖται, ἀλλὰ κατὰ τὴν ἐπιθυμίαν πράττει, οἰον ὁ ἀκρατής. καὶ ὅλως δὲ ὁρῶμεν ὅτι ὁ ἔχων τὴν ἱατρικὴν οὐκ ἱάται, ὡς ἐτέρου τυφῶν κυρίων ὄντος τοῦ ποιεῖν κατὰ τὴν ἐπιστήμην, ἀλλ' οὐ τῆς ἐπιστήμης. ἀλλὰ μὴν οὔδ' ἡ ὀρεξίς ταύτης κυρία τῆς κινήσεως· οἱ γὰρ ἐγκρατεῖς ὀρεγόμενοι καὶ ἐπιθυμοῦντες οὐ πράττουσιν ὃν ἔχουσι τὴν ὀρεξίν, ἀλλ' ἀκολουθοῦσι τῷ νῷ.

Χ. Φαινεῖται δὲ γε δύο ταῦτα κινοῦντα, ἡ ὀρεξίς ἡ νοῦς, εἰ τις τὴν φαντασίαν τυθεῖ ὡς νόησιν τινα. πολλὰ γὰρ παρὰ τὴν ἐπιστήμην ἀκολουθοῦσι ταῖς φαντασίαις, καὶ ἐν τοῖς ἀλλοις ζῴοις οὐ νόησις οὐδὲ λογισμὸς ἐστίν, ἀλλὰ φαντασία.

24. ἐστὶ ομ. LSTUVWXy. 27. νοεῖ EL. 433a 11. ἀλλοις W.
the animals in question are perfect, and not mutilated: they possess generative powers, and exhibit both development and decay. And therefore [—if sense alone were a sufficient reason for the exercise of local movement—] such animals would possess all the parts instrumental for movement.

Neither, further, is the ratiocinative part, nor the so-called reason, that which produces movement. The speculative reason thinks nothing which relates to action, nor does it assert anything with regard to the object of pursuit and aversion: whereas movement is invariably connected with one either pursuing or avoiding something. Nor indeed, even when the reason reflects on something of this character, does it even then advise the individual either to pursue or to aversion. Frequently, for example, the reason thinks of something terrible or pleasant, but it does not thereby produce fear: the only result is that the heart, in case the object be terrible, or some other part, in case it be pleasant, is excited. Furthermore, even when reason gives a command, and understanding bids us either avoid or pursue something, the individual is not moved accordingly, but follows the direction of appetite, as may be seen in the incontinent. So also, in general, we see that the man who understands the art of healing does not on that account therefore heal, a fact which shews that it requires something besides knowledge to produce the results of knowledge: and that scientific knowledge is itself unable to effect this end.

Lastly, desire is not fitted to produce this movement: the continent, though subject to desire and appetite, do not do these things for which they possess a desire, but follow, on the contrary, the lead of reason.

CHAPTER X.

There are, however, at least two faculties which are manifestly motive—viz., desire or reason, if we regard imagination as a form of reason. Frequently, in fact, it is the pictures of imagination as against knowledge that people follow, and among animals other than man it is not thought nor ratiocination, but simply this power of representing images of sense,
Αμφω ἄρα ταῦτα κυνηγικὰ κατὰ τόπον, νοῦς καὶ ὀρεξίς.

§ 2 νοῦς δὲ ὁ ἕνεκά του λογιζόμενος καὶ ὁ πρακτικός διαφέρει δὲ τοῦ θεωρητικοῦ τῷ τέλει. καὶ ἡ ὀρεξίς ἕνεκά του πᾶσα: οὖν γὰρ ἡ ὀρεξίς, αὕτη ἀρχὴ τοῦ πρακτικοῦ νοῦ· τὸ δὲ ἔσχατον ἀρχὴ τῆς πράξεως. ἀπόκειται δύο φαίνεται τὰ κυνοῦντα, ὀρεξίς καὶ διάνοια πρακτικῆ· τὸ ὀρεκτικὸν γὰρ κυ-νεῖ, καὶ διὰ τούτο ἡ διάνοια κυνεῖ, ὅτι ἀρχὴ αὐτῆς ἐστὶ τὸ

§ 3 ὀρεκτόν. καὶ ἡ φαντασία δὲ ὅταν κυνῇ, οὐ κυνεῖ ἀνευ ὀρέ-εσ. ἐν δὴ τι τὸ κυνῶν, τὸ ὀρεκτόν. εἰ γὰρ δύο, νοῦς καὶ ὀρεξίς, ἐκίνων, κατὰ κοινῶν ἀν τι ἐκίνων εἰδος. νῦν δὲ ὁ μὲν νοῦς οὐ φαίνεται κυνῶν ἀνευ ὀρεξίως· ἡ γὰρ βούλησις ὀρεξίς· ὅταν δὲ κατὰ τὸν λογισμὸν κυνῆται, καὶ κατὰ βούλησιν κυ-νεῖται. ἡ δὲ ὀρεξίς κυνεῖ παρὰ τὸν λογισμὸν· ἡ γὰρ ἐπιθυμ-έσ.

§ 4 μία ὀρεξίς τις ἐστίν. νοῦς μὲν οὖν πᾶς ὀρθὸς, ὀρεξίς δὲ καὶ φαντασία καὶ ὀρθὴ καὶ οὐκ ὀρθή. διὸ ἂν κυνεῖ μὲν τὸ ὀρε-κτόν, ἀλλὰ τούτῳ ἐστὶν ἡ τὸ ἁγαθὸν ἡ τὸ φαινόμενον ἁγα-θὸν· οὐ πᾶν δὲ, ἀλλὰ τὸ πρακτὸν ἁγαθὸν πρακτὸν δὲ ἐστὶ

§ 5 τὸ ἐνδεχόμενον καὶ ἀλλως ἐχειν. ὅτι μὲν οὖν ἡ τοιαύτη δύ- ναις κυνεῖ τῆς ψυχῆς ἡ καλομενή ὀρεξίς, φανερὸν. τοῖς δὲ διαφοροῦσι τὰ μέρη τῆς ψυχῆς, εὰν κατὰ τὰς δυνάμεις 433 διαφορῶς καὶ χωρίζωσι, πάμπολλα γίνεται, θρεπτικῶν, αὐ-

18. ὀρεκτῶν EL. Trend. Tor.: ceteri ὀρεκτικῶν. 29. πρακτικῶν ἁγ. 1.
which guides them. Both then reason and desire are fitted to produce and lead to local movement. The reason which is here intended is that which calculates for some purpose—that is, it is the practical reason, distinguished from the speculative by its end. As for desire, it is always directed to some object: in fact, it is the object at which desire aims that forms the starting-point of the practical reason, although it is some particular detail which forms the beginning of the action.

It is then on good grounds that people have viewed as springs of action these two faculties of desire and practical intellect: for the faculty of desire has itself a motive force, and the intellect excites to action just in so far as the object of desire supplies it with a starting-point: just as, similarly, imagination when it moves to action does not do so independently of desire.

The spring of action thus resolves itself into one single thing, viz. the object of desire. For if there were two faculties acting as springs to action—reason on the one hand, desire on the other—they would have to move in virtue of some common character they shared. Now reason, it is found, does not act as a spring of action independently of desire: for settled wish is a form of desire, and when a man is led to act according to his reasonable conviction he is moved also in a manner corresponding to his wish. Desire, however, excites to action contrarily to reason, appetite, which so acts, being one of the forms of desire. And thus, then, it would seem, reason is always true and right, whereas desire and imagination may be both right and not right.

It is then always the object of desire that moves to action: and this is either the good or the apparent good—not good, however, as a whole, but simply that form of it which relates to action—that is, which is contingent and admits of being other than it is.

Evidently, therefore, it is such a faculty of the soul, the so-called principle of desire, which moves to action. Those, then, that divide the soul into different parts must, if a difference of powers be the basis of their separation, recognise a great variety of such parts—the nutrient, sentient, rational, deliberative, and,
§ 6 ἐπεὶ δ’ ὀρέξεις γίνονται ἐναντία ἄλληλας, τούτῳ δὲ συμβαίνει ὅταν ὁ λόγος καὶ ἡ ἐπιθυμία ἐναντία ἄστι, γίνεται δ’ ἐν τοῖς χρόνοις αἰσθητοῖς ἐξουσιών (ὁ μὲν γὰρ νοῦς διὰ τὸ μέλλον ἄνθελκεν κελεύει, ἡ δ’ ἐπιθυμία διὰ τὸ ἡδὴν φαίνεται γὰρ τὸ ἡδὴ ἡδο καὶ ἀπλῶς ἡδο καὶ ἀγαθὸν ἀπλῶς, διὰ τὸ μὴ ὀράν τὸ μέλλον), εἰδεὶ μὲν ἐν ἂν εἰς τὸ κινοῦν τὸ ὀρέκτικον, ἢ ὀρέκτικον, πρῶτον δὲ πάντων τῷ ὀρέκτικον (τούτῳ γὰρ κινεῖ οὐ κινοῦμενὸν τὸ νοηθήναι ἢ φαντασθῆναι), ἀριθμῷ
§ 7 δὲ πλείω τὰ κινοῦντα. ἐπειδὴ δ’ ἐστὶ τρία, ἐν μὲν τὸ κινοῦν, δεύτερον δ’ ὁ κινεῖ, τρίτον τὸ κινοῦμενον· τὸ δὲ κινοῦν διὰ τὸ μὲν ἀκίνητον, τὸ δὲ κινοῦν καὶ κινοῦμενον· ἐστὶ δὲ τὸ μὲν ἀκίνητον τὸ πρακτὸν ἀγαθὸν, τὸ δὲ κινοῦν καὶ κινοῦμενον τὸ ὀρέκτικον (κινεῖται γὰρ τὸ ὀρεγόμενον ἢ ὀρέγεται, καὶ ἡ ὀρέξις κίνησις τῆς ἐστὶν ἢ ἐνέργεια), τὸ δὲ κινοῦμενον τὸ ὡς ὁ δὲ κινεῖ ὄργανον ἢ ὀρέξις, ἡδὴ τούτῳ σωματικὸν ἐστὶν· διὸ ἐν τοῖς κινοῖς σώματος καὶ ὑψηλὸς ἔργοις θεωρητέον περὶ.
§ 8 αὐτῶν. νῦν δὲ ὡς ἐν κεφαλαίῳ ἐπεῖν, τὸ κινοῦν ὄργανος ὁ πρὶν ἀρχῇ καὶ τελευτῇ τὸ αὐτό, ὅποι ὁ γνωριμός· ἐνταῦθα γὰρ τὸ κυρτὸν καὶ κοιλὸν τὸ μὲν τελευτῆ τὸ δ’ ἀρχῆς διὸ τὸ μὲν ἡρεμεῖ τὸ δὲ κινεῖται, λόγῳ μὲν ἐτέρα

κινοῦμενον ELSUVWW Bekk. 18. τὶς om. TWXy. ἢ ἐνέργεια] ἢ ἐνέργειᾳ
Tor. 22. γνωριμός E. γνωριμός X. γνωριμός STV. γνωριμός, Bekk. Tor.
further, the conative or desiring—all these being separated by wider differences from one another than are the principle of appetite and that of spirited indignation.

The very opposition of desires itself attests the oneness of the motive faculty. Such opposition happens when the reason and the appetite come together into conflict and displays itself in beings with a sense of time. With such beings, reason, from its perception of the future, enjoins resistance on the mind, while appetite is influenced by a present which is vanishing: for that which is momentarily pleasant appears both absolutely pleasant and absolutely good, because the future is unseen. Now, such a conflict of desires requires that the motive agent, the principle of desire, as such, should be specifically but one: and the most primary of all is the object of desire, for this, without being itself moved, creates movement by being made an object of thought or presented before us by imagination. Numerically, however, the motive agents may be several. Now, there are three elements in motion, one being the object which produces movement, the second that by which it moves, and the third the object which is moved. Now, of these three, the object which produces movement is two-fold, being on the one hand itself unmoved, and on the other hand not only moving but also moved. That then which while it produces movement remains itself unmoved is the good as applied to action: the element which at once sets and is set in movement is the faculty of desire (for the subject desiring is moved, in so far as it desires, and desire itself is a form of movement so far as it manifests itself in action): the object which is moved is the living being.

As for the organ through which desire produces movement, that is necessarily of corporeal nature: and must therefore be investigated among the functions common to the body and the soul. If we may, however, speak for the present summarily on the subject, that which moves instrumentally must be such that in it beginning and end coincide, as is the case, for instance, with the pivot of a joint: for there both convex and concave meet together, the one acting as end, the other as beginning. Hence, while the one part is at rest, the other is in movement—that is, the two, while different in their purpose, or idea, are in real mag-
ὅντα, μεγέθει δ' ἀχώριστα: πάντα γὰρ ὡσεὶ καὶ ἐξει κινεῖ·

διὸ δεῖ ὡσπερ ἐν κύκλῳ μένειν τι, καὶ ἐντεῦθεν ἀρ-

§ 9 χεσθαι τὴν κίνησιν. ὅλως μὲν οὖν, ὡσπερ εἰρηται, ἢ ὀρεκτικὸν

tὸ ζῷον, ταύτῃ αὐτοῦ κινητικὸν ὀρεκτικὸν δὲ οὐκ ἄνευ

φαντασίας: φαντασία δὲ πᾶσα ἡ λογιστική ἡ αἰσθητική.
tαύτης μὲν οὖν καὶ τὰ ἄλλα ζῶα μετέχει.

XI. Σκεπτέον δὲ καὶ περὶ τῶν ἀτελῶν, τί τὸ κινοῦν ἐστίν,

ὅς ἀφῇ μόνον ὑπάρχει αἰσθητικός, πότερον ἐνδεχεται φαν-

tασίαν ὑπάρχειν τούτοις, ἢ οὖ, καὶ ἐπιθυμιαν. φαίνεται γὰρ

λύπη καὶ ἠδονὴ ἐνοῦσα. εἰ δὲ ταῦτα, καὶ ἐπιθυμιαν ἀνάγκη.

φαντασία δὲ πῶς ἂν ἑνείη; ἢ ὡσπερ καὶ κινεῖται ἀορίστως,

§ 2 καὶ ταῦτ' ἑνεστὶ μὲν, ἀορίστως δ' ἑνεστίν. ἢ μὲν οὖν αἰσθητική

φαντασία, ὡσπερ εἰρηται, καὶ ἐν τοῖς ἄλλοις ζῴοις ὑπάρ-

χει, ἢ δὲ θεουλετικὴ ἐν τοῖς λογιστικοὶς πότερον γὰρ πρά-

ξει τόδε ἢ τόδε, λογισμοῦ ἣδη ἐστίν ἔργον καὶ ἀνάγκη ἐνὶ

μετρεῖν τὸ μείζον γὰρ διώκει. ὡστε δῦναται ἐν ἐκ πλειώ-

νων φαντασμάτων ποιεῖν. καὶ αἰτιον τούτο τοῦ δόξαν μὴ

dοκεῖν ἐχεῖν, ὅτι τήν ἐκ συλλογισμοῦ οὐκ ἐχει, αὐτὴ δὲ ἐκει-

nitude inseparable: for all movement is the result of impulse or attraction, and there must be therefore always something which remains fixed, like the centre of a circle, as the source from which movement may begin.

Generally then it is, as has been said, in so far as the animal is endowed with the faculty of desire that it is capable of moving itself. But no animal can be provided with the faculty of desire unless it have imaginative power. Now, all such power is connected either with the reason or the senses: and in it other animals besides men participate.

CHAPTER XI.

[Desire then, thus depending on the power of representing images of sense], it falls to us to ask, besides, what is the motive force in those imperfect animals which possess no sense but that of touch, and see whether it is or is not possible for imagination and appetite to belong to them. Pleasure and pain they do indeed evidently feel: and if these belong to them, then appetite, it follows, must be there as well. But it is difficult to see how they can have imagination. Perhaps, however, we may say that just as their movements are vague and indeterminate, so also they possess the powers in question, although merely in a vague and imperfect manner.

The simple power of representing images of sense exists, as we have already said, in other animals as well as man. The power, on the contrary, of representing images for deliberation is confined to animals that reason. For the question whether this or that is to be done is work that calls for reason and reflection: and since it is the stronger and the more preferable which desire pursues, it must always measure by one standard, and so it is enabled to form one conception out of several images which represent sensations. Hence the reason why animals, while possessing the faculty of representing images of sense, are not thought to have opinion. They do not possess the kind of desire which forms itself as the conclusion of syllogism, while at the same time such deliberate desire always involves the posses-
§ 3 υν' διὸ τὸ βουλευτικὸν οὐκ ἔχει ἡ ὀρέξις. νικὰ δ' ἐνίοτε καὶ κινεῖ τὴν βουλήσιν· ὅτε δ' ἐκείνη ταύτην, ὁσπερ σφαῖρα, ἡ ὀρέξις τῆς ὀρέξιν, ὅταν ἀκρασία γένηται. φύσει δὲ αἰὲ ἡ ἀνω ἀρχικωτέρα καὶ κινεῖ. ὡστε τρεῖς φορὰς ἦδη κινεύσθαι. 15

§ 4 τὸ δ' ἐπιστημονικὸν οὐ κινεῖται, ἀλλὰ μένει. ἐπεὶ δ' ἡ μὲν καθόλου ὑπόληψις καὶ λόγος, ἡ δὲ τοῦ καθ' ἐκαστὰ (ἡ μὲν γὰρ λέγει ὃτι δεῖ τὸν τοιοῦτον τὸ τοιόνδε πράττειν, ἡ δὲ ὅτι τόδε τὸ νῦν τοιόνδε, κἀγὼ δὲ τοιόσοδε) ἦδη αὐτὴ κινεῖ ἡ δόξα, οὐχ ἡ καθόλου. ἡ ἀμφω, ἀλλ' ἡ μὲν ἠρεμοῦσα μᾶλλον, ἡ δ' οὖ.

XII. Τὴν μὲν οὖν θρεπτικὴν ψυχὴν ἀνάγκη πᾶν ἔχειν ὅτι περ ἀν ἔτι καὶ ψυχὴν ἔχει ἀπὸ γενέσεως μέχρι φθορᾶς· ἀνάγκη γὰρ τὸ γενόμενον αὐξῆσιν ἔχειν καὶ ἀκμὴν καὶ φθίσις, ταύτα δ' ἀνευ τροφῆς ἀδύνατον· ἀνάγκη ἄρα ἐνεώνια 15 τὴν θρεπτικὴν δύναμιν ἐν πᾶσι τοῖς φυσικοῖς καὶ φθινοὺσιν.

§ 2 αἰσθησιν δ' οὖν ἀναγκαῖον ἐν ἀπασί τοῖς ζώσιν οὔτε γὰρ ὠσον τὸ σῶμα ἀπλοῦν, ἐνδέχεται ἄφην ἔχειν, (οὔτε ἀνευ ταύτης οἶνον τε οὐδὲν εἴναι ζώσιν') οὔτε ὁσα μὴ δεκτικὰ τῶν

§ 3 εἰδῶν ἀνευ τῆς ὕλης. τὸ δὲ ζῷον ἀναγκαῖον αἰσθησιν ἔχειν, 30

sion of opinion: and thus their desire is destitute of any faculty of deliberation. In the case of man, however, sometimes the images of sense overcome and move the rational volition: sometimes, as in incontinence, two things in turn overcome and stir up one another, desire thus following on desire much as a ball that players toss about: but the normal and natural course is always that in which the superior force of reason is the more supreme, and stimulates to action. Thus, then, altogether there are three courses of movement possible among the springs of action: although, it should be added, the cognitive faculty is not moved, but continues permanent. Since, however, this cognitive faculty presents itself, on the one hand, as a conception and judgment about the universal, on the other hand as a conception of the particular—the one asserting that all men of such and such character should do such and such actions, the other explaining that this particular action is of this nature, and that I am an individual of the kind described—it is this latter form of opinion, rather than the universal, that stimulates to action, or it is both of them together, the one, however, more as in repose, the other in activity.

CHAPTER XII.

Everything that is animate and living must, from its birth to the time of its decay, possess the soul which we describe as nutritive: because whatever has been born must exhibit the phenomena of growth, maturity, and dissolution, and this it cannot do apart from food and nourishment. Thus, then, the nutrient capacity must be inherent in all objects that are marked by growth and by decay.

Sensation, on the other hand, need not be present in all things that live: for neither can those objects whose body is altogether simple and uncompounded possess the sense of touch (although without this sense it is impossible to have animal life), nor again can those objects which are unable to receive the form without the matter be endowed with the capacity of sense. The animal, however, rightly so-called, must possess the powers
εἴ μηθὲν μάτην ποιεῖ ἡ φύσις. ένεκά τοῦ γὰρ πάντα ὑπάρχει τὰ φύσει, ἡ συμπτώματα ἔσται τῶν ἐνεκά τοῦ. εἴ οὖν πᾶν σῶμα πορευτικὸν μὴ ἔχον αἰσθησιν, φθεῖρον ἂν καὶ εἰς τέλος οὐκ ἂν ἔλθωι, ὅ ἐστι φύσεως ἔργον· πῶς γὰρ θρέ-434

§ 4 οὖχ οἶνον τε δὲ σῶμα ἔχειν μὲν ψυχὴν καὶ νοῦν κριτικὸν, αἰσθησιν δὲ μὴ ἔχειν, μὴ μόνιμον ὄν, γεννητὸν δὲ. ἀλλὰ μὴν οὐδὲ ἀγέννητον. διὰ τί γὰρ οὖχ ἔξει; ἡ γὰρ τῇ ψυχῇ βέλτιον 5 ἡ τῷ σῶματι. νῦν δ’ οὐδέτερον ἡ μὲν γὰρ οὐ μᾶλλον νοήσει, τὸ δ’ οὖθεν ἔσται μᾶλλον δὲ ἐκεῖνο. οὐθέν ἄρα ἔχει ψυχὴν

§ 5 σῶμα μὴ μόνιμον ἄνευ αἰσθησιῶς. ἀλλὰ μὴν εύγε αἰσθησιῶν ἔχει, ἀνάγκη τὸ σῶμα εἶναι ἡ ἀπλοῦν ἡ μικτὸν. οὖχ οἶνον τε δὲ ἀπλοῦν. ἀφῆν γὰρ οὖχ ἔξει, ἐστι δὲ ἀνάγκη 10

§ 6 ταύτην ἔχειν. τοῦτο δὲ ἐκ τῶνδε δὴλον. ἐπεὶ γὰρ τὸ ζῷον σῶμα ἐμψυχόν ἔστι, σῶμα δὲ ἀπαν ἀπτόν, ἀπτόν δὲ τὸ αἰσθητὸν ἀφῆ, ἀνάγκη καὶ τὸ τοῦ ζῷου σῶμα ἀπτικὸν εἶναι, εἰ μελλει σώζεσθαι τὸ ζῷον. αἰ γὰρ ἄλλα αἰσθησιῶς δὲ ἔτέρων αἰσθάνονται, οἶνον ὀσφρήσις ὄψις ἀκοή 15 ἀπτόμενον δέ, εἰ μὴ ἔξει αἰσθησιν, οὐ δυνήσεται τὰ μὲν φεύγειν τὰ δὲ λαβεῖν· εἰ δὲ τοῦτο, ἀδύνατον ἔσται σώζε-

§ 7 ζητοῖ τὸ ζῷον. διὸ καὶ ἡ γεύσις ἐστιν ὄσπερ ἀφῇ τις τρο-

434b 2. τὸ οὖθεν πέφυκασιν Bkk. Tor. 5. γὰρ οὖχ ἔξει TUVWy.
γὰρ ἔξει Bkk Trend. Tor.
of sense-perception, if, as we hold, nature produces nothing without a purpose, all natural objects existing for some end, or being the concomitants of objects which exist for some end. Now, if a body were supplied with faculties of movement, but did not have the power of sense-perception, it would be destroyed, and would not attain its end, which it is nature's work to realize. For how, we may ask, will such an organism provide food for itself? It is only those which are stationary that have their food supplied them from their place of origin. Nor, indeed, is it possible that a body should have soul and discriminating reason and not possess sensation, if it be capable of motion and produced by generation. Nor indeed, for that matter, will it make any difference if it be actually unbegotten. For, for what end would such a body be without the faculty of sense? It could only be because its absence would be better for it either as regards its soul or as regards its body. But, as matter of fact, the absence of sense could not possibly contribute to either. The soul will not understand the world better because it is deprived of sense: and the body will not be any more a body because it is without the sensitive capacities.

No body, therefore, not being stationary, possesses soul, without at the same time adding on the faculties of sense. If, however, it possess the faculty of sense, its body must be either simple or compound. It cannot, however, be simple: because in that case it would not have the sense of touch: and this it must necessarily possess. This, in fact, is evident from the following considerations. Since the animal is a body possessed of soul, and every body is tangible: it follows, since the tangible is perceived by touch, that the body of the living animal must be also endowed with the sense of touch, if the animal is to be able to maintain itself. For the other senses, such as smell, sight, and hearing, perceive their objects through the medium of other substances: but if an animal, when it came in contact with different substances, were not to have the sense of touch, it would not be able to avoid some and take others: and under these circumstances it would be impossible for it to preserve itself. Hence taste is, as it were, a sort of touch: for it is applied to nutriment: and nutriment is a body that can be
Φής γάρ ἐστιν, ἢ δὲ τροφὴ τὸ σῶμα τὸ ἄπτον. ψόφος δὲ καὶ χρῶμα καὶ ὀσμῆ οὐ τρέφει, οὐδὲ ποιεῖ οὐτ' αὔξησιν οὔτε το φθίσιν. ὥστε καὶ τὴν γεύσιν ἀνάγκη ἀφὴν εἶναι τινα, διὰ τὸ τοῦ ἄπτου καὶ θρεπτικοῦ αἰσθήσιν εἶναι. αὐταί μὲν οὖν ἀναγκαίαι τῷ ζῷῳ, καὶ φανερὸν ὅτι οὐχ οἶον τε ἄνευ § 8 ἀφῆς εἶναι ζῷου. αἱ δὲ ἀλλαὶ τοῦ τε εὖ ἐνεκα καὶ γένει ζώουν ἤδη οὐ τῷ τυχόντι, ἄλλα τισίν, οἴον τῷ πορευτικῷ ἀνάγκη ὑπάρχειν εἰ γὰρ μέλλει σώζεσθαι, οὐ μόνον δὲ ἀπτόμενον αἰσθάνεσθαι ἄλλα καὶ ἀποθίνει. τούτο δ' ἄν εἰη, εἰ διὰ τοῦ μεταξύ αἰσθητικὸν εἰ ἐν ἐκεῖνο μὲν ὑπὸ τοῦ § 9 αἰσθητοῦ πάσχειν καὶ κινεῖσθαι, αὐτὸ δ' ὑπ' ἐκείνου. ἀοπέρ γὰρ τὸ κινοῦν κατὰ τόπον μέχρι τοῦ μεταβάλλειν ποιεῖ, 30 καὶ τὸ ὅσαν ἔτερον ποιεῖ ὥστε ὡθεῖν, καὶ ἔστι διὰ μέσου ἡ κίνησις, καὶ δὴ τὸ μὲν πρῶτον κινοῦν ὥθει οὐκ ὡθούμενον, τὸ δ' ἐσχατον μόνον ὥθεται οὐκ ὅσαν, τὸ δὲ μέσον ἄμφω, τολλᾶ δὲ μέσα, οὕτως ἐπ' ἄλλοιοσέσως, πλὴν ὅτι μένοντα ἐν τῷ αὐτῷ τόπῳ ἄλλοιοι, οἴον εἰ εἰς κηρὸν βάψειε τις, μέχρι τούτου ἐκκυψάθη, ἦς ἔβαψεν' λίθος δὲ οὐδέν, ἄλλ' ὕδωρ μέχρι πόρρῳ. δ' δ' ἀνὴρ ἐπὶ πλεῖστον κινεῖται καὶ ποιεῖ καὶ πάσχει, ἐὰν μένη καὶ εἰς ἤ. διὸ καὶ περὶ ἀνα-5 κλάσεως βέλτιον ἡ τὴν ὅψιν ἔξωθες ἀνακλάσθαι, τὸν ἀέρα πάσχειν ὑπὸ τοῦ σχήματος καὶ χρώματος, μέχρι περ ὄν

26. οὐ] οὖδὲν TUX. || μόνον om. TX.  27. αἰσθάνεσθαι] σώζεσθαι TWX.
30. τοῦ] του Tor.  435a 1. μένοντα VWX. Trend. μένοντος Bekk. Tor.
6. κλάσθαι Bekk.
touched. On the other hand, sound and colour and smell supply no nourishment, nor do they cause either growth or dissolution. Taste, therefore, it follows, must be a kind of touch, because it is the sense which perceives the tangible and nutritive.

These two senses, then, of taste and touch are indispensable conditions of animal life: evidently, in fact, the animal cannot possibly exist without the sense of touch. The other senses are directed towards higher ends than mere existence, and do not belong to any class of animals whatever, but only to some particular species of animal. Thus, for example, they must be possessed by the animal capable of forward movement, because the animal, if it is to be preserved, must be able to perceive an object, not only when brought into immediate contact with it, but also when it is some distance from it. Now, this is only possible in case it have the power of perceiving through some intervening medium, this medium being affected and set in motion by the object of sense, while the sense itself in turn is affected by the medium. [We may illustrate by the manner in which movement is communicated.] That which produces local movement continues its effect until it makes a change and the original agent in propulsion causes another object to propel, the movement being effected through the intervening object: and just as the first object that moves propels without being propelled, whereas the last member in the chain is propelled only and does not propel, while the middle links (of which there may be many) are both propelling and propelled, so also is it with the alteration [involved in sense-perception], excepting that the alteration is effected without change of position: Thus, if one were to plunge anything in wax, the wax would be moved so far as one plunged it: a stone under similar treatment would not be moved at all, and water would be so to a still greater degree. Air, on the other hand, is moved to the greatest possible extent, and both impresses and is impressed so long as it continues still and remains a whole. And thus, also, to touch upon the theory of "repercussion," it is better to suppose that the air is affected by the colour and the form, so long as it remains unbroken (and it is so over every smooth surface), than that the visual ray after
XIII. "Οτι δ' οὖχ οἴον τε ἀπλοῦν εἶναι τὸ τοῦ ζῷου σῶμα, φανερόν, λέγω δ' οἶον πῦρνον ἥ ἀέρνον. ἂνευ μὲν γὰρ ἀφῆς ουδεμίαν ἐνδέχεται ἄλλην αἰσθήσεων ἔχειν· τὸ γὰρ σῶμα ἀπτικὸν τὸ ἐμψυχον πᾶν, ὥσπερ εἰρηται. τὰ δὲ ἄλλα ἔξω γῆς αἰσθητήρια. μὲν ἂν γένοιτο, πάντα δὲ τῷ δὲ ἐτέρου αἰσθάνεσθαι ποιεῖ τὴν αἰσθήσιν καὶ διὰ τῶν μεταξὺ ἧ δ' ἀφῆ τῷ αὐτῶν ἀπτεσθαί ἐστιν, διὸ καὶ τούνομα τοῦτο ἔχει. καίτοι καὶ τὰ ἄλλα αἰσθητήρια ἀφῆ αἰσθάνεται, ἄλλα δὲ ἐτέρου αὕτη δὲ δοκεῖ μόνη δ' αὐτῆς. ὡστε τῶν μὲν τοιούτων στοιχείων οὐθέν ἂν εἴη σῶμα τοῦ ζῴου. οὐδὲ δὴ γηῖνον. πάντων γὰρ ἡ ἀφῆ τῶν ἄπτων ἐστὶν ὥσπερ μεσότης, καὶ δεκτικὸν τὸ αἰσθητήριον οὐ μόνον ὡσαὶ διαφοράς γῇς εἰςιν, ἄλλα καὶ θερμοῦ καὶ ψυχροῦ καὶ τῶν ἄλλων ἄπτων ἄπαντων· καὶ διὰ τοῦτο τοῖς ὀστοῖς καὶ ταῖς θριξὶ καὶ τοῖς τοιούτοις μορίοις οὐκ αἰσθανόμεθα, οτι γῆς ἐστίν. καὶ τὰ φυτὰ διὰ τοῦτο οὐδεμίαν ἔχει ἀισθήσιν, οτι 435 γῆς ἐστίν· ἂνευ δὲ ἀφῆς ουδεμίαν οἴον τε ἄλλην ὑπάρχειν, τοῦτο δὲ τὸ αἰσθητήριον οὐκ ἔστω οὔτε γῆς οὔτε ἄλλου τῶν § 2 στοιχείων οὐδεμός. φανερὸν τοῖνοι ὅτι ἀνάγκῃ μόνης ταύτης στερησκόμενα τῆς αἰσθήσεως τὰ ζῷα ἀποθνῄσκειν· οὐτε γὰρ ταύτην ἔχειν οἶον τε μὴ ζῶον, οὔτε ζῶον ἢν ἄλλην ἔχειν ἀνάγκῃ πλὴν ταύτης. καὶ διὰ τοῦτο τὰ μὲν ἄλλα αἰσθηταὶ τὰ ταῖς ὑπερβολαῖς οὐ διαφθείρει τὸ ζῷον, οἶον χρῶμα

15. αἰσθητικὰ VW. 22. αἰσθητήριον] αἰσθητικόν y.
it has issued from the eyes and mixed with objects is then reflected and sent back again. Hence this air, itself affected by the object, moves in turn the eyesight, much in the same way as if the impress in the wax were to penetrate through to its extremity.

CHAPTER XIII.

The body of the animal cannot, it is evident, consist of any one single element, such as for instance fire or air. The reason of this is that touch is the necessary pre-supposition of the other senses, because, as we have said, every animate body is also provided with the sense of touch. Now, all the other elements except earth might serve as organs of the senses, but they all effect perception only mediately. Touch, on the contrary, acts by direct contact with its objects, and from this very circumstance, in fact, derives its name: and though the other senses do also perceive by contact, yet it is by contact through a third thing: whereas touch seems to perceive by direct contact on its own part. Thus the body of the animal cannot be composed of any such element as forms the medium to the other senses. Nor yet can it be composed of earth alone. For touch applies itself as a central state to all things tangible, and its organ is fitted to receive, not only the different qualities of earth, but also of the hot and cold, and of all other tangible qualities of body. And hence it is that we have no perception through the bones and hair and such like parts, because they are composed of earth entirely. Plants, again, do not have any powers of sense-perception, because they are composed totally of earth. Apart from touch, however, no other powers of sense-perception can exist: and this organ of touch is composed neither of the earth nor of any other of the elements.

It is manifest, therefore, that the absence of this sense alone must involve the animal's death: for nothing can possess this without being a living animal, nor need the animal, to be an animal, have any sense but this one. Hence the objects of the other senses—such as, for example, colour, sound, and scent—
καὶ ψόφος καὶ ὁσμή, ἀλλὰ μόνον τὰ αἰσθητήρια, ἂν μὴ κατὰ συμβεβηκός, οὗν ἂν ἂμα τῷ ψόφῳ ὄσις γένηται το καὶ πληγή, καὶ ύπὸ ὀραμάτων καὶ ὁσμῆς ἔτερα κινεῖται, ἂ τῇ ἁφῇ φθείρει. καὶ ὁ χυμὸς δὲ ἡ ἂμα συμβαίνει § 3 ἀπτικὸν εἶναι, ταύτῃ φθείρει. ἣ δὲ τῶν ἀπτῶν ὑπερβολή, οὗν θερμῶν καὶ ψυχρῶν καὶ σκληρῶν, ἀναίρει τὸ ζῷον παντὸς μὲν γὰρ αἰσθητοῦ ὑπερβολῆ ἀναίρει τὸ αἰσθητήριον, ὅστε καὶ τὸ ἀπτὸν τὴν ἁφήν, ταύτη δὲ ὀρισται τὸ ζῆν ἀνευ γὰρ ἁφῆς δεδεικται ὅτι ἀδύνατον εἶναι ζῷον. διὸ ἡ τῶν ἀπτῶν ὑπερβολῆ οὗ μόνον τὸ αἰσθητήριον φθείρει, ἀλλὰ καὶ τὸ ζῷον, ὅτι ἀνάγκη μόνην ἔχειν ταύτην. τὰς δ’ ἄλ- λας αἰσθήσεις ἔχει τὸ ζῷον, ὡσπερ εἰρήναι, οὐ τοῦ εἶναι ἑνεκα ἀλλὰ τοῦ εὖ, οὗν οἷν, ἔπει ἐν ἀέρι καὶ ύδατι, ὡς ὅρα, ὅλως δ’ ἔπει ἐν διαφανεί, γεῦσιν τε διὰ τὸ ἥδυ καὶ λυπηρῶν, ἵνα αἰσθάνηται τὸ ἐν τροφῇ καὶ ἐπιθυμῇ καὶ κινήται, ἀκοὴν δὲ ὁπως σημαίνῃ τι αὐτῷ, γλῶτταν δὲ ὑπὸς σημαίνῃ τι ἐτέρῳ.

do not by their excess destroy the animal itself, but only the
organ, although it may incidentally destroy the animal frame as
well: as, for example, when a push and blow accompany a
sound, or when what is directly seen and smelled sets in move-
ment other forces which destroy life by their contact. So also
flavour may cause destruction in this manner—in so far, that is,
as it is incidentally something tangible.

In the case of objects of touch, however, such as heat and
cold and hardness, excess destroys [not only the sense-organ but
also] the animal itself. The object of any sense, in fact, destroys,
if it be developed to excess, the organ of sense: and in this same
way, then, tangible objects destroy the sense of touch. But life
itself is constituted by this sense, since, as has been shewn be-
fore, the animal cannot exist without the sense of touch. And
thus excess in things tangible destroys not only the organ of
sense but the animal itself as well, because this is the one sense
absolutely essential to animal life; while as regards the other
senses, the animal has them, as has been said, not for bare
existence, but for the sake of higher ends. Thus, for instance, it
possesses sight, so that it may see objects both in air and water,
and in general in whatever is transparent. Taste, on the other
hand, it possesses for the sake of discriminating the agreeable
and disagreeable in food, so that it may desire and move itself
accordingly. Hearing, again, it possesses so that it may convey
a meaning to itself: the tongue it possesses so that it may ex-
press something or other to another.
NOTES.

BOOK FIRST.

CHAPTER I.

The character, method, and problems of psychology constitute the subject-matter of this chapter. Beginning (§ 1) with a statement of the superiority of psychology to other sciences and a short notice of the questions it investigates, the writer passes (§ 2) to a discussion of the method by which psychology should be studied. This question is of course almost inseparable from the character of the problems to be investigated and leads again (§ 4) to the nature of psychological problems and, through the mixed character of the feelings (§§ 9—11), brings the writer to consider the relation between the physiological and the 'dialectical' aspect of psychology.

§ 1. 402a 2. κατ' ἀκρίβειαν [The significance of this ground of the superiority of psychology to other sciences is to be found by a consideration of Aristotle's general conception of ἀκρίβεια. The chief passages bearing on this are the following:

AnaL Post. I. 24, 86a 17, ἡ μᾶλλον εἶ ἄρχης τῆς ἦττον ἀκριβεστέρα ἀπό- δειξις. ἔστι δὲ τοιαύτῃ ἡ καθόλου μᾶλλον. Metaph. A. 2. 982a 25, ἀκριβεστάτατα δὲ τῶν ἐπιστημῶν αἱ μᾶλιστα τῶν πρῶτων εἰσὶν' αἱ γὰρ εἰς ἐλαττώνων ἀκριβε- στερας τῶν ἐκ προσθέσεως λεγομένων, οίον ἀριθμητικὴ γεωμετρίας. So in Eth. vi. 5, 1141a 16, σοφία is said to be ἀκριβεστάτη τῶν ἐπιστημῶν: and in Metaph. A. 995a 15, we have τὴν δ' ἀκριβολογίαν τὴν μαθηματικὴν οὐκ ἐν ἀπασιν ἀπαιτητέον διὰ' ἐν τοῖς μὴ ἔχουσιν ὑλὴν. διὸ ποίησις φυσικῶς ὁ τρόπος—a statement rather in contradiction with the present treatise's inclusion of psychology in φυσικῇ. And indeed in De Coelo, III. 1, physic is given as an instance of τὰ ἐκ προσθέσεως, and contrasted with τὰ ἐκ διαφοράς of mathematics. In claiming therefore ἀκρίβεια for the science which he is
constructing, Aristotle means that it deals with and rests upon elementary truths which may be said to be the basis and starting-point (ἀρμηνήμον in Themistius) for the other sciences: and still more perhaps that the science is self-contained: so in Eth. III. 5, 1112b 1, we have ἀκριβεία καὶ οὐτάρκεια τῶν ἐπιστημῶν. Psychology in fact like every mental science is more or less independent of external facts: the observer is also the observed, the subject and the object coincide. The physicist has to go outside himself for the materials of his study, the psychologist finds them within himself. Thus the expression does not mean the ingenii acumen required for the study of the science as Trendelenburg supposes: it refers to the fact that ψυχή being the 

prin in the phenomena of life, the ἀρχή τῶν ζωῶν, as Aristotle almost immediately remarks, the science which investigates it reaches nearer to the real truth of things than is the case with more concrete sciences. Psychology in fact holds the same primary relation to Ethics, Politics, &c., as Arithmetic according to Meta. A. 2, does to Geometry. The commentators take the passage in somewhat of this sense. Themistius, e.g., paraphrases, τὸ μὲν ἀκριβεὶ διώτι καὶ ταῖς ἄλλαις ἐπιστήμαις παρὰ ψυχῆς ἢ ἀκριβεία, τὸ δὲ παραπάνω διὰ τῶν ὀντῶν ἢ τῆς ψυχῆς φύσει ἀπὸ τῆς ἐσχάτης ἄρχομεν τῆς φυσικῆς μέχρι τῆς πρώτης. Simplicius notes, ἀκριβεστέρα δὲ γνώσεως ἢ ἀναγκαία καὶ ἀπαράδειπνος καὶ ἢ οἰκεία τῷ γνωστῷ, and insists specially on the affinity between the subject knowing and the object known, the fact of συναισθησις and the ἐπιστροφή of the soul upon itself implied in psychology.

402a 3. τὴν τῆς ψυχῆς ἰστορίαν] Torstrick reads peri τῆς ψυχῆς on the ground that ἰστορία means not cognitio but investigatio, and that the preposition is therefore necessary. On the meaning of ἰστορία as equivalent to enquiries or researches, De Quincey has some happy remarks (Essay on Philosophy of Herodotus). Cp. Introduction, p. xxiv.

402a 7. ἐπιζητούμεν δὲ θεωρησαῖ] With this statement of the sphere and questions of psychology, compare and contrast Plato, Phaedrus, 271 a, δῆλον ἀρα ὅτι ὁ Θαυσάμαχος τε καὶ διὸ ἀν ἄλλος στοιχεὺ τέχνην ἰδιορυκτὴν διδόν ἑπότων πάση ἀκριβεία γράψῃ τε καὶ ποιήσῃ ψυχῆν θείαι, πότερον ἐν καὶ ὁμώς πέφικεν, ἢ κατὰ σώματος μορφῆν πολυείδεις, κ.τ.λ.

402a 6. ἐστί γὰρ οἷον ἀρχή τῶν ζωῶν] This view of the importance of ψυχῆ in the study of animal life is especially emphasized in the Treatise on the Parts of Animals: so, e.g., 1, 1, 6, ἀπελθόνης γούν (ψυχῆς) οὐκετὶ ζωῶν ἐστὶ. For the meaning of ἀρχή in Aristotle, see Metaph. Δ. 1, 1013, where Aristotle distinguishes six senses in which ἀρχή may be used and concludes 1013b, 17, πασῶν μὲν οὖν κοινῶν τῶν ἀρχῶν τὸ πρῶτον εἶναι δὲν ἡ ἐστὶν ἡ γένναται ἡ γεγονόσκεται. Cf. also De Gén. Anim. v. 7, 788b 14, τοῦτο γὰρ ἐστὶ τὸ ἀρχήν εἶναι τὸ αὐτὴν μὲν αἰτίαν εἶναι πολλῶν, ταύτης δὲ ἄλλο ἀνώθεν μιθῆν. See also Cope's Rhetoric, Vol. 1. p. 126. Its use in the present passage is almost identical with that of De Coelo, II. 2, 284b 26, ἀρχὴς γὰρ ταῦτα λέγω δὲν ἄρχονται πρῶτον αἱ κινήσεις τῶν ἔχοντων. And still more closely does it agree with Meta. K. 1, 1060a 1; ἀρχή γὰρ τὸ συναναροῦν: that is the
soul is so much the condition of animal life, that its removal involves also the destruction of the animal.

402\textsuperscript{a} 7. τήν τε φύσιν αὐτής καὶ τήν οὐσίαν] Notwithstanding that in \textit{Meta.} Δ. 4\textsuperscript{b}, \textit{φύσις} is said to be sometimes equivalent to η τῶν φύσεων οὐσία, and that further πᾶσα οὐσία φύσις λέγεται, a distinction would seem here to be intended to be drawn between the two terms, and Trendelenburg is probably right in referring φύσις to the external, οὐσία to the internal aspect of the soul: or rather perhaps we may say φύσις refers to the genetic account, the explanation of the process by which the soul passes from merely vegetative functions to the intellectual stage, while οὐσία refers to the essential characteristic (that viz. of a \textit{first entelechy}) which constitutes it equally in all its stages. So in fact the word would seem to be taken by Simplicius who refers φύσις to the investigations of the physical philosopher, οὐσία to the enquiries of the metaphysician.

402\textsuperscript{a} 8. ἑδ' ὃσα συμβεβηκένε περὶ αὐτής] By the \textit{συμβεβηκότα} we must understand not so much the merely accidental attributes of soul but rather what the modern logician would call its properties—those qualities, i.e., which are not immediately connoted by soul but are derivatives and consequences of it. See \textit{Meta.} Δ. 30, 1025\textsuperscript{b} 30, λέγεται δὲ καὶ ἄλλας συμβεβηκὸς ὃσα ὅσα ὑπάρχει ἐκάστῳ καθ' αὐτὸ μὴ ἐν τῇ οὐσίᾳ ὡστα, ὅσον τῷ τριγώνῳ τὸ δύο ὀφθαλμὸς ἔχειν. Similarly in \textit{Anal. Post.} I. 7, 75\textsuperscript{b} 42 science is said to involve a υποκείμενον οὗ τὰ πάθη καὶ τὰ καθ' αὐτὰ συμβεβηκότα δηλοὶ ἢ ἀπόδειξις. Cp. Cope's \textit{Rhetoric}, I. 2, § 1, p. 27.

402\textsuperscript{a} 9. ὅν τὰ μὲν ἑδα πάθη] Here, as Trendelenburg remarks, there is at first sight no real opposition: and we must understand the antithesis to mean that while some properties belong to the mind in and by itself others attach to the soul in connection with the body (ἐφώ). By the ἑδα πάθη we must understand particularly thought: by the second class pleasure, pain, sense-perceptions, &c., as Themistius explains.

§ 2. 402\textsuperscript{a} 12. λέγω δὲ τοῦ περὶ τῆν οὐσίαν καὶ τὸ τί ἐστι] The words would seem practically to mean—the specific and the general character: but perhaps the distinction is not meant to be so sharply drawn as Trendelenburg supposes. By the τί ἐστι Aristotle would seem to understand the general or generic conception of anything—the statement mainly of its genus—while οὐσία is probably used here particularly in the sense of τὸ τί ἢν εἴναι and refers to this general conception embodied in the unity of a single type. Thus we have τὸ πρῶτον ἐνπάρχον ὃ λέγεται ἐν τῷ τί ἐστι τούτο γένος, \textit{Meta.} Δ. 28, 1024\textsuperscript{b} 5: τὸ δὲ γένος βουλέται τὸ τί ἐστι σημαίνειν καὶ πρῶτον ὑποτίθεται τῶν ἐν τῷ ὀρισμῷ λεγομένων, \textit{Topr.} VI. 5, 142\textsuperscript{b} 28.

402\textsuperscript{a} 15. τῶν κατὰ συμβεβηκός ἰδίων] By ἑδα κατὰ συμβεβηκός Aristotle would seem to mean relative properties: qualities which attach to something when viewed in reference to something else. V. \textit{Topr.} v. I, 128\textsuperscript{b} 10, ἀποδίδοται δὲ τὸ ἰδιον ἢ καθ' αὐτὸ καὶ ἄει, ἢ πρὸς ἔτερον καὶ ποτὲ, ὅσον καθ' αὐτὸ μὲν ἀνθρώπου τὸ ἐφών ἠμέρον φύσις, πρὸς ἔτερον δὲ ὅσον ψυχῆ·πρὸς σῶμα, δι' τὸ μὲν προστατικὸν τὸ δ' ὑπηρετικὸν ἐστὶ. Supremacy that is to say is not a
property of soul in and by itself but it is so relatively to body, and thus an ἰδιον κατὰ συμβεβηκός. So again it is an ἰδιον of man relatively to horse to be a biped.

402a 18. τὸ πραγματευθήναι] Cope, Rhet. i. 1, § 3, notes "The primary sense of doing business or occupying oneself about anything passes to the more limited or special significations of an intellectual pursuit and thence of a 'special study,' 'a systematic treatment of a particular subject of investigation or practice." Trendelenburg compares Meta. B. 2, 997b 21, K. 1, 1059b 10, K. 7, 1064b 3.

402a 19. ποτέρον ἀπόδειξις τὶς ἐστὶν ἦ διάφεσις] The difference between the two methods is that between the logical methods of Aristotle and Plato. For Aristotle's conception of ἀπόδειξις the following passages are of importance: Post. Anal. i. 13, 81b 40, μανθάνομεν ἦ ἐπαγωγὴ ἦ ἀπόδειξις. ἐστὶ δ' ἦ μὲν ἀπόδειξις ἐκ τῶν καθόλου, ἦ δ' ἐπαγωγὴ ἐκ τῶν κατὰ μέρος. But while ἐπαγωγὴ is thus an important source of knowledge, it is wanting in the necessity and explanation-giving character of ἀπόδειξις. Thus Aristotle writes, Post. Anal. ii. 5, 91b 32, οἷδε γὰρ ὁ ἐπάγων ἱσώς ἀποδείκνυσιν, ἀλλ' ἰδίως δηλοὶ τι. But this weakness of induction which discovers merely a matter of fact uniformity is removed by the cogency of proof which attaches to ἀπόδειξις. For ἀπόδειξις is a συλλογισμὸς διεκτικὸς αἰτίας καὶ τοῦ διὰ τί (Post. An. i. 24, 83b 23); it is τῶν ἄναγκαιων and ἐξ ἄναγκαιων, and it cannot possibly attach to individual sensible things as such—τῶν οὐσίων τῶν αἰσθητῶν τῶν καθ' ἐκαστα αὐξ ἐστὶν ἀπόδειξις (Meta. z. 15, 1039b 28). But while ἀπόδειξις thus tries to induce the laws of facts from the general conception which overlies them, it does not do so by any instantaneous leap—it invariably passes from the universal to the particular διὰ τοῦ μέσου: through the help of the less general conception which will form the link of transition and be the cause which explains the particular phenomenon—τὸ μὲν γὰρ αἰτίαν τὸ μέσον, ἐν ἀπασὶ δὲ τοῦτο γίνεται (Post. Anal. ii. 2, 96a 7). Διάφεσις is defective just in wanting this gradual descent from the universal to the individual. As conceived by Plato and illustrated in the Sophist it was the method by means of which we determined the specific character of an object and found out its τί ἐστιν by bringing it under some general conception and then by successively dividing it, by a lengthy process of dichotomy, caught it (to keep up Plato's metaphor) in the member or members of the division which exactly fitted it. Hence Aristotle regards the Platonic division as involving throughout a πετιτία πριν βίπου. So he expresses himself in Prior. Anal. i. 31, 46b 31, ἐστὶ γὰρ ὁ διαφες ἀρχον συλλογισμὸς, δ' ἦ μὲν γὰρ δὲι δειξαι αἰτίας, συλλογίζεται δ' ἐκ τῶν ἀρχῶν....ἐν μὲν οὖν ταῖς ἀποδείξεισιν, ὅταν δὲ τι συλλογίζασθαι ύπάρχει, δὲ τὸ μέσον, δὲι οὖ ἔγειται ὁ συλλογισμός, καὶ ἤττον δὲι εἶναι καὶ μὴ καθόλου τοῦ πρῶτον τῶν ἄκρων ἢ δὲ διαφες τοιούτων βουλεῖται τὸ γὰρ καθόλου λαμβάνει μέσον. And in another passage he directs particular attention to the fact that in such dichotomy the difficulty as to why the subject of our enquiry must fall under one rather than another member of the division turns up at each single stage of the process. Post. Anal. ii.
NOTES. I. I.

5, 91b 37, ὁσπερ γὰρ ἐν τοῖς συμπεράσμασι τοῖς ἀνευ τῶν μέσων ἦν τις ἐπὶ ὁτι τούτων ὅστων ἀνάγκη τοῦτι ἦναι, ἐνδέχεται ἐφωτισθαι διὰ τί, ὁστος καὶ ἐν τοῖς διαμετρικοῖς ὁριοι. τί ἔστιν ἄνθρωπος; ζὴνον ὑπηρό, ὑπότον, ὑπότων, ἀπετέρων. διὰ τί; παρ’ ἐκάστην πρόσθεσιν ἐρεῖ γὰρ καὶ δεῖξε τῇ διαίρεσι, ὡς οἴεται, ὅτι πῶς ἡ ὑπηρή ἢ ἀδάνατον. ὁ δὲ τούτων λόγος ἀπασοῦ οὐκ ἔστιν ὀρθὸς. ἀστ’ ἔν καὶ ἀπεδίκουντο τῇ διαίρεσι, ἀλλ’ ὁ ὀρθὸς οὐ συλλογισμὸς γίνεται. Το a similar effect does Aristotle shew in Part. Anim. I. 3, 642b 21, that a dichotomy of negatives is impracticable: ἔτι στερήσει μὲν ἀναγκαῖοι διαμεῖν καὶ διαιροῦσιν οἱ διχοτόμοις. οὐκ ἔστι δὲ διαφορὰ στερήσεως ἡ στερήσεις’ ἀδάνατον γὰρ ἐδή εἶναι τοῦ μῆ ὄντος, οἴον τῆς ἀπόδοιας ἢ τοῦ ἀπετέρου ὁσπερ περοῖσεως καὶ τοῦδον.

402a 21. ἀλλα γὰρ ἀλλων ἀρχαὶ, καθάπερ ἀρημβοὶ καὶ ἐπιστάμενοι] The ἀρχαὶ of number would be the existence of the unit, the presupposition of supercificies would be extension. Aristotle distinguishes between common or universal principles and special or οἰκεία ἀρχαί, restricted to a particular science and not to be transferred from one science to another. Anal. Post. I. 32, 88b 27, as γὰρ ἀρχαί διεταί εἴπεν τε καὶ περὶ δ’ αἰτίαν οὐκ, ὅτι κοινα, αἰτίαν οὐκ ἀπεξεργάσιος, μέγεθος. And valid reasoning, Aristotle insists, must be conducted with special reference to these specific principles: οἱ μῆ ἐκ τῶν οἰκείων ἀρχῶν λόγους κενοὶ, Gen. An. 748a 8. Cp. especially Post. Anal. I. 7, 75a 38, οὐκ ἄρα ἔστιν ἐς ἀλλος γένους μεταβάσατο δείχζει οὖν τὸ γεωμετρικὸν ἀρμηνική. Then after enumerating the three elements of every demonstration: 1st, the conclusion which is proved: 2nd, the axiomatic principles: and 3rd, the subject-matter, he continues—εἴ ἂν μὲν οὖν ἡ ἀποκείμενον ἐνδεχόμενο τὰ ἀυτὰ ἦναι: ὁ δὲ τὸ γένος έτερον ὁσπερ ἀρμηνικῆς καὶ γεωμετρίας, οὐκ ἔστι τὸν ἀρμηνικὴν ἀποκείμενον ἐφαρμόζει ἐπί τὰ τοῖς μεγεθεῖς συμβολήτων, εἰ μὴ τὴν μεγεθῆ ἀρμικῆ ἔσον.

§ 3. 402a 24. πότερν ταῦτα τι καὶ οὐσία ἢ ποιόν] The commentators refer these general expressions to definite names, Plato being the thinker who regarded soul as an οὐσία, Xenocrates the philosopher who viewed it as a πόσον and the physicists those who identified it with a ποιόν in so far as they considered it a harmony or blending of elements.

§ 4. 402b 3. τῶν μὲν γὰρ οἱ λέγοντες] The reference as Philonius points out can hardly be to the Timaeus of Plato: probably the older φυσιολογοι are intended.

§ 5. 402b 7. τὸ δὲ ξύον τὸ καθόλου ὅτι οὐδὲν ἐστὶν ἢ ὅστερον] The opinion which is here expressed is, as a little attention will shew, not the view of Aristotle himself, but simply a continuation of the hypothetical alternative suggested in the previous clause to the effect that we can define mind only according to its different particular forms and must not attempt to frame any one general definition of it. The older texts obscured the connection by placing a colon after θεοῦ: a comma is all that is required. The passage is interesting as containing one of the first anticipations of the question which afterwards divided the schools on the question of nominalism and realism. The question is still more definitely stated by Themistius: ἄρ’ οἰ τῶν γενῶν
καὶ τῶν εἰδῶν ὄρισμοι νοημάτων εἰσὶν ὄρισμοι ἡ φύσεων ἐν τοῖς καθ' ἑκατὸν ὑφαισταμένων. Τhis no doubt is conceived principally in regard to definition, but it is substantially the same question as Porphyry afterwards raised.

§ 7. 402\(b\) 15. ἀντικείμενα] For the meaning of the term see Μετάφρ. Δ. 10, 1018\(a\) 20, ἀντικείμενα λέγεται ἀντίφασις καὶ τάνασσία καὶ τὰ πρὸς τι καὶ στέρεσις καὶ ἐξίς καὶ ἐξ ὧν καὶ εἰς ἑ ἐσχάτα. Here the term would seem to be practically restricted to τὰ πρὸς τι and to be almost equal to 'objects' as the things which are set over against the function. And so as Bonitz observes (Index 64\(a\) 18) the word is used here in its local significance.


402\(b\) 25. τάσις γὰρ ἀποδείξεως] γὰρ would seem intended to explain καλλιστα: This knowledge of a thing through its related phenomena and effects is only practically as good a method as may be: for &c.

403\(a\) 2. διαλεκτικὸς ἐφηναι καὶ κενῶς] The meaning of διαλεκτικὴ in Aristotle may be gathered from the following passage:—Μετὰ. Γ. 2, 1004\(b\) 17, οἱ γὰρ διαλεκτικοὶ καὶ σοφισταὶ ταῦτα μὲν ὑποδύονται σχῆμα τῷ φιλοσόφῳ: ἡ γὰρ σοφιστικὴ φαινομένη μόνον σοφία ἐστι, καὶ οἱ διαλεκτικοὶ διαλέγονται περὶ ἀπαύγων ...ἐστὶ δὲ ἡ διαλεκτικὴ πειραστικὴ περὶ ὧν ἡ σοφία γνωριμική, ἢ δὲ σοφιστικὴ φαινομένη οὐσα δ' οὐ. So also in Μετα. K. 3, 1061\(b\) 8, dialectic and sophistic are said to be both concerned with the συμβεβηκότα or relative and incidental properties of things. Similarly in Τοπ. 1, 1, 100\(a\) 30 we read διαλεκτικὸς δὲ συλλογισμὸς ὦ ἐξ ἐνδόξους συλλογιζόμενος; and the πρότασις διαλεκτικὴ is described as that which is open to question, and still unsettled. ἐστὶ γὰρ πρότασις διαλεκτικῆ πρὸς ἢν ἐστιν ἀποκρίνωςκαὶ ἢ οὖ. Cp. Αναλ. Pr. 1. 1, 24\(a\) 25.

Cp. Τοπ. 1. 10, 104\(a\) 12, εἰσὶ δὲ προτάσεις διαλεκτικαί καὶ τὰ τοῖς ἐνδόξους ὄμως, καὶ τάνασσία κατ' αὐτίφασιν τοῖς δυνάσιν ἐνδόξους εἶναι προτεινόμενα, καὶ ὃσα δόξαν κατὰ τέχνας εἰσὶ τὸς ἐφημενα. Dialectic then it will be seen is to Aristotle mere formal argument based on probabilities and plausibilities, reasoning which like sophistic only takes up an abstract one-sided view of things, and does not attempt to grasp them in their concrete fulness. Thus further διαλεκτικὴ is not unlike λογικὴ in Aristotle's use of the expression: it is vague, empty, verbal argument which deals merely with words, and takes but little account of things, so that κενῶς is the epithet combined at once with 'dialectical' and 'logical' discussion. The opposite mode of treatment corresponds to what Aristotle describes as φυσικὸς. Cp. Simplicius (fol. 3) διαλεκτικῶς καὶ κενῶς, ἀντὶ τοῦ λογικῶς καὶ οὐ φυσικῶς...τὴν γὰρ ἐπιστολοτέραν καὶ οὐ πραγματεύωδὲ γνώσας λογική καὶ διαλεκτικὴ εἰσὶν προσαγωγέων.

§ 9. 403\(b\) 7. ἰδὼν αἰσθάνεσθαι] Perception in all its forms, as including sight, hearing, &c.

403\(b\) 8. εἰ δ' ἐστὶ καὶ τοῦτο φαντασία] The question is discussed particularly in Bk. III., chapters 6—10.

§ 10. 403\(b\) 11. εἰ δὲ μὴθιν ἐστιν ἵδιον] Aristotle's argument is that if any mental function is peculiar to the mind, the mind can be separated and exist apart from the body: but that if no function is thus peculiar, mind cannot exist apart from body. It may be remarked on this that the denial of the antece-
dent does not involve the denial of the consequent. Nor does Themistius’ ‘apology’ (Spengel, p. 10) seem to get over this objection. The objector (says Themistius) would seem to forget that the additional word “would be possible” (to be separated) involves not a necessary consequence in regard to which the denial of the consequent involves the denial of the antecedent, but a contingent consequence, in which the result is the reverse—ἡ γὰρ ἀναίρεσις τοῦ ἡγουμένου συναναρεῖ τὸ ἐπόμενον.

403a 14. οὐ μέντοι γ' ἀφεται τοῦτου χαρισθέν τὸ εἰθ’] τοῦτο it might be thought admits of being taken either with ἀφεται or with χαρισθέν. With the former construction however, there is the awkwardness of τοῦτο in the neuter or masculine while referring to σφαῖρα, a feminine; with the latter construction (in which τοῦτο is taken with χαρισθέν) we may understand the genitive as equal to either χαλκοῦ or, in the more general sense adopted by Philoponus and Simplicius, τοῦ ὑποκειμένου. Bonitz (Hermes, vii. 416) reads with Ε ὀστό i.e. κατὰ στιγμῆν) in place of τοῦτο and understands the passage altogether as follows: The straight line as such is possessed of many qualities, as for instance that of touching a brazen circle at some point or other: but it does not follow from this that the straight line as independently existing, and considered abstractedly, touches in this manner: it possesses in short no independent reality since it is continually connected with some body or another.

403a 18. ἀμα γὰρ τοῦτοι πάσχει τι τὸ σῶμα] Torstrik regards this clause as the marginal addition of a copyist.

403a 25. λόγοι ἐνιαῖο] Trendelenburg aptly compares the λόγοι σπερματικοί of the Stoics: and Philoponus paraphrases as εἴδη ἐν ὑπὲρ τὸ εἶναι ἔχοντα καὶ οὐ χαριστά.

§ 11. 403a 27. ἡδη φυσικόν] ἡδη would seem to mean ‘without adding any further arguments.’ With this inclusion of psychology in φυσική, may be compared the significant words of Plato, Phaedrus, 270 C, ψυχῆς οὖν φύσιν ἀξίως λόγου κατανόησαι εἰς διώκειν εἶναι ἀνευ τῆς τοῦ ὅλου φύσεως.

403b 7. τίς οὖν ὁ φυσικὸς τοῦτοι] Here, as Trendelenburg observes, we must understand by φυσικός, the physicist as he ought to be—qualis esse debet ut rei naturam vere exponat. With the general sentiment cp. the Melaph. Z. ii. 1037a 16, οὐ γὰρ μόνον περί τῆς υλῆς δεῖ γνωρίζειν τὸν φυσικὸν ἀλλὰ καὶ τῆς κατὰ τῶν λόγων καὶ μᾶλλον: and for Aristotle’s conception of φυσική and its relation to psychology, see the Introduction, p. xxvii.

403b 9. ἡ οὐκ ἔστι τις ὁ περὶ τὰ πάθη τῆς ὅλης τὰ μὴ χαριστά, μὴ δὴ ἡ χαριστά κ.τ.λ.] The translation will probably itself indicate the sense in which I think this passage is to be understood. According to this interpretation, Aristotle, after pointing out that the true φυσικός is he who combines at once the material and the ideal explanation of phenomena in his explanation of them, finds himself obliged to ask about the province to be assigned to each of these two separate ways of studying nature (ἐκεῖνον δὲ ὑπὸ τὸν ἐκάτερον η). And to this he replies that there is really no observer who deals with the material side of nature as such—the pure materialist is an unreal abstraction:
the φυσικός deals with body in its general and its formal aspect (τοιουτί σώματος, τοιαύτης ύλης) and differs only in the degree of his idealism from the mathematician and the metaphysician. Taking this view of the passage we must lay particular emphasis on τοιουτί and on τοιαύτης and regard the clause ὡς αὐτά δὲ μὴ τοιαύτα, ἄλλος...τέκτον ἡ ἱατρός as parenthetical. The parenthesis as I take it simply notices incidentally the special artist as working in a more circumscribed and less general field than the true φυσικός. Altogether Aristotle distinguishes four methods of dealing with nature:

(1) That of the special artist who deals with the particular qualities of some particular kind,
(2) That of the true Physicist who deals with the general qualities of generic groups of natural objects,
(3) That of the Mathematician who deals with the quasi-abstract qualities of all objects, and
(4) That of the Metaphysician who deals with the most abstract and transcendent qualities of things.

This explanation of the passage corresponds more or less closely with the paraphrase given by Philoponus.

εἰτῶν κατὰ μὲν τὴν ἀρχήν διαλεκτικοῦ μὲν εἶναι τὸν ἐκ τού ἐδοὺς ὁρισμόν, φυσικοῦ δὲ τὸν ἐκ τῆς υλῆς, εἶτα προελθὼν καὶ εἰτῶν ὅτι φυσικοῦ ἔστιν ὁ ἐξ ἀμβούν ἀποδιδόμενον ὁρισμός, ἐρεῖ εἰκότως περὶ τῶν λοιπῶν δύο ὁρισμῶν, τὸ τε ἐκ τῆς υλῆς μόνης καὶ τοῦ ἐκ τού ἐδοὺς, τίνος ἢ ἐπτεχνίτος ἐκάτερος ὁρισμός. καὶ περὶ μὲν τοῦ ἐκ τοῦ ἐδοὺς ἀμόνον ὧτι ἐστὶ διαλεκτικὸν οὐδέν λέγει. ἢ βοη γὰρ εἰπέν. περὶ δὲ τοῦ ἐκ τῆς υλῆς μόνης λέγει ὅτι οὐκ ἔστιν οὐδεμία τέχνη περὶ ὑλῆς μόνης καταγενέσθαι. πάσα γὰρ τέχνη ἐδοὺς ἐπιθείτωι βούλεται τῇ ὑποβεβλημένῃ ἐαυτῇ ὑλῆς...διὰ μὲν οὐν τοῦ εἰτῶν περὶ “πάντα” διακρίνει αὐτὸν (ἱ. ε. τοῦ φυσικοῦ) τοῦ καθ’ ἐκαστὸν τεχνίτου· ἐκείνων γὰρ ἐκαστὸς περὶ μερικὸν τι ἔχει. διὰ δὲ τοῦ εἰτῶν τοῦ “τοιούτου σώματος” ἐξώρισεν αὐτὸν τοῦ μαθηματικοῦ.

Trendelenburg explains the passage as meaning that no one treats of matter and its properties which cannot be separated and so far as they cannot be separated, with the exception of the physicist engaged in studying all the qualities which attach to a certain kind of body and a certain kind of matter. He proposes therefore as a possible but unnecessary simplification of the text that we should read ἡ οὐκ ἐστι τις ὁ περὶ τὰ πάθη τῆς ὑλῆς τὰ μὴ χωριστὰ, μηδ’ ἡ χωριστά, ἄλλος· ἄλλ’ ὁ φυσικὸς περὶ ἀπαυθ. κ.τ.λ.

The interpretation given by Trend. agrees with the paraphrase of Theonistius and Simplicius: but it would seem to fail to answer the question with which Aristotle sets out as to what is the place of the pure materialist and the metaphysician in explaining nature. According to Trendelenburg’s view Aristotle simply draws the distinction given in the Metaphysics between the physicist, the mathematician and the metaphysician: according to the view followed in the translation the writer first points out that undiluted materialism is a mere fiction of philosophy.

403b 15. ἡ δὲ κακοφωμένα, ὁ πρῶτος φιλόσοφος] Νὶ Μέτα. Ε. 1, 1026b 12, ἡ μὲν γὰρ φυσικῇ περὶ ἀχώριστα μὲν ἄλλ’ οὐκ ἀκίνητα, τῆς δὲ μαθηματικῆς ἐνα περὶ
CHAPTER II.

The second chapter begins that historical retrospect of previous psychological investigations which Aristotle thinks a useful preliminary to his own exposition of the character of mind. Two mental properties he finds have been especially attributed to the soul: motive and active powers on the one hand, perceptive and cognitive powers on the other. (i) The active and motive powers have been emphasized by Democritus and Leucippus (§§ 3, 12), certain particular Pythagoreans (§ 4), Anaxagoras whose views however attach particularly to Reason (§ 5), Thales (§ 14), and Alcmæon (§ 17). (ii) The cognitive side of mind is prominent in Empedocles (§ 6), Plato (§ 7), Xenocrates (§ 8)—all of whom hold that knowledge involves correspondence between the subject knowing and the object known and therefore resolve mind into the Elements whether one or many which their philosophical analysis recognizes as generally entering into things. A third class of thinkers unite the cognitive with the motive powers—a phase of thought to be seen in Anaxagoras (§ 13), Diogenes (§ 15), Heraclitus (§ 16).

§ 1. 403\(\frac{1}{2}\) 23. ὅπως τὰ μὲν καλῶς εἰρημένα λάβομεν] For the motive of Aristotle’s résumé of past opinions on a subject, cp. De Coelo, I, 10, ἀρὰ δὲ καὶ μᾶλλον ἄν εἰπῃ πιστὰ τὰ μέλλοντα λειχθῇσθαι προακρούσκα τὰ τῶν ἀμφιβολούντων λόγων δικαιώματα τὸ γὰρ ἐρήμη χαλκιδικαίζεται δοκεῖν ἢτον ἢ ἠμῖν ὑπάρχῃ καὶ γὰρ δεῖ διαίητα ἢλλ’ ὡς ἀντίκεισι εἰς τοὺς μέλλοντας τάλθεις κρίνειν ἰκανός: and see also De Respir. 470\(\frac{3}{4}\) 11 and Metaph. B. 1, 995\(\frac{1}{4}\) 27, ἔστι δὲ τοὺς εὑρόρησαι βουλομένους προσφέρων τὸ διαπρῆσαι καλῶς. Trendelenburg and most of the editors place in 21 the comma before προελθόντας: Torstrik places it after προελθόντας and construes it with εὑρόρησαι δεί.

§ 3. 404\(\frac{1}{4}\) 1. ἀπειρῶν γὰρ ὄντων σχημάτων] Cp. De Coelo, III. 4, 393\(\frac{1}{2}\) 13, ποιον δὲ καὶ τί ἐκάστον τὸ σχῆμα τῶν στοιχείων οὐδὲν ἐπιδιώκειον ἄλλα μόνον τῷ πυρὶ τὴν σφαίραν ἀπέδωκαν ἁέρα δὲ καὶ τὰ ἄλλα μεγάλη καὶ μικρότητι διέξοι, οὐδὲν αὐτῶν τὴν φύσιν οἷον πανσερμίαν πάντων τῶν στοιχείων: also III. 8, 306b 32, and De Gen. I. 8.

The psychology of Democritus lay in a particular application of his general atomic theory. That theory reduced all existence to a void (κενῶν) on the one hand, a fixed space (πληρῶν) on the other, this last consisting of an infinite multitude of atoms or particles qualitatively similar. To such
atoms everything was finally reducible; and the different shapes assumed by objects depended simply on the figure, order, and relative position of those infinitely small and homogeneous particles. (Cp. Meta. A. 4, καὶ καθάπερ οἱ ἐν ποιεόντες τὴν ὑποκείμενην οὐσίαν τὰλλα τοῖς πάθεσιν αὐτῆς γεννάσας, τὸ μάνον καὶ τὸ πυκνὸν ἄρχα τιθέμενοι τῶν παθημάτων, τοῦ αὐτὸν τρόπον καὶ οὗτοι ὁ σιποφόρας αὐτάς τῶν ἄλλων εἶναι φαινότας, ταύτας μέντοι τρεῖς εἶναι λέγουσι, σχῆμα τε καὶ τάξιν καὶ θέσιν διαφέρειν γὰρ φασί τὸ ὄν λυσμός καὶ διαθύερι καὶ τρέπθη μάνου, τούτων δὲ ὁ μὲν λυσμός σχῆμα ἐστιν, ἡ δὲ διαθύερι τάξις, ἡ δὲ τρέπθη θέσις. This Aristotle illustrates by the letters of the alphabet, διαφέρει τὸ μὲν Α τοῦ Ν σχῆματι, τὸ δὲ ΑΝ τοῦ NA τάξει, τὸ δὲ Ζ τοῦ Ν θέσει). The soul therefore had to be conceived from this same atomic standpoint: and Democritus found an explanation in assimilating soul to heat. Now heat, like every other sensible quality, could be expressed in terms of an atomic configuration, and such a configuration Democritus found in spherical particles, not unlike the motes we see in streaming sunlight. For these, he argued, have most of the penetrating power and motive force which distinguishes the soul. And the life of man meant just a continuous movement of these 'fiery particles'—a continuous ingress and egress of these spherical-shaped atoms. The outward environment as Democritus conceived, was continually contracting the body and expelling the particles which thus constituted the soul, and simultaneously inspiration introduced a new relay of similar particles, and life continued to subsist. Life in fact was to Democritus just coextensive with the power which the body had to replace new spherical atoms in lieu of those which the weight of the outer atmosphere had squeezed out of the body. In qua, adds Trendelenburg, etsi rudi sententia id inest veri quod individuum quoad vivit sua vi pugnam quandom sustinet.

404a 7. ὁμογονός ὁ λέγει ἐστιν Ἀβδηνίκη, σημαίνει δὲ τὸ σχῆμα. Philoponous, 7b.

§ 4. 404a 20. ἐπὶ ταύτῃ δὲ φέρονται αὐτάς εἰς Πλάτωνα καὶ Ζευκράτην καὶ Ἀλκμαίωνα. Philop. Cp. particularly Plato, Phaedrus, 245 c, μὴ ἄλλο τι εἶναι τὸ αὐτὸ ἐντός κινοῦν ἡ ψυχή, and Latus, 895 a, where ψυχή is defined as τὴν δύναμιν αὐτὴν κινεῖν κίνησιν.

§ 5. 404a 29. διὸ καλῶς ποίησα τὸν Ὀμηρον] Cp. Meta. Γ. 5, 1009b 28, φασὶ δὲ καὶ τὸν Ὀμηρον ταύτα ἔχοντα φαίνεσθαι τὴν δόξαν ὅτι ἐποίησε τὸν Ἑκτόρα ὥς ἐξέστη ὡς τῆς πληγῆς κείσαθαι ἀλλοφροινώναι. Aristotle would seem to quote from memory—at least no passage exactly corresponding to his reference can be found, though somewhat similar expressions are to be found in Iliad, xxiii. 698, and xxii. 337. Cp. Theophrastus, De Sensu, § 58, περὶ τοῦ φρονεῖν ἐπὶ τοσοῦτον εἴρηκεν ὅτι γίνεται συμμετέχειν ἐξουσίας τῆς ψυχῆς μετὰ τὴν κίνησιν' ἐὰν δὲ περίθεμα τῆς ἡ περίψυχρος γένεται μεταλλάττειν φαινεῖ. διὸ καὶ τοὺς παλαίστους καλῶς τοῦθ' ὑπολαβεῖν ὅτι ἐστὶν ἀλλοφροινέαν.

404b 1. πολλαχοῦ μὲν γὰρ τὸ αἰτίον τοῦ καλῶς καὶ ὀρθῶς τῶν νοῶν λέγει] Cp. Metaph. A. 3, where Aristotle says of Anaxagoras νοῦν δή τες εἴπερ εἶναι καθάπερ ἐν τοῖς χρώσι καὶ ἐν τῇ φύσει τὸν αἰτίον τοῦ κόσμου καὶ τῆς τάξεως πάσης οἷον νῆσων ἐφάνη παρ' εἰκῆ λεγοντας τούς πρότερον—and the words which
Diogenes Laertius, II. 6, quotes from the beginning of his treatise: πάντα χρήματα ἢν ὀρῶν' εἶτα νοὺς ἐλθὼν αὐτὰ διεκόψατο. Anaxagoras' conception of νούς—a conception which, as will be seen in the third book, coloured to no slight extent the Aristotelian view of a creative reason—was apparently not unlike that of the Alexandrian λόγος. So at least it would seem necessary to interpret the lengthy passage which Simplicius quotes in his commentary on Aristotle's Physics (f. 33) as occurring εν τῷ πρώτῳ τῶν φυσικῶν [partly extracted in Preller, Histor. Phil. § 123 (5th ed.), § 53 (4th ed.)] and particularly the words καὶ τὰ συμμετέχοντα τε καὶ ἀποκρυμένα καὶ διακριμένα πάντα ἔγνω νοὺς' καὶ ὑπό της ἐμελέτης ἐστιν διὰ τῆς ἡμέρας καὶ ὅσα νῦν ἐστι, καὶ ὑπό τῶν εἶσαι πάντα διεκόψατο νοὺς. With Anaxagoras' ascription of νούς to all animate and living objects, cp. the spurious περὶ φυσῶν, 815b II, ὁ δὲ Ἀναξάγορας καὶ ὁ Δημόκριτος καὶ ὁ Ἔμπεδόκλης καὶ νοῦς καὶ γνώσις εἶπον ἐξευθέν τὰ φυτά.

§ 7. 404b 18. ὁμοίας δὲ καὶ ἐν τοῖς περὶ φιλοσοφίας λεγομένοις διωρίσθη, αὐτὸ μὲν τὸ ἔρωμον, κ.τ.λ.] I have ventured not without some misgivings to interpret this passage in a sense somewhat different to that in which it is generally understood. Ordinarily the αὐτὸ τὸ ἔρωμον with which the passage opens is supposed to be the intelligible world, the universe as an object of thought, as conceived in its essential permanent characteristics. And this sense it must be allowed is not only that given by the older commentators—Simplicius andThemistius, but is also in harmony with the use of the expression in the Timaeus itself. (Timaeus, 30 B, αὐτῶς δὲν ὑπὸ κατὰ λόγον τῶν εἰκότα δὲ λεγέν τὸ ἑαυτοῦ οὐ κατὶ ἐνυφασθεὶς αἰσθήσιν τῆς ἑαυτοῦ λογίας τοῦ πλανήτη τοῦ ζωῆς τῆς μαθήματος.) The passage is then interpreted to mean that the parallelism between the object and the subject is so complete that while on the one hand the world as thought, the universe conceived of in its essential relations—the κόσμος νοητός as the commentators explain αὐτὸ τὸ ἔρωμον—may be resolved into the ideas of unity, of length, of breadth, and of depth; the mind on the other hand may also be resolved into four faculties—reason, understanding, opinion, and sense. Thus then there are four primary characteristics on the part of the object, four primary on the part of the subject. But further, those four are exactly fitted to one another: the action of reason being essentially unity, that of understanding essentially duality: and just in virtue of such correspondence between the ideal qualities of the mind and the ideal qualities of things is knowledge possible.

The chief objection to this interpretation is the difficulty in explaining τὰ δ' ἀλλα ὃμωνιστρώσεις. If the αὐτὸ ἔρωμον be the universe as an object of thought, the ἀλλα must be also universal ideas, but it is difficult to see what they can be or how in fact, outside the universe, any idea can be left to be explained. Simplicius however, it should be noted, by τὰ ἀλλα understands τὰ ἐπιστητὰ, τὰ δοξαστὰ and τὰ αἰσθητὰ, the αὐτὸ τὸ ἔρωμον itself being equivalent to νοητά: while Philoponus less symmetrically and altogether less satisfactorily explains them as τὰ νοητά, τὰ φυσικά and τὰ αἰσθητά.

It seems better in the face of such divergencies of view to treat τὰ δ'
\( \Delta \lambda \alpha \) not as an addition, but an antithesis to the \( \alpha v \tau \alpha \varepsilon \varphi o \nu \) which has preceded. The meaning will then be that while the subject knowing—the animal as an intelligible and cognitive factor—the ego—is made up of the four mathematical elements of ideal unity, primary length, breadth and depth: on the other hand the non-ego, the objects which are not subjects, exhibit similar relations (\( \tau \alpha \delta \varepsilon \; \Delta \lambda \alpha \; \delta \mu o \sigma \tau \rho \delta \sigma \tau \). Thus the first statement is an emphatic assertion of the correspondence or parallelism between the animate mind and inanimate things: between the essential subject given in the \( \alpha v \tau \alpha \varepsilon \varphi o \nu \) and the essential object expressed in \( \tau \alpha \delta \varepsilon \; \Delta \lambda \alpha \): the one is the microcosm of that of which the other is the macrocosm. But the writer goes on to elaborate this correspondence into further details. The proof that the animal in its essential nature as a pure cognitive agent is the result of mathematical forms is to be found in considering the four phases of knowledge with which it is endowed (\( \epsilon \tau i \; \delta \varepsilon \; kai \; \Delta \lambda \alpha s \). These are reason, understanding (\( \epsilon \nu \sigma \sigma \tau \rho \mu \nu \)), opinion, and sense-perception. These it has to be shown are parallel to the essential qualities of objects. But what are the essential qualities of objects? The answer is numbers—oi \( \mu \nu \) \( \gamma \alpha r \; \alpha r \mu \theta \nu i \) \( \tau \alpha \; \epsilon i \nu i \; \alpha v \tau \alpha \) (\( \alpha v \tau \alpha \) is omitted by SX \( \kappa a i \; \delta \rho \chi \alpha i \; \epsilon \chi \gamma \omega \sigma \tau o \)—it is numerical relations which determine the constitutive types and principles of things; and these numerical relations, we are further told, are formed from the most fundamental conceptions of which numbers admit—\( \epsilon i \nu i \; \delta \varepsilon \; \epsilon k \; \tau \delta \nu \; \sigma t o \chi e i o \nu \).

We arrive in this way at the following results: Objects—things as objects of intellect—reduce themselves to the abstract numerical relations of unity, duality, triadity and quadruplet: Subjects, minds as knowing, present us with four phases of knowledge—reason, understanding, opinion, sense-perception. Can we shew that these are really parallel to one another and so substantiate the assertion of l. 20, which maintained that the essential animal or mind consisted of the same four arithmetical conceptions (except that what was spoken of in the previous passage as \( \mu \nu \kappa o \nu \) is called duality in the second, and the \( \pi \lambda \alpha t o s \) and \( \beta \alpha \theta o s \) of the first passage become the \( \epsilon \pi \nu \sigma \theta o \nu \) and \( \sigma t e \rho o \nu \) of the second)? The proof of this correspondence between the cognitive faculties of the subject and the fundamental numerical relations of the object is given in lines 22 and 23. Reason, it is there pointed out, is the parallel in mind to unity in things, because, we may suppose, it comprehends the mass of objects under one idea and forms a concept or \( B e g r i f f \); the discursive understanding is like duality, like abstract length (\( \mu o \nu \chi \omega \nu \; \gamma \alpha r \; \iota \nu o \; \epsilon \varphi \; \epsilon \nu \)) because, i.e. it starts from a premiss and by one direct line of deductive argument or ratiocination it arrives at one conclusion: opinion (\( \delta \theta \kappa a \)) is not thus decided and definite in its conclusions, rather it is like a triangle in which there is only one single starting point, the apex, but a pair of possible conclusions in the two sides diverging from the apex: and lastly sense is no longer like understanding or opinion, parallel to simple length or abstract breadth, but having to take account of all the concrete qualities of objects it becomes rather quadruple and
cubical and so resembles solidity and breadth. And thus Themistius sums up the Platonic standpoint: τὴν οὖν ψυχὴν συγκειμένην ἐκ τῶν αὐτῶν ἀρχῶν ἐξ ὀσπερ ὁ εἰδητικός ἀριθμὸς...εἰκότως γινομένην τὰ ἄντα.

Practically then Plato’s conclusion, if we allow the “poetical metaphors” on which it is built, is made out. The same conceptions as constitute the ἐδή of things constitute also the ἐδή of the cognitive mind: it is, in the words with which he himself concludes (25—27), by reason, by understanding, by opinion and by sense that we know and discriminate things around us: and the numbers to which these faculties of knowledge correspond are also the ἐδή which constitute real things.

The general sense of the passage is so far not difficult to construct, but a number of special difficulties remain. The theory in question is said to be in the first place expounded in the Timaeus: and the Timaeus itself expands the short account which Aristotle gives. God, it is said (p. 34), out of the unchangeable on the one hand, the divisible and corporeal on the other, made a third sort of intermediate essence partaking of the same and also of the other or diverse, which compound in like manner he placed in a mean between the indivisible and the divisible or corporeal. γενέσει καὶ ἄρετῇ προτέραν καὶ πρεσβυτέραν ψυχὴν σώματος ὡς δεσπότιν καὶ ἀργοῦσαν ἀρξομένου ἐξουσιάσατο (ὁ θεὸς) ἐκ τῶν τε καὶ τούπδε τρόπων. τῆς ἁμερίστου καὶ δεὶ κατὰ ταύτα ἔχουσας οὐσίας καὶ τῆς οὐ περὶ τὰ σώματα γιγνομένης μεριστῆς τρίτον ἐξ ἀμφοῖν ἐν μέσῳ ἐξουσιάσασα οὐσίας εἰδός, τῆς τε ταύτον φύσεως αὐτοῦ καὶ τῆς θατέρου, καὶ κατὰ ταύτα ἔξενετσαν ἐν μέσῳ τοῦ τε ἁμερίστου αὐτοῦ καὶ τοῦ κατὰ τὰ σώματα μεριστοῦ καὶ τρία λαβὼν αὐτὰ ὡντα συνεκράσασα εἰς μίαν παντὸς ἱδέαν, τὴν θατέρου φύσιν δύομικτον οὖσαν εἰς ταύτων ἔναρμότταν βία.

But over and above the Timaeus, Aristotle refers to certain λεγομένα περὶ φιλοσοφίας, as containing the doctrines under consideration.

404b 18. ἀριστῖς δὲ καὶ ἐν τοῖς περὶ φιλοσοφίας λεγομένοις] Simplicius explains the writings here referred to as τὰ περὶ τοῦ ἀγαθοῦ αὐτοῦ ἐκ τῆς Πλάτωνος ἀναγεγραμμένα συνωσίας: ἐν οἷς ἱστορεῖ τὰς τε Πυθαγορείους καὶ Πλατωνικὰς περὶ τῶν ὄντων δόγμας: and similarly Philoponus—τὰ περὶ τάγματι ἐπιγραφόμενα περὶ φιλοσοφίας λέγει. ἐν ἑκείνοις δὲ τὰς ἁγράφουσα συνωσίας τοῦ Πλάτωνος ἱστορεῖ ὁ Ἀριστοτέλης. Titze (De Serie) accordingly identifies the works in question with the Metaphysics, especially Book A. But to this it is a fatal objection that nowhere in the Metaphysics does Aristotle discuss the points here referred to. Bernays would seem at one time to have identified the work in question with Aristotle’s dialogue περὶ φιλοσοφίας. Heitz however proves pretty conclusively (p. 180, 211) that the reference must be to Plato’s own lectures. And Bernays himself says (Dial., p. 170) it seems now generally recognised that the words indicate no particular Aristotelian writing, but merely set the oral discourses of Plato (die mündlichen Vorträge Platons) side by side with his previously mentioned Timaeus. Thus the reference will be to the same source of opinions as the ἀγραφα δογματα of the Physics IV. 2, 209b 15, where Aristotle, after saying that in the Timaeus Plato identifies ὅλη and χώρα because the μεταληπτικὸν and χώρα are one.
and the same, adds ἄλλων δὲ τρόπον ἐκεί τε λέγων τὸ μεταληπτικὸν καὶ ἐν τοῖς λεγομένοις ἀγράφως δύγμασιν ὅμως τῶν τόπων καὶ τὴν χάραν τὸ αὐτὸ ἀπεφήστω. Bonitz (Ind. Ant. 68° 59, quoted in Trend., p. 182) would seem to have misunderstood Bernays’ position.

§ 8. 404° 29. ἀποφημάνει τὴν ψυχήν ἀριθμὸν κακοῦν ἐκατόπτει Simplicius and Philoponus refer the theory in question to Xenocrates. So Simplicius: Ξενοκράτους ὑπὸ τῆς ψυχῆς οὐτός λόγος βουλομένου τὴν μεσοτήτα αὐτής τῶν τε εἰδῶν καὶ τῶν εἰδοποιούμενῶν ἁμα καὶ τὸ ἰδίον αὐτῆς ἐννεάδασθαι. But Plutarch gives us more insight into the position of Xenocrates. As a mere number he says the soul was not yet formed because it was without the power of moving and of being moved: τοῦ δὲ ταύτου καὶ τοῦ ἑτέρου συμπιγγέστων, ἄν τὸ μὲν ἐστὶ κινῆσεως ἀρχὴ καὶ μεταβολῆς τὸ δὲ μονής, ψυχῆς γεγονέναι, μηδὲν ἢττου τοῦ ἵστασι καὶ ἢστασθαι δύναμιν ὑπὸ τοῦ κινεῖσθαι καὶ κινεῖν οὐσαν.

§ 10. 403° 4. τὸ τε γὰρ κινητικῶν τὴν φύσιν τῶν πρῶτων ὑπελήφσαν] Bonitz (Hermes, vii. 430) points out that this sentence if translated: ‘They posit faculty of movement (Bewegungskraft) as one of the principles,’ scarcely connects itself with what goes before. He therefore supplies τὴν ψυχὴν as object to ὑπελήφσαν and translates: Dem entsprechend definieren die Seele. Sie betrachten nämlich als Seele dasjenige unter den Prinzipien welches seiner Natur nach bewegende Kraft besitzt, &c. But the connection seems to be that their definitions of soul are just as divergent as their enumeration of first principles because soul as motive belongs to the class of first principles (τῶν πρῶτων). And the natural translation would therefore seem to be that a substance with a natural faculty of movement was not unreasonably supposed to belong to the primary elements of existence. Cp. Themistius, p. 23, εὐλογον γὰρ καὶ λίαν πιθανὸν τὴν κινητικῶτατην αἰτίαν ἐν τοῖς πρῶτοις ἀρχαῖς κατατάστειν.


§ 15. 405° 21. Διογένης δ’ ὦσπερ καὶ ἑτεροί τινες, ἀπέρα] For a further account of the psychological ideas of Diogenes, see Theophrastus De Sensu, §§ 39–48. His explanation of reminiscence and other mental states through air Theophrastus characterizes as in many respects εἰπθέτει: his theory in fact would lead us to conclude that birds as living highest and most in the air would be wisest of all. Diogenes then, Theophrastus concludes, ἀπαντα προθυμοῦμενον ἄναγεν εἰς τὴν ἀρχήν πολλὰ διαμαρτάνει τῶν εἰλογῶν.

§ 16. 405° 25. καὶ Ἰράκλειος δὲ τὴν ἀρχήν εἶναι φυσι ψυχῆ, ἐπεί τὴν ἀναθυμίασαν] Philoponus comments as follows: εἰπθέται πολλάκις ὅτι ἀρχή ἐλεγεν εἶναι τῶν ἀντων οὕτως τὸ πῦρ, πῦρ δὲ οὗ τὴν φλόγα, ὡς γὰρ Ἀριστοτέλης φήμην, ἡ φλόγ ἐνεργομελή εστὶν πυρός. ἄλλα πῦρ ἐλεγεν τὴν ἡθῶν ἀναθυμίασαν, ἐκ ταύτης οὖν εἶναι καὶ τὴν ψυχήν ὡς κινητοῦ καὶ λεπτομερεστάτης. But, as Trendelenburg points out, it
is unnecessary to give this sense of dry exhalation to the 'fire' of Heraclitus. Fire being the principle by which Heraclitus explained all existence, we need merely suppose that this fire rising upwards in a fiery vapour gave rise eventually to animal life. And if this ἀναθυμίας represents the upward way (ὁδὸς ἄω) we can understand how αὐὴ ψυχῆ σοφωτάη (Bywater, Frag. 74)—how the driest and fieriest soul is the wisest.

405ᵃ 27. τὸ δὲ κινοῦμεν] As this gives the ground of Heraclitus' doctrine τὸ γὰρ would seem the conjunction required, but the MSS. offer no variation. Heraclitus' belief in the constant flux and change of phenomena is almost proverbial in Greek philosophy. It attains its most definite form in the saying ποταμοὶ τοῖς αὐτοῖς ἐμβαίνομεν τε καὶ οὐκ ἐμβαίνομεν, εἰμέν τε καὶ οὐκ εἰμέν: into the same river we descend and we do not descend, we are and we are not (Bywater, 81). And the doctrine acquires special importance when we remember that it 'awoke' Plato to the insufficiency of sense in gaining knowledge of the world. See Aris. Meta. Λ. 6.

§ 17. 405ᵇ 29. Alcmæon. Cp. Diog. Laert. VIII. 5, ἐφὴ δὲ καὶ (Ἀλκμαῖον) τὴν ψυχὴν ἀδανατόν καὶ κινεῖσθαι αὐτὴν σωκῆς ὡς τὸν ἦλιον. § 18. 405ᵇ 1. τῶν δὲ φορτικωτέρων...καθάτερ Ἰππον] A similar depreciation of Hippo (a contemporary with Pericles) is to be found in Meta. Λ. 3, 984ᵃ 3, Ἰππονα γὰρ οὐκ ἀν τις ἐξώσει θεϊνα μετὰ τούτων διὰ τὴν εὐτέλειαν αὐτοῦ τῆς διανοίας.

§ 19. 405ᵇ 5. ἀἷμα, καθάτερ Κριτίας] Philoponus quotes the hexameter, ἀἷμα γὰρ αὐθαίρετος περικάρδιων ἐστι νόμα as used by Critias to express his views. The thinker in question was most probably the Critias who was for some time a disciple of Socrates and became one of the 'Thirty Tyrants.'

405ᵇ 9. πλῆν εἰ τις αὐτὴν εἴρηκεν ἐκ πάντων ἐναι] Philoponus refers to Empedocles as the thinker who regarded soul as resulting from a combination of all the elements.

§ 20. 405ᵇ 14. πλῆν ἐνός] The exception is explained by the 'Ἀναξάγορας δὲ μόνος of 1. 19.

§ 22. 405ᵇ 21. τοῦτος δὲ ὧν πῶς γνωρεῖι] The question here raised—how reason if it have nothing in common with other objects is to know them—is started again in Bk. ΙΙΙ. c. 4, where it is shewn that, if the object of thought be immaterial, no difficulty arises, since thought and the object of thought are identical: and that in material objects the conceptions of reason while not actually present are yet so potentially, and so give that community between thought and its objects which is required to make knowledge possible.

§ 23. 405ᵇ 23. ὥσοι δὲ ἐναντιότερες] Empedocles would be an illustration: just as Hippo and Heraclitus would be of those who resolve mind into θάτερον τῶν ἐναντίων. 405ᵇ 27. διὰ τοῦτο καὶ τὸ [ζῆν ἀνώμαται] The etymology referred to is of course that which connects [ζῆω with ζέω to seethe and foam.

405ᵇ 28. οἱ δὲ τὸ ψυχρῷ διὰ τὴν ἀναπνοὴν καὶ τὴν κατάρρυξιν] This derivation of ψυχῆ from ψυχρός on account of the refrigeration in respiration is given us in the Cratylus of Plato, p. 399 E, οἰμαί τι τοιοῦτον νοεῖν τούτοι τῷ τῆς | W. AR.
CHAPTER III.

This chapter is devoted to a refutation of the view that movement is a characteristic of the soul and (in close connection with this) to a criticism of the views expounded in the *Timaeus* that circular movement is an attribute of the soul. The conclusion that movement is not essentially (καρ' οὐσίαν) and of itself an attribute of the soul is supported by the facts that (a) on such a hypothesis place or space would be a property of the soul (§ 3), (b) that if the soul be moved by nature it must also admit of being moved by force (§ 4), (γ) its different movements would involve divergent or contrary elements to enter into its structure, (δ) that if mind were to follow the movement of the body it would follow that it might leave the body and again return to it, a supposition leading to the absurdity of resurrection (§ 6). The conception on the other hand of merely incidental movement from outside is at variance with the original conception of essential movement (§ 7) and would imply that the soul abandoned its essential substance, while the atomic theory of mental movement of the body put forward by Democritus is palpably absurd and gives no explanation of the equally important condition of rest (§ 9). The doctrine on the other hand propounded in the *Timaeus* is open to the objections of regarding mind as a quantity (§ 12), and forgets that reasoning, while continuous, is so after the manner of number rather than after that of a quantity: besides, its apprehension of things whether ascribed to it as a whole or in its parts raises serious difficulties (§ 14). The description further of the process of thought as circular movement involves, since this movement is eternal, that the same thing should be repeatedly thought, fails to observe that thought is often more a state of rest and fixing (Ἀρέμφως) than movement (§ 17), places an unnatural restraint upon the soul (§ 18) and inconsistently with the rest of the Platonic philosophy makes soul the slave of body (§ 19). Of this and like theories of mind Aristotle concludes by remarking it is a common defect that they insert mind in body without any regard to the appropriateness of the one to the other.

The fervour with which Aristotle criticizes the movement theory of the soul is explained when we find it originates with Plato. Thus in the *Phaedrus* Plato demonstrates the immortality of the soul by reference to its power of spontaneous movement: 245 E, εἰ δὲ ἐστὶ τοῦτο οὕτως ἔχων, μὴ ἄλλο τι εἶναι τὸ αὐτὸ ἐαυτῷ κατόν ἢ ψυχήν, εἰς ἀνάγκης ἀγέννητον τε καὶ ἀθάνατον ψυχήν ἐν εἰ. And in the *Laws*, 895 E, he writes ὃ δὲ ψυχῆ τούτων, τίς τούτων λόγος; ἔχομεν ἄλλον πλῆς τῶν νῦν δὴ μηθέντα, τὴν δυναμικὴν αὐτήν αὐτὴν κινεῖν κίνησιν.

§ 2. 406a 3. πρότερον εἰρημένον] The reference is not, as Trendelenburg supposes, to *De An. I* 2, 2, 403b 29, but as Bonitz, after Themistius and Simplicius,
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points out, to *Phys. Θ. 5*, particularly 257b 20, *ἐτι οὐκ ἀνάγκη τὸ κινοῦν κινεῖσθαι ἐὰν μὴ ὑφ' αὐτοῦ. οὐκ is omitted before ἀναγκαῖον in S, but this must be a mere clerical error.

§ 3. 406a 12. τεσσάρων δὲ κινήσεων οὐσῶν] Cr. *Metaph. Λ. 2, 1069b 9, εἰ δὴ αἱ μεταβολai τέταρτες ἢ κατὰ τὸ τί ἢ κατὰ τὸ ποιόν ἢ ποιόν ἢ ποῖοι καὶ γένεσις μὲν ἢ ἀπλὴ καὶ φθορὰ ἢ κατὰ τόδε, αὐξήσεις δὲ καὶ φθορίς ἢ κατὰ τὸ πόσον, ἀλλοιωσις δὲ ἢ κατὰ τὸ πάθος, φορὰ δὲ ἢ κατὰ τότον, εἰς ἐναντίωσεις ἂν εἶναι τὰς καθ' ἐκατον αἱ μεταβολai. But in *Met. Κ. II, 1068b 1*, γένεσις and φθορὰ are excluded as not strictly forms of movement, and there accordingly remain the four forms which are enumerated here.

Aristotle's argument it should be observed is as follows: If motion be the characteristic attribute of the mind, then since the forms of natural movement—locomotion, attraction, decay, and growth—all involve place or space (τόπος) in which to act, the soul will also require space in which to perform its operations. But, Aristotle leaves the reader to add, spatial existence is no attribute of mind. Nor, he adds, can we get over this difficulty by insisting that space is an attribute of the movement of such abstractions as a white colour or a measure of length. That, says Aristotle, is true enough, but the movement in such cases is a mere incidental concomitant: whereas *ex hypothesi* movement is a natural and essential quality of soul.

§ 4. 406a 22. *ἐτι δ' εἰ φύσει κινεῖται, κἂν βία κινθείν* κἂν εἰ βία, καὶ φύσει] Aristotle's argument is that any movement which is caused by internal force can be also caused by external: so that if the soul be marked by natural internal movements it will also possess external forced movements—a conclusion which is practically a *reductio ad absurdum* of the main thesis—since such "forced movements" of the mind cannot well be realized or understood. The major premise however of this argument is not free from difficulties. We may allow the former part of the assertion in the sense that what is moved from within, may be moved also from without, although it is rather in conflict to the assertion of 406b 7, that what is moved essentially by itself should not be moved also by something else. But the latter half of the assertion—κἂν εἰ βία καὶ φύσει—strikes one as obviously false—those masses which should be driven by external force cannot *ipsa facta* be moved by internal: and Themistius omits the passage in his paraphrase, commencing simply τῷ δὲ ταύτα αυχωρόντε λόγῳ καὶ βιαίοις συγχωρητέοι τις εἶναι κινήσεις τῆς ψυχῆς καὶ ἁρμαίς• εἰ δ' γὰρ κινεῖται φύσει, ἐκ τούτον καὶ βία κινθείται. Yet in the *De Coel. III. 2, 300a 21*, Aristotle after identifying βία with παρὰ φύσιν adds ἀλλὰ μὴ εἰ παρὰ φύσιν ἐστὶ τις κίνησις ἀνάγκη εἶναι καὶ κατὰ φύσιν, παρ' ἦν αὐτῆς. Thus it would seem that the passage must be accepted as it stands—as indeed it is recognised by all the older commentators: and we must understand Aristotle to mean that internal and external, natural and unnatural, are so far relative terms, that whatever movement is of the one kind may be also under appropriate conditions of the other.

§ 5. 406a 27. *ἐτι δ' εἰ μὲν ἄνω κινήσεται, πῦρ ἦσται*] The force of this argument would seem to be that the ascription of natural movement to the soul (after
the βιαων κίνησεις have been given up) will involve its consisting of the most incongruous elements: since upward movement will necessitate its being made of fire, downward movement of earth, &c.

§ 6. 406b 30. ἄτι δ’ ἐπεί φαίνεται κινοῦσα το σῶμα] Since the soul, Aristotle now argues, moves the body with its own movements, the body will also conversely (ἄντιστρέψασθαί) move the soul with the movements of the body. The soul then it follows will alter like the body, locally, and may, even after it has passed out from it, enter into it again. And this result is capped by the crowning absurdity that if this were so the bodies of the dead might rise again to life. Trendelenburg failing to see that the words in 406b 4 τούτῳ δ’ ἐστιν ἂν το ἀνίστασθαι τὰ τεθνεότα τῶν ζωῶν are such a reductio ad absurdum of the hypothesis in question, unnecessarily suspects them to be the work of a Christian commentator, “eagerly deducing the resurrection of the body from the words of Aristotle.” But, as Bonitz says (Hermes, vii. 428), “this last clause just serves to prove the absurdity of the conclusions to which the disputed definition leads. Resurrection from the dead appears just about as great a reversal of the course of nature as would be an inversion of the orbit of the sun.”

§ 7. 406b 5. τὴν δὲ κατὰ συμβεβηκός κίνησιν κἂν ὑπ’ ετέρου κινοῦτο] This section would seem to be intended as an answer to an objection raised against the previous reasoning of Aristotle. What you have said, the supposed objector replies, applies no doubt to motion if understood as an essential characteristic of the mind: but it is still possible that its movement should be produced by something outside it. And this, says Aristotle, is true enough; but then the movement in question is merely incidental, not essential. This however is to desert the original supposition: and the truth remains that that whose essential nature is to be moved by itself, loses this essential character when it is moved by something outside, just as absolute good loses its character of absolute if it be conceived as relative. Yet, the writer goes on, the most ordinary way in which we can conceive the mind moved is through αἰσθήτα—which are external—and thus the movement of the mind cannot well be conceived as something essential and intrinsic.

§ 8. 406b 11. ἀλλὰ μὴν καὶ εἰ κινεῖ γε αὐτῇ αὐτήν, καὶ αὐτῇ κινοῦσ’ ἂν] The words would seem to mean that the supposed objector gives up his view of incidental movement at the hands of something else and reasserts that the mind moves itself. But, says Aristotle, if this be so, it will also be moved in itself (the passive as Trend. points out is to be pressed). Now all movement is a removal or departure on the part of the object moved—an ἔκστασις or ceasing to be itself. Thus then if the movement of the soul be not merely incidental (and this view the supposed interlocutor has given up) it follows that the soul as moved will start from and desert its essential nature. But this is just the reverse of the fundamental hypothesis (ἀλλ’ ἔστιν ἡ κίνησις) which was that movement was of the essence of the soul, whereas now we find that the supposition of spontaneous essential movement on the part of mind involves the separation from the essence. Essential movement is in short a
contradiction in terms. To take, as Torstrik does, ἀλλ’ ἐστὶν ἡ κίνησις κ.τ.λ. simply as a continuation of ἐν μίᾳ κατὰ συμβεβη. is to miss the opposition between the hypothesis and its results. But Trendelenburg, it should be noted, similarly takes the phrase as continuing the hypothesis.

406b 12. καὶ αὐτὴ κυνῷτ' ἃν] Trendelenburg conjectures καὶ αὐτὴ κυνῷτ' ἃν οὕσια, on the ground that the consequent as it stands does nothing but repeat the antecedent. Torstrik thinks that καὶθ' αὐτήν in ὁ 15 is a pleonasm incorporated in the text through some marginal interpretation: but it hardly seems so superfluous as he imagines.

§ 9. 406b 17. Δημόκριτος παραπλησίως λέγων Φιλίππω] The force of Aristotle's comparison between the psychological theory of Democritus and the Aphrodite of Daedalus is, of course, that both give an external mechanical explanation of the phenomena in question: both making the movement proceed from an external force rather than from an inward principle. Concerning Philippus, son of Aristophanes, see Meineke, p. 9. Themistius' commentary is worth quoting: καίτοι γε ἐπαργείς λιπαν ὧτι κινεῖται τὸ ἔφον ὦ προκυνθέσθης κατὰ τότον ἔνδοθεν τῆς ψυχῆς, ἀλλὰ προελομένης μόνον καὶ κρυνάσης εὐθὺς ὑπηρετεῖται τὸ ὁμά.

§ 11. 406b 25. τὸν αὐτὸν δὲ τρόπον καὶ ὁ Τίμαιος φυσιολογεῖ] The reference is undoubtedly not to Timaeus the Pythagorean, but to the Dialogue of Plato so entitled. See Timaeus, p. 36 a. The work is referred to in similar terms in Aristotle's De Sensu, c. 2, ὁσπερ ὁ Τίμαιος λέγει, where just before we have καὶ ἐν τῷ Τιμαῖῳ γέγραπται (see Trendelenburg, Platonis of Ideis Doctrina, p. 18). The main doctrines of the passage from the Timaeus are shortly summed up by Trendelenburg to the effect that: (1) body is moved by the movement of the soul: (2) the soul is composed of elements: (3) it is so divided as to contain the harmonic number in which all truth resides, and (4) the soul has the same movements as the heavens. The chief passage in the Timaeus bearing on the view under examination is contained in the following words from pp. 33, 34:

σχῆμα δὲ ἐδόκει αὐτῷ τὸ πρόσω καὶ τὸ συγγενές. τῷ δὲ τὰ πάντ᾽ ἐν αὐτῷ ἥδω περιέχειν μὲν λάλον ὡφι πρόσων ἀν ἐν σχῆμα τὸ περιελήφθος ἐν αὐτῷ πάντα, ὀπόσα σχῆματα. διδ καὶ σφαίρανεῖς, ἐκ μέσου πάντη πρὸς τὰς τελευταῖς ᾿ίσων ἄπεχον, κυκλοτέρες αὐτὸ ἐπορεύεσθαι, πάντων τελεύτατων ὁμοιότατον τε αὐτὸ ἐκαλτομηκυμνών, νομίσας μυρίῳ κάλλιον ὁμοιον ἀναμοιαν...κόινως ἀπένεμεν αὐτῷ τὴν τοῦ σώματος οἰκείαν, τὸν ἐπτά τὴν περὶ νοῦν καὶ φωνήσιμον ἅνιστα ὑμῖν. διδ δὴ κατὰ ταύτα τὑ τὸν αὐτὸ καὶ ἐν αὐτῷ ἡμίνα ἐπιμαγαγόν ἄπα οὐκ ἕτοιμα κύκλῳ κείνθησαι στρεφόμενον...τῷ δὲ ἢ ἐν αὐτῷ ψυχῆν ὑσικών ὡς ὑπ᾽ ὑπὸ στορχὸ ταὐτοίορθῳ λέγει, ὡσὶν ἐμφανίζωσα καὶ ´ο θέος ἠμεῖσθαι...δὲ δὲ καὶ γενέση καὶ ἀρτέρῃ προτεραν καὶ προσβυτέραν ψυχὴν σώματος ὡς δεσπότην καὶ ἄρξουσαν ἀρξομένον, ἔνωτόρισα ἐκ τῶν διὰ τοῦ τοιμοῦ τρόπω τῆς ἀμφίοις καὶ σε διὰ ταύτα ἐχονείς οὕσια καὶ τῆς ἀν υπερ τὰ σώματα γεγονομένης μερισθῆς τρίτον ἐξ ἀμφοῖν ἐν μέσῳ ἔνωτον τοιμασατο οὕσιν ἐδώς. τῆς τε ταύτον φύσεως αὐ καὶ τῆς θατέρου καὶ κατὰ ταύτα ἐνωτήσθην ἐν μέσῳ το τε αμφίοις αὐτὸν καὶ τοῦ κατὰ τὰ σώματα μερίστος, καὶ τριὰ λαβόν αὐτὰ ὄντα συνεκεράσατο εἰς μιάν πάντα ἱδέαν, τὴν θατέρου φύσιν δύσμικτον οὕσαν εἰς ταύτον

NOTES. I. 3.
The soul is viewed by Plato as compounded would be the same and the dissimilar—to auto and to eteros.

406b 31. eis kuklon katekampeus] Cr. Timaeus, 36 C, taotyn oiv th

τυπτασσει πασαν, διπλη κατα μηκος σχισα μεση προς μεσην εκατερων αλληλων

οιων Προσβαλον κατεκαμπτει εις κυκλον, ξυναποι αυτως τε και αλληλαιες εν τω

καταντικω της προσβολης, κα τη κατα ταυτα και εν ταυτω περιμοιρημεν κυνη

περει αυτων ηλαβε, και των μεν εξω των δι εντως εποιειτο των κυκλων. την μεν οιν

εξω φορων επεφημησε ειναι της ταυτω φυσεως, την δι εντως της διτερων.

§ 12. 407a 3. την γερ του παντος δηλον οτι τοιμυτην ειναι βουλεται οιων ποι' εστω

ο καλομενον νους] So Trendelenburg appropriately quotes Philorus as shewing

that in Aristotle's view reason as finding itself in things, and so coming

back to the point at which it started, might be represented as a circle—η δε

της λογικης ψυχης κυνης κυκλος της ειναι έσοικαν οτι της ενεργει και ειφωταει και

αυτη εαυτην γηγοσκειι αυτη περι αυτην εγειοτα σα τε και ειωρισκονα. For the

reason, as Trendelenburg remarks, in thinking does not rest satisfied with

the forms of sense, but seeks to discover their law and principle, and in so

doing finds itself embodied in external objects.

§ 13. 407a 6. τοιτων γερ η κηνης ου κυκλοφορια] The action of sense and

appetite cannot, as reason may, be described as that of a

circle or revolution: rather the objects of sense strike upon the sense

directly and unilinearly: and appetite as such presses straight on to the

immediate objects of its gratification.

407a 10. τως γερ δη και νοησει μεγθεο αων; πότερον καθηλου η οτρων των

μοριων των αυτων;) So Trend. emended the reading adopted by Bekker—μεγθεο

αων οτρων των μοριων των αυτων. Torstrik in place of καθηλου would read

καθ' δαλων which both Simplicius and Philorus use in their paraphrase :

and he further inserts διγων after καθ' δαλων. But this addition seems

unnecessary—that διγων occurs in the expanded paraphrase of Themistius

no way makes it particularly likely that it occurred in the contracted text of

Aristotle. Susemihl would read οτρων μορια των αυτων; μορια.

§ 14. 407a 19. αναγκαιον δε των νοιω ειναι των κυκλων τοιτων] Here, as Tren-

delenburg remarks, emphasis must be laid on τοιτων—a circle of this kind, i.e.


αυτο αημανει τοιτο γερ εστι το δεικυμενον.

§ 15. 407a 22. ου η τοιμυτη περιμοιρα νοησει] Torstrik would reject νοησει as

an interpretation of περιμοιρα. The sentence following he would regard as

interrogative, in accordance with Simplicius' and Philorus' commentary

of whom the former says ερωτα αων τι δει νοησει, and the latter τι αων τοιτο

εστιν. He reads accordingly δη τι.

407a 23. των μεν γερ πρακτικων νοησεων εστι περαται] The force of this

paragraph is that while a circle always returns back into itself and so never

comes to a stop, thought on the contrary, whether it be practical or specu-

lative is essentially bounded and determined. The practical reason is so

because it always puts before itself an end or τελος in which it rests, and the
speculative reason is so because such reason resolves itself into either
definition or demonstration, and both these forms of reasoning are essentially
definite. Definition is evidently so; and demonstration though in syllogism
it may appear at times almost a circle in which the conclusion brings us
back to the premisses, is still essentially a straightforward direct movement in
which we advance from premiss to conclusion.

Such an account of the action of the mind refers, as Trend. points out,
more to its external than its inward character. Externally the power of
thought cannot perhaps be represented as a circle: but in its fundamental
and essential character the process of cognition may be represented as a
circle in which reason discovers that the world which at starting was
opposed to it, is really only the objective aspect of that which it itself holds
as subject, so that the νοῦς, and the νοητοί become identical. Cp. Metaph. A.
7, 1072b 20, αὐτῶν δὲ νοεῖ ὁ νοῦς κατὰ μετάληψιν τοῦ νοητοῦ. νοητὸς γὰρ γίγνεται
διεγόρασι καὶ νοῶν, ὅστε ταύταν νοῦς καὶ νοητον τὸ γὰρ δεκτικὸν τοῦ νοητοῦ καὶ τῆς
νούσιος νοῦς.

§ 17. 407a 32. ἐτι δ’ ἡ νόησις ἐσεικεν ἱπρομῆσει τινὶ καὶ ἐπιστάσει μᾶλλον ἡ κινήσει]
Thought, Aristotle means, fixes objects and checks the flux of sense. Cp.
Post. Anal. II. 19, p. 100b 1, where Aristotle describing the way in which our
knowledge gradually builds itself up out of the particulars of sense by
finding and widening some permanent centre, says πάλιν δ’ ἐν τούτοις ἵσταται
ἔως ἃν τὰ ἀμερή στή καὶ τὰ καθόλου, οἷον τοιοῦτος ζωῶν, ἓσως ζωῶν. Trendelen-
burg well compares Plato, Phaedo, 96b, έκ δὲ μνήμης καὶ δόξης λαβοῦσης τὸ
ἱμπρομῆς κατὰ ταύτα ἂν γίγνεσθαί ἐπιστήμη. Cp. also Physics, VII. 3, 247b 4, τὸ
γὰρ ἱπρομῆς καὶ στήναι τὴν διάνοιαν ἐπιστάσθαι καὶ φρονεῖν λέγομεν, and
Problem. XXX. 14, 95b 35, ἡ ἐπιστήμη δοκεῖ εἶναι ὅτι τὴν ψυχὴν ἱστήσιν.

§ 18. 407a 34. ἀλλὰ μὴν οὔθε μακάριον] Cp. De Coelo, II. 1, 284b 25, οὔθε
γὰρ τῆς ψυχῆς οὖν τ’ εἶναι τὴν τοιαύτην καὶ ζωῆς ἄλπην καὶ μακάριον...ἀλλ’ ἄναγκαιον
’Ιεσοῦτος τινὰς μοιρὰν κατέχειν αὐτήν ἄλθις καὶ ἄτρυστον.

407b 1. καὶ δ’ ἐστὶν ἡ κινήσις αὐτῆς μη νῦσι, παρὰ φύσιν ἂν κινεῖτο] Torstrik
thinks the words corrupt, and supposes Aristotle to have written ἡ νῦσια.
This absence of the negative seems to some extent warranted by the para-
phrase of Themistius, οἱ δὲ τὴν κινήσιν νῦσιν αὐτοῦ ποιοῦσι, φύσιν αὐτοῦ
ποιοῦσι τὴν λυμανωμένην τὰς ἐνεργείας. But the negative can I think be explained
by viewing the argument as of that dialectical kind which is cus-
tomary in Aristotle. Aristotle, that is, has said that this assignment of
movement to the mind makes it unhappy and uneasy. But, he supposes
some one to object, this movement need not be regarded as constituting its
essence. Aristotle then replies in the words which we are considering, and
asserts that if this movement be not the essential nature of the mind, we are
landed in another difficulty, because this movement must then be regarded
as unnatural: and therefore leading to greater ‘unhappiness’ than was the
other supposition.

§ 19. 407b 4. βελτίων τῷ νῷ μῇ μετὰ σάματος εἶναι] Aristotle is here confuting
Plato out of his own mouth. The Phaedo is full of passages which regard
body as the prison merely of the mind, and regard its deliverance from its fetters as an event devoutly to be wished for. And so far, the doctrine of the world-soul in the *Timaeus* is, says Aristotle, inconsistent with the psychology of the *Phaedo*.

With respect to Aristotle's whole criticism of Plato's conception of a world-soul, Zeller rightly remarks that Aristotle has strangely mistaken the mythical form in which Plato has expressed his views. Ueberweg (*Rhein. Mus.* ix. 56) holds with Aristotle that the soul is to Plato a mathematical magnitude in space, and that of its elements, the ταυτ'ων signifies number, the θάρην space which admits of all figures, and that this space is the principle of motion in secondary matter, and as such the irrational soul. But we really cannot take Plato's expressions in a literal sense: "anything filling space and yet not material can be," as Zeller says, "no more split up and bent into circles, than it can be mixed in a caldron" (*Timaeus*, 41 D).

The real meaning of Plato's conception was, as Zeller remarks, to explain the connection between the idea on the one side, and the phenomenon on the other. Such an explanatory conception Plato found in mathematical proportions, which, so to speak, he localized in a world-soul. Just then as in the *Republic* it is through mathematics (διάωνα or ἀριθμητικὴ) that the mind proceeds from sense to thought, so similarly the world-soul contains within itself the very proportions which are also the constituents of existence. This world-soul is in fact the means by which reason imparts itself to the corporeal—the indispensable intermediating principle between the universal idea and the existing particulars of sense. Hence the world-soul, as standing midway between the sensible and the ideal, participates in both. It is compounded of οὐσία ἀμέριστος and of οὐσία μεριστή—that is, it combines the non-sensible idea with the sensible phenomenon by uniting in itself the specific qualities of both. "It stands over against the unlimited multiplicity of phenomena as its ideal unity: against its lawless vicissitude as the permanent element which introduces into its fixed proportion and law" (Zeller, *Plato and older Academy*, English Trans. p. 346).

§ 22. 407b 13. συμβάινει καὶ τούτῳ τῷ λόγῳ καὶ τοῖς πλείοντος τῶν περὶ ψυχῆς]
Under this would be included all theories of transmigration or μετεμφύσωσι.

§ 23. 407b 24. ὥσπερ εἴ τις φαίη τὴν τεκτονικὴν εἰς αὐλῶν ἐνδύοιη [Whatever be the exact meaning of this, the general sense evidently is that of an incongruous connection—a union of incompatibles. Themistius brings this out still more glaringly by his paraphrase: ὥσπερ εἴ τις φαίη εἰς αὐλῶν ἐνδύεσθαι τὴν ψυχικὴν ἡ τῆν χαλκευτικὴν εἰς κερκίδας. The criticism, as Trendelenburg remarks, already anticipates Aristotle's conception of the soul as an ἐνέλεξια of the body. This is brought out well in the commentary of Philoponus, who says: "Each of the parts is characterized not by the mere psychical activity nor by the mere corporeal combination, but by the two in union. Thus, e.g. the eye is not simply the organ consisting of such and such membranes, but of those membranes along with such and such a psychical capacity."
CHAPTER IV.

The consideration of the intimate relation between the soul and body (with which the third chapter closed) leads Aristotle to examine the theory which regards soul as a harmony. From this he somewhat irregularly proceeds (§ 9) to discuss the fitness of motion as an expression for describing the action of the mind and then finally in § 16 he examines the view which identifies mind with number.

§ 1. 407b 28. πιθανῇ μὲν πολλοῖς] The expression is taken from the Phaedo, p. 88 D, as Philoponos reminds us: καὶ ὁ ἐν τῷ Φαίδων Σίμμας φησίν ὡς οὐδὲν οὕτως αὐτῷ περὶ ψυχῆς πιθανὸς φαίνοντο λόγος ὡς ὁ λέγων αὐτὴν ἀρμονίαν.

407b 29. λόγοι δ’ ὁσπερ εὐθύνας δεδοκικαὶ καὶ τοῖς ἐν κοινῇ γνωμένοις λόγοις] Bernays (Dialoge, p. 14) discusses this passage, and contends that λόγοι διδόναι is not a Greek idiom, so that we should (with Torstrik) at least read λόγον διδόναι. But further even after this alteration has been made, he discovers difficulties in the expression. The forms λόγον διδόναι and εὐθύνας διδόναι are, he maintains, inconsistent with one another, the former being used of clearing one’s self, the latter of being punished for an offence. He would therefore omit λόγους δ’. But in that case ὁσπερ is left rather without anything to explain it: we should require to read εὐθύνας ὁσπερ εἰπεῖν δεδοκικαί. It would seem then that λόγους must be retained, and the grammatical perversity of the plural may be explained as attracted (to use an old fashioned word) into the number of the following word. And surely εὐθύνη being a judicial examination in which a magistrate gave an account of his conduct may be applied equally to an enquiry which condemned, and an enquiry which acquitted. Themistius paraphrases: δεδοκικαὶ δὲ εὐθύνας καὶ εἰσηγημένη καὶ ἐν τοῖς κοινώις λόγοις καὶ ἐν τοῖς ἰδίοις. In consequence of this, Torstrik makes the suggestion that the original text must have contained the words καὶ ἐν ἰδίοις, but finally settles that καὶ before τοῖς λόγοις means etiam.

For the different interpretations that may be given of the ἐν κοινῷ γνω- μένου λόγοι see Bernays’ exhaustive treatise on the dialogues of Aristotle. Bernays (perhaps rightly enough) identifies the λόγοι in question with what are otherwise called εὔφωτερικοὶ: but would seem to be mistaken in identifying such λόγοι with definite works of Aristotle. The εὔφωτερικοὶ λόγοι to which Aristotle refers are not invariably works of Aristotle himself. The phrase would rather appear to have covered all popular writings: and therefore though it includes Aristotle’s dialogues, it is by no means necessarily confined to them. So Prantl takes the expressions in his notes on De Coelo, i. 9 (p. 284) and Phys. IV. 10 (p. 501): “εὔφωτερικοὶ λόγοι sind also ungefähr Raisonnements welche ohne streng systematischen Zweck über irgend einen Ge- genstand von gebildeten Leuten überhaupt ausgesprochen werden.” Similarly Torstrik refers the phrase to the discussions of men of culture (eas disputationes quales homines elegantiores instituere solent). And this interpretation would seem necessary both for Eth. Nic. 1. 13 and Metaphys. 1076’28. In
the former passage Aristotle accepts from the ἐξ. λόγοι a division of the mental faculties into rational and irrational: but in De An. III. 9, 432* 30 notes the inability of ranking sense under either the one or other of the two faculties. Still more difficult is it to regard the ἐξ. λόγ. as works of Aristotle himself in the second passage. Aristotle must have written a surprising number of dialogues on the ideal theory to be able to say that the subject τεθρύπωσε—"and must secondly have formed a low estimate of his own capacities to apply a half contemptuous word to his own discussions. If the reference be to the dialogues of Aristotle, the present reference would be to the dialogue Εὐδημος ἦ περὶ ψυχῆς—about which see the Appendix. Heitz, Verlor. Schriften, p. 200, refers the present passage to the Eudemus and supports against Rose (Aris. Pseudepigr. p. 58) the Aristotelian character of the dialogue as preserved for us.

Simplicius understands Aristotle to be referring as much to the Phædo as to his own dialogue Eudemus: αἵνεκεν μὲν Ἰσοὺς καὶ τοὺς ἐν Φαιδών, λέγων δὲ καὶ τοὺς ὑπ’ αυτοῦ ἐν τῷ διαλόγῳ τῷ Εὐδήμῳ γραφέντας ἑλεγκτικὸς τὴς ἀρμονίας. Philoponus quotes from the Eudemus a passage in which Aristotle criticizes the identification of mind with harmony by the same appeal to physical health as here (frag. 43, 1482* 6) : τῇ ἀρμονίᾳ, φησὶ, τὸν σώματος ἕναντι ἔστιν ἡ ἀναρμοστία τοῦ σώματος, ἀναρμοστία δὲ τοῦ ἐμψύχου σώματος νόσος καὶ ἀσθένεια καὶ αἴσχος· ὅπως δὲ τὸν ἀναμμετρία τῶν στοιχείων ἡ νόσος, τὸ δὲ τῶν ὁμομέρων ἡ ἀσθένεια, τὸ δὲ τῶν ὀργανικῶν τὸ αἴσχος· εἰ τοῖς ἡ ἀναρμοστίᾳ νόσος καὶ ἀσθένεια καὶ αἴσχος, ἡ ἀρμονία ἄρα ψυχεία καὶ ἰσχύς καὶ κάλλος. ψυχὴ δὲ οὐδέν ἔστιν τούτων οὔτε ψυχεία φησὶ οὔτε ἰσχύς οὔτε κάλλος. 

The reference however here is probably mainly to the Phædo of Plato, particularly p. 92. ταῦτα σοὶ συμβαίνει λέγειν ὅτι τὰς καὶ καὶ εἰς ἀνθρώπου εἶδος τε καὶ σῶμα ἀφικέσθαι εἰναι δ’ αὐτὴν ἔννοιαν ἐν τῶν διὰ τὰς διατροφὰς ὑποτέλεσιν. οὐ γὰρ δὴ ἀρμονία γέ σοι τοιούτων ἔστιν, ἢ ἀπεικόσιες κ.τ.λ.

§ 5. 408* 5. ἢτ’ δ’ ἐλέγον τὴν ἀρμονίαν εἰς δύο ἀποβλέπουσας] Bonitz (Hermes, vii. 431) points out that this argument only repeats the first argument in which the meanings of ἀρμονία are similarly distinguished (καὶ τοὺς Ἀρμονίαν λόγος τὶς ἐστὶ τῶν µικροτέρων ἢ σύνθεσις), and suggests that the repetition is due to the failure of the editor of the De An. to incorporate the shorter with the fuller statement of the criticism.

§ 8. 408* 24. εἰ δ’ ἐστὶν ἄτερνον ἡ ψυχὴ τῆς µικροτέρως] This passage may best be understood as a dialectical statement of the difficulties which attend on the contrary hypothesis. Aristotle has been so far arguing against the view that the soul is in harmony: it has, he says, τοιαύτα ἀπορίας: now, he turns round and points out what can be said in favour of the view. Shortly, as Bonitz says, the passage comes to this. If we give up the view which regards the soul as a harmony of the body it is difficult to understand why soul and body are connected in their dissolution so that when the body is dissolved the soul ceases to exist, when the soul departs the body is destroyed.

Cp. Themistius (Spengel, p. 46), ὧτ’ µὲν ὄν τὶς νέον ἡ λέγοντες ἀρμονίαν τὴν ψυχὴν
NOTES.  I. 4.

οὔτε ἐγγὺς ἄγαν οὔτε πάρρων τῆς ἀληθείας βάλλειν ἄν δοξεῖαν καὶ ἐκ τῶν νῦν εἰρημένων καὶ οὐ τῶν ἐν ἄλλων δήλων ἐστι, πιθανότητα δὲ πολλῆς ὁ λόγος ἔχει καθάπερ καὶ πρότερον ἐφην. πάλιν γὰρ εἰ παντελῶς ἔτερον ἡ ψυχὴ τῆς μιξεως καὶ τῆς κράσεως, διὰ τοῦτον φθειρωμένων φθείρεται εὐθὺς ἡ ψυχὴ. The problem Aristotle himself solves by his conception of the soul as ἐντελέχεια of body.

Torstrik regards the passage from ἀπαντήσεις to ἀπολογισμοῦ (18 to 29), as entirely parenthetical and confined to a criticism of the doctrine of Empedocles: so that the words ὅτι μὲν οὖν οὖθ' ἀρμονίαν οἷον τ' ἐνια τὴν ψυχήν merely take up the distinctive arguments adduced in §§ 2—6. But though this somewhat simplifies the argument, it would seem that with the criticism of the doctrines of Empedocles Aristotle blends ἀπορία of wider import. Confining the passage entirely to Empedocles, we must understand Aristotle as saying that the question under discussion cannot be settled, no matter whether we regard the soul as the same with the λόγος τῆς μιξεως or as different from it.

408b 25. τῇ δὴ ποτὲ ἀμα τῷ σαρκί ἐναι ἀναφείται;] Trendelenburg, holding that τὸ εἶναι refers always to the immaterial notion of an object, is perplexed at the fact that we have here ἀμα τῷ εἶναι in place of ἀμα τῇ σαρκί. But if we understand the word as referring, at least in many cases, simply to the concrete existence or being of a phenomenon no difficulty will arise. Philoponus comments: τούτων γὰρ (μορίων) οὖτιος ἀναφείται τῷ ἔργῳ οὐ μένοι οὖτιος οὖν τῶν ὄργανων. ἀναφείται δὲ λέγει οὐ τὸ ὄσκειμένον αὐτῷ τῶν ἀμοιμερῶν, ἀλλὰ τὸ ἐδώς. διὸ οὐκ ἐπεξ ἀναφομενής σαρκὸς ἀλλὰ τῷ σαρκὶ εἶναι.

§ 11. 408b 5. εἰ γὰρ καὶ ὅτι μάλιστα τὸ λυπείσθαι] Here, as Philoponus points out, we have the beginning of a sentence of which the apodosis is to be found in line 11, τὸ δὲ λέγει κ.τ.λ. Bonitz, Areis. Studien, II. 22, reads τὸ τὴν καρδίαν ὅδι κινεῖσαι in place of the dative τῷ on the ground that the mental phenomena in question are, by the advocates of this view, actually identified with movements, not merely regarded as caused by them. Further he reads τὸ δὲ διανοεῖσθαι ἢ τὸ τοῦτο ἔσω ἢ ἐτέρω τι: the meaning then being that thinking is (like fear, &c.) a movement of the heart or (more likely) of something else.

§ 12. 408b 13. βελτιων γὰρ ισως μὴ λέγειν τὴν ψυχὴν ἑλεῦν] Cp., though the point of view is somewhat different, De Part. Animal. II. 7, 652b 13, ὅμοιον ὅντο τῇ την ψυχὴν ἐναί φάναι πῦρ καὶ τό πρόνοια ἡ τρόπων τοῦ τέκτων ἡ τὴν τεκτονικήν, ὅτι τὸ ἐργον περαιτέρα ἐγγὺς ἀλλήλοιον οὕσων.

408b 17. ἡ δ' ἀνάμηνης ἀπ' ἐκείνης ἐπὶ τῶς ἐν τοῖς αἰσθητηρίοις κινήσεις ἡ μοράς] Themistius (Spengel, 51) comments as follows: ἡ δ' πῶς λέγει κινεῖσαι τοῦ ἀναρρόσου τῇ ψυχῇ; ἡ δ' μέχρις ἐκείνης ἡ ὁς ἀπ' ἐκείνης. ὅταν μὲν γὰρ τῶν ἐξουθεν αἰσθητῶν ἀντιλαμβάνεται μέχρις τῆς ἐπὶ ἐκείνην ἀναφοράς τὸ σῶμα κινεῖται τῶν αἰσθητηρίων εἰς τὴν ἀρχήν αὐτῆς παραπεμπότων τοῦ πάθε ϊ ἀπὸ τῶν ἐξουθεν ἀνεμάζοντο, οῦτος ἀντιλαμβάνεται αὐτῇ ἀκίνητος μένουσα. λεγομέθα τοῖν πῦρ τῇ ψυχῇ ταύτην κινεῖσαι τὴν κίνησιν ὅτι τοῦ πάθους τῶν αἰσθητηρίων ἡ ψυχή ἡμῖν αἰτία καὶ τῆς δ' αὐτῶν διαδόσεως, ἐπεὶ νεκρωθέντων γε τῶν ὄργανω τοῦ τοιοῦτον πάθος οὐχ.
The meaning of the passage would seem to be then dependent upon the fact that, according to Aristotle, there remain in the organs of sense after the disappearance of the actual sensation, impressions which Aristotle calls κινήσεις and also in several places μοναὶ (v. Anal. Post. ii. 19, 99b 36 and De Insom. 461a 18). And as ἀνάμνησις itself is like a syllogistic process (De Memor. 2, 453a 9) in effecting recollection through an association of ideas it proceeds outward as it were, from the soul and the idea which happens to be present to it, to the impressions which are stored up in the sense-organs and of which it is in search. So Freudenthal, p. 7. Trendelenburg takes the passage to mean simply that the imagination (which is closely connected with the recollection) of anything is accompanied by a sensuous picture of it, so that if we say we think of what we have perceived we really see it, if of what we hear we really hear it. But this of course is quite outside the meaning.

§ 13. 408b 18. ὁ δὲ νοῦς ἑωκεν ἐγγίνεσθαι] The drift of Aristotle's reasoning is that if movement cannot be rightly predicated of the remainder of the ψυχή, still less can it of the νοῦς or reason. Reason is an οὐσία, a self-contained, self-subsisting substance implanted from without, and not at all influenced by the mutations of the body: it is in fact ἀπαθῆς. The work of thinking (νοεῖ) may indeed be weakened, but the thought which is the source of all this operation renders itself intact. The passage of course anticipates the doctrine of De An. iii. cc. 4 and 5, and may be compared with De Gen. An. 3, 736b 28, λείπεται δὲ τῶν νοῶν μάλων θύραθεν ἐπειδείξεται. The meaning of the illustration which follows is simply that just as the decay of sight in the old means only a decay in the organ of sight, and not in the ὀπτικὴ δύναμις which employs it, so the failing of the intellectual powers is nothing but a failing of the bodily conditions of thought, and not of the thought itself. So Themistius (Spengel, p. 54), ἐξ ὧν ἐδύνεται, καθάπερ τὴν ἀισθήσαν τίθεται μὴ συμπάσχειν καμοῦσι τοῖς ἀργάνοις ὑπὸ τοῦ γῆρως οὐκ ἔν τῶν νοῶν μὴ συγκάμασί τῷ ἑνδον ἀργάνῳ καὶ οὐδὲ ἐπὶ τῆς ἀσθησεως ἱσταται μόνης.

408b 22. ὡστε τὸ γῆρας οὐ τῷ τῆς ψυχής τι πεποιθέναι, ἄλλῳ ἐν φι] Themistius is disturbed at the conclusions which would seemingly logical to follow from this doctrine. What holds good in this way of the reason must he thinks hold good also of the soul taken as a whole: ὥστε τὸ γῆρας οὐκ ἐν τῷ τῆς ψυχῆς πεποιθέναι ἄλλῳ ἐν φι καθάπερ ἐν μέθαι καὶ νόσοις, ἐδὲ τοῦτο, καὶ ἡ φυτικὴ ἀπαθῆς ἄν ἐκ καὶ ἡ ψυχὴ καὶ διὰ τοῦτο ἄθανατος. Nor can we get over the difficulty by saying simply with Philoouson, οὐ πείρατε ψυχῆς αὐτῷ ο λόγος ἄλλα περὶ τοῦ νοῦ· καὶ τοῦτον ψυχήν νοῦν καλεῖ. Themistius in fact would seem right in holding that Aristotle is not so much laying down any
systematic doctrines as raising suggestions: νῦν γὰρ ἀποροῦντι καὶ αὐτῶς μᾶλλον ἦ διδάσκοντι προσέκοικε.

§ 14. 408b 25. Ἀλλου τινός ἔσω φθειρομένου] Bonitz would read ἐν φ in place of ἔσω as in line 23. Philoponus tries with no great success to determine what we are to understand by this internal substance: τοῦτο γίνεσθαι φηγο τοῦ πνευματικοῦ σώματος ἐν φ. πρωτὸς ἑλλάμπουσιν αἱ ψυχικαὶ δυνάμεις φθορὰν τινὰ υπομένουσι.

§ 16. 408b 32. πολὺ δὲ τῶν εἰρημένων ἀλογότατων] The doctrine in question, we learn from the older commentators, was held by Xenocrates and expounded in his work peri φύσεως. The opinion is referred to in Anal. Post. 11. 491a 37, and Top. III. 6, 120b 3.

409a 1. πῶς γὰρ χρήνονται...καὶ πῶς...;] The first πῶς, Philoponus explains, refers to the τρόποι τῆς γυνώσεως, the second to the τρόπος τῆς κυνήσεως, πότερον κατ’ εὐθείαν κινεῖται ἡ κύκλῳ ἡ ἄλλος πῶς.

409a 3. διαφέρειν δε] Being one thing as moving, the other thing as moved.

§ 19. 409a 10. δοξεῖε δ’ ἄν οὐδὲν διαφέρειν] The force of course of this argument is that Xenocrates’ doctrine may be regarded as identical with the atomic theory of soul brought forward by Democritus: and the same difficulties therefore which meet the one must also meet the other. Subtract magnitude from the atoms and points, and monads will alone remain: and it will follow that soul must be confined to the moving factors only. The gist therefore of the comparison is to be found in line 17, ὥστε οὐ τὸ κινοῦν καὶ τὸ κινούμενον ἡ ψυχή, ἀλλὰ τὸ κινοῦν μόνον. Cp. Philoponus, οὐδὲν δὲ τὴν ὑπόθεσιν Δημοκρίτου λυμαίνεται τὸ ἀφελεῖν τῶν ἀτόμων τὸ συνεχές’ οὐδὲ γὰρ διὰ τὸ συνεχῆ σώματα εἶναι ἔλεγον αὐτὰ κινεῖσθαι, ἀλλὰ διὰ τὸ πλῆθος αὐτῶν τῇ ἀναθήσει τῇ πρὸς ἄλληλα.

409a 20. πρὸς τὰς ἄλλας] which do not constitute souls.

§ 20. 409a 21. εἰ μὲν οὖν έστω εἰπαὶ] The argument would seem to be a reducito ad absurdum of the position of Xenocrates by the help of a dilemma. If, it is argued on the one hand, the monads which constitute the soul are to be regarded as different from the points which make up the body, there will have to be two things in one and the same space, and if two, more are possible—which is absurd: if, it is argued on the other hand, the soul be identified with the number which forms itself from the points in the body, the question rises why do not all things have souls just as they have points and ‘numbers’ of points. Thus the words οὖ γὰρ τὸ ὁ τόπος ἄδιαιρητος, καὶ αὐτὰ are intended to bring out the absurdity of the first member of the dilemma: an endless number of points cannot meet in one point: because—and here come in the words under investigation—just as a space while remaining indivisible cannot be divided, so neither can points which are different in position only be so divided as not to be several in number. Themistius, failing to see that the clause is intended to bring out the absurdity of the conclusion, paraphrases, οὖ γὰρ τὸ τόπος ἄδιαιρητος καὶ αὐτὰ αντιθέμενα διαιρέτον οὐ ποιεῖ μέγεθος οὐδὲ δεί πλεύσως τόπον. The two absurd conclusions are
restated in the following chapter, 409\textsuperscript{b} 4, ἐν τῇ μιᾷ στίγμῇ πολλὰς στίγμας ἢ πάν σῶμα ψυχῆν ἔχειν.

§ 22. 409\textsuperscript{a} 28. ἦτι δὲ πῶς οἶν τε χωρίζεσθαι τὰς ψυχὰς] This criticism argues against the Platonists from their own standpoint. The point cannot exist alone (except by abstraction) and so similarly the soul, if reduced to mathematical points, will be unable to exist apart from the body. But Xenocrates, as a Platonist, would maintain that the soul could be separated from the body: and his theory is therefore incompatible with the rest of his psychology. Torstrik regards τὰς ψυχὰς as due simply to a marginal explanatory note and reads instead τὰ στίγμας. He quotes Sophonias in support: ἦτι εἴπερ χωριστὴν ψυχὴν πῶς οἶν τε χωρίζεσθαι τὰς στίγμας καὶ ἀπολύεσθαι τῶν σωμάτων ἃς δὴ ψυχὴν ὑπετίθεντο; οὐ γὰρ εἰς στίγμας (ἰ. γραμμὰς) διαφησουσιν (οὐ μέρη γὰρ αὐτῶν) οὔτε εἰς γραμμὰς τὰ ἑπίσειδα.

CHAPTER V.

This chapter continues (§§ 1—4) the examination of the doctrine of Xenocrates, that mind is to be regarded as a spontaneously motive number: and afterwards (§§ 5—22), investigates the view which resolves mind into certain constituent elements. The first book then closes (§§ 24—26) by suggesting some questions which psychology should solve, as to the unity and uniformity of soul.

§ 1. 409\textsuperscript{b} 1. ἵδιον τὸ ἄτομον] Torstrik would reject the words because the inconsistency in question is not confined to Xenocrates, but shared in common with the theory of Democritus. But the passage may be defended by reference to 408\textsuperscript{b} 33, ὑπάρχει γὰρ αὐτοῖς ἄδυνατα πρῶτα μὲν...ἰδαὶ δὲ ἐκ τοῦ λέγειν αὐτὴν ὀρύμον. Vahlen also argues against Torstrik in his edition of the Poetics, p. 107.

409\textsuperscript{b} 5. εἰ μὴ διαφέρων κ.τ.λ.] i.e. unless the monads of the soul be different from those of the body.

§ 3. 409\textsuperscript{b} 17. ἄσπερ γὰρ ἐξομεν πρὸτερον] Trend. refers to I. 3, 4, 406\textsuperscript{a} 26, ποιαὶ δὲ βίαιοι τῆς ψυχῆς κινήσεις ἑσσόμεν...οὐδὲ πλάτειν ῥάξιον : but this does not seem to meet the case. Aristotle is more probably referring to I. 4, § 4, 408\textsuperscript{a} 3, φαινέρωτατον δὲ εἰ τὶς ἀποδιδόναι πειραβεῖν τὰ πάθη καὶ τὰ ἔργα τῆς ψυχῆς ἀρμονία τινὶ—at least the words πάθη καὶ ἔργα occur in both passages.

§ 5. 409\textsuperscript{b} 27. ἄσπερ ἀν εἰ...τιθέντες] For an explanation of the process by which ἀν in this and similar forms of expression has lost its force, see Cope on Rhetoric, I. 1, 15, "The conditional ἀν belongs to some verb in the apodosis originally expressed, afterwards left to be understood."

§ 6. 410\textsuperscript{a} 5. τὰ δὲ τῶν ὄντων ἐκτὸς] So Torstrik probably rightly amends the line. τὰ δὲ (the reading of V) will not scan, τῶν in ESTUX makes no sense. Trendelenburg conjectured τὰς δόλῳ τῶν ὄκτω μοιρῶν λάχε νῆστιδος αἰγλης, τέσσαρας
NOTES. I. 5.

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4 II. (V ]

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§7. 410a 13. "...ινον του οντος] The connection of this passage would seem to be correctly given by Themistius (Spengel, p. 60). The general argument is that if mind is to consist of the elements, in order to know existence it must consist of all the elements of existence. But these elements of existence are the categories. Either then, Aristotle argues, the soul must consist of elements which will embrace all the categories of existence, or it must consist of the categories separately, with a view to knowing each aspect of existence. But the former supposition cannot be accepted because there is no common category of the categories; the latter cannot be accepted because the mind remains throughout an οὐσία, and no combinations of οσον, οιων, &c. will ever create anything but another οσον or οιων.

410a 16. "...ου δοκει κωινα παντων ειναι στοιχεια] Themistius expands: ου δοκει κωινα παντων ειναι τα στοιχεια, οιον άνθρωπον και του ποιει και του πασχει και των εφεξης ου κα και της ουσιας.

410a 20. έσται άρα οσον και οιων και ουσια ου ου...η έσται άρα οσον regarded as the consequence of ου και έναν ου σειστων. Torstrik thinks the words έσται...οουσια should be struck out as not repugnant to ου και έναν οουσια as they would seem to be intended to be. An analysis however of the passage seems to show that the traditional text is probably correct. Aristotle is arguing that it will not do to say that each separate category has its own elements, and that the soul is composed of such elements. The στοιχεια, for instance, of οσον, we may suppose would be number, line, figure: those of οιων would be colour, sound, &c. For, on this supposition, the soul will have to be a quantity, quality, relation, &c. But—and this seems to be the assumption covered by και οουσια—the soul remains always a concrete substance or οουσια. But how, if it be for the time exclusively a οσον is it to be simultaneously an οουσια? the elements of οσον can give rise only to a οσον, those of οιων only to a οιων, never to an οουσια. And thus this account fails to explain the most fundamental fact about the ψυχη—the fact, viz., that it is an οουσια.

§9. 410a 27. "...πολλας...μαρτυρει το νυν λεχθεν] The passage, as most of the commentators have remarked, forms no true period: nor will it do to construe it as meaning "bears witness to the difficulties of holding to the doctrine (διακερειαι ένομοι του λεγειων) as G. in Trendelenburg suggests. Torstrik is perhaps right in regarding μαρτυρει το νυν λεχθεν as an attempt to fill up a lacuna, though it might be supposed that an interpolator would have.
made a better business of his work. He rightly also objects to taking λεχθεν as equal to λεχθησόμενον, to which however Philoponus and Simplicius tell us it is here equivalent.

§ 10. 410\textsuperscript{b}6. ἐκ πάντων γὰρ έκαστον] Torstrik regards as the insertion of some interpolator de Anaxagora somniantis.

§ 13. 410\textsuperscript{b}21. ὁμοίως δὲ καὶ ὅσοι τῶν νοῶν καὶ τὸ αἰσθητικόν ἐκ τῶν στοιχείων πωμόων] Torstrik would reject the words τῶν νοῶν καὶ τὸ αἰσθητικόν as also φορᾶς οὐδὲ. "Ut enim," he says, "quam maxime immobiles sint plantae, non sequitur ut non omnis anima sentiat nec motionis gratia ex elementis isti animam procreaverant." And besides, he argues, we must strike out the words τῶν νοῶν καὶ τὸ αἰσθητικόν. For, he continues, let us suppose them written by Aristotle. The syllogism of the adversaries will then run as follows: Quicquid sentit et intelligit, idcirco sentit et intelligit quod ex elementis rerum compositum est; intellectus et sensus intelligit et sentit: ergo intellectus et sensus ex elementis rerum compositus est—a syllogism which, says Torstrik, apart from its tautology, is no way liable to the charge which Aristotle brings against those thinkers that their theory does not hold good of every form of soul.

But this would seem to be to miss Aristotle's argument. Aristotle is simply saying: Both orders of previous psychologists take a one-sided inadequate view of ψυχή. The one identify ψυχή with our cognitive perceptive powers—the other with our active and emotional faculties. But the one as well as the other have taken for the whole what is in reality but a part. Animals may have faculties of sense and yet not have movement (a fact which upsets the identification of ψυχή with κίνησις because here we have ψυχή without κίνησις): plants live and yet have neither movement nor αἴσθησις (that is their ψυχή cannot be identified with either cognitive or active faculties): many animals live and yet possess no διάνοια (that is, their ψυχή cannot be resolved into the higher intellectual powers). Thus though the statement of the reasoning is not altogether unimpeachable it seems possible to make a satisfactory argument out of the ordinary text.

§ 14. 410\textsuperscript{b}27. οὐδὲ περὶ δῆλης μᾶς] So Torstrik it would seem rightly; οὐδὲ μᾶς is the reading of ETUVW. Philoponus reads οὐδὲ δῆλης οὐδὲ περὶ μᾶς, and would seem rightly to take the words as an answer to an objection supposed to be raised to Aristotle's argument with a view to shewing that the theory is not intended to apply to mind generally but to one single form of mind—viz. the human. ἤν γὰρ ἡμῖν ὑπὲρ τῶν τὸ γνωριστικὸν τὴν ψυχήν εἶναι τίθεντοι ἀπολογούμενοι εἶπον ὅτι οὐ περὶ πάσης ψυχῆς αὐτοίς ὁ λόγος, ἀλλὰ περὶ τῆς ἀνθρωπίνης ὡς πάσης ἵδιον τὸ γυνώσκειν διὰ τοῦτο φησιν ὅτι οὐδὲ περὶ δῆλης μᾶς ποιοῦντι τὸν λόγον. ἡ γὰρ ἀνθρωπίνη ψυχή ὑπὲρ πάσα καθ' ἄλλην ἐαυτὴν γνωριστικὴ ἐστίν. ἔστι γὰρ καὶ ἐν τούτῳ καὶ τὸ θυμικὸν καὶ ἐπιθυμητικὸ καὶ φυτικὸ ὅπως οὐδὲν αἰσθήσεως μετέχει οὐδὲ περὶ τῆς ἀνθρωπίνης ὅρα πάσης διελέχθησαν.

§ 15. 410\textsuperscript{b}28. ἐν τοῖς Ὀρφικοῖς ἔπεισα καλομένους] These Orphic compositions are referred to again in De Gen. Animal., II. 1, 734\textsuperscript{a}19, ὅσπερ ἐν τοῖς καλο-
mēnous Ὄρφεως ἐπεσιν ἐκεῖ γὰρ ᾠμοίως φησὶ γέγονεθαι τὸ ζῶν τῇ τοῦ δικτύου πλοκῇ. As Trendelenburg remarks, the word καλουμένα in both passages implies a certain amount of doubt as to whether the verses in question should or should not be rightly ascribed to Orpheus. So Philoponus, Καλουμένως εἶτεν ἐπειδὴ μὴ δοκεῖ Ὄρφεως εἶναι τὰ ἐπὶ, ὥσ ἄλλῳ εἶναι τοῖς περὶ φιλοσοφίας λέγει, αὐτῷ μὲν γὰρ εἰσὶ τὰ δόγματα. ταῦτα δὲ φησὶν Ὄμομάκριτον ἐν ἐπεσι κατατείναι. As to the doctrine itself in question Trendelenburg refers to Stobaeus Ecl. i. 52. 898 where Iamblichus is quoted: τινὲς τὴν ψυχήν ἀπὸ τοῦ ἀναψυχεσθαι ὑπὸ τοῦ ψυχροῦ ὀξυμάσθαι ἀποφαίνονται καὶ τῶν ἀναψυκτόνων αέρα ψυχήν νομίζουσιν, ἀσπερ Ἀριστοτέλης παρὰ Ὄρφεως ἐν τοῖς φυσικοῖς ἐπεσι λέγεσθαι τὴν ψυχήν ὥσ εἰσίειν ἐκ τοῦ ὀλον ἀναψυκτὸν ἡμῶν φερομένην ὑπὸ τῶν ἀνέμων. εἰςκε γε μήν ὁ Ὅρφεὺς χωρὶς υπολαμβάνειν εἶναι διαιρέσεις πολλάς δὲ καὶ μέσας ἐπιφανείας καθὼς εἰπὲ τὰς μεριστὰς ψυχὰς ἀπὸ τῆς ὀλῆς ψυχῆς.

411a 1. τοῦτο δὲ λεληθεῖ τὸτο ἐστιν by Simplicius alone to refer to what precedes: Themistius, Philoponus and Sophon. refer it to what follows. Trendelenburg follows Simplicius.


§ 21. 411a 17. ὅτι τὸ ὄλον τοῖς μορφῶν όμοιοίς] so that, as Themistius expands the reasoning, εἰπέρ τὸ ἐν ἡμῖν ὑδρῶν ἐμψυχην καὶ τὸ πάν ὑδρῶν.

411a 20. εἰ δὲ ὁ μὲν ἄδρο διασπάμενον όμοιοίς, ἡ δὲ ψυχή ἀνομοιομέρης, κ.τ.λ.] The argument as Philoponus indicates seeks to refute the panpsychic theory out of its own assumptions. The separate arguments are as follows:

The Theory that mind is present in all the Elements is false because, 1st, (§ 18) Air and Fire do not become living things, as they should if possessed of ψυχή.

(2nd) (§ 19). The theory gives no grounds for holding that the soul of any one element is of higher character than that of another—which nevertheless is a portion of the theory in question.

(3rd) (§ 20). Either, on the theory, air, fire, &c. are ζωα—which is absurd—or, if not, the theory is inconsequent.

(4th) (§ 21). The theory is self-contradictory. Deriving soul from the environment it should make it όμοιοίς through all its different parts. But the soul being, on their own shewing, not homogeneous but composed of unlike parts, it follows that in soul only part of what constitutes soul will be present while part will be away. If in other words the soul of the air in the universe is different from that of the soul within us τὸ μὲν τι ὑπάρχει τῆς ψυχῆς εἰδος τῷ ἀει τῷ ἐν ὑμῖν, τὸ δὲ τι νυκτεί, ἀλλὰ τῷ ὀλῷ. But the words ἡ δὲ ψυχὴ ἀνομοιομέρης may refer not to the opinion of his adversaries but to a generally

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acknowledged truth of the diversity of soul in animals, plants, &c. So Torstrik: Immo propositionem quae in refutatione efficienda minor est tanquam ab omnibus concessam ne ponit quidem, animam nimirum humanam differre ab anima ceterorum animalium, a plantae anima utramque. Torstrik it should be added further views the words ὑπάρξει δῆλων ὅτι as the gloss of an interpolator.

§ 24. 411b 5. λέγουσι δὴ των μεριστὴν αὐτῆν] The reference is to the Platonic psychology as expounded in the Republic and Timaeus. Cp. Repub. 436 A, μανθάνομεν μὲν ἑτέρῳ, θυμοῦμεθα δὲ ἄλλῳ τῶν ἐν ἡμῖν, ἐπιθυμοῦμεν δὲ αὐτοῦ των τῷ περὶ τὴν τροφήν τε καὶ γένεσιν ἡδονῶν. Timaeus 69 D.
BOOK SECOND.

CHAPTER I.

Aristotle now enters on the dogmatic part of his psychology by giving an account of soul as such in its most comprehensive aspect. Beginning by viewing soul simply as an existing thing or substance, he goes on to view it as the perfect realization or truth of body, the ἐντελέχεια or οὐσία κατὰ λόγον, which however is not to be taken as something explicit and active, but rather as implicit and dormant, so that the ἐντελέχεια is not so much like θεωρεῖν as ἐπιστῆμη, and is therefore described as first and earlier rather than second. Soul and body are therefore intimately connected, though soul must not be viewed as necessarily dependent on the body.

§ 1. 412* 3. τὰ μὲν δὴ ὑπὸ τῶν πρῶτων παραδεδομένα] Besides the vulgate as here given, MS. E contains in the margin the fragment of another version, forming the basis of Torstrik’s theory of an earlier and later recension of the text. For this see Appendix.

§ 2. 412* 6. λέγομεν δὴ γίνοις ἐν τι τῶν ὄντων τὴν οὐσίαν] For an explanation of οὐσία and the other words employed by Aristotle in his definition of the ψεῦδος, see the Introduction, p. xl.

412* 7. ταύτης δὲ τὸ μὲν ὡς ὑλὴν κ.τ.λ.] Cp. Α. Μελαθ. Δ. 8, 1017* 12, συμβαίνει δὴ κατὰ δὸν τρόπους τὴν οὐσίαν λέγεσθαι, τὸ θ’ ὑποκείμενον ἐσχάτον, τὸ μηκέτι κατ’ ἄλλου λέγεται, καὶ δ’ ἂν τόδε τι τινὰ καὶ χωρίστων ἴ τοιούτων δ’ ἐκάστον ἡ μορφὴ καὶ τὸ εἴδος: Μελαθ. Δ. 3, 107* 9, οὐσία δὴ τρεῖς κ.τ.λ.: Μελαθ. Ζ. 3, 1029* 1, μάλιστα γὰρ δοκεῖ εἶναι οὐσία τὸ ὑποκείμενον πρῶτον. τοιούτων δὲ τρόπου μὲν τω ἡ ύλή λέγεται, ἄλλου δὲ τρόπου ἡ μορφή, τρίτον δὲ τὸ ἐκ τούτων.

412* 10. It is worth while noticing that the same remark is repeated in line 22.

412* 10. καὶ τούτῳ διχώς, τὸ μὲν ὡς ἐπιστήμη, τὸ δ’ ὡς τὸ θεωρεῖν. 412* 22. αὕτη δὲ λέγεται διχώς, ἡ μὲν ὡς ἐπιστήμη, ἡ δ’ ὡς τὸ θεωρεῖν.

And unfortunately for Torstrik’s theory, both the passages in question occur in the editio prior of the Paris MS., at least the first (412* 10) does so
altogether, and the second as a fragment which Torstrik has filled up so as to make it agree with 422.

§ 3. 412* 12. ταύτα γὰρ τῶν ἄλλων ἀρχαί] i.e. natural concrete bodies are the realities from which mathematician and artistic forms may be said to be derived.

412* 16. οὐσία δὲ οὕτως ὡς συνθετὴ] The living body is a composite substance, as consisting of matter and form in combination. So in Metaph. H. 3, 1043* 18, Aristotle says that while some define a house by telling its bricks and planks, and so give its οἶκος, and others define it as a protective covering, and so give its ἐνέργεια, a third class combine the two, and state its οὐσία—οἱ δὲ ἄμφω ταύτα συντιθέντες τὴν τρίτην καὶ τὴν ἐκ τούτων οὐσίαν. Cp. also Δ. 24, 1023* 31. The meaning of the qualifying phrase οὕτως ὡς is, as Trendelenburg points out, that to speak of composition as applied to nature is to employ an abstraction to which nothing in nature corresponds. "Nature in her productive operations nowhere separates the form and the matter, so that it cannot under any circumstances be said to have 'combined'."

§ 4. 412* 16. ἐπεὶ δὲ ἔστι σῶμα καὶ τοιοῦτο] The argument, Pacius points out, is:

Soul is not a subject but is in a subject:

Body is a subject, not in a subject:

... Body is not soul.

§ 6. 412* 28. τοιοῦτο δὲ ὅ ἀν ἢ ὅργανικον] The epithet ὅργανικον would seem to be regarded by the writer as preferable to ὥν ἔχων, because while ὥν is the effect of soul, ὅργανικον refers to more essential and primary properties.

412* 1. ὅργανα δὲ καὶ τὰ τῶν φυτῶν μέρη] This would seem to be a reply to a supposed objection. The name of "organs" cannot, it might be said, be applied to the parts of plants, &c. which yet notwithstanding possess a "soul." That, Aristotle now goes on to say, is not the case: the parts of plants are also organs.


§ 8. 412* 15. τὸν δὲ ἐστὶ πλεκεις] So all the MSS. Torstrik regards the words as absurd, and amends them by omitting πλεκεις, and reading τὸν δὲ ὦκ ἐστιν, with which ψυχή τοῦτο is to be supplied. Evidently, however, this is not Aristotle's meaning. What Aristotle says is, that soul is the realization of the body; and he illustrates this by the supposition that an artificial body such as an axe were a natural body. Then, under this supposition (ἡ μὲν γὰρ ἀν), its axehood would be its truth and soul. But, he goes on, our supposition is not tenable: our axe is merely an axe, an artificial body, and therefore cannot,
except by way of illustration, be said to have a soul, which is the essence and the truth, not of artificial creations, but of natural bodies possessed of internal powers of movement.

§ 9. 412\textsuperscript{a}20. ὁ δὲ ὄφθαλμος ὑλὴ ὑφεσιν] Torstrik thinks that the eye alone cannot be called the ἐλη of vision, and imagines Aristotle must have written ὁ δὲ ὄφθαλμος τὸ σώματος, ἣ δὲ κύρια ὑλὴ ὑφεσιν—a result strengthened to his mind by the fact that the remains of the editio prior require more words to be supplied than the vulgate offers.

412\textsuperscript{b}23. ὃς τὸ μέρος πρὸς τὸ μέρος] The passage simply means that perception generally stands to the sensitive faculties generally in the same relation as any particular act of sense (e.g. sight) stands to the particular organ (e.g. the eye).

§ 10. 412\textsuperscript{b}25. έστι δὲ οὐ τὸ ἀποθεθηκὸν] Here, as I have tried to bring out in the translation, Aristotle is seeking to explain the remaining part of his definition in § 5, 412\textsuperscript{a}28: ἐπέραμα καὶ καρπός, it is to be noted, are introduced in 412\textsuperscript{b}27 as instances of things which are not sufficiently advanced in the potentiality of life to have a soul. So Themistius, δὴ λοιπὸν ἐκ τῶν εἰρημένων ὃς οὐτε τοῦ νεκροῦ σώματος ἐντελεχεία ἡ ψυχὴ οὕτε τοῦ ἐπέραματος τὸ μὲν γὰρ οὐκ ἔχει ψυχήν, τὸ δὲ οὐδέπω, καὶ τὸ μὲν οὕτε δύναται ζῆν έτε, τὸ δὲ δύναται μὲν ἄλλ' ὑστερον. In fact, as Philoponus explains, by a σώμα δυνάμει ζωῆς ἐχον, Aristotle means the τελείων ἡδι καὶ ὁργανικών.

§ 12. 413\textsuperscript{a}7. διὰ τὸ μοιχεῖον εἶναι σώματος ἐντελεχείας] This exclusion of the reason from the general conditions of the ψυχή raises at once, as Pacius points out, the question whether reason is itself a part or form of the soul. But the question of a νοῦς χωριστός must be left to the Third Book.

§ 13. 413\textsuperscript{a}9. ὁσπέρ πλωτήρ] The force of the illustration would seem to be to shew that even though soul is always ἐντελεχεία of the body, it may yet be separated from it. Just as the sailor, though giving life and soul to his boat, can exist apart from it, so can the soul exist apart from the body.

CHAPTER II.

This chapter takes up a new point of view (ἀρχή) in the exposition of the soul, and completes the abstract metaphysic account of it just given by a statement of the different faculties through which it manifests its activity. The relation between these different faculties and their compatibility with the unity of the soul suggests some questions for consideration, and leads the writer to reassert his doctrine of soul as the truth of body.

§ 1. 413\textsuperscript{b}11. ἔπει δὲ ἐκ τῶν ἀσαφῶν μὲν φανερωτέρων δὲ γίγνεται τὸ σαφές] Ср. Phys. 1. 1, 184\textsuperscript{a}18: οὖ τούτα ἥμιν τε γνώριμα καὶ ἀπλῶς. διόπερ ἀνάγκη τοῦ τρόπου τούτου προάγει ἐκ τῶν ἀσαφεστέρων μὲν τῇ φύσει, ἥμιν δὲ σαφεστέρων ἑπὶ τὰ σαφεστέρα τῇ φύσει καὶ γνωριμώτερα. ἐστὶ δὲ ἥμιν πρῶτον δὴλα καὶ σαφὴ τὰ συγκεκριμένα μᾶλλον ὑστερον δὲ ἐκ τούτων γίγνεται γνώριμα τὰ στοιχεία καὶ αἱ ἄρχαι διαμορφοῦται ταῦτα. διὸ ἐκ τῶν καθόλου ἐπὶ τὰ καθ' ἐκαστὰ δεῖ προϊέναι. The basis
of this theory of method lies of course in Aristotle's distinction between what is "better known" in the order of nature and "better known" relatively to us: about which see Topics, VI. 4, 141b 5, and Anal. Post. I. 2, 71b 34. In the former passage Aristotle brings out the distinction by shewing that while in the order of nature, or ἄναλως, the point is prior to the line, and the line again to the superficies, relatively, on the other hand, to us and in the order of knowledge, the superficies stands first, the point or στεγή last. The passage from the Post. Anal. explains the relatively prior in the order of knowledge to be the more immediate facts of sense, while the prior and better known in the order of thought and nature are the universal truths "further removed from sense." The consequence of the doctrine is that the initial study of a subject should be inductive, and only at a later stage become syllogistic. Cp. Meta. Z. 4, 1029a 4, and Anal. Post. II. 23, 68a 35. The practical meaning of the method in its present application is, that we should begin with effects and argue back to causes,—arrive, in other words, at a conception of what soul is in itself by studying the phenomena in which it manifests its activity. A similar method is recommended to the moralist in Eth. Nic. I. 4, 1095a 2.

413a 13. οὐ γὰρ μόνον τὸ ὅτι δεὶ τῶν ὁμοιωτάτων λόγον δηλοῦν] Cp. Anal. Post. II. 8, 93a 17, where Aristotle distinguishes between a knowledge of the ὅτι and a knowledge of the διάτι, and An. Post. II. 10, 94a 11, where three kinds of definitions are enumerated. ὁρισμὸς δ' ἐπειδὴ λέγεται εἰναι λόγος τοῦ τί ἐστι, φανερῶν ὅτι ὁ μὲν τις ἐσται λόγος τοῦ τί σημαίνει τὸ ὅνωμα ἢ λόγος ἐτέρος ὁμοιωτάτης, οἷον τὸ τί σημαίνει, τί ἐστιν τρίγωνον. ὅπερ ἔχεσθαι ὅτι ὅτι ἧσσομαι διὰ τί ἐστιν. εἰς μὲν ὅρος ἔστιν ὅροι εἰρήμενοι, ἀλλὰ δ' ἐστίν ὅρος λόγος ὁ δηλῶν διὰ τί ἐστιν. οὕτως ὁ μὲν πρῶτος σημαίνει μὲν, δεικνυομεν δ' οὖν, δ' υπότερος φανερῶν ὅτι ἄνωτερον λόγος τοῦ τί ἐστι τῇ θέσει διαφέρων τῇ ἀποδείξεως. διαφέρει γὰρ εἰπεῖν διὰ τί βροντᾶ καὶ τί ἐστι βροντή. ἔρει γὰρ οὕτω μὲν διὰτι ἀποστείλλεται τὸ πῦρ ἐν τοῖς νέφεσιν· τί δ' ἐστι βροντή; ψύζος ἀποστεῖλλεν τῷ πῦρ ἐν νέφεσιν. οὕτω δ' αὐτὸς λόγος ἄλλο τρίγωνον λέγεται καὶ ὁδὸν μὲν ἀποδείξεις συνεχής, ὡδ' ὅ ὁρισμὸς. ἄτι ἐστίν ὅρος βροντῆς ψύζος ἐν νέφεσιν τοῦτο δ' ἐστὶ τῆς τοῦ τί ἐστιν ἀποδείξεως συμπέρασμα. οὐ δὲ τῶν ἁμέρων ὁρισμὸς βέβαιος ἐστὶ τοῦ τί ἐστιν ἀναπόδεικτος, ἐστὶν ἀρα ὁρισμὸς εἰς μὲν λόγος τοῦ τί ἐστιν ἀναπόδεικτος, εἰς δὲ συλλογισμὸς τοῦ τί ἐστι πτώσει διαφέρων τῇ ἀποδείξεως· τρίτος δὲ τῆς τοῦ τί ἐστιν ἀποδείξεως συμπέρασμα.

413a 16. νῦν δ' ὡσπερ συμπεράσματον ἡ λόγου...εἰς τό] Aristotle means that true definitions are like a regular syllogism, so far as to contain a middle term corresponding to the cause in outward nature, but that in ordinary practice (νῦν δὲ) definitions are like mere conclusions which connect terms, but give no clue to the middle term which unites them.

413a 19. τετραγωνισμὸς μέσης εὐθείας] Trendelenburg compares Metaph. B. 2, 996b 19. To understand the illustration we must refer to Euclid II. 14 and VI. 13. Euclid in II. 14 proposes to describe a square that shall be equal to a given rectilinear figure (A), and after constructing the rectangle BCDΕ which is equal to A finds that by producing BE to F and making EF = ED, bisecting BF and extending DE to the circumference of a
circle drawn from $G$, the square of $EH$ is equal to $BCDE$, and so to $A$.

The problem in VI. 13 is to find a mean proportional between two straight lines; and we find that by placing the two lines in one straight line, describing a semicircle on the whole line, and from the point where the two lines meet drawing a line to the circumference, a mean proportional, i.e. a line which stands to the one line in the same ratio as it itself stands to the other, is reached: so that

$$AB : BD :: BD : BC.$$  

It will be observed that $BD$, which is the mean proportional between $AB$ and $BC$, is also the side of the square equal to the rectangle $AB\cdot BC$.

§ 4. 413$^b$ 2. καὶ γὰρ τὰ μὴ κινούμενα κ.τ.λ.] Themistius adds, ὁσπερ τὰ ὀστρεα.

§ 8. 413$^b$ 16. ὁσπερ γὰρ ἐπί τῶν φυτῶν] The meaning is, that just as plants shew the oneness and indivisibility of the vegetative functions, so insects shew the oneness of the sensitive and "orectic." These instances, in short, shew that it is not the case that the perceptive powers are in one part, the vegetative in another.

413$^b$ 22. εἰ δ' ἄσθησιν, καὶ φαντασίαν καὶ ὀρεξί] Freudenthal (p. 8) would omit the words καὶ φαντασίαν, because it would follow from them that all animals which possess sensation have φαντασία as well,—a result at variance with 415$^a$ 10, ὡς δὲ ἑκεῖνον ἔκαστον οὐ πάσι λογισμὸς διάλα τοῖς µὲν οὐδὲ φαντασία, and by III. 3, 428$^a$ 9, 22, 24. And in denying, as in 428$^a$ 11 Aristotle implicitly does (δοκεῖ), that the worm has φαντασία, Aristotle would seem to deviate from the present passage.

§ 12. 414*4. ἐπεὶ δὲ ὃ ὅμων...διχός λέγεται] The introductory particle can with difficulty find an apodosis to which it is to be referred: and Trendelenburg proposes we should read ἐτι δὲ in order to clear up the clauses. Bonitz, Arist. Stud. II. 120, regards the final conclusion as arrived at in *13, ὡστε λόγος τι, as the result of three premisses. "The first premiss," he goes on, "gives expression to a fact of linguistic usage—this, viz. that under ὃ ἐπιστήμη we can understand at once ἐπιστήμη and ψυχή, just as under ὃ ὑγίειν we can understand ὑγίεια or σώμα. The second brings out the import of this use of language by shewing that the first of the two meanings denotes the form and notion, the second, the receptive substratum. [The counterpart of μὲν in the words ἢ μὲν ἐπιστήμη (18) is not ἢ ψυχή δὲ (12), as the sense shews, but the clause is begun as if it were to be continued somewhat in the following fashion: τούτων δ' ἢ μὲν ἐπιστήμη τε καὶ ἢ υγίεια μορφή καὶ ἐνδός τι καὶ λόγος καὶ οἶνον ἐνέργεια, ἢ δ' ψυχή καὶ τὸ σῶμα δεκτικόν, but the second half of the antithesis, instead of being stated co-ordinately, is included subordinately in τοῦ δεκτικοῦ, *10.] The third premiss finally maintains that the soul is that through which we live and think in the most ultimate manner (πρῶτος); and the conclusion therefore follows that soul is the λόγος and ἐνδός, rather than the ὑλή or ὑποκείμενον? This seems more satisfactory than to find with Pacius the apodosis in 414*8, τούτων δ' ἢ μὲν ἐπιστήμη. The force, of course, of πρῶτος in 414*12 is to bring out the ultimate and fundamental position of the soul in life. We live and perceive by the body; but we cannot be said to do so πρῶτος. Torstrik, it should be noticed, makes the apodosis begin with 414*12, ἢ ψυχή δὲ τούτο ὃ ὅμων...πρῶτος.


§ 15. 414*28. φανερῶν ἐκ τούτων] The same account of soul, i.e. has been arrived at by an à posteriori method (so to call it) as was in c. 1 arrived at by an à priori.

CHAPTER III.

The chief object of this chapter is to set forth the relation between the different faculties of soul, and especially to shew the way in which the possession of a higher faculty presupposes the possession of alower. Sensation, it is shewn, in §§ 2, 3, is always accompanied by desire and appetite; and in § 5 the relation of the different powers to one another is compared to that subsisting between mathematical figures. The psychologist, accordingly, must not only give a general abstract definition of the soul: he must interpret this general conception into its particular manifestations.

§ 2. 414*5. οἷς δὲ τούτων, καὶ ἢ ἐπιθυμία] Cp. the previous chapter, 413*23, where almost identical expressions were used.

§ 3. 414*6. ἐτι δὲ τῆς τροφῆς αἰσθήσεως ἐχουσῶν] This, as I have tried to bring out in the translation, is an additional argument to shew that sensation is
accompanying by desire. The argument shortly is, that because all animals have a sense for food, they are necessarily subject to hunger and thirst—that is, a desire for food, whether solid or fluid.

414* 9. τοῖς δ' ἄλλοις αἰσθητοῖς κατὰ συμβεβηκός] So Torstrik and Trend., but all the MSS. read τῶν δ' ἄλλων αἰσθητῶν. The old commentators explained the genitive as depending either on ἀφή or on ἐπιθυμία.

414* 14. διασκορείων...ὑστερον] De Sensu, cap. 4.

§ 5. 414* 25. διό γελοίον ἥτειν τὸν κοινὸν λόγον...ἀφέντας τὸν τοιούτον] The passage would seem to be partly directed against the Platonic realism, and to mean that we can no more get a definition of soul apart from all reference to particular aspects of soul than we can of figure as an entire abstraction from particular figures. Thus, we may compare it with passages like that in Eth. II. 7 § 2, in which Aristotle expresses his preference for particulars over generalities. But the chief difficulty is about ἀφέντας τὸν τοιούτον. Philoponus takes it to mean that we should not be content with general definitions and take no account of the specific kinds and the definitions of these kinds. And he goes on to explain that the psychologist should over and above finding a general account of soul study also its particular forms just as the zoologist should have an idea, not only of the animal in general, but also of the particular kinds of animals, or as the geometricalian should study figure, not only in the abstract, but also in its specific kinds. Pacius, on the other hand, takes τοιούτον to mean, not, as Philoponus, the specific definition, the account of the particular kind, but a definition of the general kind which has been given in the preceding chapters. "Inquit ridiculum esse si quis omissa ejusmodi definitione qualem nos supra attribuimus, i.e. quae attribuatur universaliter in multis, quaeerat definitionem communem," i.e. definitionem ideae. But I am inclined to think that Philoponus gives the truer meaning. The forms of soul, Aristotle is saying, are as diverse as those of figure: and just as the abstract conception of figure resolves itself into the triangle and derivative figures, so the abstract conception of soul reduces itself to the specific kind of soul. No doubt, he adds, there is both in the case of figure and in the case of soul a common notion which applies to all the particular forms: but (and this seems to be the implicit assumption between eiπημέναις ψυχαῖς and διό γελοίον) while there is this general notion, it depends for its value on the particular forms to which it applies: and, therefore (δι'o), it is ridiculous to seek a common abstract definition unless we simultaneously construct a definition of the particular kinds of soul or figure.

415* 12. ἐτερος λόγος] Kampe translates: So ist das Verhältniss des Nus ein anderes: and Philoponus explains that the subject falls to the theologian. But the words need be no more than a reference to another Book (III.), just as ἄλλος λόγος in 419* 9 and ἐτερος λόγος in 421* 6.
CHAPTER IV.

The special analysis of soul is begun in this chapter by an account of the vegetative or nutritive faculties. But before explaining the nature of nutrition, &c. Aristotle shews how soul as the cause of body is at once its formal, its final, and its efficient cause, and then dealing closely with nutrition, proceeds to shew that soul is requisite as the regulative agent in receiving the material of nourishment.

§ 1. 415* 19. πρότεροι γὰρ εἰσὶ τῶν δυνάμεων αἱ ἐνέργειαι] Themistius takes this to mean, that in the order of knowledge the exercise of a power is prior to the power itself: we first observe the action, and only in the second place come to recognise the power which underlies it. But it is more likely that Aristotle means that a mere δύναμις, as such, has no existence; that its real truth only displays itself in its realization, and that, therefore, when truly thought and metaphysically conceived, an ἐνέργεια precedes a δύναμις. Cp. Meta. Θ. 8, 1049* 10; πάσης δὲ τῆς τοιαύτης (δυνάμεως) προτέρα ἐστὶν ἡ ἐνέργεια καὶ λόγος καὶ τῇ οὐσίᾳ...τὸ λόγῳ μὲν οὖν οὐτὶ προτέρα δῆλον τῷ γὰρ ἐνδεχόμεθα ἐνεργῆσαι δυνατῶν ἐστὶ τὸ πρῶτος δυνατῶν, οἷον λέγω οἰκοδομικὸν τὸν δυνάμειν οἰκοδομεῖν καὶ ὁριστικὸν τὸ ὀρίζει καὶ ὁριστὸν τὸ δυνατὸν ὀρᾶειν.

§ 2. 415* 27. γνῶναι αὐτομήτως] v. Histor. Animal. VI. 16, 570* 2; αἱ δ’ ἐγχέλων οὔτ’ εἰς ὀξείας γίνονται οὔτ’ φοτοκούσιν, οὐδ’ ἐληφθῇ πώποτε οὔτε ἄρρόν ἐξορισθείν οὐδεμία οὔτ’ φά. 415* 2. τὸ δ’ οὖν ἑνεκα διττῶν, τὸ μὲν οὐ, τὸ δὲ φ] These words, which occur again in 415* 20, are found in all the MSS, and are recognised by all the commentators in a way which makes it difficult to resort to the otiose expedient of ejecting them from the present passage. Pacius treats them here as answering a supposed objection, to the effect that the animal procreates not τοῦ θείου ἑνεκα but for the sake of conservation. The answer then is, that an end is twofold. “Alter qui finis appetitus ut aedificationis finis est domus, alter vero cui ille finis paratur sicut aedificationis finis est ille qui domum est inhabitaturus.” And this seems to give a fairly satisfactory view of the meaning here. Nor are the two passages mere repetitions of the same truth. For while in the first passage Aristotle would seem to mean that the term end is to be used only in one of the two senses which it bears, in the second passage he would appear to imply that the soul is end in both its meanings, and thus while we have μὲν, δὲ in the former passage, we have τε, καὶ in the second.

The distinction itself is that between an end as objective, a point at which something aims—τὸ μὲν οὐ— and an end as subjective, a thing or person for which something exists—τὸ δὲ φ. Themistius illustrates the distinction from Ethics, where the end may be either, (1) happiness, or (2) the individual: διττῶν τὸ τέλος, ὁς μὲν τὸ ὡς εὐθαμονία, ὁς δὲ τὸ φ αὐτὸς ἑκαστος αὐτόφ. Cp. further Meta. Λ. 7, 1072* 1 (Bonitz, p. 499) and Physics, II. 2,
NOTES. II. 4.

194* 35, διχως γαρ το ου ειναι ειρηται δ' εν τοις περι φιλοσοφιαι, and De Gen. Anim. II. 6, 742* 22.


§ 6. 415* 25. μετεχει ψυχης] This reading I have accepted from Torstrik, following ETV. It is a further confirmation of it that in 27 for κοινωνει ζωης W reads μετεχει ψυχης. The result shews us, as Torstrik says, how the readings of one MS. were used to correct another.


§ 8. 416* 11. των σωματων η των στοιχειων] Torstrik regards the words η των στοιχειων as a mere interpretation, and places them accordingly in brackets.

416* 14. συναιτων...ου μην απλως γε αιτιων] With this distinction between an actual, unconditional cause and a mere concomitant condition of existence cp. Metaph. D. 5, 1015* 21, αναγκαιον ληγεται ου άνευ ουκ ενδηχεται ζην ως συναιτιον οιον το αναπνευ και η τροφη το ζωον αναγκαιον αδυνατον γαρ άνευ τουτων ειναι, and see also De Gen. Anim. 763* 21, διο και των φυτων τα λιπαρα αειφυλλα μαλλον. αλλα περι μεν τουτων εν άλλοις το αιτιου λεκτελον. και γαρ αλλα συναιτια του τουτου παθους αιτιων: Eth. Nic. III. 5, 1114* 23, των έξεων συναιτων ποι αυτω την εσμεν. The distinction occurs frequently in Plato: e.g. Tim. 46 D, δοξαζεται δε ουτω των πλειοτων ου ενυφαιτι άλλα αιτια ειναι των πινων.

§ 12. 416* 11. τη τροφη προς ερμυχυων εστι και ου κατα συμβεβηκον] Themistius paraprases as follows: το ερμυχυων έν εις σωμα το τρεφομενον η ερμυχυων και ουχ η λευκων η μελαν, οντο και η τροφη προς το ερμυχυων εστι και ου προς τα συμβεβηκον το τω τωτω σωματι. Susemmihl, Jahresbericht, IX. 351, suggests that we should either introduce η ερμυχυων after ερμυχυων or omit και before ου κατα συμβεβηκον.

§ 13. 416* 16. ηδη γαρ εστων αυτου η ουσια] So I have determined to read with STVWX. Trend. and Bekker read αυτη with EL: and Torstrik reads γαρ εστιν, supplying το τρεφομενον, and regarding αυτη η ουσια as unnecessary.

§ 15. 416* 23. επει δε απο των τελων] Torstrik supposes that this sentence should be read immediately after ου διναται ειναι. But the only real reason for such a transposition is, that the words εστι δε ζ τρεφεται δυτων go back to the words in line 23. It is however no unusual thing in Aristotle to find that a sentence refers to something separated by some lines from the passage in which the sentence occurs. Besides, here it would seem that the clause under discussion is intended to signify that though three elements are involved in the action of the soul as nutritive, still it is usual to designate everything by reference to its end: and this end being generation, the soul in question should be called generative.
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§ 16. 416° 25. ἔστι δὲ ὁ τρέφεται διδυτὸν] Themistius explains the words as referring, on the one hand, to the δύναμις δρεπτικῆς, which is συμφωνητική, and corresponds to the hand that steers, and on the other hand to the θερμὸν ἐμφυτον which is like an ὄργανον supplied ἐξοδεν, and corresponds to the rudder. So also Alexander as quoted by Philoponus, τὸ γὰρ ὁ τρέφει τὸ διδυτὸν οὐκ ἐπὶ τῆς τροφῆς ληπτέων, φησὶ νῦν, ἀλλὰ διδυτὸν λέγει τὴν δρεπτικὴν ψυχήν καὶ τὸ ἐμφυτον θερμὸν, ὅπο τὸ μὲν ἐστιν ἀκίνητον ἢ δρεπτικὴ δύναμις, αὐτὴ γὰρ οὐ κινουμένη κυνεῖ, τὸ δὲ ἐμφυτον θερμὸν κινοῦν καὶ κινούμενον. But Trendelenburg, following Simplicius, understands the two to be, first, heat innate in the body and moving the nutriment (κινοῦν μόνον), and, secondly, nutriment, which while it is moved by the heat, acts in turn on the body which is being nourished (κινοῦν καὶ κινούμενον).

416° 31. εὐ τοῖς οἰκεῖοι λόγοις] The reference is probably, as Simplicius suggests, to the De Generatione et Corruptione. This, at any rate, is simpler than to suppose with Heitz that the allusion is to a lost work, περὶ τροφῆς, which Heitz thinks is referred to in De Somno, 3, 456*, αἱρεται δὲ περὶ τῶντων ἐν τοῖς περὶ τροφῆς: and in De Part. Animal. II. 3, 65° II, ὥν δὲ τρόπον λαμβανεῖ ἐξ αὐτοῦ (τού αὕματος) τὰ μόρια τῆς αὐξησιν, ἢ τὰ περὶ τροφῆς ὅλως, ἐν τοῖς περὶ γενεσίως καὶ ἐν ἑτέροις οἰκειοτέρον ἕστιν διελθεῖν. That Aristotle should have known a section of what we call altogether by the name of De Generatione as a treatise περὶ τροφῆς would be analogous to the numerous passages in De Coelo in which the Physics are referred to now as the dissertation on principles, now on movement, and in one place on time; v. De Coelo, I. 6, 274* 21, εὐ τοῖς περὶ τῶν ἀρχῶν, III. 4, 303* 23, εἰρεται πρῶτον ἐν τοῖς περὶ χρόνου καὶ κινήσεως.

CHAPTER V.

The general character and conditions of sense-perception constitute the subject of this chapter; and the writer would seem especially to intend to criticise and amend the popular analysis of the process. This popular analysis (δοκεῖ) regards sense as a form of transformation, and as involving movement and a passive impression (πάσχει). But now (line 35) if sense-perception is such a passive impression, we may remember the doctrine of the schools (φασὶ δὲ τιμίως) that like is affected or impressed by like: and then the difficulty presents itself, why do the senses not perceive themselves (417* 2)? why, if sense is a purely physiological process of being impressed, like by like, does not the material organ of sense perceive the materials of which sight is composed? The explanation of this difficulty occupies § 2, and, so far as that section goes, the writer contents himself with shewing that sense is not an ever-active process, but simply a capacity dependent for its exercise upon an object which lies outside itself, much in the same way as the combustible cannot display its action without an actual fire. Thus then without drawing any distinction between the different words (πάσχειν,
which all treat sense as a physiological process, we find that the conditions of receiving an impression are that the object which communicates the impression should be active (ποιητικόν) and actually realized (ἐνέργεια ὄν). And thus we see why the senses cannot perceive themselves—the same thing cannot at once act as δύναμις and ἐνέργεια; and we further see that the popular account of the nature of impression must be altered. The real truth is, that an impression is caused both by like and unlike; the object is unlike the subject before perception, it becomes assimilated to it in the process.

So far, then (417a 21), the explanation of perception as a mere passive impression has held its ground—it does not involve the absurdity of the senses perceiving themselves. But Aristotle undertakes a further discussion of the matter. And this mainly consists in shewing the different senses in which the terms δύναμις and ἐνέργεια, on the one hand, πάσχειν, on the other, can be used. Thus § 4, a δύναμις may mean either a generic possibility (of man to attain to knowledge), or an acquired aptitude of a man to apply knowledge which he possesses. Similarly, § 5, πάσχειν may mean either a "destruction by the opposite" or a "preservation of the possible by the actual." But this last kind of impression is not to be rightly called an impression or transformation (ἀλλοιώσεις) or two forms of the conception must be recognised. Applying, then (§ 6), this distinction to αἰσθησίας, we have to note that the first form of such ἀλλοιώσεις, the mere adaptability for knowledge, is the work of the parent in generation; the second form, which puts a man in the actual possession of the elements of knowledge, is dependent on an external agent. And thus, if sense be in some respects like thought, there is the great difference that while sense is obliged to find its objects from outside, thought finds them within itself. The popular psychology is thus (§ 7) manifestly insufficient: but the words impression and transformation are so much in vogue (κυρίως ἐνόμασιν) that we shall continue to use them; and simply remember that the faculty of sense is that potentially which the object is actually, and that thus, while the faculty begins by being unlike its object, it ends by being like it.

§ 1. 416b 34. δοκεῖ γὰρ ἀλλοιώσεις τις ἐναὶ] ἀλλοιώσεις is a qualitative kind of movement, of such a kind that an alteration or transformation of the object is the result. It is explained in Metaph. Α. 1, 1069b12, as a μεταβολή κατὰ τὸ πάθος, and in N. 1, 1088a 32 it is described as κατὰ τὸ ποιόν. More fully it is said, De Gen. et Corrupt. I. 4, 319b 10, ἀλλοιώσεις μὲν ἢ τινι όταν ὑπομένοντο τοῖς ὑποκειμένοις, αἰσθητοῦ ὑπὸ, μεταβολὴ ἐν τοῖς αὐτοῖς πάθειν ἡ ἐναυτοῦ ὑπὸ, ἡ μεταξύ οὗν τὸ σώμα ἑγαίνει καὶ πάλιν κάμνει ὑπόμενον ὑπὲρ ταῦτα: when on the other hand, there is an entire change as when air is formed from water, γένεσις ἠδύ τὸ τοιοῦτον. Cp. also Phys. VII. 2, § 12, ἀλλοιώσεις γὰρ ποὺ καὶ αἱ αἰσθησίαις. ἡ γὰρ αἰσθησίαις ἢ κατ' ἐνέργειαν κύνης ἐστὶ διὰ τοῦ σώματος πασχοῦσις τί τίς αἰσθησίας.

417 1. ἐφηκαμὲν ἐν τοῖς καθόλου λόγοις περὶ τοῦ ποιεῖν καὶ πάσχειν] The old commentators referred the words to Aristotle’s work, Περὶ γενέσεως καὶ φθοράς: and I. 7 is viewed as corresponding to the present allusion (323b,
perī δὲ τοῦ ποιεῖν καὶ πάσχειν λεκτέων ἐφεξῆς). But Trendelenburg doubts whether the question is there discussed at sufficient length to justify Aristotle in thus appealing to it: and Heitz (Verlorene Schriften, p. 80) thinks the reference is to a lost work of Aristotle's, entitled, in the list which Diogenes gives us, as περὶ τοῦ πάσχειν ἡ πεπονθέα. The same work, he thinks, is intended in De Gen. An. 768b 22, εἶρηται δὲ περὶ αὐτῶν ἐν τοῖς περὶ τοῦ ποιεῖν καὶ πάσχειν διωρισμένοις.

§ 2. 417a 3. διὰ τὸ ἀνεν τῶν ἔξω οὐ ποιοῦσιν αἰσθήσεων] It is worth while remarking that Themistius thinks that Aristotle is not only explaining why the sense organs, while made up of material substances, do not perceive themselves, but touching also on the view of those who say that the soul can perceive though separated from the body. δοκεῖ δὲ μοι ταύτην μη ἀπλώς κυνεῖ τὴν ἀπορίαν ταύτην 'Αριστοτέλης ἄλλως καθαριστώμενώς μᾶλλον τῶν καὶ χιρουργεῖαν τῶν ψυχῆς τοῦ σώματος αἰσθητικῆς εἶναι λεγόντων. οἷς γὰρ οἷα τε καὶ χαρίς τῶν ὀργάνων αἰσθάνεται, διὰ τὸ οἴκου καὶ αὐτῶν αἰσθάνεται τῶν ὀργάνων;

417a 13. ὁμοίως δὲ καὶ τὸ αἰσθητών] So Torstrik would seem rightly to have added the passage on a hint from Alexander: 'Ἀποκ. κ. Λυσ. 155, 20 (Sp.) λαβὼν δὲ τὸ δικός λέγεσθαι τὸ αἰσθάνεσθαι (καὶ γὰρ δυνάμει καὶ ἐνέργεια) ἔλαβεν τὸ τῆς αἰσθήσεως τῆς μὲν εἶναι δυνάμει, τήν δὲ ἐνέργεια, ομοίως δὲ καὶ τὸ αἰσθητών. All other MSS. and editions read ὁμοίως δὲ καὶ τὸ αἰσθάνεσθαι, which, as Trend. says, metra est repetitio.

§ 3. 417a 15. τοῦ αὐτοῦ ὅρος τοῦ πασχεῖν...καὶ τοῦ ἐνέργειαν] The point to be observed is, it would seem, that κυνεῖσθαι is the middle term by which πάσχειν is assimilated to ἐνέργεια. Movement is involved at once in being affected and in being active, and so far the two terms are identical.


417a 18. κυνεῖται ὑπὸ τοῦ ποιητικοῦ] Pacius illustrates by saying that wood which is potentially fire can be actually kindled only by fire which really exists. "Similiter itaque sensus cum sit potestate deducitur in actum per suum objectum quod actu est."

§ 4. 417a 21. διαρετέτων δὲ καὶ περὶ δυνάμεως καὶ ἐντελεχείας] This would seem to be the antithesis to τὸ πρῶτον μὲν οὐν ὡς τοῦ αὐτοῦ ὅρος τοῦ πάσχειν, κ.τ.λ. (115), and to mean that, whereas the previous lines had used these various words as equivalent, and without taking any account of the modifications they admit (ἀπλῶς), it now becomes necessary to distinguish between the different senses in which we may understand δύναμι καὶ ἐντελέχεια, the general expressions under which they fall.

Altogether, it is to be observed, three forms or phases of capacities are mentioned: 1st, the remote implicit capacity (of man generically to have knowledge); 2nd, the development of this implicit capacity, apart however from its application (of a man who has acquired some branch of knowledge); and 3dly, the active expression of this knowledge to the particular problem.

417a 30. ἀμφότεροι μὲν οὖν οἱ πρῶτοι κατὰ δύναμιν ἐπιστήμονες] Torstrik
unnecessarily conjectures, ἀμφότεροι μὲν οὖν οἱ κατὰ δύναμιν ἐπιστήμονες ἐνεργεῖα γίνονται ἐπιστήμονες.

417a 32. ἐκ τοῦ ἐχειν τὴν αἰσθήσεως ἢ τὴν γραμματικὴν] Torstrik would read τὴν ἀριθμητικὴν in place of αἰσθήσεως, following the commentary of Themistius. But αἰσθήσεως makes perfectly good sense, and Themistius, we may suppose, merely expanded γραμματικὴ by adding on an additional illustration in ἀριθμητική.

§ 5. 417b 2. οὐκ ἐστι δ' ἀπλοῦν οὐδὲ τὸ πάσχειν] The different senses in which an object may be said to πάσχει are

(1) Destruction: so e.g. wood πάσχει when it is burnt,
(2) Perfection: so e.g. a man πάσχει when he is taught.

But such passio perfectiva may be again twofold: either from mere capacity, pure potentia to actualization, simple actus, or again from implicit actualization to explicit, from actus primus to actus secundus.

417b 15. τὴν τε ἐπὶ τὰς στερητικὰς διάθέσεις] For the distinction between διάθεσις (a passing phase) and ἐξίς (a permanent established state), see especially Categ. c. 8, 8b 28, διαφέρει ἐξίς διάθεσις τῷ πολυχρωνιστέρῳ εἶναι καὶ μονωμέτερον.

§ 6. 417b 17. ὑπὸ τοῦ γενόντος] That is, the individual is by birth provided with that implicit capacity for learning and knowing things, which will enable him to proceed from the mere capacity of knowledge which is practical ignorance to that possession of knowledge which, as contrasted with its antecedent, is a στερητικὴ διάθεσις. Cp. Themistius, p. 103: ἐπὶ τῆς αἰσθάνεσας τὸ μὲν στέρμα του ᾠδοῦ καὶ τὸ ὄνομα τῆς πρώτης μεταβαλλει μεταβολή καθ' ἑν γίνεται αἰσθανηκ. ὅταν δὲ γένεται ᾠδῶν ἐξεῖ ἤδη τὴν ἐξίς, ἐλλείπει δὲ αὐτῷ ἑν ἐνέργεια.


417b 29. καρδὸς γένοστ' ἵνα καὶ εἰσαυδίτις] It is difficult to say to what it is the writer here alludes: but the reference is most probably to the third and fourth chapters of the Third Book.

CHAPTER VI.

The different senses in which an object of sense may be spoken of as either special (ἴδιων), or common (κοινῶν), or incidental (κατὰ συμβεβηκός), occupy the writer in this chapter. On the subject, see the Introduction, p. lxiii., and cp. De An. III. 1, 425b 15—30, and De Sensu, 4, 442b 5.


§ 3. 418a 18. τὰ γὰρ τοιαῦτα...κοινὰ πάσχει] Simplicus somewhat pedantically points out that it is incorrect to say that the properties in question are
common to all the senses: μεγέθους γὰρ καὶ σχήματος μόνας ἀντιλαμβάνονται ὄψις καὶ ἀφή: and Themistius writes, κοινὰ δὲ πλεῖστοι: κίνησις, however, Themistius adds, entering into all our perceptions. But Philoponus seeks to shew that the different κοινὰ are really with very few exceptions shared by all the different senses. He begins by discussing the apparent contradiction, that while here ἄρθρον is regarded as a perception of the senses, it is in the Physics, in combination with time, referred to reason. πῶς οὖν ἐκεῖ μὲν τῶν νοών μόνον ἐπεν ἀντιλαμβάνεται τοῦ ἀρίθμου ἑνάθεα δὲ τὴν αἰσθήσια. λέγομεν οὖν ὅτι αὐτοῦ μὲν τοῦ ἐδώσει τοῦ ἀρίθμου ὁ νοῦς ἐστὶν ἀντιλαμβανόμενος ἢ μὲν τῷ αἰσθήματι, οὐχ ὃς τοιοῦτος ἄρθρον ἀντιλαμβάνεται, ἀλλ' ἰπλὸς ὡς πεπληθυσμένος ἢ μονάδος καὶ ὃς ἑλάττων πλήθους ἢ πλεῖστον' ὁ δὲ νοῦς ἐστιν ὁ διὰ τῆς αἰσθήσεως καὶ τοῦ τοῦ ἀρίθμου ἐδώσεως ἐπιγνώσκων. ὅτι δὲ καὶ ἡ ἀκοὴ τοῦ ἀρίθμου τούτου ἀντιλαμβάνεται πράξεως. And he goes on to note how the different senses are enabled to distinguish between sensations, smell, for instance, between an agreeable and a disagreeable scent, and thus implicitly to recognise number. And finally he concludes, ἀδικοὶ οὖν ἄρθρον μὲν πάσας αἰσθήσεις, στάσεις δὲ καὶ κίνησις ἄνευ γεύσεως ταῖς λοιπαῖς' σχῆμα δὲ καὶ μέγεθος ταῖς τρισὶν ὅψει, ἀκοῆ, ὀσφυρέσει.

CHAPTER VII.

Beginning now his analysis of the single senses, Aristotle takes up sight, and discusses its object or ἰδεῖν αἰσθητῶν. This he finds is colour, and colour he explains by reference to a pellucid substance of which the "actualization" constitutes light. This light is the condition of colour being seen. Cp. the Introduction, p. lxx.

§ 1. 418b 28. δόλον δὲ ἔσται ο λέγομεν προεισόμενοι] The reference is to § 4, 419a 2, where this ἀνάφθηφαν is explained to be τὰ πυρόδη φανάμενα καὶ λάμποντα.

418b 1. τοῦ κατ᾽ ἐνέργειαν διαφανούς] The actually pellucid is, of course, any pellucid substance, such as air or water, when illumined by light.

§ 2. 418b 9. ἐν τῷ ἄδιδρῳ τῷ ἄνω σώματι] By this upper substance we must understand the upper heavens of which the De Coelo speaks. Thus in De Coelo, c. 2, 269b 30, Aristotle shews that over and above the substances we see around us, there must be another of diviner and more eternal nature: ἐκ δὲ τούτων φανερῶν διὰ πέριπτερ τις οὐσία σώματος ἄλλῃ παρὰ τᾶς ἑνάθεαις ὥστε καὶ πρῶτον κτιστῆς καὶ πρῶτῳ τούτῳ ἀπάντων. And this πρῶτον τῶν σωμάτων has been called αἰθήρ from δὲ θεῖω (of course, a mistaken derivation); διὸ ἀρχὴ ὑπότειν ῥήμαν τὸν πρῶτον σώματος παρὰ τῆς καὶ πῶς καὶ ᾧς καὶ ἀναφέρεται πρόσωπωμαι τῶν ἀναπτάτων τόπων, ἀπὸ τοῦ θείω δὲ τῶν ἀκνῶν χρόνων θεμενοῖ τῷ ἐναντίων ἀντίθετοι. (270e 22).

418b 10. δυνάμει δὲ ἐν φ' τούτῳ ἐστι] Torstrik would punctuate δυνάμει δὲ, ἐν φ', which would give the meaning that where the pellucid or light is present, there darkness is also potentially present.
418b 14. οὖθ' ἄλως σῶμα] After σῶμα and before οὖθ' ἀπορροή Torstrik would insert the words of line 17, οὖθ' γὰρ δύο σώματα, κ.τ.λ.

418b 15. οὖθ' ἀπορροή σῶματος] This, as Trend. remarks, is directed against Plato's doctrine as expressed in the Timaeus, 67 C, ὅ σώματα μὲν χρώας ἐκάλεσαμεν, φλόγα τῶν σωμάτων ἐκάστων ἀπορρέουσαν, ὥσει σώμετρα μόρα ἔχουσαν πρὸς αἴσθησιν.

§ 3. 418b 20. καὶ οὐκ ὅρθος 'Ἐμπεδοκλῆς'] Empedocles, it may be worth while to remark, was nearer the truth than Aristotle, in so far as he had conceived of light as travelling and existing long before it reached our eyes. Cp. De Sensu, 6, 446a 26.

418b 22. καὶ γενομένων ποτὲ μεταξὺ τῆς γῆς] E and V here read τευμομένων, perhaps, as Torstrik suggests, a word Empedocles himself had used. It is in favour of this reading that in De Sensu, 2, 438a 25, vision is said ἀποτείνεσθαι μέχρι τῶν ἄστρων.

§ 4. 419a 3. τὰ πυρόθη φαινόμενα] Cp. De Sensu, 2, 437b 6: τὸ γὰρ λειών πέφυκεν ἐν τῷ σκότει λάμπετω, οἷον κεφάλαι ἀξιῶν τεύχων καὶ ὁ τῆς σημαίας βόλος. Prof. Chandler (Suggestions and Emendations, 1866) makes the not improbable suggestion that for κρέας in line 5 we should read κρέας, adding that "flesh when putrescent is often luminous in the dark."

419a 6. δὲ ἢν μὲν οὖν αἰραν ταῦτα ὅραται ἄλος λόγος] Bonitz thinks the reference is to De Sensu, 2, 437b 5.

§ 9. 419a 32. τὸ δὲ μεταξὺ ψόφων μὲν ἄηρ, ὅσμῆς δ' ἀνώνυμον] Torstrik, from the paraphrase of Themistius, conjectures: τὸ δὲ μεταξὺ ψόφων μὲν καὶ ὅσμῆς ἄηρ τε καὶ ὑδάρ. τὸ δὲ κοινὸν ἀνώνυμον' κοινὸν γάρ τι πάθος, κ.τ.λ. He objects that it is not correct to say τὸ δὲ μεταξὺ ψόφων μὲν ἄηρ, because in line 18 of the next chapter, water is added—ἐτὶ ἀκούσει ἐν ἄηρ καὶ υδάτι. But since Aristotle in the passage in question after καὶ υδάτι adds ἄλλ' ὅστιν, it is not difficult to see why he should in our present passage have confined the media to air solely, and in fact the eighth chapter makes air prominent as the medium of sound. Next, says Torstrik, it is ridiculous to speak of the medium of smell as ἀνώνυμον, as some animals (421b 8—13) smell in air, others in water—quae elementa, Torstrik adds, non carent, opinor, nomine. But the point, of course, is that language provides no one term by which to describe the quality common to air and water in virtue of which they transmit odour. The successors of Aristotle here improved upon their master, and invented, we learn from Themistius, the word διώσμον to describe the common characteristic of air and water which enables it to act as medium for smell, just as they used the word διηχεῖς to denote the medium of sound.

419b 1. ἄλλ' ὁ μὲν ἀνθρωπος—ἀδυνατε ὁσμᾶςθαι] Torstrik objects that this sentence is without a second corresponding clause, and therefore adds from Themistius, τὰ δὲ ἐνυδρα ὁσμάτα καὶ μὴ ἀναπνέοντα.

419b 3. νῦν δὲ πρῶτον περὶ ψόφου καὶ ἀκοῆς διωρίσωμεν] Torstrik, in order to remove the awkwardness of πρῶτον, would here read, μετὰ δὲ ταῦτα λεκτέων περὶ ἀκοῆς καὶ ὁσφυρήσεως, καὶ πρῶτον μὲν περὶ ψόφου καὶ ἀκοῆς διωρίσωμεν.

W. AR.
CHAPTER VIII.

Hearing is the subject of this chapter, and the writer shews that sound is due to the contact of two bodies in air (§ 3). An echo is explained as due to repercussion of sound (§ 4), and air is shewn to be the vehicle of hearing (§ 5, 6), the outer movement transmitting itself along a continuous current to the air within the ear. The different qualities of sound are shewn (§ 8) to be due to the different excitations transmitted by the air. Voice is towards the end of the chapter (§ 9) distinguished from mere sound, and is explained, as due to inhaled air struck by the ψυχή of the throat (§ 11) against the windpipe.

§ 2. 419\sup{\text{b}} 10. πληγή γάρ ἔστω ἡ πουώσα] Cr. Plato, Tim. 67 B: ὅλος μὲν ὁν φωνήν θάμεν τὴν δ' φτών ὑπ' αέρος ἐγκεφάλῳ τε καὶ αἷματος μέχρι ψυχῆς πληγὴν διαδιδομένην. With τως in the preceding sentence Chandler would supply πλήττωντος.

419\sup{\text{b}} 18. ἢτι ἀκούεται ἐν ἀέρι καὶ ὑδατί, ἀλλ' ἦττον] This ἀλλ' ἦττον, Torstrik thinks, could not have been written by Aristotle. The writer, he supposes, wished to say that sound was heard less perfectly in water than in air: he ought therefore to have written, ἢτι ἀκούεται ὁσπερ ἐν τῷ ἀέρι ὃντο καὶ ἐν ὑδατί ἀλλ' ἦττον. But, Torstrik continues, the whole opinion is foreign to this passage, as it contributes no way to the point which Aristotle had taken to demonstrate, viz. that the μεταξό isn't κύριον τοῦ ψόφου. Torstrik would accordingly read, ἢτι ἀκούεται μὲν ἐν ἀέρι καὶ ὑδατί, οὐκ ἢτοι δὲ ψόφου κύριος ὁ ἀέρ ώθε τῷ ὅῳρ.

§ 3. 419\sup{\text{b}} 24. ὁσπερ ἐν εἰ σαρὸν ἡ ὀρματὸν ψάμμου τόπτου τῶν ψερόμενον ταχύ] Aristotle has been explaining that sound always involves a blow, a something striking and a something struck. To make sound, however, to result from this, air is necessary: only, air is not the only condition (line 19); the bodies must be brought into contact with one another and with the air. To allow this, then, to happen, the air must not be allowed to disperse; the bodies must be brought together so quickly that the air does not have time to dissipate. And now (line 24) he illustrates this from a line of sand. Just as one would have to strike that with all rapidity in order to anticipate the dispersion of its particles, so similarly with the air. Cp. Themistius, p. 116, who says that whips thus make a noise by striking the air, κἂν τῇ ταχυτῇ προδαμβάνουσιν αὐτοῦ τὴν ὑβρύσιν, ὁσπερ καὶ εἰ ἄμμον σαρόν ψερόμενον παῦσαι τίς προδαμβάνων τῇ πληγῇ τὴν φοράν. Pacius illustrates by a bladder filled with air, which makes a noise if suddenly compressed, but does not do so if the air is allowed to go slowly out.

§ 4. 419\sup{\text{b}} 25. ἡχὼ δὲ γίνεται—420\sup{\text{a}} 19, ὀρυσμένον τὸν ἄερα] Torstrik devotes a note of seven pages to shewing that this passage as it stands is full of corruptions, interpolations, repetitions and inconsistencies. The whole passage, he points out, consists of two halves; of which the first discusses the nature of echo, and extends from 419\sup{\text{b}} 25 to 420\sup{\text{a}} 2; while the second explains
the character of the congenital air which is confined within the cavity of the tympanum.

419² 25. ἡχὸ δὲ γίνεται...ώσπερ σφαῖρα] Torstrik here objects that the simile of a ball does not correspond with the description which has preceded: nam ludentium pila non ab aere repercutitur sed ab ipso muro: and he omits in consequence the words ἀπὸ τοῦ with the codices SUVX. But Aristotle, it is to be observed, says nothing about a wall: he simply compares the rebound of sound which produces an echo to the rebound of a ball: and generally it may be remarked a simile is not intended to be an exact reproduction of every circumstance in which it illustrates. In confirmation of his view, Torstrik refers to the Problems 901* 16 where an echo is described as that ἡ γίνεται πληγέντος τοῦ τοιούτου πρὸς τι στερεόν from which he thinks it is evident that it is not from air, but from a solid body that air is driven back. He is disturbed however by the fact that at the close of this very passage codex Y reads ἀπὸ γὰρ τοῦ ἀέρος ἀνακλάται τοῦ ἐν τῷ κοίλῳ, οὐκ ἀπὸ τοῦ κοίλου. This however he explains is easily seen to be an interpolation: and the same remark applies to the phrase as repeated in 904* 27, even although in this latter 'interpolation' all the MSS. conspirant. Similarly in 899* 18 he detects a passage inconsistent with Aristotle's true views.

Torstrik's note is an instance of the misleading effect of a simile. He has got so imbued with the idea of a ball rebounding from a wall that he is unable to think of an echo in any other sense, and has failed to see that ἄσπερ σφαῖρα applies simply to ἀποσθῇ and has nothing to do with the other concomitants of an echo. Themistius explains the passage quite clearly: ἡχὸ δὲ γίνεται ὅταν ὁ πληγεὶς ἄηρ ὑπὸ τοῦ ψοφήσαντος ἡ φωνήσαντος προσπεσόν στερεῷ τε καὶ λεῖψι καὶ ἐν ὀντὶ διὰ τὸν τόπον τὸν ὄριζοντα αὐτὸν καὶ κωλύοντα θρύπτεσθαι εἰς τούτῳ πάλιν ἀποτάσιον, ὄσπερ καὶ σφαῖρα. The compression of the air is not merely, as Torstrik thinks, the condition of the rebound: but the waves of air which constitute a sound meet a body of air confined by some material structure and rebound from this air.

419* 33. § τὸ φῶς ὄριζωμεν] Torstrik reads § in place of §, on the ground that Aristotle is talking not of things themselves but of their definition—ὄριζομεν τὸ φῶς τῷ σκάλν ποιεῖν.

§ 5. 419* 33. τὸ δὲ κενὸν ὄρβως λέγεται...ποιῶν ἀκούειν] Here, Torstrik thinks, we have got the earlier version of the explanation of which the later version is contained in 420* 18, 19, καὶ διὰ τοῦτο φασὶν ἀκούει τῷ κενῷ καὶ ἥχοντι. He would therefore omit 33 and 34 and after § τὸ φῶς ὄριζομεν continue ὡς τοῦ δὲ καὶ ὁ ψόφος ἀνακλάται μὲν δὲν ὅταν καὶ μὴ § συνεχὴς καὶ εἰς ὁ ἄηρ, ἀλλὰ διὰ τὸ ψαθύρος εἶναι οὐ γεγονεῖν...λεῖον ἐπίπεδον. κυνῆθι in line 35 Torstrik it will be noticed altered into καὶ μὴ §.

420* 4. διὰ δὲ τὸ ἐν ἀέρι εἶναι] Pacius while saying 'receptam lectionem mutare sine librorum auctoritate mihi est religio' conjectures ἐνά ἀέρα.

420* 5. κωμιζοῦν τοῦ ἐξω τὸ ἐκεῖ κινεῖ] This according to Torstrik has no meaning and he reads accordingly κεῖται with EUXV. Trend. suggests that we should understand ψοφητικῶν as the subject, or out of the genitive.
absolute supply as nominative κωνύμενος ὀ ἐκω ἀνή. Torstrik regards 420e 5—9 as made up of two versions, fragments of the earlier of which are preserved in W. See his Commentary, p. 153.

420e 7. μέρος καὶ ἐμψυχον] Torstrik would read ἐμψυχον, because in an animate body it is not only the auricle which is ἐμψυχον.

420e 9. ἐγκατφροδιμένη πρὸς τὸ ἀκίντρος εἶναι] Trendelenburg points out that this line is at first sight inconsistent with 16, ἐλ ὧρ αἰκείων των κίνησιν ὀ ἀνὴρ κινεῖται ὀ ἐν τοῖς ὡσιν; and Torstrik regards the second passage as entirely contradictory of Aristotle’s views; because A. regarding air as the medium of sound holds that the ear is internally composed of air and that this in order to perceive the movements of external air is itself unmoved. He thinks therefore that the whole of this second passage (420e 16—18) is the result of a gloss written by some medical student in the margin and then incorporated in the text.

Lewes (Aristotle, p. 252) justly ridicules such pedantic criticism and interprets the first ἀκίντρος as merely meaning that the air immersed in the ears is incapable of escape, though at the same time capable of movement. This explanation seems simpler than that of Philoponus—ἀκίντρον οὖν ἀνο ληπτέων τὴν ἐπ’ ἀλον κίνησιν—incorporated in my translation (p. 103).

420e 17. ἀλλ’ ὁ ψφός ἀλλότριος] This then means that this spontaneous movement of the congenital air within the ear is to be distinguished from the sound which does not belong to the ear itself and so is not ὑδιος but ἀλλότριος.

§ 8. 420e 31. οὐ δὴ ταχυ τὸ δέχεται] This would almost seem to be directed against the less exact account given by Plato in the Timæus 67 C, δαὶ ὅ αὐτῆς ταχεία (κίνησις) δέξιων δάῃ ὅ βραδυτέρα, βαρυτέρα (βάσιν). Aristotle’s point is that acute sound is not in itself quick, grave in itself slow, but that the character of the notes is a result (αὐραμαίει) of the quickness and the slowness. The subject is discussed more fully in De Gen. An. v. 7, 787e 11, where the writer distinguishes between strong and weak notes on the one hand, low and high on the other. Strong and weak he explains are used ἀπλῶς, low and high relatively: μεγαλόφωνα μὲν οὖν ἐστὶν ἐν τῷ τολμά ἀπλῶς εἶναι τὸ κωνύμενον, μικρόφωνα δὲ τῷ βλάγγου. Βαρύφωνα δὲ καὶ διόψωνα ἐν τῷ πρὸς ἀλλῆλα ταῦτην ἐξειν τὴν διαφοράν.

420e 8. ἀπότασιν ἔχει καὶ μέλος καὶ διάλεκτος] ἀπότασις would seem to be the same with what is otherwise known as ἐπίτασις, which Aristoxenus (Harmon. Elem. i. 10) defines as follows: ἦ μὲν οὖν ἐπίτασις ἐστὶ κίνησις τῆς φωνῆς συνεχῆς ἐκ βαρυτέρου τούτου εἰς διόπτερα. Thus it is the range of notes of which a voice is capable. μέλος Trendelenburg explains as sonorum qui sibi inter se succentur concentus. In Politics, Θ. 7, 134b 6, Aristotle speaks of τὰ ᾱδρα μέλη and in 134b 33 of μέλη ἡθικα καὶ πρακτικα, from which it would appear that the word meant something like measure, the relation between fast and slow notes in the music. διάλεκτος is defined Hist. An. Δ. 9, 535a 30 as ἦ τῆς φωνῆς ἐπὶ τῇ γλώσσῃ διάρθρωσις and is said further 536b, to be peculiar to man.


Torstrik thinks the passage from πολλά δὲ τῶν ρέων in 9 down to οὐ τῷ
tauonti moriph in 14 cannot have been written by Aristotle. For 1st, The illustration is foreign to the general spirit of the book, sumnam ac principia in omnibus persequenti: 2ndly, Had Aristotle wished to prove his point that many animals do not have phoven, he would not have used the instances of fishes—rem paucissimis notam—but would have taken the more obvious instance of the Rombos of insects: 3rdly, The non-Aristotelian character of the passage is attested by the fact that the illustration of the fishes is not inserted, as it ought to be, after kal toutov evalum ixvthes; and the sentences as conventionally arranged argue that because sound is a certain movement of the air, insects which move air are without a voice—a mode of reasoning which the summus artis logicae magister might well decline to acknowledge.

Of these grounds on which Torstrik doubts the genuineness of this passage, the 1st is no way convincing. Aristotle's love of concrete illustration would always lead him to refer to actual facts when they were ready to hand: the 2nd rather forgets that the lexemos with which the illustration is introduced points to a phenomenon not paucissimis notam but subject of much talk: and the 3rd would seem to be met by transposing the two sentences in question and reading kal touti elulagos k.t.l. after alla oi lexemos.

§ 10. 420b 13. phoven b' esto [foun phofos, kal ou tois tauonti moriph] Torstrik objects that kal is out of place because the one part of the sentence is not continued but limited by the second part. He therefore appealing to Themistius would read, phoven b' esto [foun phofos, ou pias de kal ou tois tauonti moriph]. But the vulgate may be accepted if we regard phoven b' esto k.t.l. as itself a limitation of aepos kinesis tis estin o phofos, a limitation continued by kal ou tois tauonti moriph.

420b 21. to b' ation en eterois eirheleta] See peri anapanis c. 8.

§ 11. 421a 1. alla touto to repei] X has touto but both Trend. and Torstrik read toutw. It is not clear what we are to regard as subject of repei. Torstrik takes to emphiwvov and Kirchmann similarly translates “schlägt das beseelte Wesen.”

CHAPTER IX.

The sense of smell is analyzed and shewn (§§ 1, 2) to be comparatively little developed in man. A classification of odours is given (§ 3) and the sense is shewn like other senses to involve a medium between the object and the organ. With the subject of the chapter cp. De Gen. An. v. 2, 781*, De Part. An. ii. 10, 655b, and De Sensu 5, 442b.


421a 23. parata to aisbhtirimov touto einai eufwv] Cp. Part. An. ii. 16,
666a 11 and Phys. 3, 807b 12: ἐνυφών σημεία σάρξ ῥυγοτέρα καὶ ἀπαλωτέρα, οὐκ εὐεκτικὴ οὐδὲ πικελώδης σφόδρα.

§ 3. 421b 1. ἢ μὲν γὰρ γλυκεῖα, κρόκου καὶ μέλιτος] So Torstrik has rightly edited the text omitting ἀπὸ τοῦ with STUVWX. Aristotle has been remarking that as flavours are better distinguished than odours, the names of odours are derived from flavours in virtue of the similarity which subsists between them, i.e. when an object tastes sweet it is also said to smell sweet. He illustrates by honey which being sweet to taste is also spoken of as sweet to smell.

§ 6. 421b 21. ἀλλ' ἄδιναρν] Trendelenburg thinks this may be a marginal remark which has become incorporated with the text. But this supposition seems hardly necessary. Aristotle is saying: Since the perception of odours involves respiration, bloodless animals which do not respire would seem to require to have some other sense in order to perceive odours. But, Aristotle goes on, this cannot be: such animals perceive the difference between odorous and inodorous substances and this perception can only be called smell. The reasoning it is true is far from satisfactory, as the fact that bloodless animals do not respire and yet smell would naturally lead to the conclusion that their manner of smelling is different. But this can hardly be the meaning of ἕτερον τῷ ἄνθησιν: and had Aristotle really meant that their manner of perceiving smells was different he would not have left the subject without some suggestions as to what this manner was. Instead he lets himself be misled by language and argues that bloodless animals have smell (as he understands it) because they distinguish between the fragrant and the reverse.


§ 8. 422a 6. ἔστι δὲ ἡ ὁμήρη τοῦ ἔγρον] Rather as Prof. Bain says (Senses and Intellect, p. 147) the objects of smell “require to be in the gaseous state in the same way that the objects of taste require to be liquefied. Solids and liquids therefore have no smell except by being evaporated or volatilized.” As Bain however points out, Heat by its volatilizing power and by promoting decomposition is a powerful agent in developing odours.

CHAPTER X.

Taste has for its object something tangible, and therefore acts apparently as immediately as the sense of touch (§§ 1, 2). Its object is at once the sapid and the insipid (§ 3). Flavours are classified as sweet and bitter, oily and saltish, pungent and piquant.

§ 2. 422b 15. οὐδὲ ταῖς ἀπορροίαισ] The opinion of Democritus.

§ 3. 422a 20. ἄσπερ δὲ καὶ ἡ ὁψῖν] Here, as Bonitz notes, we have the commencement of a complex protasis of which the apodosis follows in line
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29, οὖτω δέ καὶ ἥ γεύσις. "The protasis consists of three clauses of which the two first refer to the relation of sight and hearing to their objects, the third mentions the difference of the two meanings of the negation marked by a privative, and then out of the two first clauses through an application of the explanation given in the third, the same proposition is referred to the sense of taste."


§ 5. 422b 10. τὰ δ' ἐδώ τῶν χρυσῶν] With the list cp. De Sensu, 4, 441a 15, and for modern classifications see Bain, Senses and Intellect, pp. 154—159.

CHAPTER XI.

The sense of touch raises the question (§ 1) whether it is one or more senses, and whether it acts with or without a medium of sensation. The first question is partially solved (§ 2) by considering the wide range of the objects of other senses: as to the second question touch is shewn (§§ 5—8) to involve the flesh, not as a medium, but rather as a concomitant of sensation. Touch, it is further pointed out (§ 11), involves a state of indifference with regard to things tangible.


§ 4. 423a 10. νῦν δὲ διὰ τὸ διαφέρειν δὲ οὐ γίνομαι αἱ κυήσεις] Simplicius refers this to the media, Themistius to the organ of sensation.

§ 5. 423b 20. νῦν δὲ δύο διὰ τὸ μὴ ἀντιστρέφειν] For Aristotle's conception of ἀντιστρέφειν (conversion), see Categ. 2b 20, 14a 30: Anal. Post. ii. 4, 91a 35, and cp. Cope's exhaustive note on the Rhetoric, i. 1 (ἡ ὑποκειμ. ἐστιν ἀντιστροφὸς τῇ διαλεκτ.]. Originally the term denoted the counter-movement and answer of a chorus, antistrophe replying to the strophe, and "thus when applied in its strict and proper sense it denotes an exact correspondence in detail."

§ 6. 423b 21. ἀποφέιει δ' ἀν τις] Here, as Bonitz has clearly shewn (Studien, ii. 62, 63), we have the introduction to a question which is itself only stated in 423b 1, πάτερον οὖν πάλιν ὀρόις ἐστὶν η ἀνθρώπος ἢ ὀλοιόν ὀλοί. The latter suggestion, that different senses act in different ways, is supported by the opinion current in Aristotle's day (καθάπερ νῦν ὁδεί, 423b 2), that
touch and taste operate in a different manner from the other senses. This opinion he refuses to accept (τὸ δ' οὐκ ἔστω), but before he states the question which forms the turning-point of his argument he adduces a number of considerations which themselves militate against such a conclusion. Body, he remarks, has always three dimensions. Now bodies which have anything between them cannot really touch one another. But all bodies exist either in air or water and as these are bodies (τὸ δ' ύγρων οὐκ ἔστω ἄνευ σῶματος) it follows that our bodies cannot be in actual contact with tangible objects. And hence the ἀπορία which Aristotle raises.

423b 1. εἰ διερῶν] These words must be combined with λανθάνει ἡμᾶς. The sentence written at length would be as Trendelenburg remarks: λανθάνει δὲ μᾶλλον ἡμᾶς εἰ διερῶν διερῶ ἀπτετα, ἀσπιερ καὶ τα ἐν τῷ ὅδατι ζῷα λανθάνει εἰ ύγρον ύγρῶν. ύγρῶν, it should be noticed, is the distinctive term to denote the quality of water just as διερῶν serves to designate the distinguishing quality of air.

§ 9. 423b 22. δῆλον ὅτι ἐντὸς τοῦ ὅπου ἀισθητικῶν] Aristotle's argument is of course, as Kirchmann points out in his translation, somewhat misleading. The eye does not perceive an object when placed directly on it, simply because its too close proximity prevents the necessary refraction of the luminous rays, and the ear ceases to hear objects brought directly into contact with it because the auditory nerves can only be excited by waves of sound. Contact on the other hand is the excitement adapted to the tactile nerves, and the skin as the organ of touch just requires this excitation of its surface: so that Aristotle's argument just proves the opposite of the conclusion which he draws.


CHAPTER XII.

The general character of sense-perception is expounded in this chapter, and Aristotle shews (§ 1) that sense receives the forms of things without their matter, that (§ 2) sense is not a merely physical process, but an interpreting act involving such proportion that (§ 3) excessive developments of any qualities destroy the organ of perception and (§ 4) plants are unable to perceive. Sense therefore involves an essential relativity between the organ and the object, and inanimate objects even if they be affected by some smell or sound cannot apprehend its form in such a way as to be said to perceive.

1 By an unfortunate oversight, ἔδαρος, the reading of SUX, has been rendered in the translation, through this reading being retained in the Tauchnitz text, which the first draft of the translation followed.
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§ 2. 424a 24. αἰσθητὴριον δὲ πρῶτον ἐν δ ἢ τοιαύτῃ δύναμις] Kirchmann translates: Das eigentliche Sinnesorgan ist das in welchem ein solches Vermögen. Similarly Trendelenburg: 'tacite mentem spectare videtur, quae propria est hujus facultatis sedes.' But it seems easier to take πρῶτον in a temporal sense as meaning that an organ can only be called an organ of sense when this power of apprehending things in their specific character is reached.

424a 25. ἔστι μὲν οὖκ ταύτων, τὸ δ' εἴναι ἑτέρον] This may be understood as referring either to the faculty and the object of sense, or to the organ and the faculty. But as Aristotle has just previously compared the αἰσθητήριον and the δύναμις of αἴσθησις, it seems most natural to suppose him to be asserting the sameness and the difference of the organ and the faculty of sense. Cp. Themistius, p. 143, καὶ τῷ μὲν ὑποκειμένῳ ταύτων ἢ τε αἰσθησις καὶ τὸ αἰσθητήριον, ἀσπέρ καὶ ἀπάσα μορφή τοῦ δεδεγμένῳ, τὸ δὲ εἶναι ἑτέρον τοῦ τε δραγάνου καὶ τῶς δυνάμεως. The meaning of τὸ εἴναι is simply its usual sense of being, manifestation, particular expression or application. So it is said in Eth. Nic. v. 1, that virtue and justice are fundamentally the same, but vary in their εἴναι or particular application, virtue being the state as such, justice the application of it to another (πρὸς ἑτέρον). Cp. Eth. Nic. VI. 8, 1141b 23, εἰτε δὲ καὶ ἡ πολιτικὴ καὶ ἡ φρόνησις ἡ αὐτὴ μὲν ἔξις, τὸ μὲντοι εἶναι οὐ ταύτων αὐτάς, i.e. the ideal of the statesman and his ideal of individual welfare are fundamentally the same, but realize themselves in different ways.

§ 3. 424a 30. λύται ὁ λόγος (ταύτῳ δ' ἢν ἡ αἰσθησις)] So Theophrastus (§ 32) arguing against the opinion of Anaxagoras that αἰσθησις is always μετὰ λυπῆς points out that the existence of ὑπερβολαὶ τῶν αἰσθητῶν does not (as Anaxagoras thinks) prove that the exercise of sense involves pain ἄλλα μᾶλλον ὡς ἐν συμμετρίᾳ τιν καὶ κράσει πρὸς τὸ αἰσθητὸν ἡ αἰσθησις.

§ 6. 424b 17. ἢ τὸ μὲν δομάθαις αἰσθάνεσθαι] Philoponus (quoted by Trendelenburg) comments as follows: οὐ γὰρ ἀρκεῖ πρὸς τὸ αἰσθάνεσθαι τὸ δύνασθαι τὸ εἶδος χωρίς τῆς ύλης δέχεσθαι ἄλλα καὶ δυνάμεως δεῖ ψυχικῆς, ἢτις οὐκ ἐν πάσῳ ἔστι τοις τὰ εἶδη τῶν αἰσθητῶν χωρίς τῆς ύλης δεχομένω τοις.
BOOK THIRD.

CHAPTER I.

THIS and the following chapter connect themselves closely with the analysis of sensation given in the preceding book. But there would seem to be no good reasons for re-arranging the Treatise and connecting the chapters in question with the Second Book. The Third Book takes up the general question of the cognitive powers of man: and while the Second Book had confined itself almost entirely to the analysis of αἰσθήσεις as such, the present book begins its account of cognition by considering the place of sense in knowledge. The first chapter accordingly seeks to shew the adequacy and completeness of our perceptive powers. Beginning (§§ 1—4) by a somewhat obscure and illogical argument to shew that the five senses already enumerated include all the possible senses, and that no other can be imagined to exist, the writer proceeds (§§ 5—8) to confirm this result by shewing that the common sensibles connect themselves with no one particular sense.

§ 1. 424b 21—425a 13. ὅτι δ' οὐκ ἐστιν αἰσθήσεως] The argument of this paragraph is full of difficulties, and both Trend. and Torstrik confess their inability to understand it. Bonitz, however (Aris. Studioi, II. 30), while allowing that Aristotle's reasoning is materially untenable, yet maintains that, judged of by the presuppositions of Aristotle, the demonstration is perfectly intelligible: and Kirchmann has called attention to the fact that Aristotle's expression πιστεύειν implies that the writer does not propose to do more than bring forward a series of facts which will make his conclusion fairly probable. The reasoning, such as it is, is somewhat to the following effect. The writer wishes to shew that there is no faculty of sense (αἰσθήσεως) beyond the five which we possess. The chief ground he gives for this conclusion is, that we possess all the organs of sense (αἰσθητήρια) which we can be shewn to require, and that therefore we may, subject to the condition (425a 11) that there is no body outside those with which we are acquainted, maintain that we are without none of the faculties of sense. Thus, as Bonitz says, the argument assumes the form of a series of assumptions to which the apodosis is to be found in 425a 9, πᾶσιν ἂρα αἱ αἰσθήσεις, to be again repeated with the necessary limitations in 425a 11, ἃτ' εἴ µὴ τι ἔτερον ἐστι σῶμα. The words from ἐχεῖ δ' οὖν (424b 31), to τοῦ δ Achilles (425a 1), are to be regarded as subordinate to the main argument. This main argument would appear to be as follows:
I. We have αἰσθήσεις of all those qualities of an object for which we possess an αἰσθητήριον.

2. We possess all the αἰσθητήρια which a consideration of the nature of things can lead us to expect.

Therefore: we possess all possible αἰσθήσεις.

The centre of Aristotle’s argument thus lies in the assumption—ἀνάγκη εἴπερ ἐκλείπει τις αἰσθήσεις καὶ αἰσθητήριον τι ἡμῖν ἐκλείπειν (424b 25)—the absence of any one αἰσθήσεις is possible only on the supposition of the absence of any organ of perception. Aristotle therefore seeks to shew that we are without no organ of perception: for which conclusion he adduces the following grounds. (a) The perceptive organs must operate either immediately or mediatly. But (β) so far as immediate action is concerned, touch may be regarded as a perfect source of sense-perception: and this sense-organ is one we actually possess (ἡ τυγχάνουσα ἔξων). (γ) As to mediate perception, the organs which so operate can act only through the simple elements (τοῖς ἀπλοῖς), i.e. air, water, earth, and fire. Now (δ) all these, or at least as many of them as are adapted for sense-perception, enter into our perceptive organs. Air and water constitute the perceptive medium in the organs of sight, hearing, smell (and taste): fire and earth are either unsuited to act as media (this Aristotle could assume from the analysis of the De Sensu), or else enter into all the different organs of sense. Thus (ε) the only mediate organs which man can possess are those resolvable into air and water: and these as matter of fact various animals do possess (ταύτα δὲ καὶ νῦν ἔχουσιν ἐνα ζῷα). Hence then we possess at once the mediate and the immediate organs of perception: and thus having all possible αἰσθητήρια we have also all possible αἰσθήσεις. But of course the validity of this reasoning depends entirely on the completeness of our analysis of σώμα, and of the elements into which it can be resolved; and the writer therefore modifies his conclusion accordingly, ὡςτ’ εἰ μὴ τι ἔτερον ἐστὶ σώμα (425a 11).

Practically, therefore, Aristotle’s reasoning reduces itself to the hypothetical syllogism:

If any αἰσθήσεις is wanting to us, some αἰσθητήριον must be wanting:
But no αἰσθητήριον is wanting:
Therefore no αἰσθήσεις can be wanting either.

It remains to notice the first section of the main argument,

424b 23. εἰ γὰρ παντὸς οἷς ἐστὶν αἰσθήσεις ἀφῆ, καὶ νῦν αἰσθησιν ἔχουσιν]

Bonitz rightly notes that Trendelenburg’s explanation—si omnium rerum sensus in contactu positus esset, omnia sentiremus—destroys the sequence of the reasoning: but the words would seem to have a wider meaning than Bonitz gives them. Alexander Aphrod. appears right in regarding them as an illustration from touch of what holds good of every other sense, so that just as touch presents us with all the qualities of body as tangible, so sight presents us with all visible, hearing with all audible, &c. Cp. Alexander Ἀπορ. κ. Δύσεις (Spengel, p. 170) εἰπάν γὰρ ἐπὶ τῆς ἀφῆς κατελέπευ τὸ καὶ ἐπὶ τῶν
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ὅλους ἀισθητηρίων τε καὶ αἰσθήσεων προσθείναι, δὲν πάντων λειψάνην γίνεται καθόλου τὸ εἰ δὲ ἔχομεν τὰ αἰσθήτηρα, τούτων πάντων καὶ αἰσθήσεων ἔχομεν. And the words would therefore seem to mean that we possess αἰσθήσεως of all those qualities of an object for which we possess an αἰσθητήριον.

§ 2. 424b 30. ἔχει δ' οὖν] This section Bonitz rightly regards as subordinate to the main argument. Its object is to shew that if the same elementary substance is the medium for different classes of sensible phenomena, one and the same elementary substance will serve to provide a knowledge of the different spheres of sense.

425a 2. αἰσθήσει τοῦ δὲ ἀμφότερον] The reasoning, it need scarcely be pointed out, is absurd if taken precisely as we have it in the text. The passage apparently maintains that if some element is medium for two classes of sensations, the presence of this element in the organism will secure the perception of what can be perceived through both, so that, as Simplicius notes, the mole as having air for hearing should also, as air is also a medium of vision, possess the sense of sight. Really, however, of course, Aristotle only means that since both air and water serve as media for perceiving colour, either air alone or water alone should serve as medium for perceiving what can be perceived through one or other (τοῦ δὲ ἀμφότερον). And the writer, treating the subject purely as a physiologist, takes no account of the fact that the elements only perceive through a conscious mind.

§ 5. 425b 13. ἀλλὰ μὴν οὐδὲ τῶν κομών οἶνον τ' εἴσαι αἰσθητήριων τι ἴδιον] Aristotle's proof of the position that the common sensibles cannot be ascribed to any one particular sense is encumbered by a number of difficulties and apparent inconsistencies which will be best discussed after considering the main links in his argument so far as they can be made out. The points to be noticed would seem to be simply these. The κοινὰ αἰσθητά cannot be given us by any one ἴδιον αἰσθητήρων: for if so they would have to be perceived either (1) in the way in which the sense of sight simultaneously with the perception of an object as yellow (say) knows it from past experience as also sweet, or (2) in the way in which the perception of some quality or other is immediately attended with the knowledge of the object to which the quality belongs. But the common sensibles are not perceived in this manner: they are not, that is to say, an indirect addition to a perception but inseparable elements in it. And, Aristotle would seem to add, even if the common sensibles could be identified with these indirect sensations, not even so would it be true to speak of a particular sense-organ as their source: for the senses in this work of combining qualities act not as separate independent senses, but as one united whole (οἱ Χ ἄντας δὲ ἄλλας μία), which makes it impossible to describe the intuition of the common sensibles as the work of the particular organ of sensation.

425b 14. δὲν ἐκαστὴν αἰσθήσει αἰσθανόμεθα κατὰ συμβεβηκός] This description of the common sensibles as perceived incidentally or κατὰ συμβεβηκός appears at first sight flatly inconsistent with the words of 425b 27, τοῦ δὲ κοινῶν ἢδὲ ἔχομεν αἰσθήσεων κοινῆς οὐ κατὰ συμβεβηκός: and Torstrik has accord-
ingly suggested that we should introduce a negative (οὐ) into the former passage. But the MSS. offer no variation: and that the negative is in-admissible is evident from the fact that otherwise Aristotle's remark to prove that the common sensibles are not perceived κατὰ συμβεβηκός would be altogether superfluous. The truth would seem to be that Aristotle is really using the phrase κατὰ συμβεβηκός in somewhat different senses in the present chapter. Later on he employs it as in 11. 6 to denote the inference added to a sensation, the indirect perception of an object through a quality. But in speaking of the κοινά as perceived, κατὰ συμβεβηκός, he means simply that they are perceived concomitantly with the special quality of sense: so that we no sooner perceive something as coloured than we perceive it κατὰ συμβεβηκός as a surface, no sooner hear a sound than we distinguish it as one or two. So Themistius (p. 150), ἡ δύσις μεγέθους οὐκ αἰσθάνεται προηγουμένως ἀλλ' οὐδὲ σχήματος οὐδὲ στάσεως οὐδὲ τῶν λοιπῶν, ἀλλ' αἰσθανομένη τοῦ χρώματος καὶ τοῦ μεγέθους αὐτοῦ συνανθέται καὶ τοῦ σχήματος καὶ τοῦ κινεῖσθαι αὐτὸ ἡ ἡρεμεῖν καὶ τοῦ εἶναι. This explanation is fully confirmed by ΠΙ. 3. 12, 428b 22, τρίτον δὲ τῶν κοινῶν καὶ ἐποιμένων τοῖς συμβεβηκόσιν οἴς ὑπάρχει τὰ ἴδια λέγω δ' οἷον κίνησις καὶ μέγεθος, ἀ συμβεβηκέ τοῖς αἰσθητοῖς. If Aristotle can in the third chapter speak of movement and magnitude as 'incidents' or 'concomitants' of qualities of perception, there would seem to be no reason why he should not in the first chapter describe the common sensibles or categories of perception as perceived 'concomitantly' with the objects of sensation.

425 16. ταῦτα γὰρ πάντα κίνησει αἰσθανόμεθα] Torstrik, following the paraphrase of Simplicius, reads κοινῇ in place of κίνησει. Philoponus, however, has preserved κίνησει in his paraphrase: and the word is perfectly intelligible if understood to mean that all the other common sensibles are known as some modification or other of movement.

425 21—25. οὕτω γὰρ ἔσται ὀστέρ τῶν τῇ δύσις] Torstrik supposes that we have got here a confusion between two recensions, of which the earlier commenced with εἰ δὲ μὴ, οὐδέμοιο, and ended with ἀλλ' ἡ οὕτως ὀστέρ εἰρηγιαία, while the later included the sentence, οὕτω γὰρ ἔσται...ἀμα γνωρίζομεν, and then went on to τῶν δὲ κοινῶν...οὐκ ἃρ' ἔστων ἴδια. To this result he is led by the "inextricable confusion" of the passage which can be explained in no other manner: and particularly by the fact that Aristotle employs two examples of perception, κατὰ συμβεβηκός. But, to begin with, Torstrik would seem to miss entirely the drift of Aristotle's argument. The following is his explanation of the passage. 'There cannot be a peculiar sense of those objects which are common to all the senses. For if there were (εἰ δὲ μὴ, cp. Krüger, Grk. Gram., § 65, 5, 12), then the other senses would have nothing beyond the proper qualities of each left them to perceive, except the existence of the substance whose qualities they perceive per se. The truth, however, is far otherwise: for we perceive by the five senses, not only τὰ ἴδια which we perceive καθ' αὐτό, and that which we perceive κατὰ συμβεβηκός—i.e. substance, but also τὰ κοινὰ, which we have described as perceived καθ' αὐτά. Hence it follows that a special sense of the common sensibles would be, did it exist,
superfluous. Vides summam rei sitam esse in notione supervacanei, τοῦ μάτην, quae quamquam non ponitur, animo scribentis obversabatur. This would hardly seem to represent the basis of Aristotle's reasoning. He is simply arguing that the κοινὰ αἰσθητά cannot be the object of a special sense, because, if so, they would not be, as they are, a direct element, a constant concomitant of our perceptions, but merely an accidental or incidental adjunct to them. Nor is it necessary to regard the passage as a confused mixture of two separate versions. Each passage has a definite place of its own, and the two illustrations are used to exemplify very different things. In other words, Aristotle shews first that the perception of the common sensibles cannot be identified with the manner in which the constant conjunction of two qualities in perception enables us to pass at once from the perception of the one to the perception of the other; our perception of something as extended simultaneously with the perception of it as coloured cannot be taken as analogous to the way in which the perception of something (say honey) as yellow at once leads to the perception of it as sweet. Secondly, he shews that this perception of the common sensibles cannot be assimilated to the inferential perception in which the immediate perception of something as white is at once translated into an object to which this colour belongs. Thus the two cases illustrated are quite different, and not alternatives as Torstrik would suggest. In the one case we proceed from one quality to another quality, in the other case to an object of which it is a quality. We have in short to distinguish in the chapter three senses in which αἰσθητά may be described as κατὰ συμβεβηκός—1st, as concomitants of sensation (κοινὰ αἰσθητά), 2nd, as associated qualities, 3rd, as qualities referred to objects.

§ 7. 425b 29. ἄσπερ εἴρηται τοῦ Κλέους νιῶν Ἡμᾶς ὅρᾶν] The words which follow εἰρηται have been suspected at once by Trend., Torstrik, Neuhäuser, and Kampe, and had better probably be regarded as the gloss of a copyist, who wishing to explain the manner referred to (ἄσπερ εἴρηται), added on the instance of a perception of an object through a quality, whereas the manner in question refers of course equally to the perception of the one of two associated qualities through the other quality. The words, however, are recognised by the older commentators, and need not cause much confusion though retained.

425b 31. οὐχ ἂν αὐτάλ, ἀλλὰ ἂν μία] Torstrik is evidently right in reading αὐτάλ simply instead of αἱ αὐτάλ, as Trendelenburg does. The words mean, of course, as Torstrik says: the senses perceive cognate qualities, not in themselves, i.e. not ὅψις ἂν ὅψις, γεύσις ἂν γεύσις, but so far as they coalesce in one system of perception.

§ 8. 425b 7. καὶ αὐτῇ λευκοῦ] Torstrik prints these words in brackets: but they can be understood as illustrating Aristotle's meaning by a kind of exaggeration of the facts, sight of course really perceiving other colours besides white. Nor can one see why ἀμα in 9, should be altered into ἄδελ.
CHAPTER II.

The consciousness which accompanies sensation is asserted (§§ 1, 2) to be a concomitant of sensation itself, and after explaining the identity of the sensible object, and the sensitive capacity as realized in action (§§ 4—8), the writer passes to the comparison and discrimination of the reports of different senses, and refers this (§§ 12—14) to the unity of the common sense which in its power of turning itself towards different phenomena may be compared with the point.

§ 1. 425b 12. ἐπεὶ δ' αἰσθανόμεθα ὅτι ὅρῶμεν] The question which Aristotle is discussing in this chapter is the nature of that consciousness of sensation which accompanies the exercise of our perceptive powers, συναισθήσεις as Alexander Aphr. calls it. Does, Aristotle asks, this sensation which accompanies sensation arise through the same sense as perceives the sensible object, or do we perceive visible objects by sight, but sight itself by another sense? To this question he replies, that it is the sense of sight itself which thus conveys us consciousness of the exercise of sight. It cannot, he argues, be a different sense, because then we should have two senses dealing with one and the same fact (δύο τοῦ αὑτοῦ ἔσωσαί). The ground of this conclusion is, that the sense thus conscious of the perceptive act must necessarily perceive the object-matter of the sense which it is observing. (Cp. Alex. Aphrod. (Ἀπ. κ. Δύσεις, Spengel, p. 175), ὡς γὰρ έστι τὸ ὄραμ ἄλλο τί ἐνερχεῖ τῇ ὧσει περὶ τὰ ὄρατα, ἀλλ' ἐν τῷ ὄραμ αἰσθήσεις αἰσθήσεις έστι τῆς γνωμήνης περὶ τὰ ὄρατα ἐνεργεῖας ὑπὸ τῆς ὀφασικῆς αἰσθήσεως. οὐκ οἶον τε δ' αἰσθέσθαι τῆς περὶ τάυτα τινὰ ἐνεργείας μή καὶ τάνδε αἰσθανόμενοι, περὶ ἀ ἐνεργεία γίνεται. ἀλλ' εἰ τούτοι ἔσωσαν τῶν αἰσθητῶν πλείους αἰσθήσεις, αὐτὰ αἰσθανόμενα αὐτῶν προηγουμένως καὶ αι τῶν ἐνεργειών τῶν περὶ τὰ αἰσθητὰ τῶν αἰσθήσεων αἰσθανόμεναι. τούτο δ' ἀποσπό τὸ τὰ ̣διὰ αἰσθήτη ἐκάστη αἰσθήσεις πλεῖους αἰσθήσεων αἰσθήτα εἶναι λέγει.)—This is the first argument to show that the sensation of sensation cannot be a sense different from that whose action it perceives: the second (ἐτι δ' εἰ καὶ έτέρα εἶν ἡ τῆς ὄνεως αἰσθήσεως, line 15) argues that the assumption of a sense outside of the sense whose action is perceived only repeats ad infinitum the original question (εἰς ἀπειρον εἰςω). The sensation of the sensation of seeing will in turn, that is to say, demand a similar sense, and this again another still. Thus then this sensation of sensation, must be attached to the original sense itself (ὡςτ' ἐπί τῆς πρώτης τούτο ποιητέον, where Torstrik would read βετεόν or δετεόν; perhaps οὐτεόν, one must conceive, would give a fair sense). For the meaning of πρώτη in this passage, and the degree to which it can be harmonized with Aristotle’s views otherwise, see the Introduction, p. lxxi. Cp. De Somno, 2, 455b 15; ἐστιν ἔτι καὶ κοινὴ δυνάμει ἀκολουθοῦσα πάσαις, ἢ καὶ ὅτι ὅρα καὶ αἰσθάνεται· οὐ γὰρ δὴ τῇ γε ὤψει ὅρα τῃ ὅρα. § 2. 425b 17. ἡξεί δ' ἀποριαν] The conclusion that the original faculty of sense is itself the sense which perceives the action of sense, suggests at once the difficulty whether, as it is colour which is the object of sight, the fundamental sense which thus perceives the perception of sight is coloured
also. In answer to this difficulty, Aristotle shews first, that the assumptions of the objection are not quite exactly stated—τὸ τῇ ὅψει αἰσθάνεσθαι is not, as the objection assumes, equivalent to ὁρᾶν: "even when we see nothing we are able to distinguish by the eyesight both darkness and light." Secondly he goes on to allow that there is a sense in which we may allow colour of the organ of sight, only the colour transmitted to the eye is not that of the matter, but only of the form, a fact which enables us to understand why images of past impressions can subsist in memory. [Trendelenburg would seem to misunderstand the passage. He takes the ἀπορία to be that whereas the nature of sense-perception seems to require that the sense of vision which is thus sensible of vision should be itself coloured, there is a difficulty in seeing how this is possible: and then reasonably objects that the arguments adduced do not prove the point requiring to be settled.]

§ 4. 425b25. ἦ δὲ τοῦ αἰσθήτου ἑνέργεια] The object of this and the following three sections is to explain and expand the sense in which the characteristic of the object is reproduced in the characteristics of the perceiving organ, by shewing that both αἴσθησις and αἰσθητὸν are at the moment of perception, when the object is perceived and the sense perceiving, only different aspects of one and the same set of facts. For the sense here given to τὸ εἶναι, see the previous note on II. 12, 424a25.

§ 5. 426a4. ἦ γὰρ τοῦ ποιητικοῦ καὶ κινητικοῦ ἑνέργεια ἐν τῷ πάσχοντι ἐγγίνεται] Aristotle here avails himself of the laws of κίνησις enunciated in the Physics, in order to explain the fundamental identity between the subject and object of perception. In the Physics, III. 3, 202a13, the writer shews that the action (ἑνέργεια) of the κινήτων and that of the κινητῶν are fundamentally identical, just as is the case with the ἀνάλοι, and the κάταλοι—ταῦτα γὰρ ἐν μίν ἐστὶν, ὁ μίντι λόγος οὐχ ἐστί. In the present reference, τὸ ποιητικὸν is of course equivalent to τὸ αἰσθητὸν, while τὸ πάσχον is τὸ αἰσθητικὸν.—Torstrik regards the lines 426a4—11, as compounded out of two versions thus—

Earlier Version: ἐσχιζε γὰρ ἡ πολύσις καὶ ἡ πάθησις ἐν τῷ πάσχοντι ἀλλ’ οὐκ ἐν τῷ ποιοῦντι, οὔτω καὶ ἡ τοῦ αἰσθητικοῦ ἑνέργεια καὶ ἡ τοῦ αἰσθητικοῦ ἐν τῷ αἰσθητικὸν.

Later Version: ἦ γὰρ τοῦ ποιητικοῦ καὶ κινητικοῦ ἑνέργεια ἐν τῷ πάσχοντι ἐγγίνεται. διὸ οὐκ ἀνάγκη τὸ κινοῦν κινεῖσθαι.

§ 8. 426a20. ἀλλ’ οἱ πρότερον φυσιολόγοι] The reference is probably to Democritus, Empedocles, and Heraclitus, as the precursors of Protagoras in the sensationalism or subjective idealism supposed both by Plato and Aristotle to be involved in the dictum, πάντων μέτρον ἀνθρώπος. For further expressions of Aristotle's views upon this subject, cp. Categories, 7a30, where Aristotle discussing the view that relative terms (τὰ πρὸς τὸ) are strictly coexistent, excepts ἐπιστήμη and ἐπιστήτων, αἴσθησις and αἰσθητῶν. τὸ γὰρ αἰσθητῶν πρῶτον τῆς αἰσθήσεως δοκεῖ εἶναι: τὸ μὲν γὰρ αἰσθητῶν ἀναρεθέν συναναρεῖ τὴν αἰσθήσιν, ἡ δ’ αἰσθήσις τὸ αἰσθητῶν οὐ συναναρεῖ. Cp. also Metaphys. T. 5, 1010b36.
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§ 9. 426b 27. ei δ' ἡ συμφωνία φωνή τίς ἐστιν] So I have determined to read this clause, about which already both Plutarch and Simplicius have suggested that ei δ' συμφωνία should be read with E (pr.) SX; so that φωνή might be subject, and συμφωνία the predicate, as the thought would seem at first sight to render necessary. Trendelenburg accordingly suggests ei δ' ἡ φωνή συμφωνία τίς ἐστιν, ἢ δ' φωνὴ κ.τ.λ. Torstrik however accepts the reading adopted here, and remarks that Aristotle simply says that inasmuch as hearing can perceive harmony, and harmony is a ratio of a kind, it follows that hearing is itself essentially a kind of ratio. And indeed this would seem to give a sufficiently natural explanation of the passage. Aristotle’s argument in short is—Hearing perceives sound: sound includes harmony as one of its forms: therefore hearing perceives harmony. But the faculty of sense is essentially identical with its object, and therefore as harmony involves a λόγος, or proportionate ratio on its side, so hearing must involve a similar ratio on its part.

426b 5. οἶον τὸ ἐξή ἦ γλυκὸν ἤ ἀλμυρὸν] That the ἀλμυρὸν is the result of a blending or definite combination is expounded at length in Meteorolog. B, 3, 358 and 359: so 358b 34, ἔστιν ἐν μίξει τινὸς τὸ ἀλμυρὸν. That the other flavours, both the piquant (ἐξῆ) and the sweet (γλυκὸν), involve a similar proportion, seems to be asserted in De Sensu, c. 4, 442a 8, συμμιμηται δ' οἱ ἀλλοι χυμοὶ εἰς τὴν τροφὴν τῶν αὐτῶν τρόπων τὸ ἀλμυρὸν καὶ ἐξῆ, ἀντὶ ἡδύσματος. Cp. also De An. II. 10, 422b 12.

426b 5. ὅλος δὲ μᾶλλον τὸ μικτὸν συμφωνία ἢ τὸ ἐξή ἢ βαρύ, ἀφῇ δὲ τὸ θερμαντών ἢ ψυκτών] The words can hardly be right as they stand. Torstrik regards συμφωνία as simply the gloss of a stupid copyist, who not seeing that ἐξή ἔστιν had to be supplied with ὅλος δὲ μᾶλλον τὸ μικτὸν, inserted συμφωνία in the margin: then after this was admitted into the text, another added, ἢ τὸ ἐξή ἢ τὸ βαρύ. “Sed etiam latius serpsit corruptela: sic enim pergit miser interpolator: ἀφῇ (vel ἀφῇ) δὲ τὸ θερμαντῶν (alit. θερμαντικῶν) ἢ ψυκτῶν (vel ψυκτικῶν)—quae verba omni sensu carent. Volebat fortasse tale quid: ἀφῇ δὲ τὸ μικτὸν (vel potius temperaturum) ἠδίων τοῦ θερμοῦ καὶ τοῦ ψυχροῦ.

§ 10. 426b 8. ἐκάστη μὲν οὖν αἴσθησις] On the general argument of these paragraphs in which Aristotle shews that in order to distinguish sensations we require something beyond the separate sensations as such, see the Introduction, p. lxxvi.

§ 11. 426b 15. δῆλον ὅτι ἡ σάρξ οὐκ ἐστὶ τὸ ἐσχατὸν αἰσθητῆριον] “Ad eorum sentimentiam reddit impugnandam, qui quod sensus suscipiunt, a materia non segregant et in ipsis sensuim instrumentis collocant, de vi supra materiam evectâ parum solliciti.” Trend. Cp. De Part. An. II. 10, 656b 34, where Aristotle, noting the duplicity of the organs of sense, observes that this double characteristic is not to be found in touch: τούτου δ' αἰτίων ὅτι οὐκ ἐστὶ τὸ πρῶτον αἰσθητῆριον ἡ σάρξ καὶ τὸ τοιοῦτον μόριον ἀλλ' ἐντὸς.

426b 18. ἀλλὰ δὲι ἐνι τινὶ ἄμφω δῆλα εἶναι] Cp. De Sensu, c. 7, 446b 5, ei δὲ δὴ ἀλλο μὲν γλυκεὸς ἄλλο δὲ λευκοῦ αἰσθάνεται ἡ ψυχὴ μέρει, ἥτοι τὸ ἐκ W. AR.
426b 20—22. δει δε το ἐν λέγειν...νοεί καὶ αἰσθάνεται] These two sentences, of which the later was already characterized by Trendelenburg as 'inert et otiosa repetitio,' are regarded by Torstrik as alternative versions, of which the earlier extended from λέγει ἄρα τὸ αὐτὸ down to αἰσθάνεται, while the later version is contained in the words δει δε το ἐν λέγειν...τοῦ λευκοῦ. But the words οὕτω καὶ νοεί are needed to complete the illustration of the work of discrimination in sense and thought, as exemplified by the work of the referee who decides between two different opinions: and the words λέγει ἄρα τὸ αὐτὸ are not alternative for the preceding δει δε το ἐν λέγειν, but are a reassertion of them as meaning that though the two opinions are different, still some one person is needed to assert the difference. The really superfluous words are ἐτερον γὰρ τὸ γλυκὺ τοῦ λευκοῦ, which look extremely like the gloss of a copyist, and repeat (except for the addition of γὰρ) verbatim the words in 426b 18, two lines before. They can easily be omitted (as I have done in the translation): if retained, they had better be read after ἐτερα ἄλληλων.

§ 13. 426b 29. ἀλλὰ μὴν ἄδυνατον] This is of course the beginning of a supposed objection to the action of a discriminating faculty as Aristotle has conceived it. The difficulty is shortly this.—How can a single faculty, as Aristotle has shewn the discriminating sense to be, move in such opposite directions as the perception of opposite qualities involves, without losing its character of unity. This difficulty Aristotle meets by maintaining that the faculty, while numerically one, is in its existence and its mode of operation twofold.

427a 2—5. ἃρ' οὖν ἀμα μὲν καὶ ἀριθμὸ...καὶ ἀριθμὸ ἀδιάρετον] This passage is regarded by Torstrik as made up of two versions, thus—

τὸ δὲ πικρὸν ἐναντίως, καὶ τὸ λευκὸν ἐτέρως.

Earlier Version.

ἐστι δὲ τὰς ὡς τὸ διαιρέτων τῶν διάρρημάν ν ἀισθάνεται, ἐστὶ δ' ὡς ἃ ἀδιάρετον· τῷ εἶναι μὲν γὰρ διαιρέτων, τὸ ἀριθμὸν δὲ καὶ ἀριθμὸ ἀδιάρετον.

Later Version.

ἀρ' οὖν ἀμα μὲν καὶ ἀριθμὸ ἀδιάρετον καὶ ἀχώριστον τὸ κρύπτον, τῷ εἶναι δὲ κεχωρισμένον;

§ 14. 427a 6. δυνάμει μὲν γὰρ...τάναντια, τῷ δ' εἶναι οἷ] Trendelenburg, true to his idea that τὸ εἶναι means notio et ratio, thinks that the addition τῷ δ' εἶναι obscures rather than clears up the opposition between δυνάμει and ἐνεργείσθαι: but it is evident that, if εἶναι means simply manifestation and determinate existence, the words ἀλλὰ τῷ ἐνεργεισθαι διαιρετῶν are epegegetic of τῷ δ' εἶναι οἷ. The present passage in fact is particularly valuable for the manner in which it shews how τὸ εἶναι = operation or application (ἐνεργείσθαι), and so further = λόγος (aspect).

427a 6. δυνάμει μὲν γὰρ τὸ αὐτὸ καὶ ἀδιάρετον] Torstrik would read τὸ αὐτὸ διαιρετῶν καὶ ἀδιάρετον, τῷ δ' εἶναι οἷ. But this is evidently unnecessary in the face of good MS. authority for τάναντια. What Aristotle means is, not
that the same thing may be potentially divided and undivided, but that
while it may be allowed that the same thing may even as undivided contain
potentially the tendency of two contrary directions, it is difficult to see how
in real fact, in actual exercise, such two-sided action is possible.

§ 15. 427*9. ἄλλ' ὁσπερ ἦν καλοῦσι στιγμή] Brentano (p. 91) thinks
that by στιγμή is meant a νῦν, or point of time, and refers to De Coelo, III. 1,
300*14, τὸ γάρ νῦν τὸ ἀτόμον οὗν στιγμή γραμμῆς ἔστιν. But, as Neuhäuser (p.46)
has remarked, the question suggests itself, why did Aristotle if he meant νῦν
not use the word itself, and why is it that, while στιγμή is represented
afterwards by σημεῖον, πέρας, and ὅρος, it is never represented by νῦν itself?
Nor do there seem to be any real grounds for Trend.'s emendation,
ἄλλ' ὁσπερ ἦν καλοῦσι τῶν στιγμῶν. It is true, indeed, that in Physics,
VIII. 8, 262b24, and other places, the monad and point are more or less
identified. But, if Aristotle were speaking simply of the monad, it would be
superfluous in him to tell us it was sometimes called a point. What the
writer does mean, is no doubt, that he is using the term 'point' in a much
wider sense than that in which it is commonly used: that he is using it as a
point ἀπλῶς, no matter whether it be in time or place, no matter whether it be
conceived arithmetically or geometrically. There is, therefore, no need
to follow Themistius and Alexander and regard στιγμή as the centre of a
circle, from which, as many, a number of radii start, and in which, as one,
they all unite; Aristotle is simply thinking of the point which, while it
remains essentially a unity, is the starting-point of lines on either side of
itself. Cp. Phys. IV. 11, 220a10, καὶ γὰρ ἡ στιγμὴ καὶ συνέχει τὸ μήκος καὶ
ὁρίζει. ἔστι γὰρ τοῦ μὲν ἄρχη τοῦ δὲ τελευτῆ.

427b11. ἦ μὲν οὖν ἄδαιρετον, ἐν τῷ κρίνον ἔστιν] Torstrik detects here
again a case of repetition, the words ἦ μὲν οὖν δυσὶ χρῆται τῷ πέρατι, κ.τ.λ.
only asserting afresh what has been already stated in ἦ μὲν οὖν ἄδαιρετον.
He regards then ἦ μὲν οὖν δυσὶ as the earlier version of the thought of which
ἡ μὲν οὖν ἄδαιρετον is the later. In the second passage it might be better to
read with Trend., ἦ μὲν οὖν δις or ἦ μὲν οὖν ὡς δυσὶ: though the passage is
intelligible as it stands. Cp. Phys. VII. 8, 262a19, 263a23, τῷ ἐνὶ σημεῖῳ ὡς
dυσὶ χρῆται.

427b13. καὶ κεχωρισμένα ἐστιν ὡς κεχωρισμένο] The simplest emendation
of this passage would be to read with Trendelenburg κεχωρισμένον in place
of κεχωρισμένο: and taking κεχωρισμένον as agreeing with a subject τὸ
κρίνον, translate: So far then as the discriminating faculty uses the termi-
nation of the point as two, it judges of two objects, and these separated from
one another, just as the faculty itself is for the time divided. Or as ELT
read κεχωρισμένο (the dual), we might read καὶ κεχωρισμένον ἐστιν ὡς κεχω-
ρισμένον: and the faculty of judgment is divided even as the two things (to be
distinguished) are divided. But as Alexander (Spengel, p. 180) reads ὡς τῷ
κεχωρισμένῳ, and Simplicius κεχωρισμένως, it would seem that the dative is to
be retained.

17—2
CHAPTER III.

Imagination (φαντασία) is the chief subject of discussion in this chapter, but it is so, not directly, but only through the prior question, how far sense-perception is identical with thought. Older thinkers had identified the two (§ 1), but, Aristotle points out, their theory fails to account for error (§ 2), and (§ 3) is disproved by the fact that while sense-perception is the property of every animate existence, thought itself is confined to few. Imagination is then further adduced as forming a division between sense and thought, and the remainder of the chapter is devoted to setting out its nature. Such imagination is dependent on sense-perception, but is distinct from conception and reflection. It is neither in fact sense-perception (§ 7), nor opinion (§ 8), whether accompanied by sense or in combination with sense (§ 9). Rather (§§ 11, 12) it depends upon the law of movement according to which a sensuous impression propagates its results, and varies in its degrees of truth and falsity according to the character of these impressions. It is etymologically connected with the light (§ 13), and becomes a principle of action in animal existence.

The connection between this chapter and those which have preceded, would seem to be contained in the idea of discrimination as something common to sense and thought, and yet not warranting us in trying to identify the two. We need hardly then regard this third chapter as forming a more fitting beginning for the third Book: Aristotle's problem throughout the Book is the nature of knowledge as such, and the way in which our apprehension of phenomena influences will.

§ 1. 427a.16. ἔτει δὲ δύο διαφοράς δρίζωνας] The words are without any direct apodosis, and Torstrik supposes that some words have fallen out before δοκεῖ δὲ καὶ τὸ νοέων, and left a lacuna which he proposes to fill up with a Greek version of Argyropulos' words, and insert σκέπτεσθε εἰ τι διαφέρει τὸ νοεῖν τὸι αἰσθάνεσθαι. Bonitz, on the other hand (Aris. Studien), thinks that δοκεῖ δὲ καὶ simply continues the protasis introduced by ἔτει δὲ, and that the real apodosis is to be found in the words 427b.6, ὅτι μὲν οὐν όυ ταύτων ἐστὶ τὸ αἰσθάνεσθαι. The sequence of ideas in the chapter is then, according to Bonitz, the following. While the essence of the soul is often defined by two characteristics, local movement on the one hand, thought, distinction, and perception on the other, and while many regard thought as a kind of sense-perception, and the ancients explain thought and perception as identical, it is obvious at the same time that sense and thought are not really the same. This interpretation agrees with the explanation of Plutarch as quoted by Philoponus, and corresponds with the paraphrase of Simplicius. But it would seem simpler to regard the apodosis as given in δοκεῖ δὲ καὶ, as meaning that since the popular psychology acknowledges only two main
directions of the mind’s activity, motion on the one hand, cognition on the other, the popular mind comes to think of perception and thought as one, on the ground that both are cognitive. A simple emendation in the text would be to omit δέ after ἄντα: this at least seems more reasonable than Susemihl’s γάρ which he would substitute for δέ.

427* 22. ἄστερ καὶ Ἐμπεδώκλῆς εἰρήκε πρῶς παρεῦν] The immediate meaning of this in Empedocles’ theory would be that as cognition depended upon the elements of existence, a different blending of the physical elements would lead to a corresponding difference in the character of our knowledge. Cp. Metaphys. Γ. 5, 1009β 17, καὶ γὰρ Ἐμπεδώκλῆς μεταβάλλων τὴν ἐξίν μεταβάλλει φησί τὴν φρόνησιν.

§ 2. 427b 1. οἰκεύτερον γάρ τοῖς ἔφοις] The meaning of this would seem to be that it is the possibility of error which constitutes the essence of conscious and rational existence. Just, Aristotle would seem to say, as inanimate nature knows nothing bad and therefore nothing good, so similarly it has never attained to the profound sense of falsity as opposed to truth. And therefore a pure sensationalism which knows nothing except that which is felt is quite unequal to explain the complexity of the intellectual consciousness. And Aristotle goes on further to explain that this difficulty about the possibility of deception can be explained by the thinkers in question only in one or other of two ways: either first by maintaining that all appearances are true, or secondly by explaining deception as contact on the part of the dissimilar (knowledge being by Empedocles and his school explained as contact of like with like). The first way out of the difficulty, that all impressions and phenomena are true is examined in the third book of Aristotle’s Metaphysics: the second means of escape is shewn here to be insufficient by reference to Aristotle’s doctrine that the knowledge of one contrary implies the knowledge of the other.

427b 5. ἄντα δὲ καὶ ἡ ἀπάτη καὶ ἡ ἐπιστήμη τῶν ἐναντιών ἡ αὐτή εἶναι] Aristotle’s point would seem to be that to explain misapprehension as a contact of the dissimilar, while knowledge is a contact of the similar involves an inconsistency with ordinary thought. So apparently Themistius understands the words: ἄλλως τε ὧν καὶ τῶν ἐναντίων μὲν ἐστὶν ἐπιστήμη καὶ μὴ ἀγνοια. ὁ γὰρ τὸ ἀγαθὸν ὡς ὁφελόμεν γινώσκων καὶ τὸ κακὸν ὧν βλαβερὸν συνεπιστᾶται, καὶ ὁ περὶ θάτερον ἑξαπατώμενον ἑξαπατᾶται καὶ περὶ βάτερον. ἥξε, ὥστε, ἡ τοῖς ἐναντίοις ἡμαῖς ὁμοιοῦσαι ἀμα, ὅταν τάναντια γινώσκωμεν, ἡ τοῖς ἐναντίοις ἀναιωνοῦσαι ὅταν περὶ τάναντια ἑξαπατώμεθα ἀμφο ὡς ὁμοῖος ἀδύνατα. But the significance of Aristotle’s words is not very obvious: they can hardly, however, bear the meaning which Weisse (p. 292) seeks to extract from them: “the same unity of opposites as constitutes knowledge, lies also at the foundation of error, and this last should not accordingly be explained in contradiction with the definition of knowledge which has been referred to.” The words might even be taken as confirmatory of the explanation of ἀπάτη as a βίγες τοῦ ἀνομοίου, and be translated, “indeed misapprehension is generally thought identical with a knowledge of contraries.”
§ 3. 427b7. τοῦ μὲν γὰρ πᾶσι μέτεστι] This argument had been already advanced by Alcmæon. See Theophrastus, De Sensu, § 25, Ἀλκμαίων μὲν πρῶτον ἀφορίζει τὴν πρὸς τὰ ζώα διαφοράν ἀνδραπόν γὰρ φησὶ τῶν ἄλλων διαφέρειν ὅτι μόνον ἴσυνης· τὰ δὲ ἄλλα αἰσθάνεται μὲν οὐ ἴσυνίης δὲ.

427b9. τὸ μὲν ὀρθῶς φρόνιμος καὶ ἐπιστήμη καὶ δόξα ἀληθῆς] It appears from this, as Trendelenburg remarks, that νοεῖν is regarded as the generic word under which which φρόνιμος, κ.τ.λ. are subdivisions. φρόνιμος itself is used in a vager sense than in the Ethics, where it is regarded as ἐπιστατική, and is as Alexr. Aprod. remarks (περὶ εἰμαρμένην, fol. 47) practically the ἐπιστήμη ποιητῶν τε καὶ οὐ ποιητῶν.

427b14. οὐδενὶ ὑπάρχει ὁ μὴ καὶ λόγος] λόγος here evidently corresponds to intelligible speech as opposed to φωνή, mere vocal utterance. So in De Interpret. 16b26, λόγος is defined as φωνὴ σηματική, and in Polit. 1. 1, 1253a9, φωνή is said to be the expression of pleasure and pain, while λόγος is used to express the expedient and the injurious.

§ 4. 427b14. φαντασία γὰρ ἐτερον καὶ αἰσθήσεως καὶ διανοίας] The connection between this sentence and that immediately preceding is the reverse of obvious, and has given considerable trouble to the commentators. Julius Pacius regards it as intended to confirm the distinction between thought and sense, by pointing to the faculty of imagination as midway between them: “nam si ambo extrema differunt a medio, multo magis differunt inter se.” But, as Freudenthal remarks, this explanation is too artificial to be accepted. Freudenthal himself however does not find a much more natural sequence in the passage. According to his interpretation, the passage bears the following meaning: ‘Sense, it has just been said, is a characteristic of all animals, thought is so of only a few. Nor need it be objected, Freudenthal would make Aristotle interpose the remark, that φαντασία is a kind of αἰσθήσεως, and is yet as much as thought absent from some animals: for, the writer continues, φαντασία is different at once from sense-perception, and from thought. This strikes me as also viel zu gekünstelt: and it would seem better to follow the interpretation of Themistius who regards the passage as answering a supposed objection to what Aristotle has just said by viewing φαντασία as standing to the animal in the place of thought. Cp. Themistius (Spengel, p. 162), εἰ δὲ ὅτι πολλὰ καὶ τῶν ἄλλων ᾣών μετεχει φαμέν διανοίας, οὐδὲν πρὸς τὸν λόγον· καταχρόμεθα γὰρ ἐπ᾽ αὐτῶν τῷ τῆς διανοίας ἀναμί. τα δὲ διανοίας μὲν ὀδηγοῦν κοινωνεῖ, φαντασίας δὲ ἑσο χρῆ πολλὸν δὴ ἐπιθυμηθείν τῆς διανοίας, καὶ ὧσπερ ἀφέων ἐν μεθορίῳ κειμένη καὶ ἑπακολουθοῦσα μεν τῇ αἰσθήσει, προλαμβάνουσα δὲ τὴν ὑπόληψιν. Even so, however, it must be allowed, the connection is not altogether satisfactory.

427b16. δι᾽ οὗ ἐστὶν ἡ αὐτῇ νόησις καὶ ὑπόληψις, φαινερὸν] Such is the reading of all the MSS. except U which has in the margin φαντασία instead of νόησις and y which omits the word. The clause created difficulty because Aristotle was supposed to say that νόησις and ὑπόληψις were not identical: and different devices were made in order to reconcile this with the non-
identity of ὑπολογίᾳ and ἐφαρμοσμένα which Aristotle set himself to prove. So Simplicius regarded νόησις as equivalent to ἐφαρμοσμένα. Freudenthal, however, has shewn that we must regard νόησις as a predicate to which a subject ἐφαρμοσμένα has to be supplied, and translate: It is clear that it (ἐφαρμοσμένα) is a different kind of thought from conception. This at least corresponds with 427b 28, where about τὸ νοεῖν we read τοῦτον δὲ τὸ μὲν ἐφαρμοσμένα δοκεῖ εἶναι τὸ δὲ ὑπολογία.

§ 5. 427b 26. ἐπεὶ δὲ τῆς διαφορᾶς ἐτερος ἐστώ λόγος] This is generally taken to refer to the sixth book of the Ethics.

§ 6. 428a 2. καὶ μὴ εὖ τι κατὰ μεταφορὰν λέγομεν] This most probably refers, as Freudenthal explains, to the popular usage of the term as equivalent to show, brilliancy or glamour. So Theophrastus speaks of the ἐφαρμοσμένα λίθουν, and in Acta xxv. 23, we read that Agrippa entered μετὰ πολλῆς ἐφαρμοσμένας.

§ 7. 428b 11. σκόληξ δ’ οὖ] So Torstrick would seem to have rightly emended the text, following the paraphrases of Themistius and Sophonias. The negative is wanting in all MSS., but is evidently necessary. Cp. De Gen. An. B. i, 732a 22, where the σκόληξ is regarded as the lowest type of animal existence. The intelligent character of bees and ants is noticed again in Hist. An. I. 1, 488a 12: De Part. An. II. 4, 650b 24: and Metaph. A. i, 980b 23.

§ 8. 428b 19. ἄλλα δὲ καὶ μὲν ἐπεταίρις, κ.τ.λ.] Torstrick thinks that we have got here a first and second version of the same argument, the first version being contained in the words πάση μὲν δὲ καὶ τοῖς, the latter in the words ἄλλα δὲ καὶ τοῖς, thus—

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ἐτι πάσῃ μὲν δὲ καὶ ἀκολουθεῖ πίστις, πίστις δὲ τὸ πεπειθόντος, πειθόν δὲ λόγος' τῶν δὲ θηρίων ἐνίος ἐφαρμοσμένα μὲν ὑπάρχει, λόγοι δὲ οὖ.

But the two sentences are manifestly not a mere re-statement of one another: the second is a direct extension of the first. Aristotle is trying to shew that ἐφαρμοσμένα is not to be identified with δόξα, and in support of this he adduces two arguments: first, δόξα is followed by πίστις, but while many animals have ἐφαρμοσμένα, none have πίστις: secondly, δόξα as followed by πίστις involves λόγος, but ἐφαρμοσμένα is the property of many animals, λόγος is not. πίστις in fact is the middle term of the one syllogism, λόγος the middle term of the other.

§ 9. 428b 24. φανερῶν τοῖς ὧν ὅτι οὐδὲ δόξα μετ᾽ αἰσθήσεως…οὐδὲ συμπλοκῇ δόξῃ καὶ αἰσθήσεως ἐφαρμοσμένα ἐν εἰπ.] W. H. Thompson points out in the Journal of Philology (no. 16), that the apparent tautology between the two definitions, "a combination of judgment and sensation," and "judgment accompanied by sensation," is explained by a reference to Plato's Sophist, 264 Β, where we are told that the mental state described by φανεραῖα is a "mixture of sensation and judgment" (σύμμετασις αἰσθητῆς καὶ δόξης: and just before it is
remarked that when a judgment is formed of which one of the terms is an object then present to the sense, we may properly describe such judgment as "phantasia."

428b28. λέγω δ', ἐκ τῆς τοῦ λευκοῦ δόξης καὶ αἰσθήσεως ἡ συμπλοκή φαντασία ἐστὶν] Trendelenburg here reads ei with V in place of ek, and suggests also estin in place of estin in 428b1, so as to make it plain that Aristotle is here putting hypothetically the explanation of "phantasia as the combination of δόξα and αἰσθησις, and refuting it by the conclusion to which the theory tends, τὸ ὅν φανερεῖται. But while it is true that the words just mentioned are a reductio ad absurdum of the view that imagination is a combination of the communications of sense and of opinion, they are so, not directly, but only on the interpretation given to this theory in the words, οὐκ ἀλλοι τινὸς ἐστὶν ἡ δόξα ἀλλ' ἐκεῖνον ἐστὶν οὐ καὶ αἰσθησις, an interpretation of which the words, λέγω δ' ἐκ τῆς τοῦ λευκοῦ..."phantasia is estin are an illustration, and for which the only proof adduced, beyond the vague διὰ τε ταύτα of 428b27, is given in the words, οὐ γὰρ δὴ...τῆς τοῦ λευκοῦ. Torstrik regards ἡ συμπλοκή as the addition of an interpolator.

§ 10. 428b8. ἄλλα ψευδης ἐγένετο, ὅτε λάθοι μεταπέσον τὸ πράγμα] 'Vel potius οὐ γὰρ ψευδῆς si reliqua vera,' Trendelenburg. The clause, however, may be better regarded as a parenthetical note to state an apparent objection to Aristotle's conclusion. If, Aristotle has argued, the observer (say of the sun) still possess his true opinion of the dimensions of the sun, but yet have the imagination that it is but a foot in its diameter, then on the theory that imagination and opinion are connected, the same opinion must be true and false. To this argument some one is supposed to object that this simultaneous truth and falsity is not so inconceivable as it appears, because the falsity of the view might be due to a change meanwhile in the object of which the observer was unaware. If this be the meaning, we must then suppose the writer to add a ταύτα δὲ οὐδὲν διαφέρει. Otherwise we might possibly translate ἄλλα, except (cp. Jelf's Greek Grammar, 773, 4), and connect it closely with what precedes: or we might take the words as meaning something like this—the same opinion must be true and false, whereas as matter of fact and ex hypothesi; the opinion only became false when the object altered in its character without our knowing it.

§ 12. 428b19. δεύτερον δὲ τοῦ συμβεβηκέναι ταύτα] So the words are written in STUVy, and also according to Bekker and Trend. in E. The Ald. and Sylb. Eds. read τοῦ τοῦ συμβεβηκέναι καὶ ταύτα, which is certainly simpler, and agrees with the paraphrase of Themistius, δεύτερον δὲ τῶν ὑποκειμένων τοῖς ἱδίοις καὶ οἷς ἐκείνα συμβεβηκέναι. Still τοῦ συμβεβηκέναι ταύτα, the perception of the concomitance of the particular qualities of sense, makes perfectly good sense, notwithstanding Torstrick's remark—τὸ συμβεβηκέναι non est objectum sensus sed intellectus sicut ceterae notiones abstractae.

428b24. ἁ συμβεβηκέναι τοῖς αἰσθητοῖς] Torstrik regards the words as an interpretation and an unhappy one. But see the note on III. 1, 5, 425a14.

§ 13. 428b30. ei οὖν μνήμην μέν ἄλλο ἔχει τὰ εἰρημένα] Trendelenburg's
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reading, ἡ μὴ φαντασίαν, would require us to regard τὰ εἰρήμενα as subject, and translate: If then the qualities just mentioned attach to nothing but φαντασία: and it seems simpler to read, ἡ ἡ φαντασία with LSTUVXY. Whenever reading we accept, the clause is not free from tautology. 'Torstrik conjectures, εἰ οὖν μὴθέν μὲν ἄλλο ἔχει τὰ εἰρήμενα, τούτο δ’ ἔχει, ἡ φαντασία ἁν εἰη κίνησις.


CHAPTER IV.

Thought or Reason (Noös) is the subject of this chapter. The chief object of the writer is to reconcile the fact that thought, like sense, is ‘affected’ by its object with the doctrine of Anaxagoras that reason is uncompounded with material objects. See the Introduction, pp. c—civ.

§ 1. 429* 12. σκέπτεν τίν’ ἔχει διαφοράν, καὶ πῶς ποτε γίνεται τὸ νοεῖν] This would seem to be almost a statement of the problems proposed in chapters four and five respectively. At least in the fourth chapter Aristotle seems mainly occupied with the question what is the distinctive character of thought and how does it manipulate an intelligible world, while the end of the chapter raises the question, which is more or less solved in the fifth chapter—How does the world come to be intelligible at all, and what is the origin of thought?

§ 3. 429* 15. ἀπάθεια ἢρα δεὶ εἴη] There is here, of course, an apparent non sequitur, and Themistius would seem to have read ἑτέρων ἀπαθεῖς. The contradiction, however, is merely on the surface. Aristotle is saying: Thought, like sense-perception, receives the objects with which it deals. But this receptivity though, from one point of view a passive state, is from another really active—it implies, in other words, a power of receiving objects, and is therefore not altogether passive. Just as the sense-impression is not merely an impression, but includes a spontaneous power of grasping the form apart from the matter, so also, but in a higher sense, the energy of thought, while affected by a body of contents, is able to act upon those contents and to rise above them. And so it is that Aristotle adds (429* 29) that the ἀπάθεια of the faculty of thought is not the same as that of the faculty of sense.

429* 18. ὀσπερ φησιν 'Ἀναξαγόρας] Cp. Plato, Cratylius, 413 C, where Anaxagoras’ νοῦς is called αὐτοκράτωρ καὶ οὐδεὶς μεμησμένος.

429* 18—27. ἀνίκητο ἢρα...νῦν δ’ οὐδέν ἐστιν] Torstrik thinks that we have got here two versions of the same argument—the earlier version being contained in the words ὁ ἢρα καλούμενος τῆς ψυχῆς νοῦς...νῦν δ’ οὐδέν ἐστιν,
the latter extending from ἀνάγκη ἄρα down to ὅτι δύνατον. He gives, however, little by way of reason for this view: and it is difficult to see why both passages should not have a place in the treatise. The words ὅ ἄρα καλοῦμενος τῆς ψυχῆς νοῦς really expand the thought of the previous lines: and even if they do in some ways repeat the assertion of the previous lines, it seems no unreasonable proceeding for a metaphysical writer to claim the liberty of restating his conclusions.

429* 20. παρεμφαίνεταιν γὰρ κοιλίει τὸ ἀλλότριον καὶ ἀντιφράττει] Trendelenburg interprets this as if τὸ ἀλλότριον were the object and νοῦς the subject (mens ab Anaxagora aliena, i.e. a sua natura abhorrentia arcere dictur), and Themistius similarly writes, κοιλύει γὰρ καὶ ἀντιφράζει τὸ ἐνυπάρχον εἴδος τὰ ἄλλα ᾠστερ ἄλλοτρια. But the whole context seems to require that τὸ ἀλλότριον should be taken as the subject. The metaphor is drawn from the way in which the light of one body obstructs and destroys the light of another: and just (Aristotle would seem to mean) as sunlight eclipses moonlight, the side light and radiance of a foreign unrationl object would obstruct and interfere with the action of reason. Teichmüller (Studien, p. 333) refers to Timaeus 50 D, where Plato says that the primary matter of the universe must be devoid of form (ἀμορφον): because “if the matter were like any of the supervening forms, then when any opposite or entirely different nature was impressed the representation would be a bad one, because the matter would shine through” (κακῶς ἰν ἀφομοιοὶ τὴν αὐτοῦ παρεμφαίνον ὄψιν); but Aristotle’s expression was more likely suggested by some metaphor of Anaxagoras himself. For the use of the word ἀντιφράττει in reference to an eclipse, cp. Post. Anal. II. 2, 90* 15, τί ἐστιν ἐκλείψις; στέρησις φωτὸς ἀπὸ σελήνης ὑπὸ ὑπὸ ἀντιφράζεως. See also De Coelo, II. 13, 293* 23.

429* 23. λέγω δὲ νοὺν ὅ διανοεῖται καὶ ὑπολαμβάνει ἡ ψυχή] dianoetai and ὑπολαμβάνει would seem to be opposed as process and result: dianoetáxai being the logical method through which we go in discovering truth, ὑπολαμβάνειν the product of the mental operation. For a further account of ὑπολήψις, see Bonitz on Metaphysics, 981* 7; Waitz Organon, I. 523; Biese, I. 211. The latter remarks that in Aristotle “ὑπολαμβάνειν, and especially ὑπολήψις, are the most general expressions for that activity of thought in which the mind becomes first conscious to itself of the distinction of truth and error.” It is therefore frequently used in reference to an opinion not based on established principles of knowledge but adopted rather after much deep investigation. See Meta. 981* 7, 982* 6, and Anal. Prior. 67* 22, where ὑπολαμβάνει is combined with δακάζειν. So 1073* 17, ἦ περὶ τὰς ἴδιας ὑπολήψις would seem, as Waitz remarks, to imply a certain amount of contempt for the ideal theory.

§ 4. 429* 27. καὶ εὖ δὴ οἱ λέγοντες τὴν ψυχήν εἶναι τίπον εἴδων] The reference is to Plato and his followers. Against their theory Aristotle maintains that εἶδος are not ready made endowments—innate ideas—but a gradual accretion of the mind—that, in short, we are provided merely with such conditions of
thought as will enable us to frame ideas in connection with the gradual growth of our experience.

§ 6. 429\textsuperscript{b} 9. καὶ αὐτός δὲ αὐτῶν τὸ τότε δύναται νοεῖν] Themistius, after explaining the sense in which Aristotle accepts the Platonic description of reason as a place not to contain but to become ideas—οὐθ' οὖτω τόπος ὡς περιέχει ἄλλ' ὡς γίνεσθαι ποσὸ ἃ νοεῖ καὶ ὁι αἰσθάνεται—continues as follows:

“Such a potential reason is found even in children. When, however, starting from its occupation with the object of sense and with the images which sense leaves behind, it succeeds in tracking out the universal and in collecting the like in the unlike, such reason becomes thereupon more perfect in a manner corresponding to the scientific thinker. Such a thinker, after comprehending the propositions of science, is able by himself alone to work at each of them without the help of either teaching or practice from outside. Now in this second stage the reason is still potential, though it is not so to the same extent as it was prior to learning or to discovery. For there is implanted in it now a kind of eyesight previously non-existing, which enables it to perceive the like and unlike, the same and different, the congruous and incongruous. At this stage, then, the reason is able to think itself: for reason is no other than its thoughts: and thus when it becomes identical with its objects of thought, it may further be said to think itself.”

§ 7. 429\textsuperscript{b} 10. ἐπεὶ δ' ἄλλο ἐστὶ τὸ μέγεθος καὶ τὸ μεγέθει εἶναι] The difference between the expressions here used has been fully discussed by Trendelenburg (Rheinisches Museum for 1828, pp. 457—483). Practically the difference would seem to amount to that between the abstract and the concrete, τὸ εἶναι with the dative being used to denote the essential and ideal character of an object. The phrase denotes the absence of any definite ὑποκείμενον, the exclusion of γένεσις, the essential and permanent characteristics which neither become nor pass away. In abstract conceptions, accordingly, the addition of εἶναι makes no difference—circle and the εἶναι of a circle are identical. The phrase accordingly becomes more or less equivalent to τὸ τὶ ἦν εἶναι; in fact, Aristotle would seem almost to use them as convertible. But while εἶναι with the dative is thus employed to express the essential abstract nature, it must be steadily remembered that, as used without a dative and absolutely, it means simply the manifestation, the determinate existence, the particular aspect or application. The following passages are of special value for discovering Aristotle’s use of the expression: Meta. Z. 15, 1039\textsuperscript{b} 24, οὐ γίνεται τὸ οἰκία εἶναι ἄλλα τὸ γενέτε τῇ οἰκίᾳ—i.e. we cannot conceive the production (γένεσις) of a house in the abstract but simply in the case of a concrete individual house. Meta. Z. 1029\textsuperscript{b} 14, οὐ γὰρ τὸ σοὶ εἶναι τὸ μονοῦσκο εἶναι' οὐ γὰρ κατὰ σαυτὸν εἰ μονοσκός. On the other hand, in essentially abstract conceptions, the addition of τὸ εἶναι makes no difference. So Meta. Z. 11, 1037\textsuperscript{a} 34, it is said, ὅτι τὸ τὶ ἦν εἶναι καὶ ἱκαστὸν ἐπὶ τῶν μὲν ταιτῶν, ὡς ἐπὶ τῶν πρώτων οὐσιῶν οἷον καμπυλότης καὶ καμπυλότητι εἶναι, εἰ πρῶτη ἐστὶ (λέγει δὲ πρῶτην ἡ μὴ λέγεται τῷ ἄλλο ἐν ἄλλῳ εἶναι καὶ ὑποκειμένῳ ὡς ὑλή) ὅσα δ' ὡς ὑλή ἡ ὡς συνειδημένη τῇ ὑλῇ οὐ ταύτῳ,
οδ' ὑπά κατὰ συμβεβηκός ἐν, οἷον ὁ Σωκράτης καὶ τὸ μονοσικὸν ταύτα γὰρ ταύτα κατὰ συμβεβηκός. Κρ. also Meta. Z. 6, where there is said to be a difference between ἐκαστὸν and its τὸ τί ἢν εἶναι in the case of ἑνόμενα κατὰ συμβεβηκός (incidentally concomitant conceptions) οἷον ἰενοκὸς ἀνθρώπος ἔτερον καὶ τὸ λευκὸ ἀνθρώπῳ εἶναι: because, he adds, if they were the same, τὸ ἀνθρώπῳ εἶναι and τὸ λευκὸ ἀνθρώπῳ εἶναι would be one and the same. ἐπὶ δὲ τῶν καθ' αὑτὰ λεγομένων ἂεὶ ἀνάγκη ταύτων εἶναι…ἀνάγκη ἄρα ἐν εἶναι τὸ ἀγάθον καὶ ἀγαθῷ εἶναι καὶ καλὸν καὶ καλῷ εἶναι οἷον μὴ καθ' ἄλλο λέγεται ἄλλα καθ' αὑτὰ καὶ πρῶτα. Compare with this Phys. III. 5, τὸ γὰρ ἀπείρῳ εἶναι καὶ ἀπειρον τὸ αὐτό—a remark repeated in Meta. K. 10, 1066b 13. See also Metaphys. H. 3, 1043b 1, and De Coelo, I. 9.

429b 12. ἢπ' ἐνῶν γὰρ ταύτων ἐστι] The right punctuation of this clause, which, though Themistius had seen its true meaning, was generally connected with τὸ σαρκὶ εἶναι καὶ σάρκα, is due to Trendelenburg. The meaning of the exception is apparent from several passages quoted in the previous note, particularly Metaphys. Z. 11, where this is said to hold good of first substances; οἷον καμπυλὸτης καὶ καμπυλῖτητι εἶναι.

429b 16. ἀλλὰ δὲ ἦτοι χωριστὸ, ἡ ὡς ἡ κεκλασμένη ἔχει πρὸς αὐτὴν ὅταν ἐκταθῇ] The meaning of this must be that the relation between sense and thought in the building up of knowledge is one of aspect or degree, rather than of specific difference or kind. Just as it is one and the same line which is now extended and straight, now crooked and bent: so, similarly (Aristotle would seem to say) no matter whether the objects of our knowledge be abstract truths or concrete facts, the faculty remains fundamentally the same: only the sensuous side of mind is more prominent in the one case, the logical aspect in the other. And thus it would seem unnecessary to press the illustration further, and assign the bent line to the one application of our mind, the straightened line to the other faculty of cognition. Aristotle, that is, is simply saying: Sense and Reason, in the formation of experience, are no more distinct and separate faculties than are two lines, of which the one is merely the other bent, or the first-mentioned the other straightened. But the commentators have generally tried to explain the illustration further, and regarded the crooked line as corresponding with the perception of sense, the straight line as representing the cognition of reason. Thus Themistius (Spengel, p. 177), συνεξομοιοῦται γὰρ ὁ νοῦς τῶν πράγμασιν ἃς θεωρεῖ καὶ ποὺ μὲν ὀστροπ σύνθετος γίνεται ὅποτε τὸ σύνθετον νοη ὁποῖον ἐτὸ ὡς ἀπλῶς ὅταν τὸ εἴδος ἐκλαμβάνῃ μόνων. But the remainder of his commentary rather departs from this idea by adding that Aristotle, in opposition to Plato, represents the activity of thought by a broken line—γίνεται γὰρ ἀνθρώπῳ ὁ ὦς ἀστερ ἀπλῶς τημκαῦντα ὅταν τίν ὁδὴν συμπαρασκοπῆ τῇ μορφῇ. So that it would seem that it is as compounded of matter and form that things, and thereby thought, may be likened to a broken line. Simplicius gives a Platonic rendering to the metaphor which seems far from likely to be intended. The bending or breaking of the line signifies, says Simplicius, the mēthēs through which the concrete object (τὸ εἴδοπεποιημένον) participates in its ideal form: so that
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η κεκλαμενη την των ειδοποιημενων αναστιχων δηλοι γνωσιν' η δε εκτυθεισα ως
θρη και άκαμπης της των υφων και τελειουτων γνωσεως ειληπται συμβολον.
Teichmüller (Studien, p. 492) reverses the ordinary application of the two
kinds of lines mentioned. The straight line, he thinks, represents the ac-
tion of sense as knowing things as isolated particulars, individual units; the
bent or broken line represents the mode in which the mind compresses and
gathers together its sensuous images into a concept through comparison.
And he refers accordingly to the metaphor of the disordered line of soldiers
(Post. Anal. II. 19) as embodying the same conception.

Something of bewilderment comes upon one in the midst of these differ-
ent interpretations. Teichmüller's view would hardly seem to suit the facts,
so far as Aristotle in the present chapter says little or nothing of the way in
which the mind arrives at general ideas by abstraction and generalization.
But he would almost seem right in regarding the bent line as corresponding
to the other faculty—the non-sensuous faculty. And the meaning would
therefore seem to be that sense and reason stand to one another in cognition
as two processes, of which the one goes directly at its object, whereas the
other returns upon itself. The mind, in other words, in knowing concrete
phenomena, proceeds directly towards its objects: in its knowledge of the
ideas of objects it returns back upon itself—it knows them only through
a mental category, and thus recognizes itself as existing in things. In
sense, in other words, the mind and the object lie apart—a straight line
leads from one to the other, but there is no means of returning to the mind;
in reason the object of knowledge, the essential idea, is itself rational, so
that the mind returns upon itself.

§ 8. 429b 18. πάλιν δ' επι των έν αφαιρέσει οντων] For Aristotle's view
of abstract (and particularly mathematical) ideas, see the Metaphys. K. 3,
1061a 28: Phys. II. 2, 194a 10: Post. Anal. 79a 7. In the present passage
the straight line is regarded as actually expressed, and is therefore compared
with the σιμων which is Aristotle's typical illustration of the concrete.
see Meta. E. 1, 1025b 30, το μεν σιμων συνελεμενων έστι μετα της ολης' έστι γαρ
το μεν σιμων κοιλη ρις, η δε κοιλοτης άνευ ολης αισθητης.

429b 19. μετα ουαιχοις γαρ] These words of course simply explain why
it is that the ευθυς can be identified with το σιμων, viz. because it occupies
space and is continuous.

429b 20. έστω γαρ δυνας] It would seem simplest to understand these
words in the way which Teichmüller has suggested. According to this
interpretation the straight line is first of all a concrete embodiment of an
idea, just as snubnosed is a concrete embodiment of hollowness: but,
secondly, as conceived in its essential idea it is something different from
mere continuous extent, and as such it is simple duality—that is, the
abstract conception of the straight line is that of something between two
points, and corresponding with duality. And the force of the comparison is
then, as Teichmüller explains, that, just as in the sensuous sphere, we have
objectively the concrete σαρξ, and the "idea of flesh" apprehended sub-
jectively by sense, and the generalizing faculty respectively, so in the field of mathematics, we have the simple straight line, and the abstract idea of straightness apprehended by geometrical intuition on the one hand, the more general arithmetical intuition on the other.

429b 21. καὶ ἔλος ἄρα ὡς χωριστὰ τὰ πράγματα τῆς ᾨδῆς, οὕτω καὶ τὰ περὶ τῶν νοῦν] This simply means that just as objectively we can distinguish between the form and the matter of concrete things, so subjectively we can draw a distinction between thought as it applies itself to sensible phenomena themselves, or to the essential conception of these phenomena.

§ 9. 429b 22. ἀπορήσεις ὅ θα τέσ, ἐὰν νοῦς ἀπλοῦν ἑστὶ...πῶς νοήσει] The question here raised by Aristotle is, How on the Anaxagorean conception of reason as something transcendent and uncombined with other things, is the thinking of things possible? For thinking, Aristotle goes on, implies community between subject and object—that is, implies a state of things just the reverse of that involved in the theory of Anaxagoras. And alongside with this necessity of regarding thought as a kind of πάσχειν which implies community, Aristotle passes (§ 10) to another fact which requires to be explained, the fact, viz. that thought itself can be an object of thought. And he would seem to mean that it is just in this second characteristic of our thought that we must find the solution of our difficulty. For either, he argues, thought must be thinkable by and through itself, and then supposing every object of thought to be homogeneous, we must reduce other things to thought, or if not thus thinkable by itself, we must regard it as deriving some ingredient from things which makes it thinkable and intelligible as they are. But (§ 11) Aristotle goes on to reject both of these alternatives, and without either reducing matter to thought, or thought to matter, insists simply on the presence of some community (κοινῶν) between the two. Cp. the Introduction, pp. ci, cii.

§ 11. 429b 29. ἢ τὸ μὲν πάσχειν κατὰ κοινῶν τί] The unsatisfactoriness of this clause is very evident, and a not unreasonable suggestion would be to remove it altogether from the text as probably a repetition from 429b 25. Aristotle's explanation would then be to the effect that reason to be thought, requires to have compounded with it some element or category which renders it intelligible in the same way as other things. The words which follow are not free from difficulty either. Usually δήμηται has been read: but the Aldine reading, διο εἰρήται seems to give a simpler meaning. Torstrik would read: ἢ τὸ μὲν πάσχειν καὶ ποιεῖν κατὰ κοινῶν τί γίγνεται, ὁ δὲ νοῦς, ὡσπερ εἰρήται πρότερον, δυνάμει, κ.τ.λ.


430a 5. τοῦ δὲ μὴ ἀεὶ νοεῖν τὸ αἴτιον·ἐπισκεπτέον] To the question thus raised, Aristotle would seem to give no direct answer. The explanation which we must supply is, says Kampe, that the ideas (Vorstellungen) without
which the reason is unable to think are not always present, and this because their subject, the organ of the perceptive soul is exposed to the influences of the body; and is, as perishable, liable to exhaustion. But the real answer is probably contained in the following chapter, 430\* 22, where it is shewn that νοέ as creative does always think.

CHAPTER V.

This chapter contains Aristotle’s Theory of a creative Reason as an answer to the difficulty raised in the preceding chapter—How does thought (the rational) know things (the irrational). We must, Aristotle points out, distinguish between a thought which becomes all things, and a thought which makes all things, this creative thought being eternal and independent of the body. Cp. Introduction, p. civ.

§ 1. 430\* 13. ἀνάγκη καὶ ἐν τῷ ψυχῇ ὑπάρχειν] It is obvious from this that Aristotle’s conception does not, immediately at least, refer to anything impersonal or transcendental.

430\* 15. τῷ πάντα ποιεῖν...οἶν τὸ φῶς] Cp. Plato’s comparison of the action of the ιδέα τοῦ ἀγαθοῦ in the intellectual world to that of the sun in the visible world—Republic, 500 B, τὸν ἡλιον τοῖς ὀρωμένοις οὐ μόνον, οἶμαι, τὴν τοῦ ὀρασθαὶ δύναμιν παρέχειν φήμες, ἀλλὰ καὶ τὴν γένεσιν καὶ ἀχέρ καὶ τροφήν, οὐ γένεσιν αὐτὸν ὡσ. πῶς γὰρ; καὶ τοῖς γιγαντιακομένοις τοῖνυ μὴ μόνον τὸ γιγαντομεῖον φάναι ὑπὸ τοῦ ἀγαθοῦ παρεῖναι, ἀλλὰ καὶ τὸ εἶναι τε καὶ τὴν οὐσίαν ὑπ’ ἐκεῖνον αὐτοῖς προσεῖναι, οὐκ οὐσίας ὄντος τοῦ ἀγαθοῦ, ἀλλ’ εἰτ ἐπέκεινα τῆς οὐσίας προσεῖναι καὶ δυνάμει ὑπερέχειν.

430\* 18. τῇ οὐσίᾳ ὧν ἐνεργεῖα] Torstrik conjectures ἐνέργεια, an alteration which gets rid of the awkwardness of a double dative, but seems otherwise uncalled for. The dative no less than the nominative distinguishes this reason from the passive receptive reason, which, as Torstrik says, is realized and attains to ἐνεργεία only under the action of the νούς ποιητικός.

§ 2. 430\* 19. τὸ δ’ αὐτὸ ἐστὶν ἢ κατ’ ἐνέργειαν ἐπιστήμη τῷ πράγματι...Διὸς δὲ οὐδὲ χρόνῳ] These same words are repeated at the beginning of chapter 7, 431\* 1—3, and the question arises, to which of the two passages do they naturally belong. We have hardly the data for answering the question. If we suppose that the Psychology is mainly the lecture-notes either of Aristotle himself, or of his auditors, it is perfectly explicable why he should have used the words in their present context, and also have repeated them as introductory to chapter 7. The passage in its present context would seem to mean that in the individual (ἐν τῷ ἐν) the power of thinking precedes a conscious knowledge of the ultimate categories on which all thought depends. Yet what is lost in this order of knowledge, is first in the order of nature: and so far as this is the case, the νοές ποιητικός, as the thought which makes the world thinkable, is always previously present.
430\textsuperscript{a} 21. ὃλος δὲ οὐδὲ χρόνῳ] Philoponus notes, τινὰ τῶν βιβλίων ἐξουσιῶν ὃλος, τινὰ δὲ ἀπλωσ. There would seem, however, to be no variations in the reading: but at the same time, ὃλος must be taken as antithetic to ἀπλως. Cp. Philoponus: εἰτὼν ὅτι ὃλος δ᾽ οὐ χρόνῳ ἀντὶ τοῦ ὄλῳ κόσμῳ καὶ ὃλος ἀντὶ τοῦ ὄλικος καὶ κασμίκου.

430\textsuperscript{a} 22. ἀλλ᾽ οὐχ ὅτε μὲν νοεῖ ὅτε δ᾽ οὐ νοεῖ] Torstrik here removes the negative, and reads, ἀλλ᾽ ὅτε μὲν νοεῖ ὅτε δ᾽ οὐ νοεῖ. His grounds for this are, first, that in 430\textsuperscript{a} 5, Aristotle has said we must investigate the reason, τοῦ μὴ ἄει νοεῖ, secondly, that common sense requires it ("quæ enim homo sese putet semper cogitare"), thirdly, that the negative is omitted in one MS. W. And he concludes accordingly, that the rash interpolation of the negative is due to the "mad syncretism" of Platonists. But the second of Torstrik's reasons will only raise a smile in those accustomed to metaphysical thought: the third only shews that some copyist understood the passage as little as Torstrik himself: and the first only proves that Torstrik misunderstood Aristotle's conception of the place of a creative reason in the human mind. Aristotle is just answering here the difficulty raised in 430\textsuperscript{a} 5. Why, it was there said, don't we, if thought is identical with the object of thought, always think? And now comes the answer. We do always think—the work of thought which makes the world exist, can never be suspended for an instant—we don't think at one time, abstain from thinking at another time; but, and here comes the further explanation—οὐ μὴ μνημονεύσει—this is the process is one which is in the main unconscious, and can, therefore, only be brought out by that effort of mental analysis, which few people care to make. Cp. Philoponus: οὐ γὰρ τὸν ἐνα τῷ ὀρθῷ νοῦν λέγομεν ἄει νοεῖν ἀλλ᾽ ὅτι εἶν ὄλῳ τῷ κόσμῳ ἀνθρώπινος νοεῖ ἄει νοεῖ. And no doubt the passage contains by implication, a criticism of Plato's theory of ἀδιάνόμησις, and its corollaries. Aristotle, like Plato, is maintaining the eternity of thought: but whereas the latter held that all knowledge of the fundamental categories of the mind, was the result of reminiscence and recollection of a pre-existent state, Aristotle here roundly denies the possibility of such an act of memory.

430\textsuperscript{a} 25. καὶ ἄνευ τούτου οὐδὲν νοεῖ] It is a question whether the nominative to νοεῖ is the νοεῖς παθ. or the νοεῖς ποιητικός. Taking it as νοεῖς ποιητικός, and understanding ἄνευ τούτου, as equivalent to νοὲ παθητικοῦ, the meaning will be that we have no recollection of the a priori work of thought as an eternal presupposition of our knowledge, because the creative reason which makes and contains these a priori and eternal truths never applies itself to intellectual work except through and with the subjective processes of cognition which perish with the individual. And this, it must be said, gives a satisfactory interpretation to the passage. But it seems simpler to take νοεῖς παθ. as the subject: and to understand the meaning to be that the νοεῖς παθ. cannot give this sense of eternity and immortality, because it is limited to the lifetime of the individual (παλαιός), and is altogether of a relative dependent character—never being able to think and gain experience apart from the possession of the a priori conditions of our knowledge. Another
interpretation would be to regard ἀνευ τοῖτων as equivalent to ἀνευ τοῦ φθάρτον, and translate the clause as follows—the receptive reason perishes with the individual, and never thinks or forms an experience without becoming subject to this perishable concomitant.

The Introduction has, it may be hoped, explained the sense in which I understand Aristotle’s somewhat fragmentary conception of a creative reason and its place in experience. It only remains to supplement the short account given in the Introduction of the divergent views which commentators have held respecting Aristotle’s words, by adding some short quotations from the writers themselves.

Theophrastus’ view is preserved for us in Themistius’ Commentary (Spengel, p. 108). He raises the question in what sense the νοῦς is ἔξωθεν while yet συμφυής, and answers: ἀλλὰ τὸ ἐξωθεν ἄρα οὐχ ὑπελεθεν ἀλλ’ ὡς ἐν τῇ πρώτῃ γενέσει συμπεραλμαβανόμενον θετέον. He regards the two forms of reason as united together in human reason (μικτὸν γὰρ ποσ ὁ νοῦς ἐκ τοῦ ποιητικοῦ καὶ τοῦ δυναμεί), and explains delusion and forgetfulness as arising from the union of the two. (Cp. Brandis, Geschichte d. Philosophie, III. 1. p. 288.)

Eudemos, on the other hand, seems to regard the creative reason as something supernatural and godlike. Η. 14, 1248* 25: τὸ δὲ ζητούμενον τοῦτ’ ἐστι, τὸς η ἡ τῆς κινήσεως ἀρχὴ ἐν τῇ ψυχῇ. δήλω δὴ, ὡσπερ ἐν τῷ ὅλῳ θεῶς, καὶ ἐν ἐκείνῳ. κινεῖ γὰρ ποι τάντα τὸ ἐν ἡμῖν θεῖον.

Alexander’s view is to a somewhat similar effect. The following passage extracted from Brentano explains his theory. De Anim. f. 144: τοῦτο δὴ τὸ νοστὸν τῇ ἀυτῇ φύσει καὶ κατ’ ἐνέργειαν νοῦς, αὐτίων γνώμενον τῷ ὑλικῷ νῷ τοῦ κατὰ τὴν πρὸς τὸ τοιοῦτον εἰδὸς ἀναφορὰν χωρίζειν τῇ καὶ μμείσθαι καὶ νοεῖν καὶ τῶν ἐνώλων εἰδῶν ἐκαστὸν καὶ ποιεῖν νοστὸν αὑτῷ, θύραβεν ἐστὶ λεγόμενος νοῦς ὁ ποιητικός, οὐκ ἄν μόριον καὶ δύναμις τῆς ἡμετέρας ψυχῆς, ἀλλ’ ἐξωθεν γιγαιμένος ἐν ἡμῖν, ὅταν αὐτὸ νοσμεν...χωριστὸς δὲ ἐστιν ἡμῶν τοιοῦτος ὅν εἰκότος.

CHAPTER VI.

The unity of thought in judgment would seem to be the main subject of this chapter. The writer begins by shewing that truth and falsity are not found in notions as such, but only as combined or divided. Still, he insists, such combination or division always involves a fundamental unity, and he expresses this at greater length by considering the different senses of the individual or indivisible. Lastly, he returns apparently to the standpoint of chapter five by shewing that the highest thought of all is free from this sense of combination and division, and having nothing opposed to it simply ‘thinks itself?’

Themistius begins his paraphrase of the chapter in such a way as to make it carry on the distinction between creative and recipient reason, given in the preceding chapter. The connection, then, is that while the
creative reason as not combining notions but supplying notions to be combined is always true, the receptive reason as combining the ideas of the creative reason is liable to error. Thus, for example, the creative reason forms the ideas of substance, cause, effect, good, evil, &c.: in forming them it is true, and simply true: error arises when the receptive reason applies these νοητα and speaks of one thing as good, another thing as evil, or of one thing as cause, another set of facts as effect. Themistius may possibly be right; but it would seem that some words or sentences have also dropped out, either from the failure of the auditors to follow Aristotle's meaning, or from Aristotle himself having left his notes in an incomplete state.

§ 1. 430b 26. ἐν οἷς δὲ καὶ τὸ ψεῦδος καὶ τὸ ἀληθὲς] Torstrik thinks that we have got here a duplicate of the introductory argument—thus:

η μὲν οὖν τῶν ἀδιαφρέτων νόησις ἐν τούτοις περὶ ἅ ὄν ἔστι τὸ ψεῦδος.

Earlier Version.

τὸ γὰρ ψεῦδος ἐν συνθετεί ἄει καὶ γὰρ ἂν τὸ λευκὸν μὴ λευκὸν τὸ μὴ λευκὸν συνέθεκεν, ἐνέδεχατο δὲ καὶ διαφέρεισιν φάναι πάντα. ἀλλ' οὖν ἔστι γε οὐ μόνον τὸ ψεῦδος ἢ ἀληθῆς, ὅτι λευκὸς Κλέων ἐστίν, ἀλλὰ καὶ ὅτι ἥ ἔσται.

Later Version.

ἐν οἷς δὲ καὶ τὸ ψεῦδος καὶ τὸ ἀληθές, συνθεσὶς τίς ἡν νοημάτων ὥσπερ ἐν ὑπάρχων, καθάπερ ἐμπεδοκλῆς ἔθη ἡ πολλῶν μὲν κόρας ἀνάχειν ἐβλάστησαι ἐπείτη συντϊθεσθαι τῇ φύλῃ οὕτω καὶ ταῦτα κεχαρισμένα συντϊθεται, οἷον τὸ ἀνυμητρον καὶ τὴ διάμετρος. ἦν δὲ γενομένων ἡ εὐσπιμενῶν, τῶν χρόνων προσ- εννοοῦ καὶ συντϊθεις.

Vahlen, however (Aristot. Aufsätze, i.), has carefully analysed the passage and shewn that the two sections in question cannot be regarded as alternative versions of one another. Vahlen's points are mainly these: (1st) To pass at once from η μὲν οὖν τῶν ἀδιαφρέτων—οὐκ ἔστι τὸ ψεῦδος τὸ γὰρ ψεῦδος ἐν συνθετείς is to conceal the chief thought of the chapter and to give it merely a secondary place. Secondly, the corresponding clause to η μὲν οὖν can be found only in ἐν οἷς δὲ. Thirdly, the remark οὐ μόνον τὸ ψεῦδος ἢ ἀληθῆς, ὅτι λευκὸς Κλέων ἐστίν, ἀλλὰ καὶ ὅτι έν ἔσται (in the earlier version) would come upon us with surprise without the suggestions of the 'later version,' οὐ δὲ γενομένων κ.τ.λ. Fourthly, the first section (Torstrik's later version) gives an explanation only of the συνθεσις νοημάτων, the second passage (Torstrik's earlier version) gives a proof of the proposition τὸ ψεῦδος ἐν συνθετείς ἄει—"two things which nowise overlap but reciprocally involve and supplement one another."

430b 28. συνθεσις τίς ἡν] For this use of ἡν in Aristotle see Cope's Rhetorick, i. 1, 7, with the parallel passages there quoted: "ἡν and its analogues, ἐτὶ, οὐκέτι, οὔπω, are used emphatically to mark a critical point, climax, degree attained as deserving of special and particular attention at the moment and in reference to something else which is not equally remarkable."

430b 31. οὖν τὸ αὐτύμετρον καὶ ἡ διάμετρος] Torstrik here adds ἡ τὸ σύμμετρον καὶ ἡ διάμετρος. But, as Vahlen shews, Aristotle's object here is not to shew, as in 430b 2, how συνθεσις may be false as well as true, but
simply how the separate νοήματα pass by the help of σύνθεσις into an organic unity, much in the same way as the necks and heads in Empedocles’ verses.

§ 2. 430b 1. τὸν χρόνον προσεννοῶν καὶ συντιθεῖσι] Torstrik has struck out καὶ συντιθεῖσι on the ground that it is an unnecessary addition to προσεννοῶν. “Nam Cleonem et album συντιθεμεν si dicimus Κλέων λευκός ἐστιν: sin Κλέων λευκός ἢ ν κλίτι, προσεννοῦμεν quidem tempus atque etiam προσο- στημάτωμεν sed non componimus tempus cum Cleone.” But, as Vahlen has noted, συντιθεῖσι is to be taken absolutely as equivalent to making a σύνθεσις just as προστιθεμέναι without any definite object means making a πρόσθεσις.

430b 2. τὸ γὰρ ψεύδος ἐν σύνθεσις ἀεί] This, as Vahlen has pointed out, refers not to the words immediately preceding but to the leading proposition of the section: ἐν οἷς καὶ τὸ ψεύδος καὶ τὸ διάθεσις σύνθεσις τις ἡδὺ νομά- των; cf. De Interpr. 1, 16a 12: περὶ γὰρ σύνθεσιν καὶ διάφρασιν ἐστι τὸ ψεύδος καὶ τὸ διάθεσις.

430b 2. καὶ γὰρ ἄν τὸ λευκὸν μὴ λευκόν, τὸ μὴ λευκὸν συνεθήκεν] Such is the reading commonly accepted, and I have seen no reason to alter it. Trendelenburg had in his earlier edition struck out τὸ μὴ λευκόν, but, as Vahlen remarks, the sentence does not require to have anything struck out, but rather something added to it to complete the sense. Torstrik thinks that Aristotle must have written καὶ γὰρ ἄν τὸ λευκὸν οὐ λευκόν καὶ τὸ μὴ λευκὸν λευκὸν συνεθήκεν: Trend., in his new edition, reads τὸ μὴ λευκὸν λευκὸν συνεθήκεν. But the vulgate would seem to make perfectly good sense if we supply λεγό or νόθο before τὸ μὴ λευκόν, and regard συνεθήκεν as the apodosis. The sentence will then run: Falsehood in fact always involves combination: even if the proposition assert white to be not white, it brings not-white into a combination: that is, even a strictly negative judgment (while involving separation, also) implies a combination of ideas.

430b 3. ἐνδέχεται δὲ καὶ διαίρεσιν φάναι πάντα] Torstrik finds considerable difficulty in this πάντα and its meaning. “Quod enim? omnia sunt διαίρεσις? οἱ ἀνθρώποι ἦσι διαίρεσις? τὸ λευκὸν διαίρεσις? ἡ σύνθεσις διαίρεσις et sic in infinitum?” He would accordingly read ταύτα in place of πάντα. But πάντα may surely bear some such meaning as ‘all such combinations’—all this work of forming negative propositions. From one point of view you may call it σύνθεσις: from another point of view you may call it διαίρεσις: for as Simplicius writes, οὐκ ἂν διαίρεσις ἦσι σύνθεσις. Cf. Themistius, p. 202, διαιρεῖται γὰρ ἄν διαιρεῖται ἢ ἀπόφασις, συνθέσει δὲ ἢ κατάφασις’ τάχα δὲ καὶ πάντα διαιρέσεις’ γὰρ ἡ φαντασία συγκεκριμένως παρὰ τῆς αἰσθήσεως υπεδέξατο, ὃ νοῦς διαιρεῖ.

430b 4. ἀλλ’ οὐ δέχεται γε οὐ μόνον τὸ ψεύδος] Torstrik thinks this γε absurd and would expel it from the text. But the sentence evidently means ‘anyhow’—whether we call this process σύνθεσις or διαίρεσις. And γε is just the particle which we want for expressing such a connection.

§ 3. 430b 6. τὸ δ’ ἀδιαιρετον ἐπεὶ διχωτ. κτ.λ.] The object of this section would seem to be to elucidate further the simultaneously synthetic and analytic,
combining and dividing force of mind by a consideration of the relative character of the ideas of divisible and indivisible. More particularly the question is considered with reference to space and time, in order to shew that here also a unity of thought is possible in regard to that which is divided. For, as Kirchmann rightly explains, "everything spatial and temporal has a continuous extension and is therefore divisible—in fact, we may represent it as composed of parts which run into each other. It is therefore complex and manifold, and the question arises in regard to the thinking of this complex, whether the reason thinks this as one and how this happens—whether, in other words, we can think the duration of a minute without this minute actually running out, and whether generally we can conceive for ourselves periods of time in a single moment in spite of their extension in time. And so similarly, with regard to space, we are led to ask whether it, with its different extended parts, can be thought of momentarily by the mind. To such questions Aristotle here replies that we can conceive length and time both as undivided and as divided. Spatially or temporarily extended objects are only potentially simple and without parts—i.e. the reason can think them as simple and undivided, and when this happens the thought of such an extended object is simple and instantaneous. We can, however, think these objects as divided or separated or in the sequence of their parts: and when this takes place the object is actually divided (halved) in thought, so that the parts are conceived separately in succession." Voigt's translation is worth quoting, as shewing how the philosophy of Kant had coloured his interpretation of Aristotle. Da das Untheilbare (die Formen der Sinnlichkeit und des Denkens) auf zweyerley Art so genannt wird: in Ansueh seiner Möglichkeit und in Anseueh seiner Wirksamkeit, so hindert nichts dass der Verstand zugleich das Untheilbare (die Formen) denkt, wenn er die Länge (aussere sinnliche Gegenstände) denkt. And a foot-note explains Aristotle as meaning that, "If the understanding thinks external objects, the matter comes from outside: but the forms of reflection by which the thinkable is thought come from within."

430b 7. οὐδὲν κολλιέει νοεῖν τὸ ἀδιαιρέτον] Torstrik reads here τὸ διαιρέτων ἢ ἀδιαιρέτων. And this no doubt does somewhat simplify the passage: but the ordinary text is easy enough to interpret. Aristotle's point is that μὴκος, which naturally implies parts and is thus διαιρέτων, can still be at the moment of thought (ἐταν νοὴ is, as Trend. says, to be emphasized) be regarded as ἀδιαιρέτων. There would thus seem to be no need to insert with Torstrik οἶνον before ἐταν. Lastly, ἀδιαιρέτων γὰρ ἐνεργεία must be taken as parenthesis, and καὶ εἰ χρόνῳ ἀδιαιρέτῳ as coordinate with νοεῖν τὸ ἀδιαιρέτων.

430b 9. ὁμοίως γὰρ ὁ χρόνος διαιρέτως καὶ ἀδιαιρέτως τὸ μὴκεί] Torstrik thinks that we have got here the editio posterior of that of which the editio prior is contained in 430b 17, ἐνεστὶ γὰρ καὶ τούτως τὸ ἀδιαιρέτων...καὶ χρόνῳ καὶ μὴκεί, but as he gives few or no reasons for this view, it hardly admits of examination. Only it should be noted that the words ὁμοίως γὰρ κτλ. explain why thought does not only apply to an ἀδιαιρέτων, but takes place
also ἐν χρόνῳ ἀδιαιρετῷ, whereas the words ἐνεστὶ γὰρ κἂν τοῦτοι explain why this 'undivided' thought applies also to what is εἶδει ἀδιαιρετῶν. Voigt, it may be added, explains the sentence as meaning that Time, the form of sense, may be regarded as indivisible, i.e. as an abstract form, and also as divisible, that is applied to objects of sense.

§ 4. 430b 16. κατὰ συνβεβηκὸς δὲ, καὶ οὐχ ἡ ἑκεῖνα διαιρετὰ] that is, to adopt Kirchmann's explanation, "in the conception of an extended surface or a figure as one, the circumstance that this takes place with one power and in one moment is thought not as belonging essentially to the object of conception: it is only the process of thought that is one."

430b 14. ἀδιαιρετον τῷ εἴδει] Themistius illustrates by ἄνθρωπος or Σωκράτης. Such notions are thought ἀδιαιρετῶς. For, he explains, the one half of Socrates is not thought in one part, the other half in another part of time, oüδὲ παρατείνεται τῇ διεξέσθῃ τῆς λέξεως, δὲ ἡ προφερόμεθα τὸ ἄνθρωπος, ἡ σύνθεσις τοῦ νοήματος.

430b 17. ἐνεστὶ γὰρ κἂν τοῦτοι τι ἀδιαιρετῶν] Themistius comments: αὐτῶν δὲ ὅτι ἐν πάσι τοῖς διαιρομένοις ἐνεστὶ τι καὶ ἀδιαιρετῶν καὶ ἐν πάσι τοῖς συνθέτοις ἀπλοῦν.

430b 21. δηλοῦσιν ὅπερ ἡ στέρησις] Translate: is known in the same way as its negative—that is, the point is known by wanting that continuity which marks the line.

430b 23. δεὶ δὲ δυνάμει εἶναι τὸ γνωρίζον καὶ ἐν εἶναι ἐν αὐτῷ] This is the reading of LTVWX, Ald. Sylb., and would seem to make better sense than many of the other readings. Aristotle is discussing the objects of existence which are arrived at by division or distinction—such as the point, or good as distinguished from evil—and asking how they can be comprehended by thought whose essential character is unity and unification. To this he replies: Such objects are like negatives, and merely known by relation to that other which they are not. Thus, then, the mind in knowing them is potentially both, but at the same time it does not lose its unity—it remains ἐν ἐν αὐτῷ. Bekker and Trendelenburg read after Simplicius, ἑνείναι, but there is in that case a difficulty about the subject of the verb, Kirchmann, for instance, translating die Gegenheile müssen in ihm enthalten sein. Torstrik alters the passage into καὶ μὴ ἐν εἶναι αὐτῶν, i.e. the cognitive faculty must be potentially both, and not merely one or other of the relatives: and thinks the remark possibly directed against Plato, who held νοὐς to be ὁ ταύτῳ κυκλός. But for the introduction of μὴ there is no MS. authority whatever.

One alteration seems, however, desirable in the text of the chapter—to read μὴ κατὰ ποσοῦ διαιρετῶν instead of ἀδιαιρετῶν in line 14. The argument of the chapter, it must be remembered, is as follows. Reason expresses truth and falsehood by a combination of ideas, a combination which we may call division (διαιρεσίς), but which, even as division, does not interfere with the unity of thought. For what appears objectively as division and analysis is apprehended mentally in unity and synthesis. It is so (§ 3) with what is
quantitatively divisible (for example, a line or space): it is so (§ 4) with what is not quantitatively but specifically divided: that also involves something ἀναίρετον.

Reading then in this way, τὸ μὴ κατὰ ποσὸν διαίρετον, we can understand better why Aristotle in §§ 5 and 6 goes on to insist on the unity of thought as underlying even the apprehension of opposites and of the antithetic members of division.

430b 24. εἰ δὲ τινὶ μὴ ἑστίν ἑναντίον τῶν ἀνίκον] Thus far Aristotle has discussed the unity of thought and reason by shewing that even in dealing with what is divisible and divided or relative, thought involves an underlying unity. He now takes higher ground: and shews that a faculty of thought which has passed beyond the relativity of contraries returns as it were upon itself, and finds within itself the knowledge which a lower grade of knowledge gathers from outside. Perfect absolute thought, in other words, rises above the contradictions and the complementary categories of ordinary thought: the mind, as thinking, becomes identical with the world as thought, there is no chasm between the external and the internal, or the rational and the real. God's only thought is in Aristotle's own words the thinking of thought—νόησις νοῆσως.

§ 7. 430b 26. ἐστὶ δ' ἡ μὲν φάσις τι κατὰ τινος, ἄστερ ἡ κατάφασις] Torstrik argues that φάσις here cannot be received, because (1) if it is = ἀπόφασις, Aristotle would have said, not ἄστερ, but ὅλον ἡ κατάφασις; (2) if φάσις is = κατάφασις, the word would not be repeated, and (3) if it is = simple ὅνομα or ῥῆμα, it would be incorrect to speak of a φάσις κατὰ τινος. He, therefore, writes ἐστὶ δ' ἡ μὲν κατάφασις τι κατὰ τινος, ἄστερ καὶ ἡ ἀπόφασις. It is true that φάσις is scarcely used so strictly as in De Interpret. 4, 16b 27; but there seems no great difficulty in understanding the passage as it stands.

430b 28. ὁ τοῦ τι ἐστὶ κατὰ τὸ τι ἦν εἶναι ἀληθῆ] Aristotle means that pure thought, the thinking of immaterial conceptions in the light of their idea, is as true as the perception of the οὗτα ἀληθηγὰ, and that falsehood only comes in when we assert one to be another. So Themistius, p. 206: καὶ ὁ νοῦς, ἐστὶ ἄν μὲν ἔστηται ἐπ' αὐτῆς τῆς ἑννοίας τοῦ τι ἦν εἶναι, ὅλον τοῦ ἀγαθοῦ ἡ τοῦ καλοῦ ὡς τὰ πολλὰ ἀναμάρτητος καὶ ἀγειδῆς· ὡς τινὶ δὲ ἁγαθῶν τοῦτο λέγη καὶ τοῦτο καλὸν ἀλλοτριονομεῖ πολλὰς. Cp. Metaph. E. 4, 1027b 24.

CHAPTER VII.

The subject of this chapter is generally the way in which reason deals with its sensuous materials. It forms thus in some ways the transition to the analysis of will which follows in subsequent chapters: and deals, though not exclusively, with the practical side of reason. Action, in the form of desire and aversion, takes place when the sense does not merely perceive an object, but perceives it as pleasant or painful (§ 2). But (§ 3) this presence
of sensuous images is but the condition of our mental action, and presupposes throughout the unity of mind—a unity especially involved in the comparison and distinction of sensations (§ 4). There is, therefore, a close parallel between the practical and the speculative reason (§§ 5, 6), even when the latter applies itself to mathematical abstractions (§ 7), and, generally, reason is equivalent to its objects (§ 8).

§ 1. 431a 1. τὸ δ’ αὐτὸ ἐστὶν ἢ κατ’ ἐνέγγειαν ἐπιστήμην τῷ πράγματι] These words form the direct continuation of the thoughts with which the sixth chapter closed. We have here in short the same conclusion as was reached in 430b 25; αὐτὸ ἐαυτὸ γνώσκει—the identity of absolute thought with the contents of experience. The words, it has been already noticed, are the same as those used in chapter 5, but, though Themistius omits them, they were probably used by Aristotle in both passages. In chapter 5, they denoted the identity of the νοῦς πνευματικός with the νοητά which it supported: here they re-state this same truth with the greater fulness which the analysis of cognition in chapter 6 has rendered possible.


The drift of Aristotle's comparison of sense and reason is briefly that in sense the δύναμις stands first—the possibility of sense-perception is realized by its object; in intellect, on the other hand, while this is true relatively to individuals, ὅπλως and ὅλως—apart from individuals—everything depends to such an extent upon creative intellect, that ἐνέργεια may be said to precede the δύναμις—thought as the condition of experience must precede the faculty of thought which apprehends it.


431b 17. ὧσπερ δὲ ὁ ἄρχω τὴν κάρυν τοιαύτῃ ἐποίησεν] This passage would seem to mean that just as the action of the air is the medium of sight, but not more than a medium or condition, so similarly the φαντάσματα are merely the media or conditions of thought—vehicles through which thought operates, but not necessary conditions of its exercise. Thus the words τὸ δὲ ἐσχατῶν ἐν complete this position by holding that these φαντάσματα require to be referred to the unity of mind; in other words, they are merely the materials of knowledge, unmeaning apart from the synthetic action which elaborates them into something intelligible. But alongside of this cognitive reference comes the reference to will and its relation to perception.
And so the passage bears the further meaning, that the perceptions of sense only lead to action, and cause desire or aversion, in so far as they are regarded as good or evil: and similarly the φαντάσματα which stand to thought as impressions to sense will only lead to action when apprehended as good or evil. Now such φαντάσματα are invariable concomitants of thought; but we must remark that thought is no more to be resolved into the images of sense than sight into its physiological conditions: in both there is a central faculty which distinguishes and compares.

§ 4. 431a 20. τίνι δ’ ἐπικρίνει τί διαφέρει γλυκό καὶ θερμόν] About this passage Trendelenburg remarks—ab instituto plane digreditur. But it is evident that the passage is intended, however much it may fall short of its aim, to explain the unity in diversity involved in the relation of the mind and will to different presentations of sense. The question, in fact, how the mind is able to compare different φαντάσματα, or weigh different motives to action, is not unlike that of the comparison and distinction of different communications of sense. And it is only after Aristotle has settled this preliminary question that he can carry on the main thought of the chapter in the words of 431b 2, τά μέν οὖν ἔδη τὸ νοητικὸν νοεῖ.

§ 4. 431a 21. ἔστι γὰρ ἐν τί οὔτω δὲ καὶ ὡς ὅρος καὶ τάυτα ἐν, κτλ.] This paragraph is full of almost hopeless difficulties, and no commentator can be said to have given a satisfactory explanation of them. It will simplify the subject to exhibit first some of the explanations which have been proposed, and then add a word or two of general elucidation.

Torstrik’s commentary is as follows: ἔστι γὰρ ἐν τί—i.e. the μεσότης αληθικη(α) previously mentioned: οὔτω δὲ (as in the mind) καὶ ἡ στιγμὴ καὶ ὅρος ὁ ὅρος (numerically one while differing in operation) καὶ τάυτα (i.e. the γλυκό and θερμόν) ἐν τῷ ἀνάλογῳ (each being the habitual extreme of its own ἐναντίωσις to which the privative extreme, i.e. bitter and cold, is contrary) καὶ τῷ ἀριθμῷ ἐν ἔχει πρὸς ἐκάτερον ἐναντίων. (For if hot be removed from cold by a certain interval, and this interval can be numerically stated, sweet will be removed from bitter by a corresponding interval, white from black, &c., and the numerical expression of this interval will be the same.) τί γὰρ διαφέρει τὸ ἀπορεῖν πῶς τά μὴ ὑμογενὴ κρίνει ἡ τάναυτα οἷον λευκὸν καὶ μέλαν. (The original question related to those objects which, while not contained within the same genus, are analogically the same—e.g. hot and sweet. He now brings back this question to contraries contained within the same class, and proves that if white and black are at one and the same time presented to one and the same faculty, white and sweet will be so likewise.) ἔστω δὴ ὡς τὸ Λ τὸ λευκὸν πρὸς τὸ Β τὸ μέλαν, τὸ Γ (sweet, hot, &c.) πρὸς τὸ Δ (bitter, cold, &c.) ὡς ἑκείνα πρὸς ἀλήθεια (as white to black). ὥστε καὶ ἐναλλάξ (Λ : Γ = = Δ : Β, i.e. white : sweet, hot, &c. = black : bitter, cold, &c.) εἰ δὴ τὰ ΓΔ εἰν εἰς ὑπόρχωνα (suppose that there is in the mind that which is at one and the same time two contraries, or of which two contraries can be at one and the same time predicated) οὕτως ἔξει (the sensitive mean τὸ ἐν ἐνω ὑπηρχεῖν, as it
would hold itself if any other pair of contraries should be predicated of it) τὸ αὐτὸ μὲν καὶ ἐν (so that it is numerically one and the same) τῷ ἀντίθετα (but different in aspect). Κάκεινα ὄρνευς. (After it has been shewn that when one pair of contraries has been perceived, another also will be perceived, it is evident in addition that two pairs of proportionate terms are perceived at one and the same time, if from the proportion A : Γ = B : Δ we return to the proportion A : B = Γ : Δ — quod erat demonstrandum: τι γὰρ διαφέρει τὸ ἀπορεῖν πῶς τὰ μὴ ὁμογενὲς κρίνει ἡ τάνατος, cp. 448* 18) ὁ δ’ αὐτὸς λόγος καὶ εἰ τὸ μὲν A τὸ γλυκὺ εἶπ, τὸ δὲ B τὸ λευκόν.) Thus far we have supposed that the μεσότης αἰσθητικῆ is at one and the same time a pair of contraries, white and black, or sweet and bitter, and hence we have deduced the perception of those qualities which are proportionally the same, white and sweet, or black and bitter. Now let us suppose that the sensitive mean is at one and the same time those things which are proportionally the same, sweet and white, or bitter and black, the same transposition of the proportion will lead to even contraries being perceived. The pre-supposition of the whole argument is, Torstrik further adds, that there is something (τὸ ἐν) in the mind which is really one and indivisible, but is diverse in its mode of action, and is adapted to receive at one and the same time different qualities —which being granted, the rest easily follows. Sed illud ipsum, dicat aliquis, κενολογεῖ εἰςτὶ καὶ μεταφορᾶς λέγειν μαθηματικάς.

Philoponus takes Γ and Δ to refer to the ἰδεῖς of which A and B are the objective counterparts. τὸ δὲ τρίτον καὶ τέταρτον ἀντὶ νοητῶν λαμβάνει, ἵνα ἡ τὸ μὲν τρίτον ὁ λόγος τοῦ λευκοῦ τὸ δὲ τέταρτον ὁ λόγος τοῦ μέλανος. And thus, Philoponus supposes Aristotle to reason, just as κοινὴ αἰσθησις knows the first and second terms of the series, οὗτῳ καὶ τὸν οὐδὲ τὸ τρίτον καὶ τὸ τέταρτον, τοιτέστι τοὺς λόγους τούτων.

This interpretation is also taken by Kampe (p. 109). There is—such is Kampe's explanation of the whole passage—a certain unity, and in this unity the different perceptions are also one—one in virtue of their reciprocal relation and the numerical formula of their combination, just as the corresponding outward objects. (The agreeable colours are combinations of black and white, λόγοφ καὶ κατ‘ ἀριθμοὺς, according to De Sensu 3, 439b 19, and the pleasant flavours are combinations of sweet and bitter, κατὰ λόγον καὶ κατ‘ ἀριθμοὺς, 442a 12.) Now it makes no difference relatively to this distinction, whether objects which are not homogeneous (τὸ μὴ ὁμογενῆ), such as sweet and warm, or those which are homogeneous, and therefore contrary, such as black and white, are taken into consideration. Take them, then, as homogeneous. A (white) and B (black), the objective pair, stand to one another in the same ratio as C and D, the subjective pair: and therefore, alternando, A : C :: B : D. If, then, C and D present themselves before our internal mental unity, they will resemble the condition of A and B, that is, they will be in unity, but their aspect or mode of existence will not be the same. And the same result holds good in case A and B do not belong to the same class.
This would seem to be the truer explanation of the passage. Had Aristotle meant by γ and Δ the sweet and bitter as Torstrik supposes, he would surely have said so. The whole point of Aristotle's argument is that just as qualities can be united objectively in one thing, so they can be united subjectively in one act of thought: and just as an orange is at once yellow and fragrant, so similarly the two ideas of colour and odour can be held before the mind in one act of thought. Thus the solution here proposed is similar to that in De Sensu, c. 7: the only difference in fact is that the elucidation here is encumbered with a mathematical symbolism which really helps little to a simplification of the question. See De Sensu, 7, § 9, 449a 13: ἡ ὁσπερ ἐπὶ τῶν πραγμάτων αὐτῶν ἐνδέχεται, οὗτος καὶ ἐπὶ τῆς ψυχῆς τὸ γὰρ αὐτὸ καὶ ἐν ἀριθμῷ λευκόν καὶ γλυκόν ἔστι, καὶ ἄλλα πολλά, εἰ μὴ χεριστὰ τὰ πάθη ἄλληλα, ἄλλα τὸ εἶναι ἔτερον ἐκάστῳ ὁμοίως τοινύν θετέον καὶ ἐπὶ τῆς ψυχῆς τὸ αὐτὸ καὶ τὸ εἶναι ἀριθμῷ τοῖσιν πάσιν, τῷ μέντοι εἶναι ἔτερον καὶ ἔτεροι τῶν μὲν γίνει τῶν δὲ εἰδείν ψως τὰ μὴ ὁμογενή] So in LSUX. μη is omitted in TVWY, and by Simplicius, Trend., and Bekker. If μη be left out, ὁμογενή must be regarded as explanatory of ἐνανθία, and the sentence will mean: There is no difference between considering non-homogeneous qualities, such as sweet and hot, and considering qualities which are contraries, or homogeneous, i.e. comprehended under one and the same class.

§ 5. 431b 2. τὰ μὲν οὖν ἐίδη τὸ νοητικὸν νοεῖ] This would appear to go back to the statement in 431a 15—20, and to mean that while, as stated in 15, φαντάσματα stands as αἰσθήματα to understanding, still the interpretation of these as good or evil (a 16) involves the recognition of them as general or typical εἴδη, and so implies the work of reason. This Aristotle further illustrates by the process of interpreting a war-beacon. Just as that, while immediately a merely sensuous phenomenon, becomes secondly a symbol or representative of an invasion, so similarly the presentations of sense have to be translated into the εἴδη of which they are the counterparts before they can become motives to action.

431b 5. αἰσθανόμενον τὸν φρυκτὸν ὅτι πυρ τῇ κουή γνωρίζει] Torstrik would omit ὅτι πυρ: but I agree with his "unintelligent interpolator" in thinking that the clause is intended to bring out the opposition between the perception of the ὅμα αἰσθήσεως to which the φρυκτος is merely πυρ (or more strictly a coloured surface), and the κουή αἰσθησιως which in consequence of the movement of the flame interprets it to denote the approach of an enemy. Nor would there seem to be very good grounds for reading with the margin of the Basel edition κυήσει instead of κουή. Movement may be the special condition through which the significance of the phenomenon in question is discovered, but the faculty of sense which discovers this significance is of wider scope than the particular concomitant of motion.

§ 7. 431b 12. τὰ δὲ ἐν ἀφαιρέσει λεγόμενα νοεῖ] Torstrik regards this passage as hopelessly corrupt, and adds that the first part is more or less a repetition of c. 4, 429b 8, while the second portion refers to a discussion
for which it is impossible to assign any reference. Confused, however, as the passage in some ways is, it would seem simply to continue the account of that work of reason with which the previous sections have been occupied. We have been told how the reason apprehends the ideas of desirable and undesirable in the presentations of the senses: we are now told how it apprehends mathematical abstractions. The abstraction, it is explained, is not quite complete: it is like trying to conceive the συμβον not as concrete but as abstract: and yet mathematical conceptions are never entirely independent of a concrete representative—they are, in the language of the *Metaphysics*, χωριστά ἀλλ' ὡς ἐν ὕλῃ: and therefore mathematical thought ὡς κεχωρισμένα ὡς κεχωρισμένα νοεῖ—it is in fact abstract in a narrow sense, and makes an unreal separation between ideas and things. Thus, then, the mental act involved in mathematics is of a relative, imperfect nature. But reason, in the fuller and more general sense of the word, the writer goes on to say, is not of this narrowly abstract and therefore semi-sensual character. Reason, as the thought of the ideas which give truth to things, deals at once with the form and the matter of cognition: it transcends the opposition of ὕλη and ἔλθος in the conception of ἐνέργεια. And thus, as Simplicius says, the writer is again brought to the conception of reason as penetrating to the true idea and reality of things, and thus producing an identity between things and thought. Βούλεται μὲν καὶ νῦν ὅπερ πολλάκις προεῖπε τε καὶ αὐτίς ἐρεί ὑπομνήσασα, ἄτι πάς νοῦς ὅταν ἐνεργή ὁ αὐτός ἐστι τοῖς νοουμένοις καὶ ἔστιν ἄπερ τὰ νοουμένα.

CHAPTER VIII.

This chapter discusses the connection between sense and thought, and shews that while reason is coextensive with the whole world of experience, it is still only in the world of sense that the world of thought is to be found. The two are not, as Plato had supposed, divided, but the ideas of reason only exist as embodied in material phenomena.

§ 2. 431b 24. τέρμεται οὖν ἡ ἐπιστήμη καὶ ἡ αἰσθήσεως εἰς τὰ πράγματα] Torstrick, unable to explain the 'monstrosity' of εἰς τὰ πράγματα, reads ὅπερ τὰ πράγματα on the suggestion of Themistius' interpretation (τὰ ὄντα τοῖνυν τὰ μὲν δυνάμει τὰ δὲ ἐνέργεια' οὕτω δὲ καὶ ἡ ψυχή τὰ μὲν δυνάμει εἰδή ἐστι, τὰ δὲ ἐνεργεία), and further alters εἰς τὰ δυνάμεις into εἰς δυνάμεις and εἰς τὰ ἐντελεχείας into εἰς ἐντελεχείας. But this alteration seems unnecessary.

431b 27. δυνάμεις ταύτα ἐστὶ] So the greater number of MSS. If ταύτων be read, it would seem better, with Prof. Chandler, to continue—τὸ μὲν ἐπιστήμω, τὸ δὲ αἰσθήτω.

432a 1. ἡ ψυχή ὅπερ ἡ χείρ ἐστιν] For the superiority of the hand over all other instruments, see De Part. Anim. iv. 10, 687a 20: ἡ δὲ χείρ ὅπερ εἶλαι οὖς ἐν ὄργανον ἄλλα πολλὰ ἐστὶ γὰρ ὅπερεὶ ὄργανον πρὸ ὄργανον. The metaphor implies, as Trendelenburg says, the absolute priority of mind to all material things. Just as the hand is the instrument which, existing
previously to all other things, converts them all to use, so similarly mind, as the ἐιδός ἐιδῶν, is πρῶτερον τῇ φύσει. Cp. Themistius, who says: μὴ ποτε δὲ οὐ τῷ λαμβάνειν μόνον τὰ εἰδή πάντα λέγεται καλῶς εἶναι τὰ ὑπὸ ἡ ψυχῇ ἄλλα καὶ τῷ ἐντιθέναι τὰ εἰδή τῇ ὕλῃ.

432a 12. τὰ δὲ πρώτα νοήματα τίνι διόσει;] Trend. understands these νοήματα to be the highest conceptions, a quibus reliquae veritatem repetunt, and views the clause generally as a vindication of the non-sensuous charac-
ter of the conceptions of the creative intellect. But, as Freuden
thal (p. 13) says, Aristotle would not even problematically identify our highest ideas with φαντάσματα. At the same time the πρώτα νοήματα are scarcely only unconnected ideas, like the ἀπλα of Met. E. 4, 1027b 27, without συμπλοκή of truth or falsehood: rather they are the earliest results of abstraction—the
generalizations which lie closest to sensible phenomena.

432a 14. ἣ οὖδὲ τάλλα φαντάσματα] Torstrik would here read ταῖτα, and so get the meaning—not even these—not even our earliest and least general-
ized ideas are to be regarded as directly resulting from mere sensuous im-
pressions. This no doubt simplifies the sense, but τάλλα, the reading of all
the MSS., may be accepted as meaning that our earliest ideas, as little as
our more general ideas, are to be regarded as φαντάσματα. Of course, if
πρώτα νοήματα be taken to mean the most universal and fundamental ideas
of the mind, τάλλα will give the better sense as meaning that not even other
ideas—not even ideas of less generality, are to be described as mere
φαντάσματα.

CHAPTER IX.

This and the two following chapters discuss the motive and active
powers of the mind. After some remarks (§§ 2, 3) on the extent to which we
can speak of parts or faculties of mind, the writer goes on to shew that the
motive faculty is to be found in neither the vegetative functions nor in the
sensitive powers, nor in the reason taken by itself.

§ 1. 432a 16. τὸ τε κριτικὸ, ὁ διανοιαὶ ἔργον ἐστι καὶ αἰσθήσεως] Cp. De
Moto Aním. 9, 700b 17, ὀρὼμεν δὲ τὰ κινοῦσα τὸ στὸν διάνοιαν καὶ φαντασίαν
καὶ προαίρεσιν καὶ βουλήσεον καὶ στήθησιν. ταῖτα δὲ πάντα ἀνάγεται εἰς νοῦν καὶ
δρεῖν. καὶ γὰρ ἡ φαντασία καὶ ἡ αἰσθήσεις τὴν αὐτὴν τὸ γὰρ χώραν ἔχουσιν κριτικὰ
γὰρ πάντα.

§ 2. 432a 25. ἃ τινες λέγουσι διορίζουσι] The reference is, of course, to
Plato.

432a 26. οἷ δὲ τὸ λόγον ἔχου καὶ τὸ ἁλογον] The distinction is in Eth.
Nic. 1. 13 referred to the ἐξωτερικοὶ λόγοι.

432a 30. καὶ τὸ αἰσθητικόν ὃ οὖν ὡς ἁλογον οὖτε ὡς λόγον ἔχου βείν ἂν τις
ῥάσιοι] This criticism would seem to make it probable that the popular
psychology of Eth. Nic. 1. 13 is not Aristotle’s own.
CHAPTER X.

The negative results of the preceding chapter are followed by a more positive theory of the origin of action. Desire and reason (under which imagination must be included) are the faculties which evidently lead to action. But they move in perfect unison with one another, both being directed to some end (§ 2), and this end or object of desire, whether a good of reason or a good of sense (§ 4), is that which regulates the conflict (§ 6) of reason and appetite. The process of moral action, in fact, is like a ball-and-socket joint, and the agent, while reaching forward under the influence of appetite, is continually being pulled in and regulated by the permanent standard of reason.

§ 1. 433* 11. ἀκολουθοῦσι ταῖς φαντασίαις] Cr. Eth. VII. 3. 11, διὰ τοῦτο τὰ θηρία οὐκ ἄκρατη ὅτι οὐκ ἔχει τῶν καθόλου ὑπόληψιν ἄλλα τῶν καθ' ἐκαστα φαντασίαν καὶ μνήμην.

§ 2. 433* 15. Torstrik discovers here a duplication of the text which he arranges as follows:—

ἁμω ἄρα ταῦτα κυνηγικά κατὰ τόπουν, νοῦς καὶ ὄρεξις, νοῦς δὲ ὁ ἐνεκά τοῦ λογιζόμενοι καὶ ὁ πρακτικός διαφέρει δὲ τοῦ θεωρητικοῦ τῷ τέλει. καὶ ἡ ὄρεξις ἐνεκά του πᾶσα. ὥστε εὐλόγως ταῦτα δύο φαίνεται τὰ κινοῦτα, ὄρεξις καὶ διάνοια πρακτική.

Earlier Version: τὸ ὀρεκτικὸν γὰρ

Later Version: οὐ γὰρ ἡ ὄρεξις, κινεῖ, καὶ διὰ τοῦτο ἡ διάνοια κινεῖ ὅτι ἀρχὴ αὐτῆς ἐστὶ τὸ ὀρεκτικόν.

τὸ δὲ ἐσχατον ἀρχὴ γῆς πράξεως καὶ ἡ φαντασία δὲ ὅταν κωφή, οὐ κινεῖ ἀνευ ὄρεξιως. ἐν δὴ τοῦ κινοῦν, τὸ ὀρεκτικὸν. εἰ γὰρ δύο κ.τ.λ.

The two passages, however, would not seem to be the mere duplicates which Torstrik supposes them to be. They both, indeed, contribute to the proof of the same result, that reason and desire both lead to action: but they do so in different ways. In 15 Aristotle, after noting that both reason and desire stimulate to action, shows that this is true of reason because it, when directed to an end, becomes πρακτικός, and true of desire because desire is always relative to an end: it is just, in fact, its object which constitutes the principle of the practical reason, although Aristotle adds, parenthetically, the direct principle or beginning of action is some particular fact of sense. In lines 18 and 19, on the other hand, Aristotle is more occupied with shewing that reason and desire act together in leading to action, and that ultimately everything depends upon ὄρεξις, without which neither φαντασία nor διάνοια can lead to action.—It would seem unnecessary then to have recourse to the violent expedient of Pansch (Philologus, XXI. 543), and read οὐ γὰρ ἡ ὄρεξις αὐτὴ ἀρχὴ τοῦ πρακτικοῦ νοῦ. Were we to accept Pansch's conjecture the meaning would be: Desire is always directed to some end: for desire is not itself the principle or starting-point of practical reason: it is the ultimate fact which is itself the starting-point of action.—
In line 18 ὀρέκτικῶν, which is read by the majority of MSS., would seem to be more correct than ὀρεκτῶν (read by Trend. and Torstrik), as shewing that both ὀρέξεις and διάνοια enter into action; and a word denoting the faculty seems more appropriate than one which denotes the object.

§ 3. 433a 22. κατὰ κοινὸν ἃν τι ἐκίνησεν εἴδος] Themistius paraphrases: ἀλλὰ ἂν τις δύναμις ὑπήρχεν ἀμφοτέροις κοινῇ, ὢς ἀμφοτέρα κοινώντων ἐκίνησε τὸ ζῶον ὡς τῷ δίσοδι καὶ τῷ τετράποδι τὸ πόδας ἔχειν. And Aristotle's argument would seem to be to the following effect: νοῦς and ὀρέξεις are not two separate faculties in producing action, because, if so, they would have to involve in a common centre, they would have to exhibit a community of action in producing their results. But such community does not exist. Reason, indeed, involves desire, and action, κατὰ λόγιμον, is also κατὰ βούλησιν: but ὀρέξεις, or at least ἐπιθυμία, shews no community of action with λόγιμος—in fact, the two are frequently in conflict.

433b 25. ἣ γὰρ ἐπιθυμία ὀρέξεις τίς ἐστίν?] Cpr. Τοπίκα, VI. 3, 140b 27, ἡ ἐπιθυμία ὀρέξεις τοῦ θρίσους, and De Motu Anim. 700b 22, βουλήσεις δὲ καὶ θυμὸς καὶ ἐπιθυμία πάντα ὀρέξεις: ἢ δὲ προαίρεσις κοινῶν διανοίας καὶ ὀρέξεως ὥστε κυβερνᾶται πρῶτον τὸ ὀρεκτὸν καὶ τὰ διανοητὰ.

§ 4. 433b 28. τὸ ἁγάθον ἢ τὸ φαινόμενον ἁγάθον] Cpr. Eth. Nic. III. 4, where it is shewn that absolutely it is real good which is the object of wish, but relatively to individuals it is the apparent or phenomenal. Themistius explains that it is the ἀληθινὸν ἁγάθον which excites νοῦς, the φαινόμενον that influences ἐπιθυμία and θυμὸς: and adds, καὶ γὰρ τὸ ἢδυ τηρικαῖτα φαίνεται ἁγάθον, ὅταν κυβερνᾶται τὴν ἐπιθυμίαν ἢ τὸν θυμὸν.

433b 29. πρακτῶν δ' ἐστὶ τὸ ἐνδεχόμενον] Cpr. Eth. VI. 2, 1139a 13, οὐδὲς δὲ βουλεύεται περὶ τῶν μῆ ἐνδεχόμενῶν ἀλλὰς ἐξευ.”

433b 8. ἡ δ' ἐπιθυμία διὰ τὸ θηδῇ] As Trendelenburg remarks, there is a distinct significance in using θηδῇ instead of νῦν. ‘Cupido enim non temporis punctum quod adest, sed quod instat intuetur.’ θηδῇ, in fact, implies that the object of appetite is so temporary that it has passed out of the present as soon as it has come within it.

§ 7. 433b 13. ἑπειδὴ δ' ἐστὶ τρία ἐν μὲν τὸ κινοῦν] The same analysis of movement is to be found in Phys. VIII. 5, 256b 14.


433b 16. κυβερνᾶται γὰρ τὸ ὀρεγόμενον δὲ ὀρεγότατα] κυβερνῶμεν is read by ELSUVW Bekk., but ὀρεγόμενον, the reading of TX, seems required and is accepted by Trendelenburg.

433b 20. διὸ εἰν τοῖς κοινοῖς σώματος καὶ ψυχῆς ἐργοὶς θεωρητοῦν περὶ αὐτοῦ] This refers most of the treatise De Motu Animalium. Rose, however (De Arist. Libr. Ord. p. 163), thinks the allusion is to the Parva Naturalia.
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§ 8. 433\textsuperscript{a} 22. ὅπου ἀρχὴ καὶ τελευτὴ τὸ αὐτὸ, οἷον ὁ γεγυλμός] By the γεγυλμός must be understood a ball-and-socket-joint, like that, for instance, of the elbow. There, beginning and end, are one—the forward movement in reaching forward starts just where the stationary centre ends—and similarly in moral action the moral category of the reason, the universal principle of conduct serves as the centre from which desire reaches forward to its end. Cp. De Motu Animalium, I, 698\textsuperscript{a} 14, φανερῶν γὰρ καὶ ἐπὶ τούτων ὑπὸ διδυμὸν κινεῖσθαι μπενδὸν ἠμεινεντος, πρῶτον μὲν ἐν αὐτὸις τῶι ἔφος. deι γὰρ ἐν κινήται τι τῶι μορίων, ἠπεμενεν τι. καὶ διὰ τοῦτο αἱ καπαὶ τοῖς ἔφοις ἐισίν. ὁστέρ γὰρ κίνετο ἤρμαται ταῖς καμπαίς, καὶ γίνεται τὸ δολον μέρος, ἐν ὃ ἡ καμπή, καὶ ἐν καὶ δύο, καὶ εὐθὺ καὶ κεκαμμένον, μεταβάλλου δυνάμει καὶ ἐνεργεία, διὰ τὴν καμπήν.

433\textsuperscript{a} 25. πάντα γὰρ ὅσει καὶ ἐλξει κινεῖται] Impulse on the one hand, attraction on the other, constitute the elements of movement. Cp. De Motu Animalium, 730\textsuperscript{a} 20: τὰ δ’ ἔργα τῆς κινήσεως ὅσις καὶ ἐλξει, ὡστε deι τὸ ὄργανον αὐξάνεσθαι τε δύνασθαι καὶ συστελλεσθαι.

CHAPTER XI.

This chapter connects itself closely with the preceding, and Philoponus rightly transcribes it without anything of the break which our traditional method of division renders necessary. φαντασία—the presentation of an idea to the mind—is, the tenth chapter had pointed out, the pre-supposition of a motive faculty: the present chapter asks how is this possible in the case of imperfect animals, and how does the mind compare and decide upon its different impressions.

§ 1. 434\textsuperscript{a} 4. ἡ ὁστέρ καὶ κινεῖται ἀδριστῶς] Philoponus explains: ἀδριστῶν de καλεῖ τῶι ἐξοφύτων τὴν κίνησιν, διὰ τὸ μὴ ὁμοίως συστελλέσθαι τε καὶ διαστελλέσθαι.

§ 2. 434\textsuperscript{a} 9. ὡστε δύναται ἐν ἐκ πλειώνων φαντασμάτων ποιεῖν] The point then of this section would seem to be that the conceptions and images of the mind are but the materials of will: we must further recognise an inward unity which compares and weighs the different impressions in our experience.

434\textsuperscript{a} 10. καὶ αἵτιον τοῦτο τοῦ δοξαν μὴ δοκεῖν ἔχειν, ὅτι τὴν ἐκ συλλογισμοῦ οὐκ ἔχει, αὕτη de ἐκείνη] Torstrik thinks the words 'omni cum reliquis nexus carent.' This, however, is not really the case. Aristotle is shewing that the formation of an ἔργεις as opposed to an ἔπιθυμαι in man, implies that same power of comparison and judgment which he had already in c. 7 shewn to be an indispensable pre-supposition of attaining to the conception of good and evil, just as of true and false. Here, then, after shewing that the pursuit or choice of the stronger motive or preferable course of conduct involves such a synthetic power, he adds, parenthetically it is true but still in intimate connection with what precedes, that the animal as such displays
none of this work of comparison, it never out of a number of present impressions forms a general conception which shall be the major premise of a practical syllogism: it simply follows the impression of the moment: and so, while it displays a certain amount of reasonableness in its action, it is not credited with the possession of δοξά which implies the construction of generalities.

434\(a\) 12. \(νικά δ' ἑνίστε καὶ κινεὶ τήν βούλησιν\)] This passage, which is very obscure, is amended by Torstrik as follows—\(νικά δ' ἑνίστε καὶ κινεὶ τήν βούλησιν, ὅταν ἀκρασία γένεται ὅτε δ' ἐκείνη ταῦτην ὅτε δ' ὁσπερ σφαίραν σφαίρα, ἥ ὁμοιός τῆς ὁμοιός. The passage can, however, I think, be translated as it stands, and the τρεῖς φοραί made out without any alteration of the text. The nominative to νικά must be as understood φαντασία: ἐκείνη ταῦτην must be used quite generally and explained by ὁμοιός ὁμοιός, while the third φορά must be that of φύσει δ' ἄνω ἰανω. It is true that ἀκρασία is not in strict Aristotelian terminology applied to the conflict of successive desires: but Aristotle, we may suppose, could without any inconsistency describe the state of unsatisfied desire under the general name ἀκρασία.

434\(a\) 13. ὅτε δ' ἐκείνη ταῦτην ὁσπερ σφαίρα] Themistius explains the passage as if it referred to the astronomical conception of a higher sphere or circle of constellations as influencing the movement of a lower cycle. His words are: νικά δ' ἐν ἀνθρώποις ποτέ μὲν ἡ ἄλογος τῆν λογικήν, ποτὲ δὲ τοῦμ-παλίν, κινεὶ δὲ ἡ κρατοῦσα τὴν κρατουμένην, οὐ πάουσα τῆς ὁμοιός ἀλλὰ συμπερά-γονον ἐαυτῇ ὁσπερ ἐπὶ τῆς σφαίρας τῆς οὐρανίας ἢ τῶν ἀπανῶν τῆν τῶν πλανήτων οὐχ ἴσησιν ἀλλὰ κυριωτέρη ἴδιαν κίνησιν ὁμοίως ἐαυτῇ συμπεράγει. Trendelenburg understands the passage in the same manner. According, then, to this explanation, Aristotle means that βουλήσις or βουλένσις overcomes and regulates ὁμοιός or ἐπιθυμία much in the same way as the higher orbit among heavenly bodies transforms and governs the movements of a lower sphere. To this interpretation, however, several objections suggest themselves.

1. The metaphor, if this be its meaning, is unreasonably obscur. Even Aristotle's brevity could hardly have expected so much to be made out of a single word: and if the phrase is to bear Trendelenburg's meaning, we must at least read with Torstrik ὁσπερ σφαίραν σφαίρα.

2. So taken, it is not relevant—it does not explain the phenomena which Aristotle apparently intends it to illustrate. These phenomena are the characteristics of ἀκρασία, in which one desire succeeds and overcomes another ad infinitum, so that the incontinent is the playing as it were of continually crossing and re-crossing influences. Trendelenburg only gets a suitable meaning out of the metaphor by taking it closely with the ἦ ἄνω ἀρχικωτέρα which follows.

3. The explanation of σφαίρα as—heavenly orbit is not consistent with Aristotle's use of the same expression in another chapter of the Psychology. In II. 8, 419\(b\) 27, Aristotle writes, ἣχο γίνεται ὅταν πάλιν ὅ ἀντί ἀπωθηθεί ὁσπερ σφαίρα. In this passage it is undoubtedly to the rebound of a ball that an echo is compared.
The probability, then, is that in our present passage also it is a ball, which is the subject of the metaphor; and the meaning would seem to be that in the incontinent man, wanting as he is in all powers of self-control and moral government, impulse follows impulse, appetite takes the place of appetite, just in the same way as the ball passes from the hand of one player to another. So Plato in *Euthydicus*, 277 B, speaks of ὁσπερ σφαιρὰν ἐκδεξάμενος τὸν λόγον.


CHAPTER XII.

The twelfth and thirteenth chapters appear at first sight out of place after the chapters on thought and will which have preceded. In reality, however, they form a natural conclusion to the treatise on Psychology. Regarding everything from the point of view of its end or final causes, Aristotle after an analysis of the separate mental powers naturally comes to consider the mutual relation of those powers to one another and their fitness for the conditions of human life. The writer accordingly begins by shewing (§ 1) that the lowest form of soul is necessary for mere vitality, that sense-perception necessarily attaches to the animal, and ends by pointing out at greater length how the several senses contribute to the needs of life.

§ 3. 434* 32. εἰ οὖν πᾶν σῶμα πορευτικῶν μὴ ἔχων αἴσθησιν] Trendelenburg suggests that we should here read ἔχων, εἰ otherwise having no finite verb to which it may be referred, and the change is so slight that it ought perhaps to be adopted. Torstrik maintains that Aristotle is not refuting the supposition that any animal πορευτικῶν can be without sense, but that any animals without sense are πορευτικά. He thinks accordingly that for πᾶν, εἰ or γένοιτο should be substituted.

§ 4. 434* 4. ἄλλα μὴν οὐδὲ ἄγέννητον διὰ τί γὰρ οὐ χέει;] This passage has caused considerable difficulty to the commentators. Taken directly, the sequence of ideas would seem to be the following. Every body which possesses soul and reason possesses also sense. This proposition is at first limited to body, which is ἄγέννητον, possessed of a beginning in time: but it is instantly suggested that the remark may be extended to the ἄγέννητον—the uncreated bodies of the heavens—because there is nothing to shew why they should not equally possess the faculties of sense. But here comes in the difficulty that Aristotle would not appear otherwise to assign the faculty of sense-perception to the stars. Trendelenburg accordingly regards οὐδὲ as accommodated more to the sense than to the laws of grammar, and so equivalent to ἄλλα μὴν οὐδὲ ἄγέννητον αἴσθησιν ἔχει. He translates the sentence accordingly: Nullum corpus, quod movetur, si anima gaudet et

W. AR.
mente, sensu caret, nisi immortalia eaque celestia corpora, quibus, si animantia sunt, sensus neque ad corporis neque ad mentis usum quicquam valeret. Similarly also Simplicius after noting, φαίνετοι δὲ ὁ Ἀριστοτέλης 
μηδαμῶς τὴν αἰσθήσιν ἐπὶ τῶν οὐρανίων προσείμενος, goes on to accept the 
explanation of Alexander that with ἀγέννητον we should supply αἰσθήσιν: 
κάλλους οἶμαι, ὁ Ἀλέξανδρος ἔξρης, τό, ἀλλὰ μὴν οὐδὲ ἀγέννητον, ἀξίων ἀκούειν 
πρὸς τὸ αἰσθήσιν ἐξέως—ἀλλὰ μὴν οὐδὲ ἀγέννητον ἀνυγκαῖον αἰσθήσιν ἐξέων.

The words are certainly awkward, and might be profitably removed. They are found in all our MSS., but the note of Simplicius—ἐν τοι δὲ ἀνυγκαῖοι πρὸς 
σκεται τὸ ἀλλὰ μὴν οὐδὲ ἀγέννητον—points to MSS. in his day in 
which they were absent. It would seem, therefore, that Torstrik is not 
improvable right in regarding the clause as the addition of an interpolator 
who doubted whether Aristotle's limitation of the connection of sense with 
reason to the γέννητον was altogether tenable; or the words may be an 
unformed suggestion on the part of Aristotle himself.

Whether we regard the words as an integral part of the argument, or as 
a mere suggestion raised to be forgotten, there is at least no doubt that the 
correct reading in what follows must be, διὰ τί γὰρ εἰς ἑξεῖ in TUVWY. 
For if we retain ἀλλὰ μὴν οὐδὲ ἀγέννητον, Aristotle asks why the uncreated 
should not have sense, and shews that the absence of sense cannot benefit 
it either in soul or body: if we reject the words ἀλλὰ μὴν οὐδὲ ἀγέννητον, or 
view them as strictly parenthetical, the words διὰ τί still ask, why should the 
γέννητον not possess αἰσθήσις in the way the previous sentence has man 
ained. Torstrik in supplying νοῦν κριτικῶν to διὰ τί γὰρ ἑξεῖ would seem to 
miss the drift of Aristotle's reasoning.

§ 9. 434b 31. καὶ τὸ δῶσαν ἕτερον ποιεῖ ὁστε ὠθεῖν] Torstrik here conjectures 
tὸ ὁστῆν, and adds—ridicule profecto τὸ δῶσαν: nam postquam pepulit, non 
jam pellit. The alteration somewhat simplifies the passage, but the vulgar 
can be defended if we regard ἕτερον as the accusative of δῶσαν, and then 
repeat ἕτερον after ποιεῖ.

435r 1. πλὴν ὃτι μένοντα ἐν τῷ αὐτῷ τόπῳ ἄλλοιοι] Bekker and Torstrik 
here read μένοντος. If μένοντος be accepted, we must supply τοῦ μέσου: 
μένοντα should be taken as accusative (with μέσα supplied) after ἄλλοιοι 
(scil. τοῦ).

435* 5. διὸ καὶ περὶ ἀνακλάσεως βελτιον ἦ τὴν ὅψιν ἐξίσον ἄνακλάσθαι] 
The opinion in question is that of Empedocles and Plato. They, as we 
learn further from De Sensu, 2, 437b 11, Timaeus, 45 c, explained vision as 
due to the fact that the eye was endowed congenitally with a fire, which after 
streaming from the eyes and mingling by its similarity of nature with the light 
of outward objects was finally again returned to the mind. Vision, then, was 
with these thinkers, the result of ἀνακλάσεως—the fire of the eye was after 
contact with the fire of things thrown back again upon the organ of per 
ception. Aristotle flatters himself that his own theory is much simpler. He 
conceives that the original object of vision makes an impression on some 
medium or other, and that thereafter this impression is transmitted in the
second instance to the eye, which is fitted to receive it \((\alphaι\sigma\thetaη\tau\iota\kappa\omicron\nu\varepsilon\iota\tau\sigmaο\tau\omicron\nu\ \epsilonι\nu \tau\omicron \ \epsilon\kappa\epsilon\iota\nu\omicron\u03b2\nu \ \upsilon\omicron\ \tau\omicron\ \alpha\iota\sigma\thetaη\tau\iota\kappa\sigma\iota\nu\kappa\iota\nu\iota\sigma\iota\nu\ \kappa\iota\nu\iota\sigma\iota\nu\ \alpha\upsilon\tau\omicron\ \delta\nu \ \upsilon\nu \ \epsilon\kappa\epsilon\iota\nu\omicron\)\). Thus the operation of perception is not unlike that of producing an impression in wax: only whereas the impression in wax does not continue to propagate itself after the object which produces the impression is removed, air is much more susceptible to impressions, and \(\epsilon\iota\ \pi\lambda\epsilon\iota\sigma\tau\omicron\nu\ \kappa\iota\nu\iota\sigma\iota\nu\). Thus then, Aristotle concludes, we may compare the manner in which a visible object communicates its impressions through the air to the eye, to an impression in wax which passes through the wax to the outer surface of it, and leaves its final stamp upon the paper or other material on which the wax is placed \((\omega\sigma\pi\epsilon \ \alpha\nu \ \epsilon\iota \ \tau\omicron \ \epsilon\nu \ \tau\omicron \ \kappa\iota\rho\omicron \ \sigma\nu\mu\iota\iota \ \delta\iota\iota\iota\iota\omicron \ \mu\epsilon\chi\rho\omicron \ \tau\omicron \ \pi\epsilon\rho\alpha\tau\iota\omicron\)\).

CHAPTER XIII.

This chapter sums up the results of the Psychology by shewing how the sense of touch is what determines ultimately the sensitive organism. It is touch \((\S \ 1)\) which shews that the animal organism cannot consist of one element only: it is touch alone among the senses which coincides in its annihilation with the annihilation of life in general.

\(\S \ 1. \ 435^{4}\). \(\delta\iota\ \delta\nu \ \omicron\chi \ \alpha\omicron\nu \ \tau\epsilon\nu\omicron \ \zeta\omicron\omicron\nu \ \sigma\omicron\mu\alpha, \ \kappa\tau\omicron.\ \) Aristotle's argument is to the following effect. Touch is requisite to animal existence: touch cannot be reduced to one single element (earth): therefore the animal body cannot be resolved into one single element. The main point of the argument lies, of course, in shewing that touch cannot, as might at first be thought, consist of only one element. To do this, Aristotle points out that all the other elements have been already used up in explaining the composition of the other organs of sense, which, however, produce perception mediately. Touch, however, produces perception by immediate contact: and therefore would have to be ascribed to earth alone. But earth alone is insufficient to explain its operation: it receives and perceives not only the difference of earth (hard and soft, &c.) but also the qualities of hot and cold. Thus then touch, the essential condition of animal life, cannot be composed of earth alone: and consequently the animal body cannot consist of one single element.
APPENDIX A.

THE ADDITIONAL VERSION OF MS. E.

The Paris MS. known as E contains the fragment of what Torstrik imagined to be a second alternative version of several passages of the *Psychology*. It may be useful to the student to have this second version printed alongside of the ordinary text.
THE ORDINARY TEXT.

I.

412* 3—12.

Τὰ μὲν δὴ ὑπὸ τῶν πρῶτον παραδεδομένα περὶ ψυχῆς εἰρήσθων πάλιν δὲ ὦστερ εἰς ὑπαρχῆς ἐπανώμεν, πεινίος ὁμονοι διορίσαι τί ἐστὶν ψυχή καὶ τίς ἄν εἰς κοινότατος λόγος αὐτῆς. λέγομεν δὴ γένος ἐν τὶ τῶν ὄντων τὴν οὐσίαν, ταύτης δὲ τὸ μὲν ὡς ὑλην; δ' καθ' αὐτὸ μὲν οὐκ ἐστὶν τόδε τι, ἔστρων δὲ μορφήν καὶ εἴδος, καὶ ἥν ἦν λέγεται τόδε τι, καὶ τρίτον τὸ ἐκ τούτων. ἐστὶ δ' ἡ μὲν ὑλη δύναμις, τὸ 10 δ' εἴδος ἐντελεχεία, καὶ τοῦτο διχῶς, τὸ μὲν ὡς ἐπιστήμην, τὸ δ' ὡς τὸ θεωρεῖν. οὐσίαι δὲ μάλιστ' εἶναι δοκοῦσι τὰ σώματα, καὶ τούτων τὰ φυσικά' ταῦτα γὰρ τῶν ἄλλων ἀρχαί.

II.

414* 13—416* 8.

Β, III. § 3—IV. § 7.

ὁ δὲ χυμὸς οἶδον ἠδυσµά τι τούτων ἐστίν. διασαφητεύον δὲ περὶ αὐτῶν ὄστερον, νῦν δ' ἐπὶ τοσοῦτον 15 εἰρήσθω, ὅτι τῶν ζωῶν τοὺς ἔχουσιν ἀφὴν καὶ ἀρείας ὑπάρχης. περὶ δὲ φαντασίας ἄδηλου, ὄστερου δ' ἐπισκεπτεύον. εὐλαμβάνον δὲ πρὸς τούτοις ὑπάρχει καὶ τὸ κατὰ τότων κυνηγικόν, ἐτέροις δὲ καὶ τὸ διανοητικόν τε καὶ νοῦς, οἶδον ἀνθρώπους καὶ εἰ τι τοιοῦτον ἔστοι ἢ καὶ τιμώτερον. δὴ λοιπὸν οὖν ὅτι τῶν 20 αυτῶν τρόπον εἰς ἄν εἰς λόγος ψυχῆς τε καὶ σχῆμας. οὕτε γὰρ ἐκεῖ σχῆμα παρὰ τὸ τρίγωνον ἐστὶ καὶ τὰ ἑφεξῆς, οὕτ' ἐνταῦθα ψυχή παρὰ τὰς εἰρημένας. γένοιτο δ' ἄν καὶ
THE ADDITIONAL VERSION.

I.

B, I. § 1—3. E. fol. 186 v°.

Ἐπεὶ δὲ τὰ παραδεδομένα περὶ ψυχῆς παρὰ τῶν ἄλλων, ἐφ’ ὅσον ἐκαστὸς ἀπεφήνατο τῶν πρότερον, εἰρηται σχεδόν, νῦν ὡσπερ εἴξ ἄρχῃς πάλιν ἐπανίωμεν πειράματι διορίσαι τί ἐστιν ἡ ψυχή καί τὰς ἀν εἰη λόγος αὐτῆς κοινοτάτος (sic) χωρίζομεν δὴ τὰς μὲν οὐσίας ἀπὸ τῶν ὄντων τῶν ἄλλων. 5 τῆς δὲ οὐσίας τὸ μὲν ὡς ἔλην λέγεσθαι τίθεμεν, ὡς καθ’ αὐτὸ [The MS. is defective; Torstrik conjectures: μὲν οὐκ ἔστι τὸδε τὶ, τὸ] δὴ ἡ μορφή, τὸ δ’ ἐκ τούτων. ἔστι δ’ ἡ μὲν ἔλη δυνάμει, τὸ δ’ εἴδος ἐντελέχεια, αὐτὴ δ’ ὑπάρχει διχως, ἢ γαρ ὡς ἡ ἐπιστήμη, ἡ ὡς τὸ θεωρεῖν. οὐσίαι δὲ μάλιστα δοκοῦσιν το ἐναι τὰ σώματα καὶ τούτων τὰ φυσικά’ ἄρχαι γαρ ... At this point the MS. becomes imperfect, only the first four or five letters of each line being preserved on the one side, the last four or five on the other.

II.

B, III. § 3—IV. § 7. E. fol. 1 r°.

dὲ χυμὸς ὡσπερ ἢδυσμα τούτων ἐστὶν·

dιόσπερ ὡς ἐχει τῶν ἔξων ἀφῆ, πᾶσιν ὑπάρχει καὶ δι- ρέξι. περὶ δὲ φαντασίας ἅδηλον καὶ ὕστερον ἐπισκεπτέον. ἐνίοις δὲ ταυτά τε ὑπάρχει καὶ τὸ κατὰ τόπον κινητικὸν, τοῖς δ’ ἐπὶ (sic) πρὸς τούτως διάνοια καὶ νοῦς, οἶον ἀνθρώπῳ καὶ 5 εἰ τὸ ἄλλο ἔξων ἐπερόν ἐστι τοιοῦτον ἢ καὶ τιμώτερον. ἡλον οὖν ὡς ὁμοίως σχῆματος καὶ ψυχῆς εἰς ἀν εἰη λόγος.

οὕτε γαρ ἐκεῖ σχῆμα παρὰ τρίγωνον ἐστὶ καὶ τὰ ἐφεξῆς, οὕτ’ ἐνταῦθα ψυχῆ παρὰ τὰς εἰρημένας. γένοιτο δ’ ἀν καὶ
The Ordinary Text.

ἐπὶ τῶν σχημάτων λόγος κοινός, ὃς ἐφαρμόσει μὲν πᾶσιν ἰδιος δ’ οἴδενος ἔσται σχήματος. ὁμοιοὶ δὲ καὶ ἐπὶ ταῖς 25 εἴρημέναι ψυχαῖς. διὸ γελοίον γῆτεὼν τὸν κοινὸν λόγον καὶ ἐπὶ τούτων καὶ ἐφ’ ἐτέρουν, ὃς οἴδενος ἔσται τῶν ἄντων ἰδιος λόγος, οὐδὲ κατὰ τὸ οἰκεῖον καὶ ἁπόμοιον έἰδος, ἀφέντας τὸν τοιούτων. παραπλησίως δ’ ἔχει τῷ περὶ τῶν σχημάτων καὶ τὰ κατὰ ψυχὴν· ἀεὶ γὰρ ἐν τῷ ἐφεξῆς ύπάρχει δυσόμει 30 τὸ πρότερον ἐπὶ τε τῶν σχημάτων καὶ ἐπὶ τῶν ἐμφύτων, οἷον ἐν τετραγώνῳ μὲν τρόγλων, εὖ αἰσθητικὸ δὲ τὸ θεραπευτικόν. ἢςτε καθ’ ἐκαστον γητητέουν, τὶς ἐκάστου ψυχῆ, οἷον τὸς φυτοῦ καὶ τὸς ἀνθρώπου ἡ θηρίων. διὰ τίνα δ’ αἰτία τῷ ἐφε- 415 ἔξῃς οὕτως ἔχουσιν, σκέπτεσθε. ἀνει μὲν γὰρ τοῦ θεραπευτικοῦ τὸ αἰσθητικὸν οὐκ ἐστίν· τοῦ δ’ αἰσθητικοῦ χωρίζεται τὸ θεραπευτικὸν ἐν τοῖς φυτοῖς. πάλιν δ’ ἀνει μὲν τοῦ ὀπτικοῦ τῶν ἅλλων αἰσθήσεων οὐδεμία ἐπάρχει, ἀφ’ δ’ ἀνει τῶν ἅλλων ύπάρ- 5 χει· πολλὰ γὰρ τῶν ἰδιῶν οὔτ’ ὅσιν οὔτ’ ἀκόην ἔχουσιν οὔτ’ ὀρθῆς αἰσθηθεῖαι. καὶ τῶν αἰσθητικῶν δὲ τὰ μὲν ἔχει τὸ κατὰ τόπον κινητικόν, τὰ δ’ οὐκ ἔχει. τελευταῖον δὲ καὶ ἐλάχιστα λογισμόν καὶ διάνοιαν· οἷς μὲν γὰρ ύπ- ἀρχει λογισμός τῶν φθαρτῶν, τούτως καὶ τὰ λοιπὰ πάντα, 1o οἷς δ’ ἐκείνων ἐκαστον, οὐ πάσι λογισμός, ἅλλα τοῖς μὲν οὐδὲ φαντασία, τὰ δὲ ταύτῃ μόνῃ ἐξωθικα. περὶ δὲ τοῦ θεωρη- τικοῦ οὐτοῦ ἐτερος λόγος. ὅτι μὲν οὖν ὁ περὶ τούτων ἐκαστον λόγος οὕτος οἰκειότατος καὶ περὶ ψυχῆς, δηλον.

IV. Ἀναγκαῖον δὲ τὸν μέλλοντα περὶ τούτων σκέψειν ποιεῖ- 15 σθαι λαβεῖν ἐκαστον αὐτῶν τῖ ἐστιν, εἴδ’ οὕτως περὶ τῶν ἔχο- μένων ἥ καὶ περὶ τῶν ἄλλων ἐπιμεθένων. εἰ δὲ χρῆ λέγειν τί ἐκα- στον αὐτῶν, οἷον τὸ τὸ νοητικὸν ἥ τὸ αἰσθητικὸν ἥ τὸ θεραπευτικόν, πρότερον ἔτι λεκτέον τὸ τὸ νοεῖν καὶ τὶ τὸ αἰσθάνεσθαι· πρότεραι γὰρ εἰς τῶν δυνάμεων αἱ ἐνέργειαι καὶ αἱ πράξεις κατὰ 20 τὸν λόγον. εἰ δ’ οὕτως, τούτων δ’ ἔτι πρότερα τὰ ἀντικείμενα δεῖ τεθεωρηκέναι, περὶ ἐκείνων πρῶτον ἄν δέοι διορίσαι διὰ τὴν αὐτὴν αἰτίαν, οἷον περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ. ἢςτε πρῶτον περὶ τροφῆς καὶ γεννήσεως λεκτέων· ἡ γὰρ θεραπευτική ψυχῆ καὶ τοῖς ἅλλοις ύπάρχει, καὶ πρῶτη καὶ κοινοτάτη
The Additional Version.

ἐπὶ τῶν σχημάτων λόγος, ὃς ἐφαρμόσει μὲν πᾶσιν, 10 οὐκ ἔσται μὲντοι τοιοῖς (sic) οὔθενος σχήματος. ἵμοιος δὲ καὶ ἔπὶ ταῖς εἰρημέναις ψυχαῖς. διὸ γελοειδῶν ζητεῖν τὸν κοινὸν λόγον καὶ ἐπὶ ἄλλων καὶ ἐπὶ τούτων, ὃς οὐκ ἔσται οὔθενος τῶν ὄντων ἔδοιξα, οὐδὲ κατὰ τὸ οἰκεῖον καὶ ἀτομον εἶδος, τὸν τοιοῦτον ἀφέντας. παραπλησίως δὲ ἄσπερ καὶ ἐπὶ τῶν σχημάτων, ἔχει καὶ τὰ 15 περὶ τὴν ψυχὴν ἢ ἀεὶ γὰρ ἐν τῷ εφεξῆς ὑπάρχει δυνάμει τὸ πρότερον ἐπὶ τε τῶν σχημάτων καὶ ἐπὶ τῶν ἐμφυχών, λέγω δὲ ὁ ἄσπερ ἐντεταγόμενοι μεντρίγωνοι, ἐν αἰσθητικῷ δὲ τὸθερτικοῖς (sic). ὁστε καὶ καθ' ἐκαστὸν δει ζητεῖν τὸς ἢ ἐκάστου ψυχή, οἶον τὸς φυτοῦ καὶ τὸς ἀνθρώπου καὶ τῆς (sic) θηρίου. διὰ τίνα δ' αἰτίαν τῷ 20 εφεξῆς οὖτως ἔχουσιν, σκεπτέον. ἀνευ μὲν γὰρ τοῦ θερτικοῦ οὐθέν ἔστων αἰσθητικῶν τοῦ δ' αἰσθητικοῦ χωρίζεται τὸ θερτικόν, οἶον ἐν τοῖς φυτοῖς. πάλιν δ' ἀνευ τοῦ ἀπτικοῦ οὐδεμία τῶν ἄλλων αἰσθήσεων, ἀφη δ' ἀνευ τῶν ἄλλων ὑπάρχει πολλὰ γὰρ ἐστι τῶν ὄντων, δ' οὔτ' ὡσιν ἔχει οὔτ' ἀκοήν. 25 καὶ τῶν αἰσθητικῶν δὲ κίνησις τοῖς μὲν ὑπάρχει τοῖς δ' οὐκ (sic) ὑπάρχει τελευταίων δεδικα (sic) λογισμῶς. οἷς μὲν γὰρ ὑπ- ἀρχεῖ λογισμός, καὶ τῶν ἄλλων ἐκαστῶν τῶν εἰρημένων, οἷς δ' ἐκείνων ἐκαστον, οὐ πᾶσιν ὑπάρχει λογισμός. ἀλλὰ τὰ 30 μὲν οὐδὲ φαντασίαν ἔχει μόνου, ὃτι μὲν οὖν ὃ περὶ τούτων ἐκάστου λόγος οἰκειότατος περὶ ψυχῆς ἐστὶ, δῆλον.

IV. Ἀνάγκη δὲ τὸν περὶ τούτων μέλλοντα πραγματεύεσθαι λαβεῖν τί ἐκαστὸν αὐτῶν ἔστων, εἶθ' οὕτω περὶ τῶν ἐχο-35 μένων καὶ τῶν ἄλλων ποιεῖται τῇ ἐπίσκεψιν. εἰ δὲ δεῖ λέγειν τί ἐκαστον, οὖν τί τὸ νοητικὸν ἢ τί τὸ αἰσθητικὸν ἢ θρεπτικὸν, πρότερον λεκτέων τί τὸ νοεῖν καὶ τί τὸ αἰσθάνεσθαι: αἰ γὰρ πράξεις καὶ αἱ ἐνέργειαι πρότεραι κατὰ τῶν λόγων εἰσὶ τῶν δυνάμεων. ἀλλὰ μὴν εἰ ὡς ταύτα, πρότερον 40 ἔτι τούτων διοριστέον τὰ ἀντικείμενα, οἷον περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ διὰ τὴν αὐτὴν αἰτίαν. ὡστε πρῶτον περὶ τροφῆς καὶ γεννήσεως λεκτέων· αὐτὴ γὰρ ἡ ψυχὴ κατοικῶν ἄλλως ὑπάρχει, πρῶτη δὲ καλοικοτάτη
The Ordinary Text.

25 δύναμις ἐστὶ φυσιᾷ, καθ’ ἂν ὑπάρχη τὸ ξῆν ἄπασιν. ἢς ἐστὶν ἔργα γεννήσαι καὶ τροφῆ χρήσασθαι: φυσικῶτατον γὰρ τῶν ἔργων τοῖς ξῶσιν, ὅσα τέλεια καὶ μὴ πηρόματα, ἢ τὴν γένεσιν αυτομάτην ἔχει, τὸ ποιῆσαι ἔτερον οἷον αὐτό, ξὺν μὲν ξύνην, φυτὸν δὲ φυτόν, ιόν τοῦ αἰεὶ καὶ τοῦ θείου μετέχωσιν ἢ

415 δύνανται πάντα γὰρ ἐκείνου ὀρέγεται, κακεῖνου ἕνεκα πράττει ὡσα πράττει κατὰ φύσιν. [τὸ δ’ οὐ ἔνεκα διττοῦ, τὸ μὲν οὖ, τὸ δὲ φ.] ἐπεὶ οὖν κοινωνεῖν ἀδυνατεῖ τοῦ αἰεί καὶ τοῦ θείου τῇ συνεχείᾳ, διὰ τὸ μὴ δὲν εὐδέχεσθαι τῶν φθαρτῶν ταῦτα καὶ ἐν ἀριθμῷ διαμένειν, ἢ δύναται μετέχειν ἐκαστὸν, κοινωνεῖν ταῦτα, τὸ μὲν μᾶλλον τὸ δ’ ἕττον καὶ διαμένει οὐκ αὐτὸ ἀλ’ οἷον αὐτὸ, ἀριθμῷ μὲν οἷον ἦν, εἰδεὶ δ’ ἐν. ἦστι δὲ ἡ φυσιᾷ τοῦ ξώσι τοῖς σωμάτοις αἰτία καὶ ἀρχή. ταῦτα δὲ πολλαχώς λέγεται. ὁμοίως δ’ ἡ φυσιᾷ κατὰ τοὺς διωρισμένους τρόπους τρεῖς αἰτίας: καὶ γὰρ οὗτος ἡ κίνησις αὐτῆς, καὶ οὐ ἔνεκα, καὶ οὐ ὑπάρχη τῶν ἐμπύχων σωμάτων ἡ φυσιᾷ αἰτία. ὅτι μὲν οὖν ὑπάρχη τῶν σωμάτων ἦν τὸ θαρίσι τοῦ εἶναι πάσιν ἡ ωύσια, τὸ δὲ ξῆν τοῖς ξῶσι τὸ εἶναι ἐστὶν, αἰτία δὲ καὶ ἀρχή τούτων ἡ φυσιᾷ. ἐπὶ τοῦ δυναμεῖ οὗτος λόγος ἢ

15 ἑντελέχεια. φανερῶν δ’ οὐ καὶ οὐ ἔνεκεν ἡ φυσιᾷ αἰτία, ὡς πρὸς γὰρ ὅ νοσ ἔνεκα τοῦ τοιεῖ, τὸν αὐτὸν τρόπον καὶ ἡ φύσις, καὶ τοὺτ’ ἔστιν αὐτῇ τέλος. τοιοῦτον δ’ ἐν τοῖς ξῶσι τῇ φυσιᾷ κατὰ φύσιν’ πάντα γὰρ τὰ φυσικὰ σώματα τῆς φυσικῆς ὄργανα, καὶ καθάπερ τὰ τῶν ξῶσιν, οὕτω καὶ τὰ τῶν φυτῶν, ὅσα ἔνεκα τῆς φυσικῆς οὕτα. διηττῶς δ’ ἐν τοῦ ἔνεκα, τὸ τοῦ οὗ καὶ τὸ φ. ἀλλὰ μὴ καὶ οὗτος πρῶτον ἡ κατὰ τότον κίνησις, ψυχή’ οὗ πάσι δ’ ὑπάρχη τοῖς ξῶσιν ἡ δύναμις αὐτῆς. ἐστὶ δὲ καὶ ἀλλοϊωσίς καὶ αὐξήσεις κατὰ ψυχήν’ ἢ μὲν γὰρ αὐξῆσις ἀλλοϊωσίς τῆς εἶναι δοκεῖ, αἰ-

20 τῶν φυτῶν, ὡς ἔνεκα τῆς φυσικῆς οὕτα. διηττῶς δ’ ἐν τοῦ ἔνεκα, τὸ τοῦ οὗ καὶ τὸ φ. ἀλλὰ μὴ καὶ οὗτος πρῶτον ἡ κατὰ τότον κίνησις, ψυχῆ’ οὗ πάσι δ’ ὑπάρχη τοῖς ξῶσιν ἡ δύναμις αὐτῆς. ἐστὶ δὲ καὶ ἀλλοϊωσίς καὶ αὐξήσεις κατὰ ψυχήν’ ἢ μὲν γὰρ αὐξῆσις ἀλλοϊωσίς τῆς εἶναι δοκεῖ, αἰ-

25 σάθαι τοῖς οὗθεν δ’ μὴ ἔχει ψυχῆν. ὁμοίως δ’ καὶ περὶ αὐξήσεως τε καὶ φύσεως ἔχει: οὗδὲν γὰρ φθάνει οὗθεν δ’ αὐξάνει φυσικῶς μὴ τρεφόμενον, τρέφεται δ’ οὗθεν δ’ μὴ κοινωνεῖ ζωῆς. Ἐμπεδοκλῆς δ’ οὐ καλῶς είρηκε τοῦτο, προστιθέλει τὴν αὐξήσιν συμβαίνειν τοῖς φυτοῖς κατ’ αὐτὴν μὲν συρριξόμενοις 416 διὰ τὸ τὴν γην οὕτω φέρεσθαι κατὰ φύσιν, ἀνω δ’ διὰ το
The Additional Version.

ψυχής ἐστὶ δύναμις, καθ’ ἢν υπάρχει τὸ ζῆν πάσιν (sic). ἦς ἔργον 45 ἐστὶ γέννησις καὶ τὸ χρῆσθαι τροφῆς τοῦτο γὰρ ἔργον μάλιστα φυσὶ (sic) πάσι τοῖς ζῴων, ὡσα μὴ ἀτελὴ ἢ πηρόματα ἑστών, ἢ αὐτόματον ἔχει τὴν γένεσιν, τὸ ποιήσαι οἶον αὐτὸ ἐτερον, ζῶον μὲν ζῶα, φυτῶν δὲ φυτὰ, ἦν τοῦ αἱ καὶ τοῦ θείου μετέχη ἐκαστοῦ ὑπὸ δύναται τρόπον πάντα γὰρ ἐκείνου ὀρέγεται, κακεῖνου 50 ἑνεκα πράττει ὅσα πράττει κατὰ φύσιν. τὸ γὰρ οὐ ἑνεκα δυττόν, τὸ μὲν οὖ, τὸ δὲ δὴ ἐπεὶ οὖν οὐ τῇ συνεχείᾳ τοῦ αἰεί καὶ τοῦ θείου δύναται κοινωνεῖν οὐ γὰρ ἐνδεχέται τὸ αὐτὸ ἀεὶ ἀριθμῷ εἰναι οὐθὲν τῶν φυτρῶν· ὑπὸ τρόπων ἐπιβάλλει, τοῦτον ἐκαστοῦ οὐγιανεί (sic), τὸ μὲν μᾶλλον, τὸ δὲ ἤττον καὶ διαμένει οὐκ αὐτό, 55 ἀλλ’ οἶον αὐτόν, ἀριθμῷ μὲν οὐχ ἑν, εἴδει δὲ ἑν. ἐστὶ δὲ ἡ ψυχὴ ἄρχη τοῦ ζῶοτος σώματος, ἀλλ’ ἡ ἄρχη καὶ τὸ αἰτίον λέγεται πολλαχῶς. ὁμοίως δ’ ἡ ψυχή τους τρεῖς τρόπους αἰτία τους διωρισμένους· καὶ γὰρ ἄθεν ἡ κύνησις καὶ οὐ ἑνεκα καὶ ὡς οὐσία τῶν ἐμφύσεων σωμάτων ἑστὶν ἡ ψυχή. 56 ὅτι μὲν οὖν ὡς οὐσία δῆλον· τοῦ γὰρ εἰναι ἡ οὐσία αἰτίου πάσι, τὸ δὲ ξῆν τοῖς ζῶσι τὸ εἰναι ἑστὶν, αἰτίου δὲ καὶ ἄρχη ἡ ψυχή τοῦτον ἑστὶν.

φανερὸν δὲ καὶ ὡς τὸ οὐ ἑνεκα ἡ ψυχή’ καὶ γὰρ ἡ φύσις ἑνεκα τοῦ ποιεῖ ὠσπερ ὁ νοῦς, καὶ τοῦτ’ ἑστιν αὐτὴς τὸ τέλος. καὶ ἡ ψυχή τοιοῦτον ἐν τοῖς κατὰ φύσιν, καὶ πάν τὸ σῶμα ὅργανον τῇ ψυχῇ ὁσπερ δὲ τὸ τῶν ζῴων, καὶ τὸ τῶν φυτῶν.

ἀλλὰ μὴν καὶ ὅθεν ε (sic) κύνησις πρῶτον ἡ κατὰ τόπον, τοῦτο ἐστὶ ψυχή’ ἀλλ’ οὐ πάσι τοῖς ζῴωις ἡ τοιαύτη ὑπάρχει δύναμις. ἐστὶ δ’ ἀλλοίωσις καὶ αὐξήσις κατὰ ψυχήν’ ἡ μὲν γὰρ αἰσθήσις δοκεῖ τις ἀλλοίωσις εἰναι, μὴ ἔχουν δὲ ψυχὴν οὐθέν ἄν αιθοῦτο (sic). ὁμοίως δὲ καὶ περὶ αὐξήσεως καὶ φθίσεως ἔχει’ οὐθέν γὰρ αὐξάνεται οὐδὲ φθίνει 75 φυσικῶς μὴ τρεφόμενον, οὐδὲ τρέφεται μὴ ζωῆς μετέχου. ἀλλὰ τοῦτο Ἐμπεδοκλῆς οὐκ ἐξήκειν θρόσος, προστίθεις τὴν αὐξήσιν συμβαίνειν τοῖς φυτοῖς κατὰ μὲν διὰ τὸ τὴν γῆν φύσει οὕτω φέρεσθαι, ἀνω δὲ διὰ τὸ πῦρ.
The Ordinary Text.

πῦρ ὠσαύτως. οὔτε γὰρ τὸ ἄνω καὶ κάτω καλῶς λαμβάνει· οὐ γὰρ ταύτῳ πῦσι τὸ ἄνω καὶ κάτω καὶ τὸ πάντι, ἀλλὰ ὡς ἢ κεφαλὴ τῶν ἄκρων, οὔτως οἱ ῥίζαι τῶν φυτῶν, 5 εἰ χρῆ τὰ ὁργάνα λέγειν ἑτέρα καὶ ταύτα τοῖς ἔργοις. πρὸς δὲ τούτοις τί τὸ συνέχον εἰς τὰν αὐτὸν φερόμενα τὸ πῦρ καὶ τὴν γῆν; διασπασθήσεται γὰρ, εἰ μὴ τί ἐσται τὸ κοινόν· εἰ δὲ ἐσται, τοῦτ’ ἐστιν ἡ γυνὴ καὶ τὸ αὐτίκον τοῦ αὐξάνεσθαι καὶ τρέφεσθαι.

III.

421a 5—422a 23. B, VIII. § 12—X. § 3.

5 οτι οὐ δέχονται τὸν ἀέρα οὐδ’ ἀναπνεύσσον. δι’ ἢν μὲν οὖν αἰτίαν, ἑτέρος ἐστι λόγος.

IX. Περὶ δὲ ὁσμῆς καὶ ὀσφραντοῦ ἰττον εὐθυριστῶν ἐστὶ τῶν εἰρημένων οὐ γὰρ δήλου ποιών τι ἐστιν ἡ ὁσμὴ, οὔτως ὡς ὁ ψόφος ἢ τὸ χρῶμα. αὐτίκον δ’ ὅτι τὴν αἰσθήσεων παύσην οὐκ 10 ἔχομεν ἀκριβῆ, ἀλλὰ χείρῳ πολλῶν ἄκρων φαίνετο γὰρ ἀνθρώπων ὅσματι, καὶ οὕθεν ἀισθάνεται τῶν ὁσφραντῶν ἄνευ τοῦ λυπηροῦ ή τοῦ ἵδεος, ὡς οὖν οὗτος ἄκριβος τοῦ αἰσθήματος. εὐλόγον δ’ οὗτοι καὶ τὰ σκληρόφθαλμα τῶν χρωμάτων αἰσθάνεσθαι, καὶ μὴ διαδήλους αὐτοῖς εἰναι τὰς δια- 15 φορὰς τῶν χρωμάτων πλὴν τὸ φοβερὸ καὶ ἀφόβω. οὔτω δὲ καὶ τὰς ὁσμὰς τῶν ἀνθρώπων γένους· οὐκεικε μὲν γὰρ ἀνάλογον ἔχειν πρὸς τὴν γεώσιν καὶ ὁμολογεῖ τὰ εἰδή τῶν χρωμάτων τοῖς τῆς ὁσμῆς, ἀλλ’ ἀκριβεστέραν ἔχομεν τὴν γεώ- σιν εἰς τὸ εἶναι αὐτήν ἄφιν τινα, ταύτην δ’ ἐχειν τὴν αἰ- 20 σθησιν τῶν ἀνθρώπων ἀκριβεστάτην’ ἐν μὲν γὰρ ταῖς ἀλλαίς λείπεται πολλῶν τῶν ἄκρων, κατὰ δὲ τὴν ἄφιν πολλῶν τῶν ἀλλών διαφερόντων ἀκριβοῦ. διὸ καὶ φρονιμώτατον ἐστι τῶν ἄκρων. σημεῖον δὲ τὸ καὶ ἐν τῷ γένει τῶν ἀνθρώπων παρὰ
The Additional Version.

οὔτε γὰρ τὸ κάτω καὶ ἄνω λαμβάνει ὁρθῶς·
οὔ γὰρ τὸ αὐτὸ ἐκάστοτε τὸ ἄνω καὶ τὸ κάτω καὶ τοῦ παντὸς
ἀλλ’ ὦς ἡ κεφαλὴ τῶν ζῴων, οὕτως ἡ ρίζα τῶν φυτῶν ἔστιν
τὸ δὲ αὐτὸ δεῖ λέγειν ὅργανον, ὅπερ ἀν ἢ τὸ αὐτὸ ἔργον.
ἐτὶ δὲ τὶ τὸ συνέχον εἰς τάναυτία φερομένων;

τούτῳ γὰρ αἰτιόν τὸ τῆς αὐξήσεως καὶ τροφῆς· εἰ δὲ μὴ,
οὐθὲν κωλύσει δι — —

III.

B, VIII. § 12—X. § 3.  

Ε. fol. II 10.

οὔτε, ὦ δὲ ἀιτιάν ἔτερον ἔσται περὶ αὐτῶν λόγος.
Περὶ δὲ ὁσμῆς καὶ τοῦ ὀσφραντοῦ οὐκ ἐστὶν ὁ ὀργίσαι ὁμοίως
τοῖς εἰρημένοις αἰσθητοῖς, τι ἔστιν ἡ ὁσμή. ὁ ὀργίσατος ὁψάτος καὶ τὸ
φῶς, αἰτίον δ’ ὦτε οὐκ ἔχομεν ἀκριβῆ ταύτην τὴν

ἀισθήσειν, ἀλλὰ χειριστὰ ὁσμᾶτα ἀνθρώπους τῶν ζῷων,
καὶ οὐδεμίαν ἀνευ

τοῦ λυπηροῦ καὶ ἡδέος δύναται αἰσθάνεσθαι ὁσμήν, ὡς τοῦ ἀίσθη-

τηρίου ὄντως οὐκ ἀκριβοῦς. ὁσπερ οὖν τοῖς σκληροφθάλμοις

ἄδηλους εἰκός εἶναι τὰς διαφόρας τῶν χρωμάτων καὶ

συγκεχυμένας, ἀλλὰ τῷ φοβερῷ καὶ τῷ ἄφοβῳ διορίζειν μόνον,

οὕτω καὶ τὸ περὶ τὰς ὁσμὰς τοῖς ἀνθρώποις, ἐπεὶ ἕοικε

τε ἀνάλογον ἔχειν πρός ἱεύσιν καὶ ὅμοια τὰ εἴδη τῶν

χυμῶν τοὺς τῆς ὁσμῆς, ἀλλὰ τὴν γεύσιν ἔχομεν ἀκριβεστέραν
diὰ τὸ εἶναι ἀφήν τινα· αὐτὴν δὲ ἔχει τὴν αἰ-

σθήσειν ἀκριβεστάτην ἀνθρώπωσ· ἐν μὲν ἡρ ταῖς ἄλλαις

λείπεται πολλῶν ζῴων, τῶν δ’ ἀπότεν τοῖς αἰσθάνεται

μᾶλιστα ἀκριβῆς. διὸ καὶ φορομιῶται τῶν ζῴων

ἔστιν. σημεῖον δὲ καὶ γὰρ αὐτῶν τῶν ἀνθρώπων


The Ordinary Text.

το ἀισθητῆριον τούτο εἶναι εὑφεῖς καὶ ἀφφεῖς, παρ' ἄλλο
25 δὲ μηδὲν ὁ μὲν γὰρ σκηνηρῶσαρκοὶ ἀφφεῖς τὴν διάνοιαν, ὁ δὲ μαλακόσαρκοι εὑφεῖς. ἔστι δ', ἄσπερ χυμός ὁ μὲν γλυκὺς ὁ δὲ πικρός, οὕτω καὶ ὁσμαί. ἀλλὰ τὰ μὲν ἔχουσι τὴν ἀνάλογον ὀσμήν καὶ χυμόν, λέγω δὲ οἶνον γλυκεῖαν ὀσμήν καὶ γλυκύν χυμόν, τὰ δὲ τούναντια. ὁμοίως δὲ καὶ
30 δριμεία καὶ αὐστηρὰ καὶ ὄξεια καὶ λιπαρά ἐστιν ὀσμή. ἀλλ' ἄσπερ εἴπομεν, διὰ τὸ μὴ σφόδρα διαδῆλος εἶναι τὰς ὁσμὰς ἄσπερ τοὺς χυμοὺς, ἀπὸ τούτων εἴληφε τὰ ὀνόματα καὶ ὁμοίως δὲ καὶ ὁμοίωτητα τῶν πραγμάτων ἡ μὲν γὰρ γλυκεία ἀπὸ τοῦ κρόκου καὶ τοῦ μέλιτος, ἡ δὲ δριμεία θύμω καὶ τῶν τοιούτων τῶν αὐτῶν δὲ τρόπον καὶ ἐπὶ τῶν ἀλλων. ἔστι δ' ἄσπερ ἢ ἀκοὴ καὶ ἐκάστη τῶν αἰσθητῶν, ἡ μὲν τοῦ ἀκουστοῦ
5 καὶ ἀνηκούστου, ἡ δὲ τοῦ ὑγροῦ καὶ ἀσφαλίου, καὶ ἡ ὀσφρησις τοῦ ὀσφραυντοῦ καὶ ἀνοσφραυντοῦ. ἀνοσφραυντὸν δὲ τὸ μὲν παρὰ τὸ ὄλως ἀδύνατον ἔχειν ὀσμήν, τὸ δὲ μικρὰν ἔχου καὶ φαύλην. ὁμοίως δὲ καὶ τὸ ἀγευστουν λέγεται. ἔστι δὲ καὶ ἡ ὀσφρησις διὰ τοῦ μεταξύ, οὖν αέρος ἢ ὅδατος καὶ 10 γὰρ τὰ ἑνυδρά δοκοῦσιν ὀσμῆς αἰσθάνεσθαι. ὁμοίως δὲ καὶ τὰ ἑναιμα καὶ τὰ ἀναιμα, ἄσπερ καὶ τὰ ἐν τῷ ἀέρι καὶ γὰρ τοιούτων ἑναι πόρρωθεν ἀπαντᾷ πρὸς τὴν τροφὴν ὑποσμα γινόμενα. διὸ καὶ ἀπορον φαίνεται, καὶ πάντα μὲν ὁμοίως ὀσμάτα, ὡς τὰ ἀνθρώπω ἀναπνεύον μὲν, μὴ ἀναπνεύον δὲ
15 ἀλλ' ἐκπνεύων ἢ κατέχων τὸ πνεῦμα οὐκ ὀσμάτα, οὔτε πόρρωθεν οὔτ' ἐγγύθεν, οὔδ' ἄν ἐπὶ τοῦ μυκτῆρος ἐντὸς τεβή, καὶ τὸ μὲν ἐπὶ αὐτοῦ τιθέμενον τῷ αἰσθητηρίῳ ἀναίσθητον εἶναι κοινὸν πάντων' ἀλλὰ τὸ ἀνεὶ τοῦ ἀναπνεύ, μὴ αἰσθάνεσθαι ἦδιον ἐπὶ τῶν ανθρώπων δὴλον δὲ πειρομένους. ὅστε
20 τὰ ἀναιμα, ἐπειδὴ οὐκ ἀναπνεύοντα, ἑτέραν ἄν των αἰσθητῶν ἔχοι παρὰ τὰς λεγομένας. ἀλλ' ἀνυστοῦ, εἴπερ τῆς ὀσμῆς αἰσθάνεται· ἡ γὰρ τοῦ ὀσφραυντοῦ αἰσθησίας καὶ δυσώδους καὶ εὐώδους ὀσφρησις ἐστίν. ἐτὶ δὲ καὶ φθειρόμενα φαίνεται ὑπὸ τῶν ἰσχυρῶν ὀσμῶν υφ' ἄσπερ ἀνθρώπως, οἶνον ἀσφάλ−
25 τοῦ καὶ θείου καὶ τῶν τοιούτων. ὀσφραίνεσθαι μὲν οὖν ἄναγκαιον, ἀλλ' οὐκ ἀναπνεύοντα. ὥσικε δὲ τῶν ἀνθρώπων διαφέ−
The Additional Version.

eὐφυεῖς, οἱ δ' ἀφυεῖς εἰσὶ παρ' οὐδὲν αἰσθητῆριον ἔτερον ἀλλὰ παρὰ τοῦτο. ὅν μὲν γὰρ ἡ σὰρξ μαλακὴ, εὐφυεῖς, οἱ δὲ σκληρόσαρκοι ἀφυεῖς τὴν διάνοιαν. ἔστι δ' ὁ στέρχο χυμὸς ὁ μὲν γλυκός ὁ δὲ πικρός, καὶ ὁσμαὶ τὸν αὐτὸν ἔχουσαι τρόπον, ἀλλὰ τὰ μὲν ἔχει τὴν ἀνάλογον ὁσμὴν καὶ χυμὸν, τὰ δὲ τοὐναντίον. ὁμοίως δὲ καὶ δριμεία καὶ αὐστηρὰ καὶ ὀξεία καὶ λππαρά ἐστιν ὁσμή. 

ἀλλ' ὁ στέρχο εἰρήναι διὰ τὸ μὴ σφόδρα διαδήλους εἶναι τὰς ὁσμὰς ὁ στέρχο τοὺς χυμοὺς, ἀπὸ τούτων εἰλήφη τὰ ὀνόματα καθ' ὁμοιότητα τῶν πραγμάτων' ἡ μὲν γλυκεία κρόκον καὶ μέλιτος, ἡ δὲ δριμεία θύμον καὶ τῶν τοιούτων τὸν αὐτὸν δὲ τρόπον καὶ ἐπὶ τῶν ἄλλων. ἔστι δ' ὁ στέρχο καὶ ἡ ἀκοι καὶ ἕκαστο τῶν αἰσθήσεων τοῦ τὸ ἀκουστοῦ καὶ ἀνακούστο καὶ ὁρατοῦ καὶ ἀφαιροῦντος τοῦ ωσαύτου. ἐστὶ δὲ καὶ ἡ ὀσφρησις διὰ τοῦ μεταξύ, ὅλον ὑδατός καὶ ἄερος· καὶ γὰρ τὰ ἐνυδρα φαίνεται αἰσθητάμενα ὁσμῆς, καὶ τὰ ἐναιμα καὶ ἀναιμα ὀμολογ. ὁ στέρχο καὶ τὰ ἐν τῷ ἀει' καὶ γὰρ τούτων ἐνα πόρροθευμαντά πρὸς τὴν τροφὴν αἰσθητάμενα 40 τὴν ὁσμὴν διὸ καὶ ἔχει ἀπορίαν εἰ πάντο, μὲν ὁσαύτως ὁσμᾶται, ὁ δ' ἀνθρώπος ἀναπνέεις μὲν, μη ἀναπνέεις δὲ ἀλλ' ἡ κατέχον τὸ πνεῦμα ἡ ἐκπνεύων οὐκ ὁσμᾶται, οὔτε πόρρω οὔτ' ἐγγύς, οὔτ' ἀν ἐπιθῇ τις εἰς τὸν μυκτήρα ἐντός. καὶ τὸ μὲν ἐπ' αὐτῷ τῷ αἰσθητήριῳ τιθέμενον ἀναληθητόν 45 εῖναι κοινών πάντων' ἀλλὰ τὸ ἀνω τοῦ αναπνεύσεις μὴ αἰσθανόμεν εἶδον ἐπὶ τῶν ἀνθρώπων ἑστὶν τούτῳ δὲ πειραμένον χείλι. εἰ οὖν τὰ ἀναιμα μὴ ἀναπνεύς, ἐτέραν ἄν τινι ἔχοι αἰσθησιν παρὰ τὰς λεγομένας. ἀλλ' εἴπερ τῆς ὁσμῆς αἰσθάνεται ἀδύνατον' ἡ γὰρ τῶν ὀσφραντοῦ καὶ εὐωδίας καὶ δυσώδους αἰ- 50 σθησις ὀσφρησις ἑστὶν. φαίνεται δὲ καὶ φθειρόμενα ὑπὸ τῶν ἵσχυρῶν ὁμοίων ὡς ὁ στέρχο καὶ ἀνθρώπω, ὅλον ἀσφάλτου καὶ θεοῦ καὶ τῶν τοιούτων, ὀσφραίνεσθαι μέντοι νῦν ἀναγκαῖον, ἀλλ' οὐκ ἀναπνεῖν. ἀλλ' εἴοικε διαφέρειν τὸ αἰσθητήριον
The Ordinary Text.

ρειν τὸ αἰσθητήριον τούτο πρὸς τὸ τῶν ἄλλων ζῴων, ὡσπερ τὰ ὀμματα πρὸς τὰ τῶν σκληροθάλμων· τὰ μὲν γὰρ ἔχει φράγμα καὶ ὡσπερ ἐλυτρον τὰ βλέφαρα, ἀ μὴ κενή· 30 σὰς μὴν ἀναστάσας οὐχ ὅρα· τὰ δὲ σκληρόφθαλμα οὐδὲν ἔχει τοιοῦτον, ἀλλ’ εὐθέως ὅρα τὰ γυμνέα ἐν τῷ διαφανεὶ. οὕτως οὖν καὶ τὸ ὀσφραντικὸν αἰσθητήριον τοῖς μὲν 422α ἀκάλυφες εἶναι, ὡσπερ τὸ ὄμμα, τοῖς δὲ τῶν ἁέρα δεχομένοις ἔχειν ἐπικάλυμμα, ὁ ἀναπνεόντων ἀποκαλύπτεσθαι, διευρυμνούμενων τῶν φλεβῶν καὶ τῶν πόρων. καὶ διὰ τοῦτο τὰ ἀναπνεόντα οὐκ ὀσμᾶτα ἐν τῷ ψυγῷ ἄναγκαιον γὰρ 5 ὀσφρανθῆναι ἀναπνεύσαντα, τούτῳ δὲ ποιεῖν εἴν τῷ ψυγῷ ἀδύνατον. ἔστι δ’ ἡ ὀσμὴ τοῦ ξηροῦ, ὡσπερ ὁ χυμὸς τοῦ ψυγοῦ· τὸ δὲ ὀσφραντικὸν αἰσθητήριον δυνάμει τοιοῦτον.

Χ. Τὸ δὲ γευστὸν ἐστὶν ἀπτὸν τ’ καὶ τούτ’ αἰτίον τοῦ μὴ εἶναι αἰσθητὸν διὰ τοῦ μεταξὺ ἀλλοτρίου ὄντος σώματος· 10 οὐδὲ γὰρ ἡ ἄφη. καὶ τὸ σῶμα δὲ ἐν φ’ ὁ χυμός, τὸ γευστὸν, ἐν ψυγῷ ὥς ψηλ’ τούτῳ δ’ ἀπτόν τι. διὸ κἂν εἰ ἐν ψατὶ ἦμεν, ἡσθαιμέθ’ ἂν ἐμβληθέντος τοῦ γλυκοῦ, οὐκ ἦν δ’ ἂν ἡ αἴσθησις ἡμῶν διὰ τοῦ μεταξὺ, ἀλλὰ τῷ μικρῆν τῷ ψυγῷ, καθάπερ ἐπὶ τοῦ ποτοῦ. τὸ δὲ χρώμα 15 οὐχ οὕτως ὀρᾶται τῷ μίγμωνθαι, οὐδὲ ταῖς ἀπορρολαῖς. ὡς μὲν οὖν τὸ μεταξὺ οὕθεν ἐστὶν’ ὡς δὲ χρώμα τὸ ὀρατὸν, οὕτω τὸ γευστὸν ὁ χυμὸς. οὐθέν δὲ ποιεῖ χυμοῦ αἴσθησιν ἁνευρότητα, ἀλλ’ ἔχει εἰνεργεια ἡ δυνάμει ψηλότητα, οἴον τὸ ἅλμορον εὐτηκτῶν τε ψάρ αὐτὸ καὶ συνηκερικοῦ γλώττης.

20 ὡσπερ δὲ καὶ ἡ ὄψις εὔτε τοῦ τε ὀρατοῦ καὶ τοῦ ἄρατον (τὸ γὰρ σκότος ἄρατον, κρίνει δὲ καὶ τοῦτο ἡ ὄψις), ἐπὶ τοῦ λίαν λαμπροῦ (καὶ γὰρ τοῦτο ἄρατον, ἄλλοι δὲ τρόπον τοῦ σκότους), ὑμολογεῖ δὲ καὶ ἡ ἀκοὴ ψόφου τε καὶ συγιᾶς, ἀν τὸ
The Additional Version.

τούτο τοὺς ἀνθρώπους πρὸς τὸ τῶν ἀλλων ξύων, ὡσπέρ καὶ τὰ ὀμματα πρὸς τὰ τῶν σκληροβάλμων τὰ μὲν γὰρ ἔχει τῶμα καὶ ὡσπέρ ἔλυσσαν τὰς βλεφαρίδας, ἃς ἄν μὴ ἀναστάσῃ καὶ κινήσῃ οὐχ ὀρθῇ τὰ δὲ σκληροβάλμα οὐκ ἔχει, ἀλλὰ εὐθὺς ὀρᾶ, ὅτι ἂν τεθῇ ἐν τῷ διαφανείῳ ὀὐτῷ καὶ τὸ ὀσφαντικὸν αἰσθητήριον τοῖς μὲν ἀκαλυφοὶ εἶναι, ὡσπέρ τὸ ὀμμα, τοῖς δὲ δεχομένοις τὸν ἄερα ἔχειν ἐπικάλυμμα, ὅ ἀναπνεύσοντων ἀποκαλύπτεσθαι, διευρυνομένων τῶν φλεβῶν καὶ τῶν πόρων. καὶ διὰ τούτῳ τὰ ἀναπνέοντα ἐν τῷ ὑγρῷ οὐκ ὀσμᾶται, ὅτι ἀνάγκη ἀναπνεύσαντα ἐσφανθῆναι, ἐν δὲ τῷ ὑγρῷ ἀδύνατον τούτῳ ποιεῖν. ἦστι δὲ ἡ ὁσμὴ τοῦ ἔνθρου ὡσπέρ ὁ χυμὸς τοῦ ὑγροῦ, τὸ δ' ὀσφαντικὸν αἰσθητήριον δυνάμει τοιούτων.

Τὸ δὲ γενοστὸν ἐστίν ἀπτῶν τι καὶ τούτο αὖτιν τοῦ μὴ εἶναι αἰσθητὸν διὰ τοῦ μεταξὺ ἀλλοτρίου ὄντος σώματος· οὐδὲ γὰρ ἡ ἀφή. καὶ τὸ σῶμα, ἐν ὃς ὁ χυμὸς, τὸ γενοστὸν, ἐν ὑγρῷ ὡς ὑλὴ τούτῳ δ' ἀπτῶν τι. διὸ κἂν εἰ ἐν ὑδαίι εἰημεν, αἰσθανόμεθα ἐμβληθέντος γιλκεύος, οὐ διὰ τοῦ μεταξὺ δὲ ἡμῶν ἡ αἰσθησις, ἀλλὰ τῷ μιχθῆναι τῷ ὑγρῷ, ὡσπέρ ποτῷ· τὸ δὲ χρώμα οὐχ οὔτως ὀρᾶται τῷ μίγμυσθαι οὐδὲ ταῖς ἀπορρολαις. ὡς μὲν οὖν τὸ μεταξὺ οὐθέν ἐστίν· ὅς δὲ χρώμα τὸ ὄρατον, οὕτω γενοστὸν χυμὸς. οὐθέν δὲ ποιεῖ αἰσθησια χυμοῦ ἄνευ υγρότητος, ἀλλ' ἔχει ενεργεία ἡ δυνάμει υγρότητα, οἷον τὸ ἄλμυρον τηκτῶν τε γὰρ αὐτῷ καὶ συντηκτικῶν τῆς γλώττης. ὡσπέρ δὲ καὶ ἡ ὅψις ἔστι τοῦ τε ἐρατού καὶ τοῦ ἀράτου (ὁ δὲ γάρ σκότος ἀρατός, κρίνει δὲ καὶ τούτου ἡ ὅψις), ἔτι τοῦ λιαν λαμπροῦ (καὶ γὰρ τούτῳ πως ἀράτον, ἀλλ' ἐκ τοῦ σκότος), ὁμοίως δὲ καὶ ἡ ἀκοή ψύφου τε καὶ σιγής, ὅν τὸ
The Ordinary Text.

IV.


καί τοι καθάπερ εἶπαμεν καὶ πρότερον, καν εἰ δὲ ύμένος αἰσθανοîtreba τῶν ἀπτῶν ἀπάντων λανθά-
νοντος ὅτι διείργει, ὁμοίως ἃν ἔχοιμεν ὅσπερ καὶ νῦν ἐν τῷ ὑδάτι καὶ ἐν τῷ ἀέρι δοκοῦμεν γὰρ ἀυτῶν ἀπτεσθαι καὶ οὐδὲν εἶναι διὰ μέσου. ἀλλὰ διαφέρει τὸ ἀπτῶν τῶν ὀρα-
τῶν καὶ τῶν ψοφητικῶν, ὅτι ἐκείνων μὲν αἰσθανόμεθα τὸ τὸ μεταξὺ ποιεῖν τι ἡμᾶς, τῶν δὲ ἀπτῶν οὐχ ὑπὸ τοῦ με-
15 ταξίν ἀλλ' ἀμα τὸ μεταξὺ, ὅσπερ ὃ δὲ ἀστίδιος πλη-
γείς· οὐ γὰρ ἡ ἀστίς πληγείσα ἐπάταξεν, ἀλλ' ἁμφοῖς 
συνέβη πληγήναι. ὥλος δ' ἐσκευή ἡ σάρξ καὶ ἡ ρυλῶτα, ὡς 
ὁ ἁρπ καὶ τὸ ὑδωρ πρὸς τὴν ὤντι καὶ τὴν ἀκόι καὶ τὴν 
ὁσφησιν ἔχουσι, οὕτως ἔχειν πρὸς τὸ αἰσθητήριον ὅσ-
20 περ ἐκείνων ἐκαστον. αὐτόν δὲ τοῦ αἰσθητήριον ἀπτομένου 
οὐτ' ἐκεὶ οὐτ' ἐνταῦθα γένοιτ' ἀν αἰσθήσιν, ὁἷον εἴ τις σῶμα 
τὸ λευκὸν ἠπὶ τοῦ ὄμματος θείη τὸ ἔσχατον. ἡ καὶ δὴλον 
ὅτι ἐντὸς τοῦ ἀπτοῦ αἰσθητικόν. οὕτω γὰρ ἀν συμβαίνει 
ἐπερ καὶ ἠπὶ τῶν ἄλλων ἐπιτιθεμένων γὰρ ἠπὶ τὸ αἰσθη-
25 τήριον οὐκ αἰσθάνεται, ἠπὶ δὲ τὴν σάρκα ἐπιτιθεμένων αἰσθά-
νεται· ὡστε τὸ μεταξὺ τοῦ ἀπτικοῦ ἡ σάρξ. ἀπταλ μὲν οὖν 
eisίν αἰ διαφοράτι τοῦ σώματος ἡ σῶμα· λέγοι δὲ διαφοράς 
αι τὰ στοιχεῖα διορίζουσι, θερμὸν ψυχρόν, ἔρημον ὕγρα, περὶ 
ὁν εἰρήκαμεν πρότερον ἐν τοῖς περὶ στοιχείοις. τὸ δὲ αἰσθη-
30 τήριον αὐτῶν τὸ ἀπτικοῦ, καὶ ἐν ό ἡ καλουμένη ἀφὴ ὑπά-
ρχει πρῶτο, τὸ δυνάμει τοιοῦτον ἐστὶ μόριον τὸ γὰρ αἰσθά-
424δνεσθαι πάσχειν τι ἔστιν· ὡστε τὸ ποιοῦν οἷον αὐτὸ ἐνεργεῖα, 
τοιοῦτον ἐκείνῳ ποιεῖ δυνάμει ὅν. διὸ τοῦ ὁμοίως θερμοῦ καὶ 
ψυχροῦ ἡ σκληροῦ καὶ μαλακοῦ οὐκ αἰσθανόμεθα, ἀλλὰ 
tῶν ύπερβολῶν, ὡς τῆς αἰσθήσεως οἷον μεσοτήτος τίνος οὐσίας 
5 τῆς ἐν τοῖς αἰσθητοῖς ἐναντιώσεως. καὶ διὰ τοῦτο κρίνει τὰ 
αισθητά. τὸ γὰρ μέσον κριτικῶν γίνεται γὰρ πρὸς ἐκάτερον 
αὐτῶν θάτερον τῶν ἀκρῶν· καὶ δεῖ ὅσπερ τὸ μέλλον αἰσθη-
σεθαι λευκοῦ καὶ μέλανος μηδέτερον αὐτῶν εἶναι ἐνεργεῖα,
APPENDIX A.

The Additional Version.

IV.

B, XI. § 7—XII. § 6.

E. fol. 196 r.

εἰρηται πρότερον ὅτι καὶ δὲ ὑμένος ἀν πάντων αἰσθανόμεθα τῶν ἀπτῶν, κἂν εἰ λανθάνων διείργουν, ὁμοίως ἂν ἐχομεν ὡσπερ νῦν ἐν τῷ ὑδατι καὶ ἐν τῷ ἀέρι· δοκοῦμεν γὰρ αὐτῶν θυγγάνειν καὶ οὗθεν εἶναι διὰ μέσου. ἀλλὰ διαφέρει τούτῳ τὰ ἀπτὰ τῶν ὁρα-5 τῶν καὶ ψοφητικῶν, ὅτι ἐκείνων αἰσθανόμεθα τῷ τὸ μεταξὺ ποιεῖν τι ἡμᾶς, τῶν δὲ ἀπτῶν οὐχ ὡς τοῦ με-ταξύ ἀλλ' ἀμα τῷ μεταξύ, ὡσπερ οἱ διὰ τῆς ἀπτίδος πλη-γέντες' οὐδὲ γὰρ ἡ ἀσπίδας πληγείσα ἐπάταξεν, ἀλλ' ἀμα ἀμφοῖν συνεβ' πληγήσαι. ὅλος δ' ἐσοικε καὶ ἡ σάρξ καὶ ἡ γλώττα, το 10 ὡς ὁ ἀέρ καὶ τὸ ὕδωρ πρὸς τὴν ὑφιν καὶ τὴν ἀκοήν καὶ ὄσφροιν ἐχομεν, οὕτως ἐχειν πρὸς τὸ αἰσθητήριον ὡσ-περ ἑκεῖνων ἑκαστῶν. αὐτοῦ δὲ τοῦ αἰσθητηρίου ἀπτομένου οὖτ' εἰκὲ οὔτ' ἐνταῦθα γένοστ' (sic) ἄν αἰσθησις. οὐν εἰ τιστὸ σῶμα τὸ λευκὸν ἐπὶ τοῦ ὁμάτων θεί τὸ ἐσχατον. ἦ καὶ δήλον 15 ὅτι ἑντὸς τὸ τοῦ ἀπτοῦ αἰσθητικὸν. οὕτω γὰρ ἂν συμβαινόι ὡσπερ ἐπὶ τῶν ἀλλων ἐπιτιθεμένου γὰρ ἐπὶ τὸ αἰσθητή- 20 ρίου οὐκ ἐσθανεται (sic), ἐπὶ δὲ τὴν σάρκα ἐπιτιθεμένου αἰσθάνεται; ὡστε μεταξύ ἃρα τοῦ ἀπτικοῦ ἡ σάρξ. ἀπταὶ μὲν οὖν εἰσίν αἱ διαφοραι τοῦ σώματος ἦ σώμα: λέγω δὲ διαφορας ἂν τὰ στοιχεῖα διαρίζουσι: θερμὸν καὶ ψυχρὸν καὶ ἔπρον καὶ ὑψρον, περὶ ὅπειρεν εἰρηται πρότερον ἐν τοῖς περὶ τῶν στοιχείων, τὸ δὲ αἰσθητήριον αὐτῶν τὸ ἀπτικόν, καὶ ἐν δὲ ἡ καλομένη ἀφ' ὑπάρ-χει πρώτη, τὸ δυνάμει τοιοῦτον ἐστὶ μόριον τὸ γὰρ αἰσθανόμεθαι τὰ πάσχει τι ἐστίν, ὡστε τὸ ποιοῦν οὖν αὐτὸ ἐνεργεία, 25 τοιοῦτον ποιεῖ ἐκεῖνο τὸ δυνάμει ὃν. διὸ τοῦ ὁμοίου θερμοῦ ἡ ψυχροῦ ἡ σκληροῦ ἡ μαλακοῦ οὐκ αἰσθανόμεθα, ἀλλὰ τῶν ὑπερβολῶν ὡς ἂν τῆς αἰσθήσεως οὖν μεσότητοι τινος ὑπῆς τῆς ἐν τοῖς αἰσθητοῖς ἐναντιώσεως. καὶ διὰ τοῦτο κρίνει τὰ αἰσθήτα, τὸ γὰρ μέσον κριτικῶν γίνεται γὰρ πρὸς δ', 30 ποτερονοὶ αὐτῶν ὑπάτερον τῶν ἄκρων καὶ δει ὡσπερ τὸ μέλλον λευκοῦ αἰσθάνεσθαι ἡ μέλλον εὐδέτερον εἶναι ἐνεργεία,
The Ordinary Text.

dynamai δ' ἀμφα, οὕτω δὴ καὶ εἴπ τῶν ἄλλων καὶ ἐπὶ τῆς
10 ἀφῆς μὴτε θερμῶν μὴτε ψυχρῶν. ἔτι δ’ ὀστερ δρατοῦ καὶ
ἀποράτου ἡν πῶς ἡ ὤψις, ὁμοίως δὲ καὶ αἱ λοιπαὶ τῶν ἀντι-
κειμένων, οὕτω καὶ ἡ ἀφή τοῦ ἀπτοῦ καὶ ἀνάπτου ἀναπτοῦ
δ’ ἔστι τὸ τε μικρὰν ἔχουν πάμπα διάφορα τῶν ἀπτῶν,
oiν πέτοιην ὁ ἄνδρα, καὶ τῶν ἀπτῶν αἱ ύπερβολαι, ὀστερ
15 τὰ φθαρτικά. καθ’ ἐκάστην μὲν οὖν τῶν αἰσθήσεων εἴρηται
τύπῳ.

XII. Καθάλου δὲ περὶ πάσης αἰσθήσεως δεὶ λαβεῖν ὅτι ἥ
μὲν αἰσθήσεις ἐστὶ τὸ δεκτικὸν τῶν αἰσθητῶν εἰδῶν ἄνευ τῆς
ὕλης, οἴον ὁ ἥπερ τοῦ δακτυλίου ἄνευ τοῦ σειδῆρον καὶ τοῦ
χρυσοῦ δέχεται τὸ σημείον, λαμβάνει δὲ τὸ χρυσάν ἡ τὰ
χαλκῶν σημείων, ἀλλ’ οὖχ ἡ χρυσὸς ἡ χαλκός. ὁμοίως δὲ
καὶ ἡ αἰσθήσεως ἐκάστου ὑπὸ τοῦ ἔχουσι χρώμα ἡ χυμόν ἡ
ψόφον πάσχει, ἀλλ’ οὖχ ἡ ἔκαστον ἐκείνων λέγεται, ἀλλ’
τοιοῦδε, καὶ κατὰ τὸν λόγον. αἰσθητήρων δὲ πρῶτον ἐν
25 ἡ τοιαύτη δύναμις. ἔστι μὲν οὖν ταύτων, τὸ δ’ εἶναι ἔτε-
ρον μέγεθος μὲν γὰρ ἂν τι εὑρή τὸ αἰσθανόμενον οὐ μὴν τὸ
γε αἰσθητικὸ εἶναι, οὕτω ἡ αἰσθήσεις μέγεθος ἐστίν, ἄλλα λό-
γος τις καὶ δύναμις ἐκείνου. φανερὸν δ’ ἐκ τούτων καὶ διὰ
tὶ ποτε τῶν αἰσθητῶν αἱ ύπερβολαι φθειροῦσι τὰ αἰσθητή-
30 ρια: ἐάν γὰρ ἡ ἱσχυρότερα τοῦ αἰσθητήριου ἡ κίνησις, λινε-
tαι ὁ λόγος, τούτο δ’ ἂν ἡ αἰσθήσεις, ὀστερ καὶ ἡ συμ-
φωνία καὶ ὁ τόνος κρουμένων σφόδρα τῶν χροδῶν, καὶ διὰ
tὶ ποτε τὰ φυτὰ οὐκ αἰσθανόμεναι, ἔχοντα τὶς μόριον ψυχι-
kων καὶ πάσχοντα τὰ ὑπὸ τῶν ἀπτῶν καὶ γὰρ ψύχεται
424 καὶ θερμαίνεται: αὐτὸν γὰρ τὸ μὴ ἔχειν μεσότητα, μηδὲ
τοιαύτην ἀρχὴν οὕτω τὰ εἶδη δέχεσθαι τῶν αἰσθητῶν, ἀλλά
πάσχειν μετὰ τῆς ὑλῆς ἀπορίσεις δ’ ἂν τις εἰ πάθου ἂν
τι ὑπ’ ὁσμῆς τὸ ἀδύνατον ὀσφρανθηκαί, ὑ ὑπὸ χρωματὸς τὸ
5 μὴ δυνάμενον ἔδειν’ ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων. εἰ δὲ
τὸ ὀσφραντὸν ὁσμῆ, εἰ τὶ ποιεῖ, τὴν ὀσφρησιν ἡ ὁσμῇ ποιεῖ.
ἀστε τῶν ἀδύνατων ὀσφρανθήκαι οὐδὲν οὐκ λεῖ τὰ πάσχειν ὑπ’
ὁμῆς: δ’ ἂν αὐτὸς λόγος καὶ ἐπὶ τῶν ἄλλων οὐδὲ τῶν δυ-
νατῶν, ἀλλ’ ἡ αἰσθητικήν ἐκαστον. ἣμα δὲ δὴλον καὶ οὕτως
Αλλὰ δυνάμει, οὕτω δὴ καὶ ἐπὶ τῶν ἄλλων καὶ ἐπὶ τῆς ἄφις μήτε θερμὸν μήτε ψυχρὸν. ἔτι δ' ὀστερὸν τοῦ τὸ ὄρατον καὶ τοῦ ἀνάπτυγον ἡμῶν πεπερασμένος, οὕτω καὶ ἡ ἄφις τοῦ ἀνάπτυγον ἀναπτύγον δὲ τὸ τε μικρὰν πάμπαν ἔχων διαφοράν τῶν ἀπτῶν, οἷον πεποιθεὶν ὁ ἀήρ, καὶ αἱ ὑπερβολαί τῶν ἀπτῶν, ὀστερὰ τὸ φθινότερον. καθ' ἐκάστην μὲν οὖν αἰσθησιν εἰρηται ὡς ἐν τῷ ὁρῷ εἰπεῖν.

Καθόλου δὲ περὶ πάσης αἰσθήσεως δεῖ λαβεῖν ὅτι ἡ μὲν αἰσθήσεις ἐστὶ τὸ δεκτικόν τῶν αἰσθητῶν ἀνευ τῆς ύλῆς, οἷον ὁ κήρος τοῦ δακτύλου (sic) ἀνευ τοῦ σιδήρου καὶ τοῦ χρυσοῦ δέχεται τὸ σημεῖον, λαμβάνει δὲ τὸ χαλκοῦ ἢ χρυσοῦ σημεῖον (sic), ἀλλ' οἷς ἢ χαλκὸς ἢ χρυσός. ὠμολογεῖ δὲ καὶ ἡ αἰσθήσεις ἐκάστη ὑπὸ τοῦ ἐχοντος χρώμα ἢ ψόφου ἢ χυμοῦ πᾶσχει, ἀλλ' οἷς ἢ ἐκαστὸν ἐκεῖνων λέγεται, ἀλλ' ἤ τοίονδε καὶ κατὰ τῶν λόγων. αἰσθητήριον δὲ πρὸς τὸν ἐφ', ἢ τοιοῦτον δύναμις. ἔστι μὲν οὖν τὸ αὐτὸ, τὸ δ' εἶναι ἐτεροῦν μέγεθος μὲν ἢρ ἂν τι εἴη τὸ αἰσθανόμενον οὐ μέντοι τὸ τε αἰσθητικό εἶναι ἢ αἰσθήσεις μεγέθεις ἔστιν εἶναι, ἀλλ' λόγος τις καὶ δύναμις ἐκεῖνος. φανερὸν δ' ἐκ τούτων καὶ διὰ τὰς ποτὲ τῶν αἰσθητῶν αἱ ὑπερβολαὶ φθινότεροι (sic) τὰς αἰσθήσεις ἀν οἷρ ἢ κίνησις ἵσχυροτέρα τοῦ αἰσθητήριου, λύεται ὁ λόγος, τούτῳ δ' ἂν αἰσθήσεις, ὀστερανεὶ ἡ συμφωνία καὶ ὁ τόνος σφόδρα κρουμνεῖ τῶν χορδῶν. καὶ διὰ τὰ ποτὲ τὰ φυτὰ οὐκ αἰσθάνεται, ἔχοντα τι μόριον ψυχικοῦ καὶ πάσχοιτα ὑπὸ τῶν ἀπτῶν καὶ γὰρ ψύχεται καὶ θερμενεῖ (sic): ετίον (sic) δὲ τὸ μὴ ἔχειν μεσοτήτα, μηδὲ τοιαύτην ἀρχήν, οὐάν τὰ εἶδος τῶν αἰσθητῶν δέχεσθαι, ἀλλ' θετ ἀντὶ τῆς υλῆς πᾶσχει. ἀπορήσειε δ' ἂν τις, ἄρα πάθοι ἂν ὑπ' ὁσμῆς τὸ μὴ δυνάμενον ψφαρανθῆναι, ἢ ὑπὸ χρώματος τὸ μὴ δυνάμενον ἐδειγμονοίς δὲ καὶ ἐπὶ τῶν ἄλλων. εἰ δ' ἡ ὀσμὴ τὸ ψφαραντὸν, εἰ τι ποιεῖ, τὴν ὄσφρησιν ποιεῖ ὄσμη. ὥστε οὐδὲν πᾶσχει τῶν ἄδυνατων ὄσφρανθῆναι. 65 ὁ δ' αὐτὸς λόγος καὶ ἐπὶ τῶν ἄλλων οὐ δέ τῶν δυνατῶν, ἀλλ' ἡ αἰσθητικὸν ἐκαστον. ἀμε δὲ δῆλον καὶ οὕτως.
The Ordinary Text.

10 οὔτε γὰρ φῶς καὶ σκότος οὔτε ψόφος οὔτε ὀσμὴ οὐδὲν ποιεῖ
tὰ σῶματα, ἀλλὰ ἐν οἷς ἐστὶν, οἷον ἀὴρ ὁ μετὰ βροντῆς
διϊστησε τὸ ξύλον. ἀλλὰ τὰ ἀπτὰ καὶ οἱ χυμοὶ ποιοῦσιν εἰ
γὰρ μὴ, ὑπὸ τίνος ἂν πᾶσχοι τὰ ἄψυχα καὶ ἀλλοιῶτο;
ἀρ’ οὖν κάκεινα ποιήσει; ἢ οὐ πᾶν σῶμα παθητικὸν ὑπ’ ὀσμῆς
15 καὶ ψόφου’ καὶ τὰ πάσχοντα ἀόριστα, καὶ οὐ μένει, οἷον
ἀὴρ’ ὀξεῖ γὰρ ὄσπερ παθῶν τι. τί οὖν ἔστι τὸ ὀσμᾶσθαι
παρὰ τὸ πᾶσχειν τι; ἢ τὸ μὲν ὀσμᾶσθαι αἰσθάνεσθαι, δὲ
δ’ ἀὴρ πάθων ταχέως αἰσθητός γίνεται.
The Additional Version.

οὔτε γὰρ ψόφος οὔτε τὸ φῶς καὶ σκότος οὔτε ἡ ὁσμὴ οὐθέν ποιεῖ
tὰ σώματα, ἀλλ’ ἐν οἷς ἐστίν, οἴον ἀὴρ ὁ μετὰ τῆς βρουτῆς
dιέστησε τὸ ξύλον. ἀλλὰ δὴ τὰ ἅπτα καὶ οἱ χυμοὶ ποιοῦσιν εἰ γὰ
gὰρ μῆ, ὑπὸ τίνος ἂν πάσχοι τὰ ἄψυχα ἡ ἀλλοιοίτο;
ἀρ’ οὐν κάκεινα ποιεῖ; ἡ οὔ πάν σῶμα παθητικῶν ὑπὸ ὁσμῆς
cαὶ ψόφου καὶ τὰ πάσχουτα ἀόριστα, καὶ οὐ μένει, οἷον
ἀὴρ’ ὄξει γὰρ ὃς παθῶν τι. τί οὖν ἐστὶ τὸ ὁσμᾶσθαι
παρὰ τὸ πάσχειν τι; ἡ τὸ μὲν ὁσμᾶσθαι καὶ ἀισθάνεσθαι, ὁ 75
δ’ ἀὴρ παθῶν τούτο ταχὺ αἰσθητὸς γίγνεται.

'Αριστοτέλους περὶ ψυχῆς Γ′.
APPENDIX B.

ARISTOTLE'S DIALOGUE EUDEMUS.

The following passages are our chief sources of information respecting Aristotle's psychological Dialogue Eudemus. They are printed in the same order as that in which they are collected in the Berlin Academy Edition of Aristotle's Works. For some account of the probable course of the argument see Bernays, Die Dialoge des Aristoteles, especially pp. 21—27.


2. David Proleg. in Ar. Categ. p. 24v 10: τῶν δὲ συνταγματικῶν τὰ μὲν εἶσιν αὐτοπρόσωπα ὃ καὶ ἀκροαματικὰ λέγονται, τὰ δὲ διαλογικά, ὃ καὶ ἀξωτερικὰ λέγονται...ἐγραψε δὲ καὶ πρὸς
ΑΝΕΠΙΤΗΔΕΙΟΥΣ ΠΡΟΣ ΦΙΛΟΣΟΦΙΑΝ ΤΑ ΔΙΑΛΟΓΙΚΑ...ΚΑΤΑΣΚΕΥΑΣΩΝ ΔΕ ΤΗΝ ΑΘΑΝΑΣΙΑΝ ΤΗΣ ΨΥΧΗΣ ΚΑΙ ΤΟΙΣ ΑΚΡΟΑΜΑΤΙΚΟΙΣ ΔΕΙ ΑΝΑΓΚΑΣΤΙΚΩΝ ΛΟΓΩΝ ΚΑΤΑΣΚΕΥΑΣΕΙ, ΕΝ ΔΕ ΤΟΙΣ ΔΙΑΛΟΓΙΚΟΙΣ ΔΙΑ ΠΙΘΑΝΩΝ ΕΙΚΟΤΩΝ. ΦΗΣΙ ΓΛΑΥΚΟΝ ΠΕΡΙ ΨΥΧΗΣ ΑΚΡΟΑΜΑΤΙΚΟΙΣ ΌΤΙ Η ΨΥΧΗ ΑΦΘΑΡΤΟΣ: ΕΙ ΓΛΑΥΚΟΝ ΨΥΧΗ ΑΦΘΑΡΤΗ, ΕΔΕΙ ΜΑΛΙΣΤΑ ΑΥΤΗΝ ΦΘΕΙΡΙΣΑΙ ΥΠΟ ΤΟΥ ΕΝ ΤΩ ΓΗΡΑ ΑΜΑΡΟΥΣΘΑΙ, ΤΟΤΕ ΔΕ ΑΚΜΑΖΕΙ ΤΟΥ ΣΩΜΑΤΟΣ ΠΑΡΑΜΑΣΑΝΤΟΣ ΩΣΠΕΡ ΟΥΝ ΠΑΡΑΚΑΜΑΖΕΙ ΌΤΕ ΤΩ ΣΩΜΑ ΑΚΜΑΖΕΙ ΤΟ ΔΕ ΟΤΕ ΔΕΙ ΦΘΕΙΡΙΣΑΙ ΑΚΜΑΖΟΝ ΑΦΘΑΡΤΟΝ Η ΨΥΧΗ ΆΡΑ ΑΦΘΑΡΤΟΣ ΕΣΤΙ, ΚΑΙ ΟΥΤΩΝ ΜΕΝ ΕΝ ΤΟΙΣ ΑΚΡΟΑΜΑΤΙΚΟΙΣ ΔΕΙ ΔΕ ΤΟΙΣ ΔΙΑΛΟΓΙΚΟΙΣ ΦΗΣΙΝ ΟΥΤΩΝ, ΌΤΙ Η ΨΥΧΗ ΑΘΑΝΑΤΟΣ, ΕΠΕΙΔΗ ΑΥΤΟΦΥΒΩΝ ΠΑΝΤΩΝ ΕΙ ΑΝΘΡΩΠΟΙ ΚΑΙ ΣΠΕΝΔΟΜΕΝ ΧΟΑΙ ΤΟΙΣ ΚΑΤΟΙΧΟΜΕΝΟΙΣ ΚΑΙ ΟΥΜΥΝΕΝ ΚΑΤ’ ΑΥΤΑΝ, ΟΥΔΕΙΣ ΔΕ ΤΟΥ ΜΗΔΑΜΗ ΜΗΔΑΜΩΣ ΟΥΝ ΣΤΕΝΙΔΕΙ ΠΟΤΕ Ή ΟΥΜΥΝΕ ΚΑΤ’ ΑΥΤΟΥ. ΔΕ ΆΛΕΞΑΝΔΡΟΣ ΑΛΛΗΝ ΔΙΑΦΟΡΑΝ ΛΕΓΕΙ ΤΩΝ ΑΚΡΟΑΜΑΤΙΚΩΝ ΠΡΟΣ ΤΑ ΔΙΑΛΟΓΙΚΑ, ΌΤΙ ΕΝ ΜΕΝ ΤΟΙΣ ΑΚΡΟΑΜΑΤΙΚΟΙΣ ΤΑ ΔΟΚΙΝΤΑ ΑΥΤΟ ΛΕΓΕΙ ΚΑΙ ΤΑ ΑΛΗΘΗ, ΕΝ ΔΕ ΤΟΙΣ ΔΙΑΛΟΓΙΚΟΙΣ ΤΑ ΑΛΛΟΙ ΠΟΤΟΝΤΑ ΤΑ ΨΕΥΔΗ...ΤΟΤΟ ΔΕ ΕΙΣΕΝ ΆΛΕΞΑΝΔΡΟΣ ΕΠΕΙΔΗ ΤΗΝ ΛΟΓΙΚΗ ΨΥΧΗΝ ΒΟΥΛΕΙΤΑΙ ΦΘΕΙΡΗΝ ΕΙΝΑΙ, ΔΕ ΆΡΙΣΤΟΤΕΛΗΣ ΕΝ ΤΟΙΣ ΔΙΑΛΟΓΙΚΟΙΣ ΜΑΛΙΣΤΑ ΔΟΚΕΙ ΚΗΡΥΤΤΕΙΝ ΤΗΝ ΑΘΑΝΑΣΙΑΝ ΤΗΣ ΨΥΧΗΣ. ΎΝΑ ΟΥΝ ΜΗ ΣΧΗΜΑΠΟΥ ΦΕΙΡΗΝ ΤΩΝ ΆΡΙΣΤΟΤΕΛΗΝ, ΔΙΑ ΤΟΤΟ ΕΙΣΕΝ ΤΟΙΑΤΗΝ ΔΙΑΦΟΡΑΝ.

Themist. de Anima (Opp. ed. Venet. 1534, f. 90b, t. II. p. 196, 21, Spengel): καὶ οἱ λόγοι δε οὗ ἡρωτήσε (Plato in the Phaedo) περί Ψυχῆς ἀθανασίας εἰς τὸν νοῦν ἀνάγονται σχεδὸν τι οἱ πλεί- στοι καὶ ἐμβριόθετατοι, οὐ τοῦτοι τῆς αὐτοκινήσιας· ἐδείχθη γὰρ ὡς αὐτοκίνητος μόνος οὐ νοῦς, εἰ τὴν κίνησιν ἀντὶ τῆς ἐνέργειας νοο- ημεν καὶ τὸ μαθῆσαι ἀναμνήσεις εἰναι λαμβάνον καὶ τὴν πρὸς τὴν θεὸν ὀμοιότητα. καὶ τῶν άλλων δὲ τοὺς ἀξιοπιστοτέρους δοκιμάσας οὐ χαλεπώς ἀν τις τῷ νῷ προσβιβάσειεν. ὡσπερ η γε καὶ τῶν ὑπ’ Άριστοτέλεος ἐξειργασμένων ἐν τῷ Εὐδήμω. ἦν ὄν δῆλον ὅτι καὶ Πλάτων τὸν νοῦν ἀθανάτον μόνον ὑπολαμβάνει.

3. Proclus in Plat. Tim. v. p. 338d (p. 823 Schn.): τὴν ψυχήν τῷ σώματι συνήθειν αμέσως πάντα τὰ περὶ καθόδου ψυχῆς ὑπεκτείνων προβλήματα...ἀλλ’ οὐδὲ τὰ μετὰ τὴν ἑξωδον αὐτής ἐν τούτοις παραδώσει...οτι φήσω τὸ πρῶτον διασώζει τῇ τοῦ δια- λόγου προθέσει καὶ τῆς περὶ ψυχῆς θεωρίας ὅσον φυσικὸν ἐν τούτοις παραλαμβάνει τὴν πρὸς τὸ σῶμα τῆς ψυχῆς ὑμιλιαν παραδίδουσ. δ’ δή καὶ Άριστοτέλης ξηλώσας ἐν τῇ περὶ ψυχῆς πραγματεία φυσικῶς αὐτὴν μεταχειριζόμενος οὔτε περὶ καθόδου
ψυχῆς οὐδε περὶ λίθεων ἐμνημόνευσεν, ἀλλ' εἰ τοῖς διαλόγους χωρὶς ἐπραγματεύσατο περὶ αὐτῶν καὶ τὸν προηγούμενον κατεβάλλετο λόγον.


5. Augustinus contra Julianum Pelag. 4 (15) 78: Quanto ergo te melius veritatique vicinii de hominum generatione senserunt quos Cicero in extremis partibus Hortensii Dialogi velut ipsa rerum evidentia doctus compulsusque commemorat. nam cum multa quae videmus et gemimus de hominum vanitate atque felicitate dixisset, ex quibus humanae, inquit, vitae erroribus et acerminis fit ut interdum veteres illi sive vates sive in sacris initiiisque tradendis divinae mentis interpretes, qui nos ob aliqua scelera suscepta in vita superiore poenarum luendarum causa natos esse dixerunt, aliquid vidisse videantur verumque sit illud quod est apud Aristotelem, simili nos affectos esse supplicio atque eos qui quondam cum in praedonum Etruscorum manus incidissent, crudelitate excogitata necabantur, quorum corpora viva cum mortuis, adversa adversis accommodata quam artissime colligabantur: sic nostros animos cum corporibus ut vivos cum mortuis esse conjunctos.


Schol. al. ad eundem locum, p. 203: εἰ ἐνταῦθα ἱστορήσει Ἀριστοτέλης ἀνθρώπων αὐτῶν καὶ μόνον τῷ ἡλικιαί ν τρεφόμενον ἀέρι, τῇ χρή περὶ τῶν ἐκεί οἶσθαι;

7. Plutarch. qu. conv. 8, 9, 3: τὴν δὲ Τίμωνος ἐν Κιλκίᾳ
τηθήν Ἁριστοτέλης ἱστορίκη φωλεῦειν τοῦ ἔτους ἐκάστου δύο μῆνας, μηδείς πλήν μόνον τὸ ἀναπνεῖν ὅτι ἣ διαδήλων οὕσαν.

8. Olympiodor. in Phaedon., p. 22 (Finckh): καὶ ὁ μὲν Πρόκλους βούλεται τὰ οὐράνια ὅψιν μόνον καὶ ἀκοὴν ἔχειν καθάπερ καὶ Ἁριστοτέλης· μόνας γὰρ τῶν αἰσθήσεων ἐκεῖνα ἔχει τάς πρὸς τὸ εὐ εἶναι συμβαλλομένας, οὐ μὴν τὰς πρὸς τὸ εὑρεῖ ἀιδός ἔχεις πρὸς τὸ εὑρεῖ συμβάλλονται. καὶ ὃς ποιητὶς δὲ μαρτυρεῖ τούτοις λέγων, “ἡξιος, ὡς πάντ’ ἑφορᾶς καὶ πάντ’ ἑπακούεις” ὡς ἄν ὦμιν μόνη καὶ ἀκοὴν αὐτῶν ἔχοντων καὶ ὃτι αὐτὰ μᾶλστα αἱ αἰσθήσεις ἐν τῷ ἐνεργείῳ μᾶλλον γινώσκοντον ἄπερ ἐν τῷ πάσχειν καὶ οἰκείοτεραι αὐτὰ αὐτῶν ὡς ἀναλλοιώτατος. ὃ δὲ γε Δαμάσκιος καὶ τᾶς ἄλλας αἰσθήσεις βούλεται αὐτὰ ἔχειν.

9. Plutarch. Consolat. ad Apoll. 27: πολλοὶ γὰρ καὶ σοφοὶ ἀνδρῶν, ὡς φησὶ Κράντωρ, οὐ νῦν ἄλλα πάλαι κέκλαυσται τάνθρωπα τιμωρών ἡγουμένους εἰναι τὸν βλοῖ καὶ ἀρχήν τὸ γενέσθαι ἀνθρωτὸν συμφοράν τὴν μεγίσθην. τούτω δὲ φησιν Ἁριστοτέλης καὶ τὸν Σειλῆνον συλληφθέντα τῷ Μίδα ἀποφήμασθαι. βέλτιον δ’ αὐτῶ τὰς τοῦ φιλοσόφου λέξεις παραθέβαι. φησι δ’ ἐν τῷ Εὐθῆμῳ ἑπιγραφομένῳ ἢ περὶ ψυχῆς ταυτί “διὸ περσὶν κράτιστα καὶ μακαριστότατα. καὶ πρὸς τῷ μακάριος καὶ εὐδαίμονας εἶναι τοὺς τετελευτηκότας νομίζομεν καὶ τὸ ψεύσασθαι τι κατ’ αὐτῶν καὶ τὸ βλασφημείν οὐχ ὦσιν ὡς κατὰ βελτίων καὶ κρειττόνων ἱδίῳ γεγονότων. καὶ ταῦθ’ οὕτως ἀρχαία καὶ παλαιὰ διατελεῖ νεομομένα παρ’ ἱμαῖ, ὡστε τὸ παράταν οὐδεὶς οἶδεν οὔτε τοῦ χρόνου τὴν ἀρχὴν οὔτε τὸν θέντα πρῶτον, ἀλλὰ τὸν ἀπειρον αὐών τυχάνον οὖσα διὰ τέλους οὕτω νεομομένας. πρὸς δὲ δὴ τούτως διὰ στόματος ὁν τοῖς ἀνθρώποις ὡς ἐκ πολλῶν ἐτῶν καὶ παλαιῶν χρόνον περιφέρεται θρυλομενον—τὶ τούτ’; ἐφ’ ἀκαίειν ὡς υπολαβὼν ὡς ἀρα μὴ γίνεσθαι μὲν, ἐφ’ ἀριστον πάνων, τὸ δὲ τεθυάναι τοῦ ζῆν ἐστὶ κρείττον. καὶ πολλοὶ οὕτω παρὰ τὸ δαιμονίου μεμαρτύρητα. τούτῳ μὲν ἐκείνῳ τῷ Μίδα λέγουσι δήποτε μετὰ τὴν θήραν ὡς ἐλαβε τὸν Σειλῆνον διερωτώτατοι καὶ πυθανομένω τί ποτὲ ἐστὶ τὸ βέλτιον τοῖς ἀνθρώποις καὶ τί τὸ πάνων αἵρετώτατον, τὸ μὲν πρῶτον οὐδεν έθέλειν εἰπεῖν ἀλλὰ σιωπᾶν ἀρρήτως επειδή δὲ ποτε μόλις πάσαν μηχανὴν μηχανώμενος προσηγαγετο φθέγχασθαι τι πρὸς αὐτῶν, οὕτως ἀνακαλυχάνουν εἰπεῖν Δαιμονος ἐπιτόν καὶ Τύχης χαλεπῆς ἐφήμερον σπέρμα, τί με
biadézethē lēgein ă ūmôn ârēon μῆ γνώναι; met' ἁγνοιας γὰρ τῶν οἰκείων κακῶν ἀλυπότατος ὁ βλος. ἀνθρώπως δὲ πάμπαν οὐκ ἔστι γενέσθαι τὸ πάντων ἄριστον οὐδὲ μετασχεῖν τῆς τοῦ βελτίστου φόσεως ἄριστον ἄρα πᾶσι καὶ πάσαις τῷ μὴ γενέσθαι τὸ μέντοι μετὰ τοῦτο καὶ τὸ πρῶτον τῶν ἄλλων ἀνυστῶν, δεύτερον δὲ, τὸ γενομένους ἀποθανεῖν ὡς τάχιστα. δὴλον οὐν ὡς οὔσης κρείττονος τῆς ἐν τῷ τεθύναι διαγωγῆ ἢ τῆς ἐν τῷ ξῆν οὕτως ἀπεφήναι.

10. Io. Philoponus in Ar. de An. I (c. 4 in.) ed. Ven. 1535, f. E. 1° supra.: μεμψάμενος ὁ Ἀριστοτέλης κοινῶς τοὺς περὶ ψυχῆς ἀπαντας εἰπόντας ὅτι μηδὲν περὶ τοῦ δεξιομένου αὐτῆς σώματος διελέχθησαν...οἰκείως ἀκόλουθον τούτος περὶ ψυχῆς δόξαν συν-απτεί. εἰς ταύτῳ γὰρ ἀποβλέψατε ὅτι οὐχ ὡς ἔτυχε τὸ σῶμα ψυχῆς μετέχει, ἀλλὰ δὲ τοιάσθη κράσεως, ἀστέρ καὶ ἡ ἀρμονία οὐχ ὡς ἔτυχε τῶν χορδῶν ἐξουσίων γίνεται, ἀλλὰ δέι τοσεὶ δάσεως, ἐνέμισαν καὶ τῇ ψυχῇ ἀρμονίαν εἶναι τοῦ σώματος καὶ πρὸς τοὺς διαφόρους τοῦ σώματος ἀρμονίας τὸ διά-φορα εἶδη τῶν ψυχῶν εἶναι. ταύτην οὖν ἐκτίθεται τῇ δόξαν καὶ διελέγχει. καὶ τέως μὲν αὐτὴν τὴν δόξαν μόνην ἐν τούτοις ἱστορεῖ, μετ' ὀλύμα δὲ καὶ τοὺς λόγους δὲ ἂν εἰς ταύτην ἐκεῖνοι τῇ δόξαν ὑπήχθησαν τίθησιν. ἦδη δὲ καὶ ἐν ἄλλοις πρὸς ταύτην ἀντείπειν τὴν δόξαν, λέγω δὴ ἐν τῷ Εὐδήμῳ διαλόγῳ, καὶ πρὸ αὐτοῦ ὁ Πλάτων ἐν τῷ Φαιδρῷ πέντε τισὶ κέχρηται ἐπιχειρήσας πρὸς ταύτην ἐνιστάμενος τὴν δόξαν... (f. E. 1°) ἀναι ἡν οὗ ἀν πεντε ἐπιχειρήσεις αἱ Πλάτωνος. κέχρηται δὲ καὶ αὐτὸς ὁ Ἀριστο-τέλης ὃς ἦδη ἐιπόν ἐν τῷ Εὐδήμῳ τῷ διαλόγῳ δύο ἐπιχειρῆ- σει ταύταις, μη μὲν οὕτως· τῇ ἀρμονίᾳ, φησὶν, ἐστι τι ἐναντίον ἢ ἀναρμοστία τῇ δὲ ψυχῇ οὐδὲν ἐναντίον. οὐκ ἄρα ἡ ψυχὴ ἀρμονία ἐστὶ· ἐβαίνοι δ' ἂν τις πρὸς τοῦτο (ait Alexander) ὅτι τῇ ἀρμονίᾳ ἐναντίον οὐκ ἐστὶ κυρίως ἐναντίον ἀλλὰ στέ- ῥησις ἀριστος' καὶ τῇ ψυχῇ δ' ὡς εἶδε τινι οὐσία ἐστὶ τι ἀντι- κείμενον ἀριστος, καὶ ἀστέρ ἐκεῖ φαμὲν τὴν τοιάδε ἀρμονίαν μεταβάλλεις εἰς τήν ἀναρμοστίαν, οὕτω καὶ τὴν τοιάδε στέρησις μεταβάλλεις εἰς ψυχήν' δευτέρα δὲ τῇ ἀρμονίᾳ, φησὶ, τοῦ σώ- ματος ἐναντίον ἐστὶν ἡ ἀναρμοστία τοῦ σώματος, ἀναρμοστία δὲ τοῦ ἐμψύχου σώματος νόσος καὶ ἀσθένεια καὶ αἴσχος· ἂν τὸ μὲν ἀσυμμετρία τῶν στοιχείων ἡ νόσος, τὸ δὲ τῶν ὁμοιομερῶν ἡ ἀσθένεια, τὸ δὲ τῶν ὀργανικῶν τὸ ἀίσχος. εἰ τοινύν ἡ ἀναρμοστία νόσος καὶ ἀσθένεια, καὶ αἴσχος, ἡ ἀρμονία ἡρα νύσεια καὶ ἰσχύς καὶ
kállós. ψυχή) δὲ οὐδὲν ἐστὶ τούτων οὔτε ὕγιεια φημὶ οὔτε ἱσχὺς οὔτε κάλλος: ψυχήν γὰρ εἶχε καὶ ὁ Θερσίτης ἀξίχιστος ὄν. οὐκ ἄρα ἐστὶν ἡ ψυχή ἀρμονία. καὶ ταῦτα μὲν ἐν ἑκείνοις. ἐνταῦθα δὲ τέσσαρις κέχρηται ἐπιχειρήσεσιν ἀνασκευαστικάς τῆς δόξης ταύτης, ὅν τὸ τρίτον ἐστὶ τὸ εἰρημένον ἐν τῷ Εὐδήμῳ δεύτερον... (f. E. 2a), "ἀρμόζει δὲ μᾶλλον καθ" υγιείας λέγειν ἀρμονίαν καὶ ὀλος τῶν σωματικῶν ὅρετῶν ἡ κατὰ ψυχῆς": τούτῳ τρίτον ἐπιχειρήμα. ἐστὶ δὲ τὸ δεύτερον τῶν ἐν τῷ Εὐδήμῳ. ὅτι δὲ ἀρμονία ἡ υγιεία ἐδειξεν ἐν ἑκείνοις ἐκ τοῦ ἐναντίον τῆς νόσου. εὐπομεν δὲ ἀνατερὸ τῆς ἀγωγῆς τοῦ συλλογισμοῦ.


Themistius de An. f. 70a (t. II. p. 54, 3 Speng.): καὶ ἀλλὰ δὲ τις δόξα παραδέδοται περὶ ψυχῆς πιθανῇ μὲν οὐδεμιᾶς ἤσοσον τῶν λεγομένων, δεδουλεύων δὲ εὐθύνας καὶ ἐξητασμένη καὶ ἐν τοῖς κοινοῖς λόγοις καὶ ἐν τοῖς ἱδίοις. λέγουσι γὰρ τινες αὐτὴν ἀρμονίαν καὶ γὰρ τὴν ἀρμονίαν κράσιν καὶ σύνθεσιν τῶν ἑναντίων εἶναι καὶ τὸ σῶμα συγκείσθαι εἰς ἑναντίων. τῆς οὖν τανάντια ταῦτα εἰς συμφωνίαν ἄγοναν καὶ ἀρμόζουσαν, θερμὰ λέγω καὶ ψυχρὰ καὶ ύγρὰ καὶ ξηρὰ καὶ σκηνρὰ καὶ μαλακὰ καὶ ὅσαι ἀλλαὶ ἑναντιώσεις τῶν πρῶτων σωμάτων, οὐδὲν ἄλλο εἶναι οὐ τὴν ψυχήν, ἀστέρ καὶ ἦ τῶν φθόνου ἀρμονία τὸ βαρὺ καὶ τὸ δέξι συναρμόζει. πιθανότυτα μὲν οὖν ὁ λόγος ἔχει, διελήμεναι δὲ πολλαχῇ καὶ ὑπ' Ἀριστοτέλους καὶ ὑπὸ Πλάτωνος. καὶ γὰρ ὅτι τὸ μὲν πρῶτον τοῦ σώματος, τούτεστιν ἡ ψυχῆ, ἀρμονία δὲ ὑστεροῦ' καὶ ὅτι τὸ μὲν ἄρχει καὶ ἑπιστατεῖ τῷ σώματι καὶ μάχεται πολλάκις, ἀρμονία δὲ οὐ μάχεται τοῖς ἡρμοσμένοις· καὶ ὅτι τὸ μᾶλλον καὶ ὑπὸ τὸν ἀρμονία μὲν δέχεται, ψυχή) δὲ οὐ· καὶ ὅσον ἀρμονία μὲν σωζόμενη οὐ προσέται ἀναρμοστιαν, ψυχῆ δὲ κακιὰν προσέται· καὶ ὅτι εἰπὲ τοῦ σώματος ἡ ἀναρμοστία νόσος ἐστὶν ἡ αἴσχος ἡ ἀσθένεια, ἡ ἀρμονία τοῦ σώματος κάλλος ἄν εἶη καὶ ψυχή καὶ δύναμις ἄλλα οὐ ψυχῆς, ταῦτα μὲν ἄπαντα εἴρηται ὑπὸ τῶν φιλοσόφων ἐν ἄλλοις· ἀ δὲ νῦν Ἀριστοτέλης φησὶ τοιαῦτα ἐστίν...ὅτι μὲν οὖν οἱ λέγουτες ἀρμονίαν τὴν ψυχὴν οὔτε ἐγγὺς ἀγαν οὔτε πόρρῳ τῆς ἀληθείας βάλλειν ἀν δόξειαν, καὶ ἐκ τῶν νῦν εἰρημένων καὶ ἐκ τῶν ἐν ἄλλοις δήλον ἐστίν.
11. Simplic. in Ar. de An. l. III. f. 62* inf. Hayduck, p. 221: ο μὲν οὖν Πλάτων καὶ ἐπὶ πάντων εἰδθεν ὁμοιόμοιος τά τε εἴδη καὶ τά κατ' αὐτά εἰδοποιούμενα προσαγορεύειν. ὁ δὲ 'Αριστοτέλης ὅταν μὲν μεριστῶν τὸ εἰδοποιούμενον ἦν, φυλάττεται τῇ ὁμοιόμοιᾳ διὰ τὴν πολλὴν τοῦ μεριστοῦ πρὸς τὸ εἴδος ἀμερίστου ὃν ἀποστασίαν τὴν δὲ λογικὴν ψυχήν ὅσ μὴ μόνον ὄριζομένην ἄλλα καὶ ὅρον οὐσίαν μεταξὺ γὰρ ὃς τοῦ ἀμερίστου καὶ μεριστοῦ ἀμφοτεροίς οὐσία, οὕτω καὶ τοῦ ὄρου καὶ τοῦ ὄριζομένου ἀμφότερον ἐμφαίνονσα, τὸ μὲν ὡς ἀνελιπτομένη, τὸ δὲ διὰ τὴν συμφορὰν καὶ διὰ τὴν τῶν ἀνελεγμένων πάντων εἰς ἔννοιαν ὁς παραπομπὴν τῷ ὄριζοντι νῦ. καὶ διὰ τούτου καὶ ἐν τῷ Ἑυδήμῳ τῷ περὶ ψυχῆς αὐτῷ γεγραμμένῳ διαλόγῳ εἴδος τι ἀποφαίνεται τῇ ψυχήν εἶναι, καὶ ἐν τούτῳ ἐπαινεῖ τοὺς τῶν εἴδων δεκτικὰς λέγοντας τῇ ψυχήν, οὐχ ἔληκαν ἄλλα τῇ νοητικῇ ὡς τῶν ἀληθῶν δευτέρως εἰδῶν γνωστικῆς τῷ γὰρ τῆς ψυχῆς κρεῖττον νῦ τὰ ἀληθῆ εἴδη σύστοιχα.

12. Plutarchus de Musica, c. 22: δεδειγμένου δὲ ὅτι ὁ Πλάτων οὐτ' ἀγνοεῖ οὐτ' ἀπειρίᾳ τὰ ἄλλα παρημήσατο ἄλλ' ὡς οὐ πρέποντα τοιαύτη πολιτείᾳ δείξαμεν ἔξης ὅτι ἔμπειρος ἁμοιόμοιος ήμ. ἐν γούν τῇ ψυχογονίᾳ τῇ ἐν τῷ Τιμαιῷ...(c. 23) ὅτι δὲ σεμνὴ ἡ ἁμοιόμοια καὶ θεῖαν τι καὶ μέγα, 'Αριστοτέλης ὁ Πλάτωνος ταύτη λέγει "ἡ δὲ ἁμοιόμοια ἐστὶν ὁμοιὰ τῆς φύσεως ἐχούσα θελαι καὶ καλὴν καὶ δαμομιᾶν τετραμερής δὲ τῇ δυνάμει πεφυκνία δύο μεσοτητὶς ἔχει ἄριθμητικὴν τε καὶ ἁμοιοικήν, φαίνεται τε τὰ μέρη αὐτῆς καὶ τὰ μεγέθη καὶ αἱ υπεροχαί κατ' ἀριθμὸν καὶ ἰσομετριὰν ἐν γὰρ δυσι τετραχόρδοις ῥυθμίζεται τὰ μέρη. ταύτα μὲν τὰ ῥητά.
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[The letters refer to the books, the numerals to the chapters and sections.]

A.
άγαθον δι' ἄλλα, δι' αὐτό, ἑτέρου ἕνεκά, καθ' αὑτό Α, 3, § 7.
άγαθον ἁπλῶς ετ τινί Γ, 7, § 6.
ἀγέννητα Γ, 12, § 4.
ἀδιαίρετα Γ, 6. ἀδιαίρετον δυνάμει Γ, 6, § 3. εἴδει Γ, 6, § 4. στερησέi Γ, 6, § 5.
ἀδήρ ἢ ψυχή Α, 2, § 15.
ἀγάλη Α, 5, § 6.
τὸ ἄδιδον τὸ ἄνω σῶμα Β, 7, § 2.
αἰμα ἢ ψυχή Α, 2, § 18.
τὸ αἰσθάνεσθαι καὶ τὸ φρονεῖν ταύτων Γ, 3, § 1.
ἀἰσθησις. αἰσθητικὴ ψυχή Β, 5 ss.
κοὐν ἐπεὶ πᾶσιν αἰσθήσεως Β, 5.
καθὸ δὲ περὶ τὰ σαρκικά αἰσθήσεως Β, 12.
οὐκ ἑτέρα παρὰ τὰς πέντε Γ, 1.
τὸ αἰσθητικὸν ὅπως ἀνευ τοῦ θρεπτικοῦ Β, 3, § 7.
περὶ τῶν αἰσθητῶν Β, 6, § 1 sqq.
ἀκάλυφες αἰσθητήριον Β, 9, § 7.
ἀκοή Β, 8.
ἀκουσίς Γ, 2, § 4. § 6.
ὁ ἀκρατής Γ, 9, § 8.
ἀκρίβεια Α, 1, § 1.
ἀκτίνες αἱ διὰ τῶν θυρίδων Α, 2, § 3.
τὸ ἀληθὲς τὸ φαινόμενον Α, 2, § 5. σύνθεσις νομιμῶν Γ, 6, § 1.
'Αλκμαιόν Α, 2, § 17.

ἄλλοιωσίς Β, 5, § 1.
ἄλλοφρονεῖν Α, 2, § 5.
ἀμαίρωσις ἡ ἐν τῷ γάμῳ Α, 4, § 13.
ἀμβήλυ—ἀξίω Β, 8, § 8.
ἀμηγή ὁ νοῦς Γ, 4, § 3.
ἀνάκλασις Β, 8, § 4. Γ, 12, § 9.
ἀναθυμίασις in Heraclitus Α, 2, § 16.
ἀνάλογον Β, 11, § 1.
ἀνάμνησις Α, 4, § 12.
'Αναξαγόρας Α, 2, § 5. § 13. § 22. Γ, 4, § 3.
ἀνίστασθαι Α, 3, § 6.
ἀντικειμενα Α, 1, § 7. Β, 4, § 1. Β, 11, § 12.
ἀντιφράττειν Γ, 4, § 3.
ἀναίχευες κόρσα Γ, 6, § 1.
ἀνω. τὸ ἄνω σῶμα Β, 7, § 2.
ἀνώνυμον Β, 7, § 9.
ἄρατον, ἀνήκουστον, ἀγευστὸν Β, 10, § 3.
ἀπαθὴς ὁ νοῦς Γ, 4, § 3. § 5.
ἀπάτη Γ, 3, § 2.
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ἀσπάλαξ Γ, 1, § 4.

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Ἀφροδίτη Δαιάλου Α, 3, § 9.

ἀφυείς τῆς διάνοιας Β, 9, § 2.

οἱ ἐν 'Αχελώο ἱψίνες φωνεῖν λέγονται

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Β. Βαρὺ ὤξυ Β, 8, § 8.

βλέφαρα οὐκ ἔχει τὰ σκληρόφθαλμα Β, 9, § 2.

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