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ARISTOTLE'S PSYCHOLOGY
ARISTOTLE'S PSYCHOLOGY

IN GREEK AND ENGLISH,

WITH

INTRODUCTION AND NOTES

BY

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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 encyclopaedic 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 Politics\(^1\) 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. \(1141b\)\(^1\)\(^2\)\(^3\), ἐστι δὲ καὶ ἡ πολιτικὴ καὶ ἡ φρόνησις ἡ αὐτῇ μὲν ἔξις, τὸ μὲντο ἐγώ ὡς ταῦτα ἀντίκα—i.e. the moral ideal for the individual and for the state is one and the same, but its manner of realization (ἀπὸ ἐνα) is different. Cp. X. 9. \(1181b\)\(^1\)\(^5\), where the whole science is named ἡ περὶ τὰ ἀνθρώπινα φιλοσοφία.
INTRODUCTION.

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 opuscles 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. περὶ αἰσθήσεως καὶ αἰσθητῶν.
b. περὶ μνήμης καὶ ἀναμνήσεως.
c. περὶ ὑπνοῦ καὶ ἐγρηγόρευσεως.
d. περὶ ἐνυπνίων.
e. περὶ τῆς καθ ὑπνοῦ μαντικῆς.
f. περὶ μακροβιότητος καὶ βραχυβιότητος.
g. περὶ ζωῆς καὶ θανάτου.
h. περὶ ἀναπνοῆς.

To these is sometimes added another tractate under the title περὶ νεότητος καὶ γήρωσι, as corresponding with the first two chapters of the περὶ ζωῆς καὶ θανάτου. 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 Laërtius, 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 ἀναπνοῆς ἐλέγον μὲν τινες τῶν πρῶτον φυσικῶν εἰρήκασιν. So also Aristotle closes the *Parta Naturalia* at 480*2*1 by saying: περὶ μὲν οὖν ζωῆς καὶ θανάτου καὶ τῶν συγγενῶν ταύτης τῇ σκέψεως σχέδου εὑρησαί περὶ πάντων.

1 To the περὶ ψυχῆς possibly correspond in the Catalogue of Diogenes No. 13, περὶ ψυχῆς ἂ: 73, ὅσεως περὶ ψυχῆς ἂ. To the *Parta Naturalia* would seem to correspond 120, φυσικῶν κατὰ στοιχείων λῆ: while further in 117 μημονεκὼν ἂ we may perhaps recognise our περὶ μημότητος. With respect to the general discrepancy between the works of Aristotle as named by us and catalogued by Diogenes Laërtius, 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 κυμάτων—ἐν τοῖς περὶ ἀρχῶν—ἐν τοῖς περὶ χρόνου.

2 See the Appendix.
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

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1 For Weisse’s argument see his translation p. 278, and for an answer Schmidt in Jahrbücher für wissenschaftliche Kritik, Aug. 1831.
2 Φυσιογνωμικά: 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 ἀκοουσεῖν ἢ περὶ φωνῆς.
4 περὶ ὧμοιως καθέσως. See Rose (De Aris. Libr. Ord 163). The work περὶ ἦμων πορείας (De Animalium Incensu) is on the other hand generally regarded as authentic.
5 Εὔδομος ἢ περὶ ψυχῆς.

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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, interpenetrate 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 *Analyticis*, 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 *Analyticis* and *Topics* thus reciprocally seem to involve each other, contrast *Anál. Pr.* i. 1, 12.12 (καθάπερ ἐν τοῖς Τετεκτεῖται); c. 30 46.30 (δὲ ἀκριβεῖας δὲ διεξεραύνων ἐν τῇ πραγματείᾳ τῇ περὶ τὴν διαλεκτικὴν); 11. 15, 64.37 and 11. 17, 65.17 with *Topics*, viii. 11. 162a11 (φανερὸν δ' ἐκ τῶν ἀναλυτικῶν); and viii. 13. 162b32, τὸ δ' ἐν ἀρχῇ...κατὰ ἀληθεῖαν μὲν ἐν τοῖς Ἀναλυτικῶν ἔργασι, κατὰ δὲ δόξαν δὲ νόμον λεκτῶν. [Cf. Ritter, 111. 29.] For other instances see Zeller, *Phil. d. Griechen* ii. 2 (2te Aufl.) p. 195, n. 2.
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. Ordine, p. 119. Zeller, P. d. G. 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 1668 the writer, speaking about words as signs of thoughts, says περὶ μὲν οίν τοῦτον κρίθηκα ἐν τοῖς περὶ ψυχῆς. But the reference fits neither de An. III. 6 (Waite) 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 (παραφωτὶς) of politics and because in I. 11. 1372a1 the writer says of γελοία, διώτηται 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 παραφωτὶς 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. i. 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. 122), 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, i. 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. Níc. 1. 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 εξωτερικὰ λόγου of I. 13 and the τέταρτων μόρων of VI. 13. 1144'9. But any unprejudiced reader will find in the reference to the εξωτερικὰ λόγου a reference not to the de Anima but to the popular psychology which is criticised in the de An., and the τέταρτων μόρων 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 κίνησις in discussing pleasure, would seem to have been composed at a later period than the remainder of the work.
last chapters of the \textit{Politics}) must have followed, not, as Rose so
learnedly maintains, the \textit{Metaphysics}, but the works on what may
briefly be described as Natural Philosophy\footnote{1}. Among these works
on Natural Philosophy, the \textit{Physics}, as we usually call it, occupied
the foremost place. This, as is clearly indicated in the first lines
of the \textit{Meteorology}, was followed by the Treatise on the Heavens
\textit{(De Coelo)}, the dissertation which we commonly designate \textit{De
Generacione et Corruptione}, and lastly the \textit{Meteorology} itself\footnote{2}.
Thus far the order of the physical investigations is not difficult
to trace. But whether the \textit{Meteorology} was followed by the
\textit{History of Animals}, or by the \textit{Psychology}, is a question which
cannot be easily resolved. Perhaps we may best hold with
Zeller that the \textit{History of Animals} was begun before the \textit{Psycho-
logy}, but that on the other hand it was not completed till the
last-named work had seen the light\footnote{3}. But whatever be the true

\footnote{1} That the \textit{Metaphysics} did not as Rose thinks (p. 136) precede but succeed the
physical writings is already indicated by \textit{Physics} i. 9, 192\textsuperscript{a}34, \textit{περὶ δὲ τὴν κατὰ τὸ}
eidos ἄρχη...\textit{ἀκριβείας τῆς πρώτης φιλοσοφίας ἔργων ἐστὶ διαφέρει, ὡστε εἰς ἐκεῖνον}
tὸν καὶρὸν ἀποκελεῖθαι. 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.

\footnote{2} \textit{Meteorolog.} i. 1, 338\textsuperscript{b}20, \textit{περὶ μὲν οὖν τῶν πρῶτων αἰτίων τῆς φύσεως καὶ περὶ}
πάσης κινήσεως φυσικῆς, \textit{ἔτι δὲ περὶ τῶν κατὰ τὴν ἂνω φοράν διακεκριμένων ἄτομων}
cαὶ \textit{περὶ τῶν στοιχείων τῶν σωματικῶν πόσα τε καὶ ποιὰ...καὶ περὶ γενέσεως καὶ φύσις}
tῆς κοινῆς εἰρησται πρῶτερον.

\footnote{3} See Zeller, p. 106, n. 5. Rose (p. 212) concludes from \textit{VIII. 9} and \textit{II. 5} of the
\textit{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 \textit{Psychology} makes reference to other works are the following:

\textit{Bk. I. c. 3, 406\textsuperscript{b}3, ὅτι μὲν οὖν οὐκ ἀναγκαῖον τὸ κυνών καὶ αὐτὸ κυνείσαθα τρέτερον}
eἰρησται: where the reference is probably not to 403\textsuperscript{b}29 but to \textit{Physics} \textit{VIII. 5}.

\textit{Bk. II. c. 4, 416\textsuperscript{b}30, διασαφθένω ὃ ἔστιν ὑποτέρων περὶ αὐτῆς ἐν τοῖς ὀλίγοις λόγοις}
(where the writer may refer to a lost treatise \textit{περὶ τροφῆς} or to \textit{De Gen.}).

\textit{II. 5, 417\textsuperscript{b}1, τούτῳ δὲ πῶς ἄνωτον ἡ ἄνωταν εἰρήκασιν ἐν τοῖς καθόλου λόγοις}
περὶ τοῦ πουεὶ καὶ πάσχειν: the reference being to \textit{De Gen.} \textit{Bk. I. c. 7}.

\textit{II. 5, 417\textsuperscript{b}17, ἐστὶν ἡ κίνησις ἐνέργεια τις, ἀτέλεια μέντοι, καθάπερ ἐν ἐτέρῳ εἰρησται,}
refers to \textit{Phus. III. 2, 201\textsuperscript{b}31}.

\textit{II. 5, 417\textsuperscript{b}29, περὶ μὲν τῶν διασαφθεῖσα καὶρὸς γένεσιν ἀν καὶ εἰσακείει, refers most}
probably to \textit{De An. III. cc. 4 and 5}.

\textit{II. 7, 419\textsuperscript{b}7, δὲ ἢν μὲν οὖν αἰτίων ταῦτα ὀρᾶται ἄλλος λόγος, refers to \textit{De Sensu} 2,}
437\textsuperscript{b}5.}
relation of the Psychology and the Zoology, there can be no doubt but the composition of the former was followed 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.

II. II, 432b29, λέγω δὲ διαφορὰς αἱ τὰ στοιχεῖα διορίζουσι, θερμῶν ψυχῶν, ἔχον ύπόθεν, περὶ δὲ εἰρήκαμεν πρότερον ἐν τοῖς περὶ στοιχείων, refers to De Gen. Bk. II. c. 2.

III. 9, 433b11, περὶ δὲ ἀναπνοῆς καὶ ἐκπνοῆς καὶ ὑπνοῦ καὶ ἐγκυμοσύνης ὑπέτερον εἴπερκεπτένων.

III. 10, 433b18, ὃ δὲ καταγέννημα ὦ βρέχει ἡθη τούτῳ σωματικῶν ὕπτων διὸ ἐν τοῖς κοινοῖς σώματος καὶ ψυχῆς ἐργοῖς ἑθηκεῖ τοῖς περὶ αὐτῶν—about which see the note upon the passage.

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, 473b27 the writer refers to the Treatise on Parts of Animals as already written: treats 467b6, the Inquiries on Life and Death, as concluding all his works on Animals, and in De Gen. An. IV. 10, 777b6 (αἵτων δὲ τοῦ μὲν ἄνωμα μακρὸβιον ὕπτομον ἐχῶν...περὶ δὲ ὑπέτερον ἐροῦμεν) 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, ἧ γὰρ φώσις παρὰ τὸ σῶμα τὴν τελευτὴν τοῦ περιστόμοιον συνήγαγε καμάφασα καθάπερ εἴρηται πρότερον ἐν τοῖς περὶ τῶν μορίων λόγοις—De Part. An. III. 5, 668a8, πώς μὲν οὖν τρέφεται τὸ ἔζω...ἐν τοῖς περὶ γενέσεως λόγοις μᾶλλον ἀρμόδια σκοπεῖ κ.τ.λ.

The work De Incessu Animalium is referred to in De Part. An. IV. 11 690b15, 'ὅτ' ᾖ αἵτια τῆς ἀποδίας αὐτῶν εἴρηται ἐν τοῖς περὶ τῆς πορίας τῶν ὑπόθεν διαφορᾶς τέχνης καὶ ἐπιστήμης, and in An. 4, 98a12 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 metaphysic. 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' (ἰστορία 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 ὀφθαλ) 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: ὁτιοι μὲν ὄνω ὁσπερ λέγομεν καὶ μέχρι τούτου δυναῖον ἐφίγαιτο ὡν ἡμείς ἔτοιμομεν ἐν τοῖς περὶ φύσεων. So also Lk. M. 1058b, περὶ μὲν ὄν τῆς τῶν αἰεθητῶν ὀφθαλικὶ ἑρημικεῖ τὸν ἐκεῖν ἐν μὲν τῇ μεθόδῳ τῇ τῶν φυσικῶν περὶ τῆς ὑλῆς, ἐαυτόν δὲ περὶ τῆς κατ᾽ ἐνεργείαν.

1 For this conception of ἱστορία, v. Anal. Pr. 1. 31, 4624, and Hist. An. 1. 6, 491b12.
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 organization.

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 (πίστις) 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

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1 De An. 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 studied¹. 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 alone²." 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.

¹ _Eth. Nic._ 1. 7, 1098b5, μετέχει δὲ πειρατον ἐκδότας (τὰς ἄρχας) ἤ περίφοραν.  
² 401b2, νῦν μὲν γὰρ οἱ λέγουσαν καὶ δηοῦσαν περὶ ψυχῆς περὶ τῆς ἀνθρωπίνης μόνης τιτόραν ἐπισκοπέων.
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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 ὀλον φύσεως).

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

1 403°16, έωικε δε και τα τῆς ψυχῆς πάθη πάντα είναι μετὰ σώματος, θυμός...και το φυλείν τε και μειείν κ.τ.λ.

2 De Part. An. 1. 1, 641°21, τοῦ φυσικοῦ περὶ ψυχῆς ἢν εἰς λέγειν καὶ εἰδέναι, 403°27, καὶ διὰ ταύτα ἢν φυσικοῦ τὸ θεωρῆσαι περὶ ψυχῆς.

those attributes of being which are immutable and separated from any material expression, nor like mathematic with those which while unchangeable 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. K. 7, 1064’30, ή μεν οὖν φυσική περὶ τὰ κινήσεως ἔχουσ’ ἀρχῆν ἐν αὐτῆς εστίν.

3 Phys. 11. 7, 198’22, ἐπεὶ δ’ αἱ αἰτίαι τέταρτες, περὶ πασῶν τοῦ φυσικοῦ εἰδέναι, καὶ εἰς πᾶσας ἁπάντως τὸ διὰ τὰ ἀποδώσει φυσικῶς, τὴν ὕλην, τὸ εἴδος, τὸ κινήσαν, τὸ οὖν ἔνεκα. So also 200’32 and 194’6.

4 Meta. Z. 11, 1037’16, οὐ γὰρ μόνον περὶ τῆς ὕλης δεῖ γνωρίζειν τὸν φυσικὸν ἄλλα καὶ τὴν κατὰ τὸν λόγον καὶ μᾶλλον.
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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 (eidos) in all living things.¹

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 physicist². 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 nature³.

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, 644a30, λεκτέων εἰς τῷ περὶ φύσεως θεωρητικῷ περὶ ψυχῆς μᾶλλον ή περὶ τῆς ὑλῆς, ὃσι μᾶλλον ή ὑλή δὲ ἐκείνη φύσις ἐστὶν ή ἀνάπαυσιν. The whole chapter is valuable as it throws light upon Aristotle's method of studying nature. Cp. De Motu An. 2. 704b13, where we have the expression μέθοδος φυσική, of which one principle is ἡ φύσις οὐδὲν ποιεῖ μάθη.

² De Part. An. 1. 1, 644b9, δήλον οὖν ὡς οὐ περὶ πάσης ψυχῆς λεκτέων· οὐδὲ γάρ πᾶσα ψυχὴ φύσις.

³ Meta. E. 1, 1036a5, περὶ ψυχῆς ένιας δειοθησαί τοῦ φυσικοῦ θούμη ήνε τῆς ὑλῆς ἐστὶν.

De Part. 1. 1, 644b24, εἰ γάρ περὶ πάσης (τῆς ψυχῆς λεγέα ή φυσική), οὐδὲν λειτάται παρά τὴν φυσικὴν ἐπίστημην φιλοσοφίαν. ὁ γὰρ νοῦς τῶν νοητῶν. ὡστε περὶ πάντων ἡ φυσικὴ γνώσις ἐν εἰς κ.τ.λ.
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 other1.

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 40329, διαφερόντως ο' ἀν ὄρθωμος φυσικός τε καὶ διαλεκτικός ἐκαστον αὐτῶν, σοιν ἀρχῇ τι ἔστιν...τίς οὖν ὁ φυσικός τούτων;...ἡ μᾶλλον ὁ ἐξ ἀμφότερ.
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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 εἴρημαι καὶ κενῶς ἀπαντεῖς).

Aristotle would seem then to take the same view of the study of mind as Hegel has done in a passage of the Encyclopaedia. "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 force.”

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 point. 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 I. i. 403 a 2.
2 Logic of Hegel, translated by W. Wallace, § 34.
3 Eth. Nic. i. 4, 1095 b 6, ἀρχὴ γὰρ τὸ δὲν.
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 part¹, 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 re-
gisters.

III. THE PRE-ARISTOTELIAN PSYCHOLOGY.

The historical retrospect of previous psychology which oc-
cupies the greater portion of the first book of the main treatise
illuminates 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 at-
tention 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 psycholo-
gists. Some of them had emphasized its perceptive and cog-
nitive faculties, others had laid stress on its powers of movement

¹ Polit. l. 2, 1253'30, τὸ γὰρ ὅλον πρότερον ἀναγκαῖον εἶναι τοῦ μέρους.
and active exercise\(^1\). 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 show 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 it\(^2\).

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 it\(^3\)." Their procedure is thus, Aristotle holds, as inconsistent as the transmigration theories of

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\(^1\) De An. 1. 2, 403\(^a\)25, τὸ ἐμψύχον δὴ τοῦ ἄψυχον διοῦν μάλιστα διαφέρειν δοκεῖ, κινῆσις τε καὶ τῷ αἰσθάνεσθαι παρελθήσαμεν δὲ καὶ παρὰ τῶν προγενέστερων σχέσεων δύο ταύτα 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, 407\(^b\)20, οὐ δὲ μόνον ἐπιχειροῦσι λέγειν ποιόν τι ἡ ψυχή, περὶ δὲ τοῦ δεξαμένου σώματος οὐθέν ἐν τῷ προσδιορίζοντι.
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 προαρέσεως πνεύματος καὶ νοῆσεως) 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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1 407\(a\)24, παραπλήσσων δὲ λέγων πάντα καὶ ταῖς φαίνεται τὴν τεκτονικὴν εἰς αὐτὸν ἐνεύρεσθαι.
2 I. 3, 406\(b\)24.
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 1. 4, 408b11, τὸ δὲ λέγειν ὅργιζοθάνα τὴν ψυχὴν ὁμοιὸν κἂν εἰ τίς λέγοι τὴν ψυχὴν ὑφαίνειν ἢ ἀκοδομεῖν βέλτιον γὰρ ὅσον μὴ λέγειν τὴν ψυχὴν ἑλεῖν ἢ μανθάνειν ἀλλὰ τὸν ἀνθρωπὸν τῇ ψυχῇ.

2 408b15, τοῦτο δὲ μὴ ὡς ἐν ἐκείνῃ τῆς κινήσεως οὕσης, ἀλλ' ὅτε μὲν μέχρι ἐκείνης, ὅτε δ' ἀπ' ἐκείνης, οἶον ἢ μὲν αἰσθησις ἀπὸ τωμῆς, ἢ δ' ἀνάμμησις ἀπ' ἐκείνης ἐπὶ τὰς ἐν τοῖς αἰσθητήριοις κινήσεις ἢ μονάς.

3 1. 5, 410a7, αὐτὲν ὡδ' ὃφελος εἶναι τὰ στοιχεῖα ἐν τῇ ψυχῇ εἰ μὴ καὶ οἱ 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 *Timaeus* 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 *Timaeus* 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.

ἐνέσται καὶ ἡ σύνθεσις γνωρικεί γὰρ ἐκαστὸν τὸ δόμον, τὸ δ' ὅστοιν ἡ τὸν ἄνθρωπον οὐθέν εἰ μὴ καὶ ταῖτ' ἐνέσται. τούτο δ' ὅτι ἀδίνατον, οὐθέν δεὶ λέγειν.

1 Ι. 3. 407.
INTRODUCTION.

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 D). 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 (ὁλῷ 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 organism1.

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 organism2. 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 nature3.

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 threelfold 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, 411\(\text{a}\), λέγουσι δὴ τινες μεριστήν αὐτῆν καὶ ἄλλω μὲν νοεῖν ἄλλω δὲ ἐπιθυμεῖν. τὸ οὖν δὴ ποτὲ συνέχει τῆν ψυχήν, εἰ μεριστή πέρυκεν; οὐ γὰρ δὴ τὸ γε σώμα δοκεῖ γὰρ τὸναντίον μᾶλλον ἡ ψυχὴ τὸ σώμα συνέχει.

3 III. 9, 432\(\text{a}\), ἐξεῖ δὲ ἀπορίαν εἰδικός πῶς τε δεῖ μόρα λέγειν τῆς ψυχῆς καὶ τῶν, τρόπον γὰρ των ἀπειρα φαίνεται, καὶ οὐ μόνον ἀ τινες λέγουσι διορίζοντες λογιστικοὺς καὶ θεμιτικοὺς καὶ ἐπιθυμητικούς, οἱ δὲ τὸ λόγον ἔχουν 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 develop 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. 410δ, πάντες δὲ καὶ οἱ διὰ τὸ γνωρίζειν καὶ αισθάνεται τὰ ὑπά τὴν ψυχήν ἐκ τῶν σταχελῶν λέγοντες αὐτήν, καὶ οἱ τὸ κυητικότατον, οὗ περὶ πάσης λέγουσα ψυχή.
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 principle. 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 (*ουσία*) 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

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1 ii. 1, 412b14, ἵων δὲ λέγωμεν τὴν δι’ αὐτοῦ τροφῆν τε καὶ αἰτίσιν καὶ φόβισιν.
character. To the tract ‘on Categories,’ ‘first substances’ are
definite forms of existence, ‘secondary substances’ the genera
and species in which first substances are contained1: 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 notions2.

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 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 comple-
mentary 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 (οὐλὴ) on the one hand,

1 Cat. c. 5, 2041, οὐσία δὲ ἐστὶν ἡ κυριότατα τε καὶ πρῶτος καὶ μάλιστα
λεγομένη, ἡ μητῆ καθ’ ὑποκειμένου τινός λέγεται μητ’ ἐν ὑποκειμένῳ τω τι ἐστιν, ἐν οἷς τὸ ἀρχευτών ἢ ὁ τίς ἐπικρόν. δεύτεραι δὲ οὐσία λέγονται ἐν οἷς εἴδεσιν καὶ πρῶτος οὐσία λεγό-
μεναι ὑπάρχονται. So also Metaph. Z. 3, 1029b, οὐσία is explained as τὸ μη καθ’ ὑποκειμένῳ ἄλλα καθ’ οὖ τά ἄλλα. Still more definitely it is said, Categories, 3b10, πάσα δὲ οὐσία δοκεῖ τοῦτο τι σημαίνει: a result also expressed in the reasonings of

2 Metaph. Z. 7, 1033b1, εἴδος δὲ λέγω τὸ τί ἦν εἰναὶ ἐκαστόν καὶ τὴν πρῶτην
οὐσίαν. Z. 11, 1037, ἡ οὐσία γάρ ἐστι τὸ εἴδος τὸ ἐνοῦ ......and more clearly 1037b1,
tὸ τι ἦν εἰναὶ ἐκαστόν ἐπὶ τῶν μὲν ταὐτῶν, ὥσπερ ἐπὶ τῶν πρῶτων οὐσίων, ὥσπερ κατα-
λότης καὶ καταλύσκεται εἶναι, εἰ πρῶτη ἐστίν. λέγω δὲ πρῶτην ἡ μη λέγεται τῇ ἄλλῳ ἐν
ἄλλη εἶναι καὶ ὑποκειμένῳ ὡς οὐλή.
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 phraseology, 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 σῶματος). 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 showed 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' ούκ ἐστιν οὐσία, ἀλλὰ σύνολον τι ἐκ τούτῳ τοῦ λόγου καὶ προθέτη τῆς ζωῆς ὡς καθόλου. Cp. 1057a29, ἡ οὐσία γάρ ἐστι τὸ εἴδος τὸ ἐνόν, ἐξ οὗ καὶ τῆς ζωῆς ἡ σύνολος λέγεται οὐσία. And the sense of fully determined reality as equivalent to οὐσία is put most clearly De Interpret. c. 13, 23a23, τὰ μὲν ἄνευ δυνάμεως ἐνέργεια εἶσον, οἷον αἱ πρώται οὕσιαι. For Aristotle's conception of ζωή the following passages are important: De Gen. I. 4, 320b2, ἐστι δὲ ζωή μάλιστα μὲν καὶ κύριος τὸ ὑποκείμενον γενέσεως καὶ φθορᾶς δεικτικόν: Met. H. I, 1042a27, ὡμοὶ δ' ζωής ἡ μὴ τὸ δέ; τι οὕση ἐνεργεῖα δυνάμει ἐστι τὸ δέ; τι: or more simply in Met. Z. 3, 1059a20, λέγοι δ' ὡμοὶ ἡ καθ' οὖν μὴτε τι μὴτε ποιοῦν μὴτε ἄλλο μὴθεν λέγεται οἷος ἀφρατοῖ τὸ δέ. So shortly it is the ἀφρατόν, the undetermined.

2 Met. H. 3, 1043a35.
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, ἡ δὲ δύναμις εἰς τὴν ἐνέργειαν ἀνάγεται.
2 Meta. Θ. 8, 1050a23, διὸ καὶ τὸν αὐτὸν ἐνέργεια λέγεται κατὰ τὸ ἔργον καὶ ἐντελεῖν πρὸς τὴν ἐντελέχειαν. Whereas ἐντελέχεια connotes as it were both ἔργον and τέλος: it is a ἔτι 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 unsystematic 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 Anim. II. 1, 412b4, εἰ δὴ τι κανόν υπὸ πάσης ψυχῆς δεί λέγειν, εἰς ἑν ἐντελεχείαν ἡ πρώτη σώματος φυσικοῦ ὁργανικοῦ.

2 Eth. Nic. II. 7, 1107b29, οἱ μὲν καθόλου (λόγοι) κενώτεροί εἰσιν, οἱ δ' ἐπὶ μέρους ἀληθινῶτεροι.
the ἐνέργεια 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 τί ἂν εἶναι 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 τί ἔστι with the words τὸ εἶναι. The τί ἔστι of an object is the statement of its general leading nature. By τὸ εἶναι 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 τί ἔστι to τί ἂν 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 (ὄνοσία). The substance or reality however with which we are now dealing is 'without matter' (ἀνευ υλῆς)—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 τί ἂν εἶναι 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. 10, 1032b14, ἐπεὶ δὲ ἢ τῶν ἔως ψυχῆ (τότε γὰρ οὐδα τοῦ ἐμψύχου) ἢ κατὰ τὸν λόγον οὐσία καὶ τὸ ἐδος καὶ τό τί ἂν εἶναι τῶ του̨ψων σώματι.
2 Meta. Z. 7, 1032b14, λέγετε δ' οὐσίαν ἄνευ υλῆς τό τί ἂν εἶναι. It is frequently identified with the use of εἶναι with a dative, as denoting the essential character of some object. So Meta. Z. 4, 1029b14, discussing the conception λογικῶς, says ἐστι τὸ τί ἂν εἶναι ἐκαστὸν δ' ἔλεγεται καθ' αὐτό. οὐ γὰρ ἐστι τὸ σοι εἶναι τὸ μονακεφ ἐναντι'. οὐ γὰρ κατὰ σαυτόν εἰ μονακεφ. Cp. also Meta. II. 3, τὸ γὰρ τί ἂν εἶναι τῆς ἐνεργεία ἐπάρχει. ψυχῆ μὲν γὰρ καὶ ψυχῆ εἶναι ταύτων, ἀνθρώπω δὲ καὶ ἀνθρώπων οὐ ταύτων, εἰ μὴ καὶ ἡ ψυχῆ ἀνθρωπος λεγθήσεται.
INTRODUCTION.

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 psychology. 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 complementary 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 misappropriated 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 independent 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 significance.

Regarding soul in this way as the truth of body, Aristotle will not accept such phrases as harmony or adjustment (σύνθεσις) 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* shows 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 εἴς ἑνάντια) 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\(^1\). 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\(^2\).' The two, he means, are only complementary sides of one and the same

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\(^1\) *De An.* 1. 4, 407\(^b\) 30, ἀρμονίαν γὰρ τινα αὐτὴν (ι.ε. ψυχὴν) λέγουσι καὶ γὰρ τὴν ἀρμονίαν κράσιν καὶ σύνθεσιν ἑνάντια εἶναι καὶ τὸ σώμα συγκείσθαι εἰς ἑνάντια· καθοιγεὶ η μὲν ἀρμονία λόγος τίς ἐστι τῶν μικρότερον ἢ σύνθεσις, τίνι δὲ ψυχὴν οὐδέπερ οἷον τ' εἶναι τούτων... ταῦτα μὲν οὖν ἔχει τοιαύτα ἀπορίας· εἴ δ' ἐστιν ἑτερον ἡ ψυχὴ τῆς μίξεως, τί δὴ ποτὲ ἄμα τῷ σαρκὶ εἶναι ἀναφείται;

\(^2\) *Id.* 11. 1, 412\(^b\) 6.
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 Guelinx 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. 412a12 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 Stagyrite: 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
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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, 413b16, νῦν δ' ὄσπερ συμπεράσματι οἱ λόγοι τῶν ὀρών εἴσον. W. AR.

\( d \)
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 not yet animals\(^1\), 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 animals\(^2\). 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

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\(^1\) De Partibus An. IV. 681\(b\)12, ο γὰρ φύσις μεταβαλλει συνέχεια ἀπὸ τῶν ἀφόρων εἰς τὰ ζῷα διὰ τῶν ζώων μὲν οὐκ ἄνωτεν δὲ ζώων, οὕτως ὡσε δοκεῖν πάμπαν μικρὸν διαφέρειν θατέρων θάτερον τῷ σύνεγγυς ἄλλῃνοι. Cp. Hist. An. 881\(b\)4.

\(^2\) Hist. Animalium, Book VIII. 1, 888\(a\)18, ἐστι γὰρ ἐν τοῖς πλέοντες καὶ τῶν ἄλλων ζῴων ἡ ψυχή τῶν περὶ τὴν ψυχήν τρόπουν, ἀπερ ἐπὶ τῶν ἄνθρώπων ἵναι φανερωτέρας τὰς διαφορὰς.
up to man as the perfect development of what is contained im-
plcitly 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 soul1.

These stages in the development of soul are not however

1 Π. 2. 413b12, ἡ ψυχή τούτους ὀρισται, ὑπερτικῆς, αἰσθητικῆς, διανοητικῆς, κυήσεως.
Cρ. Π. 3. 413b31.
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 orectic 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 τοῖς ἐκαστῶν ἑστὶ ψυχῇ ἢ μόριον ψυχῆς καὶ εἴ μόριον πότερον οὗτως ὥστε εἶναι χωριστῶν λόγω μόνον ἡ καὶ τόπω. Ср. III. 9, 432b22.
2 III. 9, 432b24.
3 II. 9, 432b7, εἴ δὲ τριὰ ἡ ψυχή, ἐν ἑκάστῳ ἐσται δρακεῖον: because, it is explained, ἐν τῷ λογιστικῷ ἡ βούλησις γίνεται, καὶ ἐν τῷ ἀληθείᾳ ἡ ἐπιθυμία καὶ ὁ θυμόσ.
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ing, on the point of view from which they are regarded (λόγος): 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 conceptive 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 (Π. 3. 1) the faculties are spoken of as five—the nutritive, sensitive, conative, locomotive and intellectual: at other times (Π. 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 Π. 2. 10, 413b29, τῷ δὲ λόγῳ ὅτι ἐτερα φανερόν· οἰδίθητι γὰρ εἶναι καὶ ὀδα- στικῷ ἑτερῳ, εἶτε καὶ τὸ αἰσθάνεσθαι τοῦ δοξάζειν.

2 Eth. Nic. 1. 13, 1102a28, ταῦτα δὲ πότερον διώρισαι καθάπερ τὰ τοῦ σώματος μέρα καὶ πῶν τὸ μεριστὸν ἦ τῷ λόγῳ δύο ἑστὶν, ἀρχώριστα πεφυκότα καθάπερ ἐν τῇ περ- φερείᾳ τὸ κυρτὸ καὶ τὸ κολλόν.

3 Eth. Eud. Π. 1, 1219b32, διαφέρει δ’ οὐθὲν οὐτ’ εἰ μεριστῇ ή ψυχή οὐτ’ εἰ ἀμερῆς, ἐξελκά μέντοι δυνάμεις διαφόρους ὑστὲρ ἐν τῷ κομπότῳ τὸ κολλόν καὶ τὸ κυρτόν ἀδιαχώροστων, καὶ τὸ εὐθύ καὶ τὸ λευκᾶν’ κατα τό εὐθύ τοῦ λευκῶν.

4 III. 7, 431b13, οὖχ ἐτερῷ τὸ δρεκτικῶν καὶ φευκτικῶν οὐτ’ ἄλληλων οὗτε τὸν αἰσθη- τικὸν’ ἀλλὰ τὸ εἶναι ἄλλο.
(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, 414b:8.
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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.

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, δεὶ δὲ μὴ λειπήσαι πότερον προσήκει λέγειν πῶς ἐκαστὸν γίνεσθαι πέρικε μάλλον ἢ πῶς ἐστὶν. ... ἢ γὰρ γένεις ἐνεκα τῆς οὐσίας ἑστὶν, ἀλλ' οὕτως ἢ οὐσία ἐνεκα τῆς γενέσεως. Metaph. M. 1077a18, τὸ ἀτελὲς μέγεθος γενέσει μὲν πρότερον ἑστι, τῇ οὐσίᾳ δ' ὑστέρου, οἷον ἄψυχον ἐμψύχου.
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, 666*34: το ζῷον αίσθήσει ἑπισταί. 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.1

Sensation is thus usually explained by Aristotle as a process
in which we are ‘moved’ or ‘affected’ (literally, ‘suffer’) by an
external object.2 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.3 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 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, 424a32—424b2.
2 II. 5, 416b33: ἡ δ' αἰσθήσεις εν τῷ κυνείσθαι τε καὶ πάσχειν συμβαίνει δοκεῖ γὰρ ἀλλοιωσίς τις εἶναι. Ἀλλοιωσίς itself is regarded as a kind of κίνησις, a μεταβολή κατὰ τὸ ποιόν, and more definitely we read De Gen. 1. 4, 319b10: ἀλλοιωσίς μὲν ἐστιν ὅταν ὑπομένοντος τοῦ ὑποκείμενου, ἀλαθητοῦ ἑστος, μεταβάλλει ἐν τοῖς αὐτῶ οἴκεισι ἕναντιος ὁμοιὸς ἢ μεταξὺ. That πάθος is the vehicle of ἀλλοιωσίς appears from Μεταφ. Δ. 21, 1022b15, πάθος λέγεται ἕνα μὲν τρόπον ποιότης καὶ ἂν ἀλλοιωθαί εὐνέχεται.
3 So in II. 12, 424a34, Aristotle asks why plants do not perceive—καὶ γὰρ ψύχεται καὶ θερμαίνεται—i.e. they display signs of that ἀλλοιωσίς which was said to constitute perception.
4 III. 2, 425b22: τὸ ὄργον ἔστιν ὃς κεχωρωμάτισται.
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\(^1\).

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\(^2\). For if suffering (πάσχειν) 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 ἔνδος 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 (αισθάνεσθαι) is limited to an individual ‘here’ and ‘now,’ while perception (αισθησις) refers to the general aspect of a quality (τοιύνδε), 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 merc capacity (δύναμις) or as merely a ‘suffering’ or passive affection (πάθος)\(^3\). 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, 424\(^a\) 18: ἡ μὲν αἰσθησις ἐστι τὸ δεκτικὸν τῶν αἰσθητῶν εἰδῶν ἀνευ τῆς ἔλης, οἷον ὁ κηρὸς τοῦ δικτυλίῳ ἀνευ τοῦ σιδήρου καὶ τοῦ χρυσοῦ δέχεται τὸ σημεῖον.

\(^2\) III. 4, 429\(^b\) 29: ἡ ἀπάθεια τοῦ αἰσθητικοῦ.

\(^3\) II. 5, 417\(^a\).
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 τις 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, 432b2: πάσχει γάρ τι η γεύσις υπὸ τοῦ γεννήσεις γεννησείς ἀναγκαίως ἔρα.
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. 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 correlative, and in the perceptive act tend to coincide. They differ only in the manner of their definite existence (τὸ ἐναι) or in the manner in which they may be regarded (τὸ λόγος). 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. 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. It would seem therefore that

1 II. 5, 418a3.
2 III. 2, 425b26: ἡ δὲ τοῦ αἰσθητοῦ ἐνέργεια καὶ τῆς αἰσθήσεως ἡ αὐτὴ μὲν ἐστὶ καὶ μία, τὸ δὲ ἐναὶ όι ταὐτῶν αὐταῖς.
3 426b20: ἀλλ' οἱ πρῶτον φυσικῶν τούτοι οὗ καλῶς ἔλεγον, οἰδήν οἴομενοι οὔτε λευκῶν οὔτε μέλαιν εἶναι ἄνευ δύσεως, οὔδ' χωμὸν ἄνευ γυμνός.
4 C. d. 5, i.37: τὸ μὲν γάρ αἰσθητῶν ἀναιρεθὲν συναναρκῖ τὴν αἰσθήσιν, 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

αἴσθησις τὸ αἴσθητον οὐ σωναίρει. The grounds on which these conclusions are made to rest imply a physical conception of αἴσθησις, which is hardly in accordance with Aristotle's developed views upon this subject. The αἴσθησις, it is said, is prior to αἴσθησις because αἴσθησις itself results from a composition of various αἴσθητα, such as fire and water. Cp. Metaph. I. 5, 1010b37.

1 De Sensu, 2, 438b22: τὸ γὰρ αἴσθητον ἐνεργεῖν ποιεῖ τὴν αἴσθησιν.
2 Πρ. Περ. 11, 424b6: αἴσθησις οἷς μεσότητος τυποῦ ὧν ἐν τοῖς αἴσθητοις ἐναντίωσεως. καὶ διὰ τούτου κρίνεται τὰ αἴσθητα, τὸ γὰρ μέσον κριτικὸν γίνεται γὰρ πρὸς ἐκάστου αὐτῶν ἄπειρον τῶν ἄκρων.
3 Πρ. Περ. 11, 7, 422b23: πᾶσα γὰρ αἴσθησις μᾶς ἐναντίωσεως εἶναι δοκεῖ, οἷς ὁμίλει λευκῶν καὶ μελανῶν.
4 Πρ. Περ. 11, 19, 99b35: ἔχει γὰρ δύναμιν σύμφωνον κριτικὴν ἣν καλοῦσιν αἴσθησιν.
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

1 II. 12, 3, 424a28.
4 An. Post. II. 10, 100a16, καὶ γὰρ αἰσθάνεται μὲν τὸ καθ' έκαστον, ἡ δ' αἴσθησις τοῦ καθόλου ἐστὶν, οἷον άνθράπου ἄλλ' οἷ Καλλίου ἀνθράπον.
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 ἰδιὸν αἰσθητὸν—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’ ἰδιὸν μὲν ὁ μὴ ἐνδέχεται ἐτέρα αἰσθήσει αἰσθάνεσθαι, οἷον ὅψις χρώματος. Cp. Plato, Theaeetes 184 e: ἢ καὶ ἑπιλήσεις ὁμολογεῖν ὃ δ’ ἐτέρας δυσάμενας αἰσθάνει, ἀδύνατον εἶναι δ’ ἄλλης ταύτ’ αἰσθήσει, οἷον ὃ δ’ ἄκος, δ’ ὅψεως, ἢ ὃ δ’ ὅψεως, δ’ ἄκος;
3 De An. II. 6, 418a20.
4 II. 7, 419b25—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\(^1\). 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\(^2\). 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 τὸ ἐν ὧν ἐνεκά: whereas touch and taste are intended for our bare subsistence, contribute to nothing but our animal existence, are in short simply τὸν ἐν ἐνεκά\(^3\). 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\(^4\) 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

\(^1\) *Hist. An.* iv. 8, 532b29.
\(^2\) III. 13, 435b2.
\(^3\) *De Sensu*, 1, 437a4. *De An.* iii. 3, 429b3.
\(^4\) *De An.* ii. 11, 422b—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, ἀπταλ μὲν ὤν ἐσιν αἱ διαφοραὶ τοῦ σώματος ἕ ἡ σῶμα.

2 De Generatione, II. 1, 330b24, δὴ οὖν τὸν ὅπερ τὰ πᾶσα αἱ ἐλλαὶ διαφοραὶ ἀνάγονται ἐς τὰς πρώτας τέτταρας: αὐται δ' οὐκέτι ἐλλαττοὺς ὡστε γὰρ τὸ θεραπεύει ὁ ὅπερ ὤν ἕ ἑρετῶν.

3 Part. An. II. 10, 656b25, οὐκ ἐστι σῶμα τὸ πρῶτον αἰσθητῆρον ἢ σάρξ ἀλλ' ἐντὸς.

4 De An. II. 11, 423b26, ὡστε τὸ μεταξὺ τοῦ ἀπτικοῦ ἡ σάρξ.

W. AR.
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 shield¹.

Taste² 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 flavour³. 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 exercise⁴. 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 kinds⁵. 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 taste⁶. But this of course is only a concession to the customary language

¹ 423b14, τῶν ἀπτών οὐχ ὑπὸ τοῦ μεταξός ἀλλὰ ἀρα τῷ μεταξῷ αἰσθανόμεθα ὅπερ ὁ δὲ ἄσπιδος πληγεῖς.
² De An. 11. io. De Sensu, c. 4.
³ De Sensu, 4, 441b20, λειτεται δὴ τῷ πάσχειν τι τὸ υδέρ μεταβάλλειν.
⁴ 441b19, καὶ ἐστὶ τοῦτο χυμός τὸ γενόμενον ὑπὸ τοῦ εἰρημένου ἔροι τάδε ἐν τῷ υγρῷ τῆς γεύσεως τῆς κατὰ δύναμιν ἀλλοιωτικόν εἰς ἐνέργειαν.
⁵ 421b10; 422b12, ὅπερ δὲ τὰ χρώματα ἐκ λευκοῦ καὶ μέλανος μίξεώς ἐστιν, οὕτως οἱ χυμοὶ ἐκ γλυκέως καὶ πικροῦ.
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of mankind: in reality, Aristotle views the tongue as little more than medium in the transmission of the flavour of external 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 perceive 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 explanation, have but an imperfect sense of flavours because their tongue is imbued 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. 11, 423b6.
2 422b11, οὗτ ὁ πόρος ἀν ὑποθήκης ἡμῶν διὰ τοῦ μεταξύ ἄλλα τῷ μυχθῆρα τῷ ύγρᾷ.
3 423b3.
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\footnote{1}ent faculty of not uncognate character and much more fully understood. Taste and smell indeed present to Aristotle’s mind a constant parallel to one another. The object of both is a combination of the moist and dry; but whilst 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\footnote{2}; and the object of smell is thus said to be a dryness which holds taste or sap within it (ἐγχύμως ξηρότης). The popular account of odour as a smoke-like exhalation (καπνόδης ἀναθυμάςις) Aristotle views as on the whole untenable\footnote{3}. 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\footnote{4}. 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\footnote{5}. 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

\begin{itemize}
\item \footnote{1} 432\textsuperscript{a}, ἐστι δ’ ἡ δομῆ τοῦ ξηρῶν, ὡσπερ ὅ χυμῶς τοῦ υγροῦ. \footnote{2} De Sensu, 5, 443\textsuperscript{b}.
\item \footnote{3} Ibid, 5, 443\textsuperscript{b} 21. No doubt in c. 2, 438\textsuperscript{b} 24 we have ἡ δ’ ὁπερ ἀναθυμάςις ἡ ἀναθυμάςις asserted as the ground for referring the organ of smell to fire, but the passage in question seems a mere hypothesis to show how on the popular assumption that each sense corresponds to some element or other, smell would have to be referred to fire. See Büumeker, p. 47, who in 16 reads φαγερέων ὡς εἰ δεῖ.
\item \footnote{4} De An, 421\textsuperscript{b} 8.
\item \footnote{5} De Sensu, 442\textsuperscript{b} 29, ἑλιακίκοι ἡ ὑπικίκοι ἐγχύμως ξηρότητος.
\item \footnote{6} De An, 11, 7, 9, 419\textsuperscript{b} 32.
\end{itemize}
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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\(^1\).

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 conditions 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\(^2\).

Hearing\(^3\) 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*\(^4\). 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.

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1. 425b\(^5\); 421b\(^14\).
2. *De Sensu*, 1, 437b\(^16\), διάπερ φρονιμώτερα οἱ τυφλοὶ τῶν ἑκεῖσκι καὶ κοφώσιν.
3. *De An. II. 8.*
4. *De Gen. Animal. v. 7*, 786b\(^13\); 788a\(^34\).
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.” 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—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 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 τινός): voice being in fact sound possessed of meaning (ψόφος σημαντικός).

Sight, 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

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1 420b3.
2 De An. 11. 8, 420b3. Cp. Timaeus, 67 ά, δῶς μὲν οὖν φωνῆι βάλει τὴν δὲ ὅτως ὑπ’ ἄρος ἐγκεφαλὸς τε καὶ αἷματος μέχρι ψυχῆς πληγὴν διαδιδομένην, τὴν δὲ ὅπτ’ αὐτῆς κίνησιν, ἀτὸ τῆς κεφαλῆς μὲν ὁρκομένη, τελευτῶσαν δὲ περὶ τήν τοῦ ἢπατος ἔδραν, ἀκούντ’ δὲ αὐτῆς ταξεία, δεξίων, δὲ δὲ βραβεύσα, βαρύτερα.
3 11. 8, 420b31. Cp. and contrast Iuli. 1. 1, 125310 where Aristotle distinguishes between φωνή and λόγον: ἡ μὲν οὖν φωνή τοῦ λυπηροῦ καὶ ἤδεστο ἐστι σημεῖον· ὁ δὲ λόγος ἐπὶ τῷ δηλοῖν ἐστὶ τὸ συμφέρον καὶ τὸ βλασφερόν.
4 De An. 11. 7; De Sensu, 2. 3.
—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 (ἀπόρροιαν) which explains the visibility of colour. What then, we have to ask, is this pellucid (διαφανὲς)? It is that which is not visible by itself but becomes visible only through a foreign colour (δὲ ἀλλότριον χρῶμα). 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 418b31, πῶς δὲ χρώμα κινητικὸν ἐστὶν τοῦ κατ’ ἐνέργειαν διαφανοῦς. Cr. 419b9.
² De Sensu, 3, 439b11, ὡσε χρώμα ἐν εἰδή τοῦ διαφανοῦς ἐν σώματι ὑψηλὸν 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 *κορή* which receives the impressions transmitted by the intervening medium from the coloured object. 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. 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

1 *De Part. Anim. 11. 8, 653b25; Hist. Anim. 1. 8, 491b30, τὸ δ’ ἐντὸς τοῦ ὄφθαλμοι, τὸ μὲν υγρόν, ὑπελπεί, κορή.

2 *De Sensu, 2, 438b5, καὶ εὐλόγως τὸ ἐντὸς ἐστὶν ὑδατος διαφανεῖ γὰρ τὸ ὕδωρ, τὸ δὲ περὶ τούτῳ μέλαιν, τὸ δ’ ἐντὸς τούτων 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 discharge¹.

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 oscillations of the air, but instead of shewing 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-

¹ The chief passages bearing on this subject are as follows: De Gen. An. ii. 6, 744b⁵, δ’ ὀφθαλμὸς σώμα...υγόν καὶ φυχὸν καὶ οὐ προϋπάρχον ἐν τῷ τόπῳ...ἀλλ’ ἀπὸ τῆς περὶ τοῦ ἐγκέφαλου υγράτητος ἀποκρίνεται τὸ καθαρότατον διὰ τῶν πόρων οἱ φαίνονται φέροντες αὐτῷ πρὸ τὴν μηνύγην τῆς περὶ τῶν ἐγκέφαλον. De Gen. An. ii. 6, 743b⁵, αὕτων δ’ ἔτι τὸ τῶν ὀφθαλμῶν αλαθητήμων ἐστὶ μὲν ὥσπερ καὶ τὰ ἄλλα αἰσθητήρια ἐπὶ πόρων. Hist. An. i. 11, 492σ21, περαίνουσι δὲ καὶ οἱ ὀφθαλμοὶ εἰς τῶν ἐγκέφαλον καὶ κεῖται ἐπὶ φλεξίου ἐκάτερος. Hist. An. i. 16, 495a11, φέροντι δ’ ἐκ τοῦ ὀφθαλμοῦ τρεῖς πόρους εἰς τὸν ἐγκέφαλον, ὦ μὲν μέγαστος καὶ ὦ μέσος εἰς τὴν παρεγκέφαλίδα, ὦ δ’ ἐλάχιστος εἰς αὐτὸν τοῦ ἐγκέφαλον. De Sensu, c. 2, 438b13, ἢδε γάρ τισι πληγεῖσιν ἐν πολέμῳ παρὰ τῶν κράταρον οὕτως ὡστε ἐκτρήθηναι τοὺς πόρους τοῦ ὄμματος ἐδοξεῖ γενέσθαι σκότος, ὥσπερ λύχνου ἀποσκευαζόντος, διὰ τὸ οὖν λαμπτήρα τινα ἀπογνωσθῆναι τὸ διαφαινέστε καὶ τὴν καλοσκινήν καρπόν. Sprangcl, in his History of Medicine, tried to identify the πόροι of Aristotle with the nerves, and of the three πόροι mentioned the first was thought to be 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.
tecture 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 sense” (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 
\[\text{a}i\sigma\theta\eta\tau\rho\iota\alpha\varsigma\] with a so-called \[\psi\nu\chi\gamma\] 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

\[1\] Theaet. p. 184 d, δεινον γάρ ποιεῖ τις ἐν ἡμῖν, ὡσπερ ἐν δολείοις ἱπποις, 
\[\text{αισθήσεις} \varepsilon ἐγκάθηται, \] ἀλλὰ μὴ εἰς μίαν τῶν ἱδέων, εἰτε \[\psi\nu\chi\gamma\] εἰτε \[\delta\tau\iota \delta\iota\] καλεῖν, πάντα 
\[\tau\iota\iota \varepsilonντεῖνει, \] ἡ διὰ τούτων ὅλων ὀργάνων \[\text{αισθησιομέθα} \varepsilon\varsigma\text{α} \text{αισθητά} \].
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one single perception? and what is the character of that mysterious 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 (κοινὴ αἰσθησις) 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 (ὃδιον αἰσθητόν) 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 external 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 movement 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 superior faculty—this κύριον αἰσθητήριον—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.

1. 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 γλυκὸ καὶ ἑκαστὸν τῶν αἰσθητῶν πρὸς ἑκαστὸν κρίνομεν, τόι καὶ αἰσθανόμεθα ὅτι διαφέρει; ἀνάγκη δὴ αἰσθήσεις αἰσθητά γάρ ἐστιν. Cr. III. 7. 4, 431a20; De Sensu, c. 7. De Somno, 2, 455a15, ἔστι δὲ τι καὶ κοινῆ δύναμις ἀκολουθοῦσα πάσαις, ἣ καὶ ὅτι ὀρᾷ καὶ ἀκοίνει [omit καὶ with Ε] αἰσθάνεται· οὐ γὰρ δὴ τῇ γε δέξει ὥρᾳ ὅτι ὀρᾷ. καὶ κρίνει δὴ καὶ διόνται κρίνειν ὅτι ἑτερά τα γλυκὰ τῶν λευκῶν, οὕτω γεῖσει οὕτε δέχει οὗτ’ ἀμφότερον, ἀλλὰ των κοινῆς μορφῆς τῶν αἰσθητήρων ἀπόστων.

2 III. 7, 431b24, τι γάρ διαφέρει τὸ ἀπορεῖν πῶς τά μὴ ὁμογενὴ κρίνει οὐ τὸν γατὰ ὂλων λευκῶν καὶ μέλαιν.
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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\(^3\)—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\(^4\). 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 (ποί είναι) it is different\(^5\). 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\(^6\). Such a point is at once one and two:

\(^1\) 436\(b\)17, οὗτε δή κεχωρισμένοις ενδέχεται κρίνειν ὅτι έτερον τό γλυκό τού λευκοῦ, ἀλλά δεὶ ἐνὶ τοῖς ἄμφω δῆλα είναι.

\(^2\) 436\(b\)19, οὗτοι μὲν γὰρ κἄν εἰ τοῦ μὲν ἐγώ τοῦ ὅδε ἀλάθοιο, δήλον ἄν εἰς ὅτι ἑτέρα ἀλλήλων. δεὶ δὲ τὸ ἐν λέγειν ὅτι ἑτέρον.

\(^3\) De Sensu, 7, 449\(a\)8, ἀνάγκη ἄρα ἐν τι εἶναι τῆς ψυχῆς ψ ἀπαντα αἰσθάνεται.

\(^4\) 436\(b\)22, οὗτοι μὲν οὖν οὕς ὄντες τε κεχωρισμένοις κρίνειν τα κεχωρισμένα, δήλον...... ἀλλὰ μὴν ἀδιάφορον ἄμα τὰς ἐναντιας κινήσεις κινεῖσθαι τὸ αὐτὸ ἢ ἄδιαφρον καὶ ἐν ἀδιαφροφρο χρόνω.

\(^5\) 427\(a\)4, τῷ εἶναι μὲν γὰρ διαιρετῶν, τόπῳ δὲ καὶ ἀριθμῷ διαιρετῶν. De Sensu, 7, 449\(b\)10, αἰσθάνοντ' ἄν ἅμα τῷ αὐτῷ καὶ ἐνί, λόγῳ δ' οὖ τῷ αὐτῷ.

\(^6\) De An. III. 2, 427\(a\)10, ἀλλ' ὥσπερ ἦν καλοὶ τινες στιγμὴν ἥ μία καὶ ἥ δῖο,
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

tαύτη καὶ διαφέρει. Cp. III. 7, 4, 431a11, ἔστι γὰρ ἐν τι’ οὖν δὲ καὶ ὡς ὅρωσ. 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 Cede, III. 1, 300b14, τὸ γὰρ νῦν τὸ ἀτομον ὁδὸν 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 of point is indeed all that is required. V. Phys. iv. 11, 220a10, καὶ γὰρ ἡ στιγμὴ καὶ συνίχει τὸ μήκος καὶ ὄρθος ἐστι γὰρ τὸν μὲν ἀφικτον τὸ δὲ τελευτή.

1 De Sent. 7, 449a13, ἡ δὲ στιγμὴ ἐπὶ τῶν πραγμάτων αὐτῶν ἐνδέχεται, οὔτω καὶ ἐπὶ τῆς ψυχῆς.

2 De An. III. 1, 425a15, where the κώμα are described as those ὅπῃ ἐκάστη αἰσθήσει αἰσθησίμεθα 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. Bäumker, p. 62.) So also in III. 3, 12, 428b23, the κώμα are identified with ἐπόμενα τῶν συμβεβηκόν τὸς ὑπάρχει τὰ ἰδία, and to κίνησις καὶ μέγεθος is added a συνβεβήκη τοὺς αἰσθητοῖς.
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 (αἰσθητὰ κοινὰ) 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, 443b4. De An. 11. 6, 418b17.
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 συμβεβηκὼς 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 (οὐχ ἢ αὑτῷ, ἡλέ ἢ 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. 1. 425b30.
2 De Men. 1. 450a12, φανερῶν δὲ τῷ πρώτῳ αἰσθητικῷ τούτῳ ἡ γνώσις ἐστιν. Aristotle specially argues that those common sensibles are a result of sensation and not of thought, because memory involves time (ὅται ἐνεργῇ τῷ μνήμῃ προσαναθάναι δὲ τρόπερον).
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 πρῶτης τοῦτο ποιντέων).

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. 111. 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 (ἀρχή τῆς αἰσθήσεως). But, further, just as each one of the senses has its physical counterpart or organ; and as the soul or ψυχή 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 discharges. Particularly does he call attention to the fact that the brain produces no sensation on being touched. 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

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1 De Part. An. II. 10, 656e16, εὐαυθήσεις ἐνεκέν ἀσαρκῶν εἶναι φασὶν αἰσθάνεσθαι μὲν γὰρ τῷ ἐγκεφάλῳ, τῷ δ' αἰσθῆσιν οἷς προσεῖσθαι τὰ μόρια τὰ σαρκώδη λιαν τούτων δ' οὐδέτερον ἄστων ἀληθής...τῶν τ' αἰσθήσεων οὐκ οίκος οὐδέματι, δι' ἀναλογίας καὶ αἰτίας ἔστων ὀστερ ὀπίσω τῶν περίπτωμάτων. ἀλλ' οὐχ εἰς κοινότητα διὰ τίνα αἰτίαν ἔναι τῶν αἰσθήσεων ἐν τῇ κεφαλῇ τοῖς ἱεροῖς εἰσὶν, τούτῳ δ' ὀρθῶστες ἰδιαίτερον δι' τῶν ἀλλων μορίων ἐκ συνεισφορᾶς πρὸς ἄλλην συνεισφοράν. δι' ὑμέν αὐχέν τῶν αἰσθήσεως ἐστὶν ὁ περὶ τὴν καρδιὰν τόπος, διάφορος πρὸς τό τοίς περὶ αἰσθησίους. Cf. Plato, Τίτιτους 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, 652a2, ὅτι μὲν οὖν οὐκ ἔχει συνεισφοράν οὐδεμίαν πρὸς τὰ αἰσθητικά μόρια, δὴν μὲν καὶ διὰ τῆς δήλου, ἐτί δὲ μᾶλλον τῷ μυθικῷ πειθεῖν αἰσθησιν διαγγανόμενον, ὦπερ οὐδὲ τὸ αἷμα οὐδὲ τὸ περίττωμα τῶν ἱερῶν.
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

1 De Part. An. ii. 7, 652b10, ἐπεὶ δὲ ἄπαντα δεῖται τῇ ἐναντίον βοσῆ ὡς τούχαν τοῦ μετρῶν καὶ τοῦ μέσου, διὰ ταύτην τὴν αὐτίαν πρὸς τὸν τῆς καρδίας τόπον καὶ τὴν ἐν αὐτῇ θερμάσμα τε μεμιχάνεται τὸν ἐγκέφαλον ἡ φώσις.

2 De Jüvent. 3, 469b10, ἀλλὰ μην τὸ γε κύριον τῶν αἰσθήσεων ἐν ταύτῃ (τῇ καρδίᾳ) τοῖς ἐναίμους πάσιν ἐν τούτῳ γὰρ ἀναγκαῖον εἶναι το ἑνάν ὑπὸ τῶν αἰσθητήρων κοίνων αἰσθητήρων.

3 De Gen. An. ii. 6, 743b25, διὰ μὲν οὖν τὸ τὴν ἀρχὴν ἐν τῇ καρδίᾳ τῶν αἰσθήσεως εἰσαί καὶ τῷ ζῷῳ παρὰ αὐτῇ γίνεται φύσεως.

4 De Jüvent. 1, 467b28, ἐπεὶ οὖν τῶν ὕδων αἰσθητήρων ἐν τῷ κοίνῳ ἓπειρον αἰσθητήρων, εἰς δὲ τὰς ἐνεργείας αἰσθήσεις ἀναγκαῖον ἀπαντῶν, τοῦτο δὲ ἀν εἴη μέσον τοῦ πρόσθεν καλαμόμον καὶ ὁπισθὲν.

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-
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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 unlikeness, sameness and difference, unity and number. There is no special organ (ἰδιον ὑγανον), 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 shows 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 distinguish 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 feeblcr 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 (μνήμη) 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 Insomni. 1, 460b2, ἀπελθόντος τοῦ θέραθεν αἰσθητῶν ἐμμενεῖ τὰ αἰσθήματα αἰσθητὰ δεντά.
2 De Sensu, c. 7, 44715, ἄει ἡ μείζων κίνησις τῆς ἐλάττων ἐκκρατεί. De Insomni. 3, 461α1.
3 De Insomni. 2, 459b9, μεταφερόντων τὴν αἰσθησιν ἀκολουθεῖ τὸ πάθος, οἶνον ἐκ τοῦ
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

\[ \hat{n} \text{λου ἐς τὸ σκότος} \ \text{συμβαίνει γὰρ μηδὲν ἀράν διὰ τὴν ἐτὶ ὑποθεσαν κίνησιν ἐν τοῖς ὁμοιοῖς ὑπὸ τοῦ φῶτος κ.τ.λ.} \]

1 De An. III. 3, 429α1, ἡ φαντασία ἀν εἶναι κίνησις ὑπὸ τῆς αἰσθήσεως τῆς κατ’ ἐνέργειαν γεγομένην. Cr. 459α17. '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, 428β10.

4 Khoor. I. 11, 1370“28, ἡ φαντασία ἐστὶν αἰσθήσεως τῆς ἀσθενῆς.

5 De Insoom. I. 459β15, ἐστι μὲν τὸ αὐτὸ τῷ αἰσθητικῷ τὸ φανταστικόν, τὸ δὲ εἶναι φανταστικῷ καὶ αἰσθητικῷ ἔτερον.
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.\(^1\)

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\(^2\). 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, 418\(b\)–18.

\(^2\) 418\(b\), τὸ ὁμ ὑφεσθαι ἐστὶ τὸ δοξαζεῖν ὅπερ αἰσθάνεται μὴ κατὰ συμβεβηκότ.
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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 there-fore 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 im-
plies 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 imagina-
tion will be practically true: should it on the other hand be the
‘decaying’ relic 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 differ-
ent and employ different standards1. 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, be-
cause the sight is more authoritative than the touch2. 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 itself3.” So it is, Aristotle explains, that the earth appears

1 De Insomni. 2, 460b16, αἳτιον δὲ τοῦ συμβαίνειν ταύτα τὸ μῆ κατὰ τὴν αὐτήν
dιώκαμι κρίνειν τὸ τε κύριον καὶ ἡ τὰ φαντάσματα γίνεται.
2 460b20.
3 De Insomni. 2, 460b23—26, τοῦ δὲ διεψιθαί aἵτιον ὅτι οὐ μόνον τοῦ αἰσθήτον
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 explanation 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 conditions 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-perception. 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 λευκὸν τὴν αἰσθήσεως), sleep is, on the contrary, the result of restriction and quiescence 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,

κινούμενον φανεται ἁδέσποτε, ἀλλὰ καὶ τῆς αἰσθήσεως κινούμενης αὐτῆς, οὐν ἡσαύρως κυμάται ὠσπερ καὶ ὑπὸ τοῦ αἰσθήτου.

1 De Insomni. 3, 454b28, οὐ μόνον ἔγχυρηρότως αἱ κυνήσεις αἱ ἁπά τῶν αἰσθημάτων γνώμεναι...ἀλλὰ καὶ ὅταν γένηται...ὕπνοι, καὶ μᾶλλον τότε φαινόνται, μετ' ἕμεραν μὴν γὰρ ἐκκρούονται.

2 De Somn. 1, 454b28, ἄνευ μὲν γὰρ αἰσθήσεως οὐχ ὑπάρχει οὐδ' ὕπνοι οὔτ' ἐγρήγορα. 3 454b10, ὁ γὰρ ὕπνοι τι τοῦ αἰσθητικῶν μορίου ἐστίν, οἶον δεσμός καὶ ἀκινησία τις.
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 unnatural 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 phenomenon of sleep refers it to the circuit in reverse order and in considerable volume (αντιπερστασις αθρώς) made by the substantial nutriment which has been carried by the natural heat within the body on to the primary organ of sensation\(^1\).

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 composed\(^2\).” Thus then the blood in its descent toward the heart carries with it movements whether they be potential or

\(^1\) De Somn. 458b15, τι μὲν οὖν τὸ αἵτιον τοῦ καθεύνον εἰρηται, ὅτι ἢ ὑπὸ τοῦ συμματώδους τοῦ ἀναφερομένου ὑπὸ τοῦ συμφύτου θερμοῦ ἀντιπερστασις ἀθρώς ἐπὶ τὸ πρῶτον αἰσθητήριον καὶ τι ἐστιν ὅ ὑποῖο τοῦ πρῶτου αἰσθητήριου κατάληψις πρὸς τὸ μὴ δύνασθαι ἐνεργεῖν.

\(^2\) De Insomn. 463a4, γιγκτὸς δὲ δι’ ἀρήναν τῶν κατὰ μέρος αἰσθήσεως καὶ ἀδύναμίας τοῦ ἐνεργεῖν, διὰ τὸ ἐκ τῶν ἑοῦ εἰς τὸ ἐντὸς γίνεσθαι τὴν τοῦ θερμοῦ παλιρροιαν, ἐπὶ τὴν ἀρχὴν τῆς αἰσθήσεως καταφέρονται καὶ γίνονται φαινομένα καλοσταμάνης τῆς παραχθήν.
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 (κωνήσεως φανταστικαί 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.

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 φάντασμα τὸ ἀπὸ τῆς κωνήσεως τῶν αἰσθημάτων, ὅταν ἐν τῷ καθεύδειν ὑ, ὑ καθεύδει, τούτ’ ἐστὶν ἐνύπνιον.
member, as we have had occasion to remark before, the background given to the whole Aristotelian Psychology by the \( \psi \nu \chi \bar{y} \) 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 \( \kappa \omega \nu \eta \) \( \delta \nu \nu \alpha \mu \iota \varsigma \) of sense generalized conceptions of an object—they are \( \alpha \iota \sigma \theta \eta \mu \alpha \tau \alpha \) but \( \acute{\alpha} \nu \nu \ \acute{\upsilon} \lambda \eta \varsigma \); 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 reliques 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, 432*9, \( \tau \alpha \ \gamma \rho \ \varphi \alpha \tau \delta \alpha \mu \alpha \tau \alpha \ \dot{\omega} \varsigma \pi \epsilon \rho \ \alpha \iota \sigma \theta \eta \mu \alpha \tau \alpha \ \acute{\alpha} \nu \nu \ \acute{\upsilon} \lambda \eta \varsigma \).

2 *Ibid. III. 7, 431*1, \( \tau \alpha \ \mu \epsilon \nu \ \acute{o} \nu \ \acute{o} \delta \dot{\eta} \ \tau \alpha \ \nu \omega \tau \kappa \iota \dot{\alpha} \nu \ \acute{\epsilon} \nu \ \tau \acute{o} \varsigma \ \varphi \alpha \tau \delta \alpha \mu \alpha \varsigma \ \nu \alpha \epsilon \).

3 *Ibid. III. 10, 433*10, \( \epsilon \tau \iota \varsigma \ \tau \iota \nu \ \varphi \alpha \tau \dot{\alpha} \iota \dot{\alpha} \nu \ \dot{\omega} \ \nu \acute{o} \eta \varsigma \iota \nu \ \tau \iota \nu \).
it is attended by a consciousness of some time in the past at which the event remembered actually happened. 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," 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. 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.

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 (ἀναμνήσκεσθαι)—the faculty, that is to say, of calling back to consciousness the per-

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1 *De Mem.* 1, 449b22, ἀεὶ γὰρ ὅταν ἐνεργῇ κατὰ τὸ μνημονεύειν, ὅτι ἐν τῇ ψυχῇ λέγει, ὅτι πρῶτον τοῦτο ἦκον ἢ ἦθελον ἢ ἔνδοτον ἢ ἐνόησεν.....διὸ μετὰ χρόνου πᾶσα μνήμη.
2 451a15, φαντάσματος ὡς εἰκόνος οὐ φάντασμα ἐξίσ.
3 450a12.
4 450b32, διὸ καὶ τοῖς μὲν ἐν κινήσει πολλῇ διὰ πάθεσι ν ἢ δι' ἀλλικάν ὤνῳ οὐ γινεται μνήμη, καθάπερ ἀν εἰς ὀδόρ βέον ἐμπιστοφορή τῆς κινήσεως καὶ τῆς σφαγῆς.
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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.”

1 De Mem. 2, 451b16, δτάν οὖν ἀναμνησκόμεθα, κινοῦμεθα τῶν προτέρων
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\(^1\). 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 one will never shew itself without the other\(^2\).

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 (σωματικόν 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 (I.4, 408\(^b\)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

\(^1\) 452\(^a\).3. 
\(^2\) 452\(^b\)28, διὸ τὸ πολλάκις έννοοῦμεν ταῦτα ἀναμιμηγόμεθα· ὥστε γὰρ φύσει τὸδε μετὰ τὸδε ἐστὶν, οὕτω καὶ ἐνεργειά· τὸ δὲ πολλάκις φύσιν ποιεῖ. Mr J. C. Wilson suggests reading here συνηθεῖρ for ἐνεργεία.
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ends in what Aristotle calls deliberation\(^1\). 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\(^2\). 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 (ἐοικε δὲ τὸ καθόλου ἀρχῇ καὶ τὸ μέσου 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

\(^{1}\) \(453^b10\), τὸ ἀναμμηνήσκεθαι ἐστιν ὁ ἦν συλλογισμὸς τις.

\(^{2}\) \(Elih. Νικ. vii. 3, 1147^b4\).
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
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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

\(^1\) 429\(a\)23, λέγω δὲ νοών ὑπολαμβάνει ἡ ψυχή. 419\(b\)10, ὑπολαμβάνει τε ἡ ψυχή καὶ φρονεῖ.

\(^2\) II. 3, 427\(a\)26.

\(^3\) II. 5, 417\(b\)22, αὕτω δ' ὅτι τῶν καθ' ἐλαστὸν ἡ κατ' ἐνεργείαν αἰσθήσεως, ὡς δ' ἐπιστήμη τῶν καθόλου ταύτα δ' ἐν αὐτῇ πώς ἢ ἐστιν τῇ ψυχῇ. διό νοήσαι μὲν ἐπ' αὐτῷ, ὡς τὰν βούλησαι, αἰσθάνεσθαι δ' ὅπως ἐπ' αὐτῷ ἄναγκειον γὰρ ὑπάρχειν τῷ αἰσθητῷ.

\(^4\) 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 429b15, τῷ μὲν οὖν αἰσθητικῷ τὸ θερμὸν καὶ τὸ ψυχρόν κρίνει καὶ ὃν λέγος τις ἡ σάρκις ἀλλὰ δὲ ἢ τοι χρωστῷ ἢ ὃς ἡ κεκλασμένη ἔχει πρὸς αὐτόν ὅταν ἑκατοῦν τὸ σαρκὶ εἶναι κρίνει. Neuhäusler makes νόσι 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.

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 untrammelled 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 (εἴ ὁ νοῦς μηθεὶς μηθὲν ἔχει κοινὸν, πῶς νοήσει;)? 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 (ἡ γὰρ τι κοινὸν ἀμφοῖν ύπάρχει τὸ μὲν ποιεῖν δοκεῖ τὸ δὲ πάσχειν). Some light is thrown upon the problem

1 429a 13, εἴ δὴ ἐστὶν οὐκ ὅπερ τὸ αἰσθάνεσθαι, ἡ πάσχειν τι ἢ ἐν ἑνὶ ὑπὸ τοῦ νοητοῦ ἢ τι τοιοῦτον ἑπερωτάθει ἄρα δεῖ εἶναι, δεκτικῶν δὲ τοῦ εἶδου καὶ δινάμεις τοιοῦτων ἀλλὰ μὴ τούτο. Themistius would seem to have read ἑπερωτάθει, but the correctness of the ordinary text is confirmed by line 29, οἷς ὧρᾳ ἡ ἀπάθεια τοῦ αἰσθητικοῦ καὶ τοῦ νοητικοῦ.

2 429a 18, ἀνάγκη ἄρα, ἐπὶ πάντα νοεῖ, ἄμηγή εἶναι, ὅπερ φησὶν Ἄραξαγόρας, ὡς κρατήρ τοῦ ὃ ἐστιν ὡς γνωρίζει παρεμφανώμενον γὰρ κωλύει τὸ ἄλλοτρον καὶ ἀτιθάτει.
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 (ἐι μὴ κατ’ ἄλλον (νοῦς) αὐτὸς νοητὸς), then, on the supposition that everything becomes thinkable and knowable in the same way (ἐν δὲ τὸ νοητὸν εἶδει) 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 τοῖς ἄλλοις ὁ νοῦς ὑπάρξει, ἡ μεμυγμένον τι ἔχει ὁ ποιεῖ νοητὸν αὐτὸν ὀσπερ τάλλα). 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 τὸ μὲν πάσχεων κατὰ κοινῶν τι). And by virtue of this community reason may be said to hold in itself implicitly the whole world of experience (δυνάμει πῶς ἐστι τὰ νοητὰ ὁ 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 ἀ πριορι possibility: it is a mere form without the actual experience which will give these forms reality (ἀλλ’ ἐντελεχεῖα οὐδὲν πρὶν ἃν 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 it. 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

1 430'1, δεὶ δ’ οὕτως ὀσπερ ἐν γραμματείᾳ φιληθέν ὑπάρχει ἐντελεχεῖα γεγραμμένῳ ὀσπερ αὐτῷ ἐπὶ τοῦ νοῦ.
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dpaper 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 ἕλης τὸ αὐτὸ ἔστι τὸ νοούν 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

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1 III. 5, ἐπει δ’ ὁσπερ ἐν ἀπάσῃ τῇ φώσῃ ἔστι τι τὸ μὲν ὕλη ἐκάστῳ γένει (τοῦτο δὲ τὸ πάντα δυνάμει ἐκείνῳ) ἔτερον δὲ τὸ ἀθρόι καὶ ποιητικόν, τῇ ποιεῖν πάντα, οἷον ἡ τέχνη πρὸς τὴν ὕλην πέντεοθεν, ἀνάγκη καὶ ἐν τῇ ψυχῇ ύπάρχειν ταῦτα τὰς διαφορὰς.

2 430α, καὶ ἔστιν ὁ μὲν τοιοῦτος νους τῷ πάντα χίνεσθαι, ὡς τῇ τοῦ πάντα ποιεῖν, ὡς ἔστι τοις, οἷον τὸ φῶς τρόπον γὰρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει δυτα χρώματα ἑνεργεία χρώματα.
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 body\(^1\): 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 object\(^2\)—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 reason\(^3\). This reason in fact is always implicitly present in the world: it does not think at one time, and rest from thinking at another\(^4\); 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 οὗτος ὁ νοῦς χορηγός καὶ ἀμήγς καὶ ἀπαθής, τῇ νοησίᾳ δὲν ἑνεργεῖ. \\

\(^2\) τὸ δ' αὐτὸ ἄστιν ἡ κατ' ἑνεργείαν ἐπιστήμη τῷ πράγματι, εὐ. c. 4, 430a, ἐπὶ τῶν ἀρχὴν ὡς τὸ αὐτὸ ἐστὶ τὸ νοοῦν καὶ τὸ νοούμενον.

\(^3\) ἢ δὲ κατὰ δύναμιν χρόνῳ προτέρα ἐν τῷ ἔν, ὥσπερ δὲ οὐδὲ χρόνῳ.

\(^4\) ἄλλα οὐχ ὅτε μὲν νοεῖ ὅτε δ' οὐ νοεῖ.
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is really eternal and immortal\(^1\): 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\(^2\). 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

\(^1\) χρησθεὶς δ’ ἐστι μόνον τοῦτ’ ὑπὲρ ἐστί, καὶ τοῦτο μόνον αὐθάνατον καὶ αἰών.

\(^2\) οὐ μην ἐνώθησεν δὲ, ὃι τοῦτο μὲν ἀπαθετ, δὲ παθητικὸς νοὸς φαράγος, καὶ ἄνευ τοῦτο (ἱ. τοῦ παθητικοῦ) οὐδὲν νοεῖ (ἱ. τ. παθητικὸς).
in virtue of a community between thought and things. And this κοινών 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 outside. 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 παθητικός: the passive reason is "the whole of the presentative

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

1 Brentano, Psychologie des Aris., p. 185.
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.

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.
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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\(^1\). 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\(^2\). 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\(^3\).

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\(^4\). And since this induction itself is primarily dependent on sense-perception—since in fact apart from sense-perception induction cannot

\(^1\) Post. Anal. ii. 19, 100\(\alpha\) 10, ότε δὴ ἐνυπάρχονσιν ἀφορισμέναι άλλοι, ἡπτι ἐξ, ὀτ' ἀλλων έξεων γίνονται γνωστικωτέρων \\

\(^2\) Ibd., οἷον ἐν μάχῃ τραχύν γενομένη ἔνοικος στάτωσ ἔτερος ἔστη, εἰτ' ἔτερος ἔστω ἐπὶ ἀρχών ἦλθεν, ἡ δὲ ψυχὴ ὑπάρχει τοιαύτη οὔσα οἵα δύνασθαι πάσχειν τοῦτο.

\(^3\) στάτωσ γὰρ τῶν ἀδιαφόρων ἔνοικος, πρώτων μὲν ἐν τῇ ἐμνή ἱσταται ἡπτι τὰ ἀμερῆ στῇ καὶ τὰ καθόλου οἷον τοιοῦτον ἔστω ἔστη καὶ ἐν τοῦτο ἱσταται.

\(^4\) δὴ δὲ ἦταν τὰ πρῶτα ἐπιγνώσθειν ἀναγκαῖων καὶ γὰρ καὶ ἀναγκαῖοι 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. 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 and in the sixth book of the Ethics. While one chapter asserts that as syllogism 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.

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 understanding 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 οἷς ἔστιν ἄνευ φαντάσματος—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, 81b3, ἐπαχθῆαι δὲ μὴ ἔχοντας αἰσθήσειν ἀδύνατόν τῶν γὰρ καθ ἑκατὸν ἢ αἰσθήσεις.

2 100b3, ἐπεὶ δὲ τῶν περὶ τὴν διάνοιαν ἑξων αἰς ἀληθεύομεν αἱ μὲν ἀληθεῖς εἰσιν, αἱ δὲ ἐπεδεξάμενα τὸ φέοδος, ὅπως ὀδα καὶ λογισμός, ἀληθῆ δ' ἂν ἐπιστήμη καὶ νοῦς καὶ οὗδὲν ἐπιστήμη θαρύθμητον ἄλλο γένος ἢ νοῦς, αἱ δ' ἀρχαὶ τῶν ἀποδείξεων γνωριμώτεραι, ἐπιστήμη δ' ἕπαισε μετὰ λόγον ἐστὶ, τῶν ἀρχῶν ἐπιστήμη μέν οὐκ ἂν εἶν' ἐπεὶ δ' οὗδὲν ἀληθικὸν ἐνδέχεται εἶναι ἐπιστήμης ἢ νοῦς, νοῦς ἂν εἶν' τῶν ἀρχῶν.

3 Eth. Nic. vi. 3, 1139, εἰσὶν ἄρα ἀρχαὶ εἰς ὁνὶς δ' ἀλογοσιζὸς οὖν οἰκ ἔστιν συλλογισμὸς ἐπαγωγή ἡ ἡμ. ix. 6, 1141b7, λειτπαι νοῦς ἔκα τῶν ἀρχῶν.
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 εἰδέσι τοῖς αἰσθητοῖς τὰ νοητὰ ἐστὶ— but this merely emphasizes the fact that it is because phenomena are thought that they are intelligible to

1 De Mem. 1. 449a30, νοεῖν οἷν ἔστιν ἀνεψιν θυμάσματος· συμβαίνει γὰρ τὸ αὐτὰ πάθος ἐν τῷ νοεῖν ὑπερ καὶ ἐν τῷ διαγράφειν· ἔκει τε γὰρ οὐδὲν προσχρόμενοι τῷ τῷ ποιόν ώρισμένον εἶναι τὸ τριγώνος, διός γράφομεν ὦρισμένον κατὰ τὸ ποιόν· καὶ ὁ νοσῶν ἱστώτως, κἀν μὴ ποιόν νοεῖ, τίθεται πρὸ διμμάτων ποιόν, νοεῖ δὲ οἷς ὄ ποιόν. Cr. De An. III. 7, 431b17, III. 8, 432a58.

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\(^1\).

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\(^2\). 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\(^3\). 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\(^4\). 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

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1 432\(a\), ἡ χειρ δρομανῦ ἐστὶν δργάων καὶ ὁ νοῦς εἴδος εἰδῶν.
2 Ἐθ. Νικ. i. 4, 6: i. 7, 21.
3 Ἐθ. Νικ. vi. 5, ii.40\(b\)16, αἱ μὲν γὰρ ἄρχαι τῶν πρακτῶν τὸ ἐνέκα τὰ πρακτά: τῷ δὲ ὑπερθαμμάν ἢ ήκόνοιν ἡ λύτην εἴδος οὐ φαίνεται ἢ ἄρχη...ἐστι γὰρ ἡ κακία φιλαρτικὴ ἄρχης.
4 VI. ii. 4, ii.43\(b\)4; VI. 12, 10, ii.4\(a\)31.
an act of reason. 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.

Reason then, it now only remains to add, is essentially what constitutes the individual. It is no longer dependent on bodily conditions like the other cognitive and emotional elements in our nature: it is something of a transcendental character: something which brings us into connection with God himself. And thus we cannot enquire about the time when reason came into existence: as an actualized state, something which does not become évérgeia but is essentially itself developed, it never began to exist—rather it is coeval with the world. 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 all these 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

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1 vi. 11, 1143b5, ἐκ τῶν καθ’ ἐκαστα τὸ καθόλου τοῦτον ὅπως ἔχειν δεῖ αἰσθῆσαι, αὕτη δ’ ἦστι νοῦς.
2 Eth. Nic. vi. 8, 1142a26, ἀντίκειται μὲν δὴ (φράσσοι) τῷ νῷ· δ’ μὲν γὰρ νοῦς τῶν ἄρων ὅπως ἔστι λόγος, ἡ δὲ (φράσσοι) τοῦ ἐσχάτου, οὔ τινές ἔπιστήμη ἄλλη αἰσθήσεως, οὐχ ἡ τῶν ἴδιων, ἄλλη οὖσα αἰσθάνομεν ὅτι τὸ ἐν τοῖς μαθηματικοῖς ἐσχάτοις τρίγωνων.
3 X. 8, 1178a2: δόξει δ’ ἐὰν καὶ εἶναι ἐκαστος τούτο, εἰσερ τὸ κύριον καὶ ἄμεινον.
4 Eth. X. 7, 1177a16, εἶτε θείον ὅν καὶ αὐτὸ εἶτε τῶν ἐν ἡμῖν τὸ δειότατον.
5 Metaph. II. 5, 1044b22, ἐπεὶ δ’ ἦνα ἄνευ γενέσεως καὶ φύσεως ἐστι καὶ οὐκ ἔστων οἷον αἱ στιγμαί, εἰπερ εἰς, καὶ δῶσω τά εἶδή καὶ αἱ μορφαὶ (οἳ γάρ τὸ λεπτὸν γίγνεται ἄλλα τὸ ἑνῷ λευκῷ). Cp. Teichmüller, p. 387.
without: 'that it does not result from mere physical generation in the way that the faculties for sustaining life—the \( \psi νχ' \) \( \theta ρεττική \)—may be said to do ¹. 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 ² 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 \textit{can} be applied to experience: and the \( γραμματεῖον \) 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 \textit{De Gen. Anim.} 11. 3, 736b27, \( \lambda επιται θε AVC \, \nuον \, \eta \nuδερε \, \epsilonπεισιν \, \καὶ \, \thetaεύον \epsilonιν \, \muονον \, \οιδην \, \gammaαρ \, \αυτον \, \τη \, \epsilonνεργεία, \) κοινωνεί \( \sigma\omega\mu\alpha\tauική \) \( \epsilonνεργεία. \)

² \textit{Ibid.} 736b15.
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an intermediate stage would have been discussed, and that before 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 susceptibilities of man with which he is occupied: and among such δυνάμεις no place is left for the πάθη or emotions. At the beginning indeed of the treatise, these feelings had excited considerable 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 standpoint 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 opportunity for treating of the feelings. Man is an emotional being simply in so far as he is a sensitive or perceptive being; 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 systematic exposition of the feelings but simply a description of some aspects of them. What we have in the *Rhetoric* is a popular delineation of some of the more obvious feelings to which we are subject: the *Ethics* gives us an analysis of the universal concomitants of all feelings. These concomitants are pleasure and pain: feelings in fact are just the states which are followed by pleasure and pain. And of pleasure and pain Plato had given a more than usually exhaustive account. Pleasure, he had explained, arose from the πλήρωσις, the filling up and satis-

1 Π. 2, 413b23, ὅπου μὲν γὰρ ἀλήθη, καὶ λόγη τε καὶ ὑδάη, ὅπου δὲ ταῦτα, εἰ ἀνάγκης καὶ ἐπὶθυμία.
2 *Eth. Níc. II. 4, 1103b21, λέγω δὲ πάθη μὲν ἐπιθυμίαν, ὄργυρ, φόβον, ὀράσος, ψυχον, χαρίν, φίλον, μίσος, πόθον, ἤλθεν, ἔλεος, ὅλως οἷς ἐπεται ἥδου ἤ λόη.
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 ἔνεργεια: 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.¹

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."² Aristotle in fact is fond


² III. 7, 2, 431a8, τὸ μὲν οὖν αἰεθάντει διόμοιῳ τῷ φάναι μόνον καὶ νοεῖν ὅταν δὲ ἦδον η λυπηρῶν, οἷον καταφάσα ἢ ἀποφάσα διώκει ἢ φεύγει.
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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 unformed 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 ὑλή 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

1 Eth. vi. 2, 1130a21, ἐστι δ' ὁ περ ἐν διάνοιᾳ κατάφασις καὶ ἀπόφασις, τὸν' ἐν ὀρέξει δίωξε καὶ φυγή.
2 Μεν. Mor. 1183b22, συμβαλλει δὴν αὐτῷ ἑποστήμας ποιούντο τὰς ἀρετὰς ἀναρεῖν τὸ ἀλογον μέρος τῇ ὕψην, τούτῳ δὲ ποιον ἀναρεῖ καὶ πάθος καὶ ἠθος.
3 111. 7, 431a14, τῇ δὲ διανοητικῇ ψυχῇ τὰ φαντάσματα ὁδινὸν αἰθηματα ὑπάρχειν ὅταν δὲ ἀγαθόν ή κακόν φήσῃ ἡ ἀποφήσῃ φεύγει ή διώκει.
4 431b2, τὰ μὲν ὤν ἐδη 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 προαιρεσις may be described as either νοῦς ὑφεκτικός reason stimulated by desire, or ὑφεξὶς 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 shows 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

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1 431a17, ἀσερ ὁ ἄρτος τὴν κόρην τοιαύτῃ ἐποίησεν, αὐτὴ δὲ ἔτερον.
2 III. 9, 432b5.
4 De An. III. 9, 432b16, ἀλλὰ μὴν οὐδὲ τὸ λογιστικὸν καὶ ὁ καλοῦμενος νοῦς ἐστὶν ὁ κινών ὁ μὲν γὰρ θεωρητικὸς ὁδὴν νοεί πρακτὸν...ἀλλ’ οὐδ’ ἦν θεωρῇ τι τοιοῦτον, ἣδι θεωρεῖν φιλότιμον καὶ λαῖκον, οὐκ ἐνδοῖς διανοεῖται φοβερὸν τι ἡ ἡδονή, οὐ κελεύει δὲ φοβεῖσθαι.
5 Eth. Nic. VI. 2, 1139b35.
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 (ἀρετικοίν δὲ οὐκ 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 ἁρετὸν κινεῖ οὐ κινοῦμενον τῷ νοηθήναι ἢ φαντασθῆναι 433\(b\)12). And in the language of the exoteric psychology of the Ἑἰθῆς, 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

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\(^1\) *Eth. Nic. III. 3, 1111\(b\)17, ἢ μὲν ἐπιθυμίᾳ ἡλικὸς καὶ ἐπιλύσει μὲν προαίρεσις δ’ οὖτε λυπηροῦ οὐδ’ ἡλικός.

\(^2\) III. 10, 433\(b\)9, φαίνεται δὲ γε διὸ ταῦτα κινοῦντα, ἢ ὑβρίσι ἢ νοῦς, ἐκ τῆς τὴν φαντασίαν τιθέντως ὡς νοητώς τως. Ὁ Ὑδ. Μέλαν 700\(b\)17: ἐργάζεται δὲ τὰ κινοῦτα τὸ ἄνων διάνοιας καὶ φαντασίαν καὶ προαίρεσιν καὶ βουλήσει καὶ ἐπιθυμίᾳς. ταῦτα δὲ ταῦτα ἀπάντησι εἰς νοῦν καὶ ὑβρίσι καὶ γέφ ς φαντασία καὶ ἡ αἰσθήσεως τὴν αὐτήν τῷ νῷ χώραν ἔχουσιν.
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. II, 434 b 9*, καὶ ἀνάγκη ἐνί μετρεῖν τὸ μείζον γάρ διωκεί, ὡστε δύναται ἐν ἑκ πλείονον πανταμάτων ποιεῖν.

3 *De An. III. 11, 434 b 16*, ἐπι δ’ ἡ μὲν καθόλου ὑπόληψις καὶ λόγος, ἡ δὲ τοῦ καθ’ ἑκαστα (ἡ μὲν γάρ λέγει διὶ δει τῶν τούτων τὸ τοῦτο πράττειν ἡ δὲ διὶ τούτῳ τὸ νῦν τοῦτο, κἀγὼ δὲ τοῦτο) ἦδ’ αὐτῇ κυνεί ἡ δόξα, οἶχ’ ἡ καθόλου, ἡ ἀρμοὶ ἀλλ’ ἡ μὲν ἡμοῦσα μάλλον, ἡ δ’ οὐ. Thus, it should be noticed, both the major and the minor premiss may have either an objective or a subjective reference. *Cp. Eth. Nic. vii. 3, 6, 1147 b 4*, διαφέρει δὲ καὶ τὸ καθόλου. The practical syllogism is also explained *vi. 12, 10, 1144 a 31*: *VII. 3, 9*, αἰτὶ *De Motu Animal. 701 a 32*, ποτέν μοι, ἡ ἐπιθυμία λέγει τοδὲ δὲ ποτόν ἡ αἰσθήσεως εἶπεν ἡ ἡ φαντασία ἡ ὦ νοῦς. εὐθὺ δὲ πίνει. οὕτως μὲν οὖν ἐπὶ τὸ κνεύσαι καὶ πράττειν τὰ ἔφα ορμῶν, τῇ μὲν ἐσχάτῃ αἰτίας τοῦ κνεύσαι, μεῖζον ὄντος, ταύτης δὲ γνωριμίας ἢ διὰ αἰσθήσεως ἢ διὰ φαντασίας καὶ νοῆσεις. 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 reasoning. 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 (γρυγλυμός). In such a joint one part seems to be reaching forward, while another remains immovable in its position: (ἐλέξις) attraction and impulsion (ὁδοίας) combine to produce the action which results. 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 Ἐθ. Νει. ι. ι, 4, καὶ ὁ νόος τῶν ἐσχάτων ἑπ’ ἀμφότερα...διὰ καὶ ἀρχή καὶ τέλος νοεῖ.

2 De An. III. 10, 433b21, τὸ κυρόν ὄργανον, ὀποὶ ἄρχη καὶ τελευτή τὸ αὐτὸ ὅλον ὁ γεγυμνός ἔρειδα γάρ τὸ κυρτὸν καὶ τὸ κάλυον τὸ μὲν τελευτή τὸ δ’ ἀρχήν κ.τ.λ.

Readers of Teichmüller's highly suggestive volume (Praktische Vernunft) will see how much I am indebted to him in this interpretation. See p. 210.
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 \(\betaουλητών\) and the \(νουτών\) 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. \(II.\ 10, 433a21, \varepsilonν\ \deltaή \ τι \ τό \ κινοῦν \ τό \ ὀρεκτών.\)
2. \(Μεθηρ. \ Λ. \ 7, 1072a29, \'ὅρεγόμεθα \ δὲ \ διότι \ δοκεῖ \ μᾶλλον \ ή \ δοκεῖ \ διότι \ ὀρεγόμεθα. \'\ αρχὴ \ δὲ \ ' \ νόησις.\)
3. \(Eθ. \ Νεκ. \ III. \ 4, 1113b22, ἀρε παθέν ἀπλῶς μὲν καὶ κατ' ἀλήθειαν \ βουλητὼν \ εἶναι \ τάγαθον, \ ἐκάστῳ \ δὲ \ τὸ \ φαινόμενον;\)
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 ἴστορία: 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
INTRODUCTION.

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 ψυχή 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 ψυχή 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 ψυχή; 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 \( \thetaυμος \) 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.
ἈΡΙΣΤΟΤΕΛΟΥΣ
ΠΕΡΙ ΨΥΧΗΣ Α.
ΑΡΙΣΤΟΤΕΛΟΥΣ

ΠΕΡΙ ΨΥΧΗΣ Α.

§ 1 Τῶν καλῶν καὶ τιμῶν τὴν εἰδησίαν ὑπολαμβάνοντες, μᾶλλον δὲ ἐτέραν ἔτερας ἡ καὶ ἀκριβείαν ἡ τῶν βελτιώνων 
τε καὶ θαυμασιωτέρων εἶναι, δι' ἀμφότερα ταῦτα τὴν τῆς 
ψυχῆς ιστορίαν εὐλόγως ἂν ἐν πρῶτοις τιθείμεν. δοκεῖ δὲ καὶ 
πρὸς ἀλήθειαν ἀπασαν ἡ γνώσις αὐτῆς μεγάλα συμβάλλει 
καὶ μάλιστα δὲ πρὸς τὴν φύσιν· ἔστι γὰρ οἶνον ἀρχή 
τῶν ζωῶν. ἐπιζητοῦμεν δὲ θεωρῆσαι καὶ γνῶναι τὴν 
τε φύσιν αὐτῆς καὶ τὴν οὐσίαν, εἰδὴ ὧσα συμβέβηκε περὶ 
ἀυτῆς· ἄν τὰ μὲν ἱδια πάθη τῆς ψυχῆς εἶναι δοκεῖ, τὰ δὲ δι' 
§ 2 ἐκείνην καὶ τοῖς ζώοις ὑπάρχειν. πάντη δὲ πάντως ἐστὶ 
τῶν ἀληθευτών λαβεῖν τωστὶ πίστιν περὶ αὐτῆς. καὶ γὰρ ὅτος 
κοινὸν τοῦ ἡθήματος πολλοῖς ἐτέρους, λέγω δὲ τοῦ περὶ 
τὴν οὐσίαν καὶ τὸ τί ἐστι, τάχ' ἄν τῷ δόξει μία τις εἶναι 
μέθοδος κατὰ πάντων περὶ δὲν βουλόμεθα γνῶναι τὴν 

3. τε om. E Tor. || ταῦτα om. E Tor. || τὴν τῆς τῆς τῆς E Tor. 
πολλοῖς STUVW Tor. 13. τὸ] 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
ΠΕΡΙ ΨΤΧΗΣ Α.

οὕσιαν, ὁσπερ καὶ τῶν κατὰ συμβεβηκὸς ὅδιν ἀπόδειξις, ὥστε ζητητέον ἄν εἰ ἡ τῆν μέθοδον ταύτην. εἰ δὲ μὴ ἐστί μία τις καὶ κοινὴ μέθοδος περὶ τὸ τί ἐστιν, ἐτὶ χαλεπώτερον γίνεται τὸ πραγματευθῆναι. δεῖσθε γὰρ λαβεῖν περὶ ἕκαστον τίς ὁ τρόπος. ἐὰν δὲ φανερὸν ἃ, πότερον ἀπόδειξις τίς ἐστιν ἢ διαίρεσις ἢ καὶ τις ἄλλη μέθοδος, ἐτὶ πολλὰς ἀπορίας ἔχει καὶ πλάνας ἐκ τίνων δεῖ ζητεῖν ἄλλαι γὰρ

§ 3 ἅλλων ἀρχαῖ, καθάπερ ἀριθμῶν καὶ ἐπιπέδων. πρῶτον δ' ἰσως ἀναγκαῖον διελεῖν ἐν τίνι τῶν γενῶν καὶ τί ἐστι, λέγω δὲ πότερον τόδε τι καὶ οὐσία ἢ ποιῶν ἢ ποσῶν ἢ καὶ τις ἄλλη τῶν διαιρεθεῖσῶν κατηγορίων' ἐτὶ δὲ πότερον τῶν ἐν δυνάμει οὐνὼν ἢ μᾶλλον ἐντελέχεια τις: διαφέρει γὰρ οὐ τι

§ 4 σμικρόν. σκεπτεῖν δὲ καὶ εἰ μεριστή ἢ ἀμερής, καὶ πότερον ὅμοιοις ἂπασα ψυχὴ ἢ οὐ. εἰ δὲ μῇ ὁμοιοίς, πότερον εἴδει διαφέρουσιν ἢ γένει. νῦν μὲν γὰρ οἱ λέγοντες καὶ ἤτοι τούτοις περὶ ψυχῆς περὶ τῆς ἀνθρωπίνης μόνης ἐοίκασιν ἐπι-

§ 5 σκοπεῖν. εὐλαβητέον δ' ὅπως μὴ λανθάνῃ πότερον εἰς ὁ λόγος ἄντι ήστι, καθάπερ ζῷον, ἢ καθ' ἐκαστον ἐτερος, οἶνον ἵππον, κυνὸς, ἀνθρώποι, θεοῦ, τὸ δὲ ζῷον τὸ καθόλου ἢτοι οὐθέν ἐστιν ἢ υἱότερον' ὁμοίως δὲ καὶ τι κοινὸν ἄλλο κατηγοροῖτο.

§ 6 ἐτι δ' εἰ μῇ πολλαὶ ψυχαὶ ἄλλα μόρια, πότερον δεὶ ζη-

PSYCHOLOGY I §§ 3—6.

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
Για πρώτη φορά, η δεκαετία χρήζει ματιά. Χαλεπόν δὲ καὶ τούτων διορίσαι ποία πέφυκεν ἑτερα άλληλων, καὶ πότερον τὰ μόρια χρῆ ἐγεῖν πρότερον ἢ τὰ ἔργα αὐτῶν, ὁδὸν τὸ νοεῖν ἢ τὸν νοῦν καὶ τὸ αἰσθάνεσθαι ἢ τὸ αἰσθητικόν ὁμοίως.

§ 7 δὲ καὶ ἐπὶ τῶν ἄλλων. εἰ δὲ τὰ ἔργα πρότερον, πάλιν ἄν τις ἀπορήσειν εἰ τὰ ἀντικείμενα πρότερον τούτων ἐγκεφάλου, ὁδὸν εἰκονίζειν τὸ αἰσθητικὸν καὶ τὸ νοητὸν τοῦ νοητικοῦ. Εἰκονίζειται δ' οὐ μόνον τὸ τί ἐστι γνώνω καὶ χρήσιμον εἶναι πρὸς τὸ θεωρῆσαι τὰς εἰκόνας τῶν συμβεβηκότων ταῖς οὐσίαις, ὡσπερ ἐν τοῖς μαθήμασι τί τὸ εὐθὺ καὶ καμπύλον ἢ τὸ γραμμὴ καὶ ἐπίπεδον πρὸς τὸ κατιδεῖν πόσαις ὁρθαίς αἱ τοῦ τριγώνου γωνίαι ἕστασις, ἀνάπαυσις καὶ πλεῖστον, ἀναλυτικά τὰς ὁρισμοὺς μὴ συμβαίνει τὰ συμβεβηκότα γνωρίζειν, ἀνάπληξις εἰκάσαι πρὶν ἀντίκεισθαι καὶ κενῶς ἀπαντᾶε.  

§ 8 τὸ αἰσθητικὸν τοῦ αἰσθητικοῦ καὶ τὸ νοητὸν τοῦ νοητικοῦ. Εἰκονίζειται δ' οὐ μόνον τὸ τί ἐστι γνώνω καὶ χρήσιμον εἶναι πρὸς τὸ θεωρῆσαι τὰς εἰκόνας τῶν συμβεβηκότων ταῖς οὐσίαις, ὡσπερ ἐν τοῖς μαθήμασι τί τὸ εὐθὺ καὶ καμπύλον ἢ τὸ γραμμὴ καὶ ἐπίπεδον πρὸς τὸ κατιδεῖν πόσαις ὁρθαίς αἱ τοῦ τριγώνου γωνίαι ἕστασις, ἀνάπαυσις καὶ πλεῖστον, ἀναλυτικά τὰς ὁρισμοὺς μὴ συμβαίνει τὰ συμβεβηκότα γνωρίζειν, ἀνάπληξις εἰκάσαι πρὶν ἀντίκεισθαι καὶ κενῶς ἀπαντᾶε.  

§ 9 ἀπορίαν δ' ἔχει καὶ τὰ πάθη τῆς ψυχῆς, πότερον ἐστὶ πάντα κομνα καὶ τοῦ ἐχούσας ἢ ἐστὶ τι καὶ τῆς ψυχῆς ἱδίου αὐτῆς τοῦτο γὰρ λαβεῖν μὲν ἀναγκαῖον, οὐ ῥᾴδιον δὲ. φαίνεται δ' 

11. τοῦτο V. 12. ἐκ ζητῶν UWX. 15. πρότερα ES.  
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 οúde ποιεῖν, οἴον όργίζεσθαι, θαρρεῖν, ἐπιθυμεῖν, ὅλως αἰσθάνεσθαι. μάλιστα δ’ έοικεν ιδιον τὸ νοεῖν· εἰ δ’ ἐστὶ καὶ τούτο φαντασία τις ἢ μὴ ἀνευ φαντασίας, οὐκ ἐνδέχοιτ’ ἂν οúde τούτ’ ἀνευ § 10 σώματος εἶναι. εἰ μὲν οὖν ἐστὶ τι τῶν τῆς ψυχῆς ἐργῶν ἢ 10 παθημάτων ιδιον, ἐνδέχοιτ’ ἂν αὐτήν χωρίζεσθαι: εἰ δὲ μηθέν ἐστι τούτων αὐτῆς, οὐκ ἂν εἴη χωρίστη, ἀλλὰ καθάπερ τῷ εὐθεί, ἢ εὐθύ, πολλὰ συμβαίνει, οἴον ἀπέστηθαι τῆς χαλκῆς σφαίρας κατὰ στιγμῆν, οὐ μέντοι γ’ ἀφεται τούτων χωρίσθεν τὸ εὐθύ. ἄχωρηστον γάρ, εἴπερ ἂεί μετὰ σώματος, τωστός, θυμός, πραότης, φόβος, ἑλεος, θάρσος, ἐτι χαρά καὶ τὸ φιλεῖν τι καὶ μισεῖν· ἄμα γὰρ τούτως πάσχει τι τὸ σώμα. μηνύει δὲ τὸ ποτὲ μὲν ἵσχυρὸν καὶ ἐναργῶν παθημάτων συμβαίνοντων μηδὲν παροξύνεσθαι. 20 φοβεῖσθαι, ἐνιοτεὶ δ’ ὑπὸ μικρῶν καὶ ἀμαρών κινεῖσθαι, ὅταν ὅργα τὸ σώμα καὶ οὕτως ἔχει ὥσπερ ὅταν ὰργίζηται. ἐτι δὲ τούτῳ μᾶλλον φανερῶν· μηθενὸς γάρ φοβεροῦ συμβαίνοντος ἐν τοῖς πάθεσι γίνονται τοῖς τοῦ φοβομένου. εἰ δ’ οὕτως ἔχει, δὴλον ὅτι τὰ πάθη λόγοι ἐνυλοὶ εἰσιν. 25 ὡστε οἱ ὅροι τοιούτων οἴον τὸ ὀργίζεσθαι κίνησις τις τοῦ τοιουτοῦ σώματος ἢ § 11 μέρους ἢ δυνάμεως ὑπὸ τοῦτο ἐνεκα τούτε. καὶ διὰ ταύτα ἡδη

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.
φυσικόν τὸ θεωρῆσαι περὶ ψυχῆς, ἥ πάσης ἡ τῆς τοιαύτης. διαφερόντως δὲ ἂν ὀρίσαιντο φυσικὸς τε καὶ διαλεκτικὸς ἐκαστὸν αὐτῶν, οἶον ὀργή τι ἐστίν. ὁ μὲν γὰρ ὀρέξει ἀντιλυπτέος ἡ πήγεσις ἢ τι τοιοῦτον, ὁ δὲ ζέσων τοῦ περὶ καρδίαν αἰματός ἢ, θερμοῦ. τούτων δὲ ὁ μὲν τὴν ὠλην ἀποδιδόσων, ὁ δὲ τὸ ἔδος καὶ τὸν λόγον. ὁ μὲν γὰρ λόγος ἔδος τοῦ πράγματος, ἀνάγκη δὲ εἶναι τούτου ἐν ὠλη τοιαδί, εἰ ἐσται, ὡσπερ οἰκίας ὁ μὲν λόγος τοιοῦτος, ὅτι σκέπασμα κωλυτικὸν φθορᾶς ὑπ’ ἀνέμων καὶ ὦμβρων καὶ καυμάτων, ὁ δὲ φύσει λίθους καὶ πλῖνθους καὶ ἔξωλα, ἔτερος δὲ ἐν τούτοις τὸ ἔδος, ἕνεκα τωνδὶ. τίς οὖν ὁ φυσικὸς τούτων; πότερον ὁ περὶ τὴν ὠλην, τὸν δὲ λόγον ἀγνουών, ἢ ὁ περὶ τὸν λόγον μόνον; ἢ μᾶλλον ὁ ἔξω ἀμφοῖν. ἐκείνων δὲ δὴ τίς ἐκάτερος; ἢ οὐκ ἐστὶ τις ὁ περὶ τὰ πάθη τῆς ὠλης τὰ μὴ χωριστά, μηδὲ μὴ χωριστά, ἀλλ’ ὁ φυσικὸς περὶ ἀπαυνθ’ ὡστα τοῦ τοιουδί σώματος καὶ τῆς τοιαύτης ὠλης ἔργα καὶ πάθη. (ὅποσα δὲ μὴ μὴ τοιαῦτα, ἀλλ’ καὶ περὶ των μὲν τεχνιτῆς, εἰ τὸ τύχη, οἶον τέκτων ἢ ἰατρός) τῶν δὲ μὴ χωριστῶν μὲν, ἢ δὲ μὴ τοιούτων σώματος πάθη καὶ έξαφαιρέσεως, ὁ μαθηματικός, ἢ ὁ κεχωρισμένα, ὁ πρῶτος φιλόσοφος. ἀλλ’ ἐπανεῖτεν ὅθεν ὁ λόγος.

29. ὀρίσαιντο ὁ φ. STUWX. || καὶ ὁ διαλεκτικὸς W. 403b 1. καὶ θ. Bekk.
3. ὡσπερ ἐπὶ οἰκίας W. 5. ὦμβρων καὶ πνευμάτων E. || φησι SVX.
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.
ΠΕΡΙ ΨΥΧΗΣ Α.

ελέγομεν δ' ὅτι τὰ πάθη τῆς ψυχῆς αὐχώριστα τῆς φυσικῆς ὑλῆς τῶν ζῴων, ἡ δὴ τοιαύτη ὑπάρχει θυμὸς καὶ φόβος, καὶ οὖν ὃσπερ γραμμὴ καὶ ἐπίπεδον.

§ 1. Εἰσισκοποῦντας δὲ περὶ ψυχῆς ἀναγκαῖον ἀμα διαπο- ροῦντας περὶ δὲν εὑπορεῖν δὲν, προελθόντας τὰς τῶν προτέρων δόξας συμπαραλαμβάνειν ὅσοι τι περὶ αὐτῆς ἀπεφήναντο, ὅπως τὰ μὲν καλῶς εἰρήμενα λάβωμεν, εἰ δὲ τι μὴ κα- λῶς, τούτ' εὑλαβηθῶμεν. ἀρχῇ δὲ τῆς ζητήσεως προβείσθαι τὰ μάλιστα δοκοῦνθ' ὑπάρχειν αὐτῇ κατὰ φύσιν τὸ ἐμψυ- χον δὴ τοῦ αὐτοῦ δυνοῦ μάλιστα διαφέρειν δοκεῖ, κινήσει τε καὶ τῷ αἰσθάνεσθαι. παρειλήφαμεν δὲ καὶ παρὰ τῶν προ- γενεστέρων σχεδοῦ δύο ταῦτα περὶ ψυχῆς. φασὶ γὰρ ἐνιοὶ καὶ μάλιστα καὶ πρῶτως ψυχὴν εἶναι τὸ κωὐν. οὐθέντες δὲ τὸ μὴ κινούμενον αὐτὸ μὴ ἐνδέχεσθαι κινεῖν ἐτερον, τῶν 30

§ 2 κινομένων τι τῆν ψυχὴν ὑπέλαβον εἶναι. οὖν Δημόκριτος μὲν πῦρ τι καὶ θερμῶν φησιν αὐτὴν εἶναι· ἀπειρῶν γὰρ ὄρτων σχημάτων καὶ ἀτόμων, τὰ σφαιρειδῆ πῦρ καὶ ψυχὴν λέ- γει, οἶον ἐν τῷ ἀέρι τὰ καλοῦμενα ἕξωσματα, ἃ φαίνεται ἐν ταῖς διὰ τῶν θυρίδων ἀκτῖσιν, δὲ τὴν πανσπερμίαν στοιχεία λέγει τῆς ὄλης φύσεως· ὁμοίως δὲ καὶ Λεύκιππος· τοῦτων 5 δὲ τὰ σφαιρειδῆ ψυχῆν, διὰ τὸ μάλιστα διὰ παντὸς δύ- νασθαι διαδύνειν τοὺς τοιούτους ῥυσμούς, καὶ κινεῖν τὰ λοιπὰ κινοῦμενα καὶ αὐτά, ὑπολαμβάνοντες τῇν ψυχὴν εἶναι τὸ

17. οὗτος ως χωριστὸς Ε. οὗ χωριστὰς Τορ. 18. ἡ δὴ ὑγε Υ., ἑγεμ. Τ. 22. συμπεριλαμβάνεις TWX. 26. διὰ SVWX. 404a 4. τὴν μὲν παν σπερματ E. Τορ. 6. σφαιρ. πῦρ καὶ ψυχὴν V.
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
παρέχου τοίς ζῷοις τὴν κίνησιν. διὸ καὶ τοῦ ἥν ὄρον εἶναι τὴν ἀναπνοὴν· συνάγοντος γὰρ τοῦ περιέχοντος τὰ σώματα, καὶ ἐκθλίβοντος τῶν σχημάτων τὰ παρέχοντα τοῖς ζῴοις τὴν κίνησιν διὰ τὸ μηδὲ αὐτὰ ἡρεμεῖ, μηδὲποτε, βοήθειαν γέγνεσθαι θύραθεν ἐπεισιόντων ἄλλων τοιούτων ἐν τῷ ἀναπνεῖν· κωλύει γὰρ αὐτὰ καὶ τὰ ἐνυπάρχοντα ἐν τοῖς ζῷοις ἐκ- κρίνεσθαι, συνανείργοντα τὸ συνάγον καὶ πηγνύον· καὶ ἥν § 4 δὲ ἐως ἀν δύνωνται τοῦτο ποιεῖν. ἔοικε δὲ καὶ τὸ παρὰ τῶν Πυθαγορείων λεγόμενον τὴν αὐτὴν ἔχειν διάνοιαν· ἐφασαν γὰρ τινὲς αὐτῶν ψυχήν εἶναι τὰ ἐν τῷ ἀέρι ξύσματα, οἱ δὲ τὸ ταῦτα κωνὸν. περὶ δὲ τούτων εἰρηται, διὸτι συνεχῶς φαίνεται κωνούμενα, κἂν ἢ νημεῖα παντελῆς. ἐπὶ ταύτῳ δὲ φέρονται καὶ ὁσοὶ λέγουσι τὴν ψυχῆν τὸ αὐτὸ κωνὸν· ἐοικασί γὰρ οὗτοι πάντες ὑπειληφέναι τὴν κίνησιν οἰκειοτάτον εἶναι τῇ ψυχῇ, καὶ τὰ μὲν ἄλλα πάντα κυνείσθαι διὰ τὴν ψυχήν, ταυτὴν δ᾽ ύφ᾽ ἑαυτῆς, διὰ τὸ μηθὲν ὅραν κωνῶν δ § 5 μὴ καὶ αὐτὸ κυνεῖται. ὁμοίως δὲ καὶ Ἀναξιγόρας ψυχήν εἶναι λέγει τὴν κωνόσαν, καὶ εἰ τις ἄλλος εἰρήκεν ὡς τὸ πᾶν ἐκώνησε νοῦς, οὐ μὴν παντελῶς γ᾽ ὀσπερ Δημόκριτος. ἐκεῖνος μὲν γὰρ ἀπλῶς ταύτων ψυχῆν καὶ νοῦν· τὸ γὰρ ἄληθὲς εἶναι τὸ φαινόμενον· διὸ καλῶς ποιήσαι τὸν "Ομηρον ὡς
the soul is that which supplies animals with motion. This
same assumption led them to regard respiration as the bound-
ary 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 com-
pressing 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 prin-
ciple 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' ἄλλοφρονέων. οὖ δὴ χρήται τῷ νῷ ὡς δυνάμει τοι περὶ τὴν ἀλήθειαν, ἀλλὰ ταύτῳ λέγει ψυχήν καὶ νοῦν. Ἀναξαγόρας δ' ἦττον διασαφεὶ περὶ αὐτῶν' πολλαχοῦ μὲν 404b γὰρ τὸ αὐτοῦ τοῦ καλῶς καὶ ὀρθῶς τὸν νοῦν λέγει, ἐτέρωθι δὲ τοῦτον εἶναι τὴν ψυχήν' ἐν ἀπασι γὰρ ὑπάρχειν αὐτὸν τοῖς ἰσόις, καὶ μεγάλους καὶ μικροῖς, καὶ τιμίους καὶ ἀτιμοτέρους. οὔ φαίνεται δ' οἷς κατὰ φρόνησιν λεγόμενοι νοῦς 5 πάσων ὁμοίως ὑπάρχειν τοῖς ἰσόις, ἀλλ' οὐδὲ τοῖς ἀνθρώπως
§ 6 πάσων. οὗτοι μὲν οὖν ἐπὶ τὸ κινεῖτο τὸ ἐμφυσαν ἀπέβλεψαι, οὗτοι τὸ κινητικῶτατον ὑπέλαβον τὴν ψυχήν' οὗτοι δ' ἐπὶ τὸ γινώσκειν καὶ τὸ αἰσθᾶνεσθαι τῶν ὑπων, οὗτοι δὲ λέγουσι τὴν ψυχήν ταῖς ἀρχαῖς, οἱ μὲν πλείους ποιοῦντες, οἱ 10 δὲ μίαν ταύτην, ὡσπερ Ἐμπεδοκλῆς μὲν ἐκ τῶν στοιχείων πάντων, εἰνάὶ δὲ καὶ ἐκαστὸν ψυχὴν τοῦτων, λέγων οὖν γαῖῃ μὲν γὰρ γαῖαν ὅπωσπερ, ὑδατί δ' ὑδωρ, αἰθέρι δ' αἰθέρα διαν, ἀτὰρ πυρὶ πῦρ ἀειθηλον, στοργῇ δὲ στοργήν, νείκος δὲ τε νείκει λυγρῷ.
§ 7 τοῦ αὐτοῦ δὲ τρόπων καὶ Πλάτων ἐν τῷ Τιμαῖῳ τὴν ψυ-
χὴν ἐκ τῶν στοιχείων ποιεῖ: γινώσκεσθαι γὰρ τῷ ὁμοίῳ τὸ ὁμοίου, τὰ δὲ πράγματα ἐκ τῶν ἀρχῶν εἶναι. ὁμοίως δὲ καὶ ἐν τοῖς περὶ φιλοσοφίας λεγομένοις διώρισθη, αὐτὸ μὲν τὸ ἱδρόν ἢ αὐτῆς τῆς τοῦ ἔνος ἱδέας καὶ τοῦ πρώτου μήκους 20 καὶ πλάτους καὶ βάθους, τὰ δ' ἄλλα ὁμοιοτρόπως. ἐτὶ δὲ καὶ ἄλλως, νοῦν μὲν τὸ ἔν, ἔποιησθηκαί δὲ τὰ δύο· μοναχῶς γὰρ ἐς ἐν· τὸν δὲ τοῦ ἐπιπέδου ἀριθμον δόξαν, αἰσθησιω δὲ

404b 1. ἀσαφεῖ X. 3. τὸν νοῦν εἶναί ταῦταν τῇ ψυχῇ TW. 7. πάσῳ
om. STWX. 8. τὸ om. X. 10. ποιεῖτες τὰς ἀρχαῖς ταύτας om SX.
21. τὰς δ' ἄλλας ὁμοιοτρόπους Them.
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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tόν τού στερεού· οἱ μὲν γὰρ ἀριθμοὶ τὰ ἐϊδή αὐτὰ καὶ ἁρ-
χαὶ ἐλέγοντο, εἰσὶ δὲ ἐκ τῶν στοιχείων. κρίνεται δὲ τὰ πράγ-
ματα τὰ μὲν νψ, τὰ δὲ ἐπιστήμη, τὰ δὲ δόξη, τὰ δὲ ἀισθή-

§ 8 σει· εἰδή δ' οἱ ἀριθμοὶ οὖν τῶν πραγμάτων. ἐπεὶ δὲ καὶ
κινητικὸν ἐδόκει ἡ ψυχὴ εἶναι καὶ γνωριστικὸν οὕτως, ἐνιοῖ
συνεπλέξαν εὖ ἀμφῶν, ἀποφημάμενοι τὴν ψυχὴν ἀριθμὸν
§ 9 κυνοῦνθ' ἦσυντόν. διαφέρονται δὲ περὶ τῶν ἁρχῶν, τίνες καὶ τὸ
πόσα, μάλιστα μὲν οἱ σωματικὰς ποιούντες τοῖς ἀσωμάτους,
tούτοις δ' οἱ μίζαντες καὶ ἀπ' ἀμφῶν τὰς ἁρχὰς ἀποφη-

§ 10 νάμενοι. διαφέρονται δὲ καὶ περὶ τὸ πλήθος· οἱ μὲν γὰρ
μίαν οἱ δὲ πλείους λέγοντιν. ἐπομένως δὲ τούτοις καὶ τὴν
ψυχὴν ἀποδιδόσασθ' τὸ τε γὰρ κινητικὸν τὴν φύσιν τῶν πρώ-

§ 11 τῶν ὑπειλήφασσιν, οὐκ ἀλώγως. ὅθεν ἐδοξεὶ τυπὶ πῦρ εἶναι· 5
καὶ γὰρ τούτο λεπτομερόστατον τε καὶ μάλιστα τῶν στοιχείων
ἀσωμάτου, ἐτὶ δὲ κυνεῖται τε καὶ κυνεὶ τὰ ἄλλα πρῶτως.

§ 12 Δημοκρίτος δὲ καὶ γλαφυρωτέρως έιρηκεν ἀποφημάμενοι
dιὰ τι τούτων ἐκάτερον. ψυχὴν μὲν γὰρ εἶναι ταῦτα καὶ νοῦν,
tούτο δ' εἶναι τῶν πρῶτων καὶ ἀδιαίρετων σωμάτων, κινητῷ-

κόν δὲ διὰ μικρομέρειαν καὶ τὸ σχῆμα· τῶν δὲ σχημάτων
εὐκινητότατον τὸ σφαιροειδὲς λέγει· τοιούτων δ' εἶναι τὸν τε
§ 13 νοῦν καὶ τὸ πῦρ. Ἀναξιαγόρας δ' έουσκε μὲν ἐτερον λέγειν
ψυχὴν τε καὶ νοῦν ὅσπερ εἴσομεν καὶ πρότερον, χρῆται δ'
of a superficies, 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
ΠΕΡΙ ΨΥΧΗΣ Α.

ἀμφότερον ὃς μιᾷ φύσει, πλὴν ἀρχήν γε τὸν νοῦν τίθεται μάθητα πάντων· μόνον γοῦν φησὶν αὐτὸν τῶν ὄντων ἀπλῶν εἶναι καὶ ἀμυγγὴ τε καὶ καθαρόν. ἀποδίδωσι δὲ ἀμφῷ τῇ αὐτῇ ἀρχῇ, τῷ τε γινώσκειν καὶ τῷ κινεῖν, λέγων νοὐν κινήσαι τὸ § 14 πάν. ἐοικε δὲ καὶ Θαλής ἐξ ὧν ἀπομνημονεύουσι κινητικών τι τὴν ψυχήν ὑπολαβεῖν, εἴπερ τὸν λίθον ἐφή ψυχήν ἔχειν, § 15 ὅτι τὸν σίδηρον κινεῖ. Διογένης δ᾿ ὦσπερ καὶ ἐτεροί τινες, ἀέρα, τούτων οἰηθεὶς πάντων λεπτομερέστατον εἶναι καὶ ἀρχήν· καὶ διὰ τοῦτο γινώσκειν τε καὶ κινεῖν τὴν ψυχήν, ἃ μὲν πρῶτον ἔστι καὶ ἐκ τούτου τὰ λοιπὰ, γινώσκειν, ἃ δὲ λεπτότατον, § 16 κινητικών εἶναι. καὶ Ἡράκλειτος δὲ τὴν ἀρχήν εἶναι φησὶν ψυχήν, εἴπερ τὴν ἀναθυμίαν, ἐξ ἃς τὰλλα συνεπηθησον· καὶ ἀσωματώτατον τε καὶ ῥέον αἰεί· τὸ δὲ κινούμενον κινούμενον γινώσκεσθαι· ἐν κινήσει δὲ εἶναι τὰ ὄντα κάκεινος ἕστο καὶ § 17 οἱ πολλοί. παραπληροῦσι δὲ τοῦτοι καὶ Ἀλκμαῖοι εὐοικεν ὑπολαβεῖν περὶ ψυχῆς· φησί γὰρ αὐτὴν ἀθάνατον εἶναι διὰ τὸ οὐκέναι τοῖς ἀθάνατοις, τοῦτο δὲ ὑπάρχειν αὐτῇ ὡς αἰει κινούμενη· κυνεῖσθαι γὰρ καὶ τὰ θέα τὰ πάντα συνεχῶς § 18 αἰεί, σειλῆνην, ἢλιον, τοὺς ἀστέρας καὶ τὸν οὐρανὸν ὅλον. τῶν δὲ 405h

πολλακώτερον καὶ ὕδωρ τινὲς ἀπεφήνατο, καθάπερ ἦπερ τινῶν. πειραθήσει δὲ ἐοικασων ἐκ τῆς γονῆς, ὅτι πάντων ὕγρα· καὶ γὰρ ἐλέγχοι τοὺς αἰμα φαύκοντας τὴν ψυχήν, ὅτι ἡ γονή § 19 οὐχ αἷμα· ταύτην δὲ εἶναι τὴν πρώτην ψυχήν. ἐετεροί δὲ αἷμα, καθάπερ Κριτίας, τὸ αἰσθάνεσθαι ψυχῆς οἰκείωτατον ὑπολαμβάνοντες, τοῦτο δὲ ὑπάρχειν διὰ τὴν τοῦ αἰματος φυ-
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 sentient capacity as due to the element of blood.
ΠΕΡΙ ΨΤΧΗΣ Α.

σων. πάντα γὰρ τὰ στοιχεῖα κρίσθην εἰληφε, πλὴν τῆς γῆς·
ταύτην δ' οὐθεὶς ἀποπέφανται, πλὴν εἰ τις αὐτὴν εἰρηκεν ἐκ
§ 20 πάντων εἶναι τῶν στοιχείων ἡ πάντα. ὁ ἐργεῖται δὲ πάντες τὴν ψυχὴν τρυσὶν ὡς εἰπέν, κυνήγει, αἰσθήσει, τῷ ἀσωμάτῳ· τοῦτον δ' ἐκατον ἀνάγεται πρὸς τὰς ἀρχὰς. διὸ καὶ οἱ τῷ γυνώσκειν ὀριζόμενοι αὐτὴν ἡ στοιχεῖον ἡ ἐκ τῶν στοι-
χείων ποιοῦσι, λέγοντες παραπλησίως ἀλλήλους, πλὴν ἐνός·
φασὶ γὰρ γυνώσκεσθαι τὸ ὁμοίων τῷ ὁμοίῳ· ἐπειδὴ γὰρ ἡ § 15
ψυχὴ πάντα γυνώσκει, συνιστάσθων αὐτὴν ἐκ πασῶν τῶν ἄρ-
§ 21 χῶν. ὅσοι μὲν οὖν μίαν τωλά λέγουσιν αἰτιὰν καὶ στοιχεῖον ἐν,
καὶ τὴν ψυχὴν ἐν τιθέασιν, οὖν πῦρ ἡ ἀέρα· οἱ δὲ πλείους
§ 22 λέγοντες τὰς ἀρχὰς καὶ τὴν ψυχὴν πλεῖον ποιοῦσιν. Ἄνα-
ξαγόρασ δὲ μόνος ἀπαθὴ φησὶν εἶναι τῶν νοῦν, καὶ κοινὸν § 23
οὐθὲν οὐθεὶν τῶν ἄλλων ἔχειν. τοιοῦτος δ' ὁν πῶς γνωριεῖ καὶ
diὰ τῶν αἰτιῶν, οὔτ' ἐκεῖνος ἐιρηκεν οὔτ' ἐκ τῶν εἰρημένων συμ-
§ 23 φανέρεσ ἐστίν. ὅσοι δ' ἐναντίωσεις ποιοῦσιν ἐν ταῖς ἀρχαῖς, καὶ
τὴν ψυχὴν ἐκ τῶν ἐναντίων συνιστάσαν· οἱ δὲ θάτερον τῶν
ἐναντίων, οὗν θερμὸν ἢ ψυχρὸν ἢ τι τοιοῦτον ἄλλο, καὶ τὴν § 25
ψυχὴν ὁμοίως ἐν τῷ τούτων τιθέασιν. διὸ καὶ τοῖς ὀνόμασιν
ἀκολουθοῦσιν, οἱ μὲν τὸ θερμὸν λέγοντες, ὡτι διὰ τοῦτο καὶ τῷ
ζῆν ὀνόμασται, οἱ δὲ τὸ ψυχρὸν διὰ τὴν ἀναπνοὴν καὶ τὴν
κατάψυξιν καλεῖσθαι ψυχὴν. τὰ μὲν οὖν παραδεδομένα
περὶ ψυχῆς, καὶ δ' ἂς αἰτίας λέγουσιν οὔτω, ταύτ' ἐστίν.

μὲν γάρ τὸ E. Tor.
PSYCHOLOGY I 2 §§ 20—23.

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.
III. Ἐπισκεπτέον δὲ πρῶτον μὲν περὶ κινήσεως: ὡς γὰρ οὐ μόνον ἰσοδός ἐστι τὸ τῆν οὕσιαν αὐτῆς τοιαύτην εἶναι οἶαν φασίν οἱ λέγοντες ψυχήν εἶναι τὸ κινοῦν ἐαυτὸ ἢ δυνάμενον 406α κωνεῖν, ἀλλ' ἐν τῶν ἀδυνάτων τὸ ὑπάρχει αὐτῇ κίνησιν.

§ 2 ὅτι μὲν οὖν οὐκ ἀναγκαῖον τὸ κινοῦν καὶ αὐτὸ κωνεῖσθαι, πρῶτον εἴρηται. διχῶς δὲ κινομένου παντὸς (ἡ γὰρ καθ' ἐτερον ἢ καθ' αὐτό) καθ' ἐτερον δὲ λέγομεν, οὖσα κωνεῖται τῷ ἐν 5 κινομένῳ εἶναι, οἷον πλωτῆρες. οὐ γὰρ ὁμοίως κωνοῦνται τῷ πλοῖῳ τὸ μὲν γὰρ καθ' αὐτὸ κωνεῖται, οἱ δὲ τῷ ἐν κινομένῳ εἶναι. δὴνον δ' ἐπὶ τῶν μορίων οἰκεία μὲν γὰρ ἐστι κίνησις ποδῶν βάδισις, αὕτη δὲ καὶ ἀνθρώπων· οὐχ ὑπάρχει δὲ τοῖς πλωτήρσι τότε) διχῶς δὲ λεγομένου τοῦ κωνεῖ-10 σθαι, νῦν ἐπισκοποῦμεν περὶ τῆς ψυχῆς εἰ καθ' αὐτὴν κι-

§ 3 νεῖται καὶ μετέχει κινήσεως. τεσσάρων δὲ κινήσεων οὕσων, φορᾶς ἀλλοιώσεως φθίσεως αὐξησεως, ἡ μίαν τούτων κωνίκ' ἢ πλείον ἢ πάσας. εἰ δὲ κωνεῖται μὴ κατὰ συμβεβηκός, φύσει ἢ ὑπάρχοι κίνησις αὕτη· εἰ δὲ τούτο, καὶ15 τόπος· πᾶσαι γὰρ αἱ λεχθεῖσα κινήσεις ἐν τόπῳ. εἰ δ' ἐστὶν ἡ οὕσια τῆς ψυχῆς τὸ κωνεῖν ἐαυτὴν, οὐ κατὰ συμβεβηκό:_

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
§ 4 κινήσεως μετέχει. ἐτὶ δ’ εἰ φύσει κινεῖται, κἂν βία κινηθείση κἂν εἰ βίᾳ, καὶ φύσει. τὸν αὐτὸν δὲ τρόπον ἔχει καὶ περὶ ἱρεμίας· εἰς δὲ γὰρ κινεῖται φύσει, καὶ ἱρεμεῖ ἐν τούτῳ φύσει ὀμοίως δὲ καὶ εἰς δ’ κινεῖται βίᾳ, καὶ ἱρεμεῖ ἐν τούτῳ βίᾳ. ποῦ οὖσαι τῆς ψυχῆς κινήσεις ἔσται καὶ § 5 ἱρεμίαι, οὔδε πλάτεις βουλομένους ῥάδιον ἀπόδονται. ἐτὶ δ’ εἰ μὲν ἁνω κινήσεται, πῦρ ἔσται, εἰ δὲ κάτω, γῆ τούτων γὰρ τῶν σωμάτων αἱ κινήσεις ἀδύται. ὁ δ’ αὐτὸς λόγος καὶ § 6 περὶ τῶν μεταξῆς. ἐτὶ δ’ ἐπεὶ φαίνεται κινοῦσα τὸ σῶμα, ταῦτα εὐλόγοι κυλεῖν τάς κινήσεις ἂς καὶ αὐτὴ κινεῖται. εἰ δὲ τούτο, καὶ ἀντιστρέψασιν εἰπεῖν ἀληθεῖς ὅτι ἡν τὸ σῶμα κινεῖται, ταῦτην καὶ αὐτήν. τὸ δὲ σῶμα κινεῖται φορᾷ· 406 ὁστε καὶ ἡ ψυχὴ μεταβάλλοι ἄν κατὰ τὸ σῶμα ἡ διὰ ἡ κατὰ μόρια μεθισταμένη. εἰ δὲ τούτ’ ἐνδέχεται, καὶ ἔξελθον- σαν ἐστεινα τόλμω ἐνδέχοντ’ ἄν’ τούτω δ’ ἐποιητ’ ἄν τὸ ἀνυ- § 7 σταθεῖ τὰ τεθνεῖτα τῶν ζῷων. τὴν δὲ κατὰ συμβεβηκός κινήσεως κἂν ὑφ’ ἔτερον κυνὸτο· ὡσθεῖν γὰρ ἄν 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
ΠΕΡΙ ΨΤΧΗΣ Α.

οὐ δεὶ δὲ ὃ τὸ ψῆνει συνείσθαι ἐν τῇ οὐσίᾳ, τοῦθ᾽ ὑπ᾽ ἀλλοῦ κυνεῖσθαι, πλὴν εἰ μὴ κατὰ συμβεβηκός, ἀστερὸς οὐδὲ τὸ καὶ οὐτὸ ἀγαθὸν ἦ δὲ αὐτὸ, τὸ μὲν δὲ ἀλλο εἶναι, τὸ δὲ ἑτέρου ἑνεκεν. τὴν δὲ ψυχὴν μάλιστα φαίνη τις ἅν ὑπὸ τῶν ἂν

§ 8 αἰσθητῶν κυνεῖσθαι, εἰπὲν κυνεῖται. ἀλλὰ μὴν καὶ εἰ κυνεὶ γε αὐτῇ αὐτῆν, καὶ αὐτῇ κυνοῖτ' ἄν, ἀστὲν ἐπὶ πᾶσα κίνησις ἐκστασίς ἐστὶ τοῦ κυνουμένου ἃ κυνεῖται, καὶ ἡ ψυχὴ ἐξίσταται ἁν ἐκ τῆς οὐσίας, εἰ μὴ κατὰ συμβεβηκός αὐτήν κυνεί. ἀλλ' ἡ κίνησις τῆς οὐσίας αὐτῆς καὶ αὐτῆν. ἐνοῦ δὲ καὶ κυνεῖν φασὶ τὴν ψυχὴν τὸ σῶμα ἐν ὧδ' ἐστίν, ὡς αὐτῇ κυνεῖται, ὁδὸν Δημόκριτος, παραπλησίως λέγων Φιλόππῳ τῷ κοιμω- 

§ 9 ἐστιν ὡς κύριος τῆς οὐσίας αὐτῆς καὶ αὐτῆν. ἐνοῦ δὲ καὶ κυνεῖν φασὶ τὴν ψυχήν τὸ σῶμα ἐν ὧδ' ἐστίν, ὡς αὐτῇ κυνεῖται, οἶδον Δημόκριτος, παραπλησίως λέγων Φιλόππῳ τῷ κοιμω- 

§ 10 καὶ κυνεῖν τὸ σῶμα πᾶν. ἡμεῖσ' δ' ἐρωτήσομεν εἰ καὶ ἠρέ- 

§ 11 τὸ ζῶον, ἀλλὰ διὰ προαίρεσιν τούς καὶ νοησίας. τὸν αὐτὸν δὲ τρόπον καὶ οὗ ὅμως 

8. μὴ om. E. 11. αἰσθητικών S. Ald. 12. καὶ αὐτῇ κυνοῖτ' ἄν 

9. συνεφέλκειν συγκρ. Trend. 13. ἐξίσταται (um. dē) SWX. 17. κοιμωδιασκόλων 

TUVWX. 22. ἐρωτήσομεν STUVW. 22. ἢρεμήσεσθαι ποιεῖ τοῦτ' αὐτῷ STUW.
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-
συμφώνουσι φοράς, τήν εὐθυωρίαν εἰς κύκλον κατέκαμψεν·
καὶ διελών ἐκ τοῦ ἐνὸς δύο κύκλους δυσσαχῆ συνημμένους
πάλιν τὸν ἑνα διείλεν εἰς ἐπτὰ κύκλους, ὡς οὐσας τᾶς τοῦ 407α
§ 12 οὐρανοῦ φορᾶς τὰς τῆς ψυχῆς κυνῆσεις. πρῶτον μὲν οὖν οὐ
callος τὸ λέγειν τὴν ψυχὴν μέγεθος εἶναι. τὴν γὰρ τοῦ παυ-
tός δῆλον ὅτι τοιαύτην εἶναι βούλεται οἶον ποτ' ἐστὶν ὁ καλοῦ-
μενος νοῦς· οὐ γὰρ δὴ οἶον γ' ἢ αἰσθητική, οὐδ' οἶον ἡ ἑπιθυμ.
§ 13 μητηκῆ· τοῦτων γὰρ ἡ κύησις οὐ κυκλοφορία. ὁ δὲ νοῦς εἰς
καὶ συνεχῆς, ὁσπερ καὶ ἡ νόησις· ἡ δὲ νόησις τὰ νοη-
ματα· ταῦτα δὲ τῷ ἐφεξῆ ἐν, ὡς ὁ ἀριθμός, ἀλλ' οὐκ ὡς τὸ
μέγεθος. διόπερ οὖδ' ὁ νοῦς οὕτω συνεχῆς, ἀλλ' ἦτοι ἀμερής ἡ
οὐκ ὡς μέγεθος τι συνεχῆς· πῶς γὰρ δὴ καὶ νοησεὶ μέγεθος ὧν;
τὸτερον καθόλου ἡ ὀτροφῶν τῶν μορίων τῶν αὐτῶν; μορίων δ' ἦτοι
cατὰ μέγεθος ἡ κατὰ στυγμήν, εἰ δὲ καὶ τοῦτο μόριον
§ 14 εἰπεῖν. εἰ μὲν οὖν κατὰ στυγμήν, αὐτὰς δ' ἀπειροῦ, δῆλον ὡς
οὐδέποτε διεξεισθεν, εἰ δὲ κατὰ μέγεθος, πολλάκις ἡ ἀπειράκις
νοῆσει τὸ αὐτό. φαίνεται δὲ καὶ ἀπαξ ἐνδεχόμενον. εἰ δ' ἰκα
νὸν θυγεῖν ὀτροφῶν τῶν μορίων, τί δέ κύκλῳ κινεῖσθαι ἡ καὶ
ὅλως μέγεθος ἔχει; εἰ δ' ἀναγκαῖον νοησαι τῷ ὄλῳ κύκλῳ
θυγόντα, τίς ἐστιν ἡ τοὺς μορίους θέξις; ἐτί δὲ πῶς νοῆσει τὸ
μεριστῶν ἀμερεῖ καὶ τὸ ἀμερές μεριστὸ; ἀναγκαῖον δὲ τῶν
νοῶν εἶναι τῶν κύκλων τούτων. νοῦ μὲν γὰρ κύησις νόησις, 20

32. κύκλους δύο Ε. Τορ. 407α 8. ὡς δ' ἀριθμοῖς ὁ om. Trend. 10. μέγ.
ὡς ὀτροφῶν τῶν μορίων Syllb., Bekk. || πόσον καθ' ὄλου θηγῶν ἡ κ.τ.λ. Τορ. 11. τῶν
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 κύκλος δὲ περιφορά. εἰ οὖν ἡ νόησις περιφορά, καὶ νοὺς ἀν εἰη ὁ κύκλος, οὐ ἡ τοιαύτη περιφορά νόησις. ἀεὶ δὲ δὴ τι νοησεῖ. δεῖ γὰρ, εἴπερ αἴδιος ἡ περιφορά. τῶν μὲν γὰρ πρακτικῶν νοῆσεων ἐστὶ πέρατα (πᾶσαι γὰρ ἐτέρου χάριν), αἱ δὲ θεωρητικαὶ τοῖς λόγοις ὁμοίως ὀρίζονται. λόγος δὲ πᾶς ὀρι-25 σμὸς ἡ ἀπόδειξις. αἱ δὲ ἀποδείξεις κἄ ἀρχής, καὶ ἐξουσί πῶς τέλος, τὸν συλλογισμὸν ἡ τὸ συμπέρασμα. εἰ δὲ μὴ περατοῦνται, ἀλλ' οὐκ ἀνάκαμπτοντι γε πάλιν ἐπ' ἀρχήν, προσλαμβάνουσαι δ' ἀεὶ μέσον καὶ ἀκρον εὐθυτοροῦσιν· ἡ δὲ περιφορά πάλιν ἐπ' ἀρχήν ἀνακάμπτει. οἱ δ' ὀρισμοὶ πάν-30
§ 16 τες πεπερασμένοι. ἐτι εἰ ἡ αὐτὴ περιφορὰ πολλάκις, δεη.
§ 17 σει πολλάκις νοεῖν τὸ αὐτό. ἐτι δ' ἡ νόησις ἐοικεν ἡρεμήσει τυί καὶ ἐπιστάσει μᾶλλον ἡ κυνήσει τὸν αὐτὸν δὲ τρόπον § 18 καὶ ὁ συλλογισμός. ἀλλὰ μὴν οὐδὲ μακάριον γε τὸ μὴ βάδιον ἀλλὰ βίαιον· εἰ δ' ἐστίν ἡ κύνησις αὐτῆς μὴ οὐσία, 407§
§ 19 παρὰ φύσιν ἀν κινώτο. ἔπιπονον δὲ καὶ τὸ μεμίχθαι τῷ σώματι μὴ δυνάμενον ἀπολυθῆναι, καὶ προσέτι φευκτὸν, εἴπερ βέλτιον τῷ νῷ μὴ μετὰ σώματος εἶναι, καθάπερ § 20 εἰσῴθε τε λέγεσθαι καὶ πολλοῖς συνδοκεῖ. ἀδῆλος δὲ καὶ τοῦ 5 κύκλῳ φέρεσθαι τὸν οὐρανὸν ἡ αἰτία. οὕτε γὰρ τῆς ψυχῆς ἡ οὐσία αἰτία τοῦ κύκλῳ φέρεσθαι, ἀλλὰ κατὰ συμβεβηκός οὕτω κυνεῖται, οὕτε τὸ σῶμα αἰτίου, ἀλλ' ἡ ψυχὴ μᾶλλον § 21 ἐκεῖνῳ. ἀλλὰ μὴν οὐδ' ὅτι βέλτιον λέγεται· καὶ τοὺς γ' ἔχρην

it follows that reason would be the circle of which such a revolu-
tion constitutes thought. And again the soul will be con-
tinually 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 explana-
tions 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 begin-
ning 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 defini-
tions: 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 consti-
tute 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 inde-
dependent 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 pro-
duces movement in the body. Nor indeed is it asserted that
the soul moves in this manner because it is its better course.
διὰ τοῦτο τὸν θεὸν κύκλῳ ποιεῖν δέρεσθαι τήν ψυχήν, ὅτι τὸ
βέλτιστον αὐτῇ τὸ κινεῖσθαι τοῦ μένειν, κινεῖσθαι δ’ οὕτως ἡ
άλλως. ἐπεὶ δ’ ἐστὶν ἡ τοιαύτη σκέψις ἐτέρων λόγων οἶκειο-
§ 22 τέρα, ταύτην μὲν ἀφόμεν τὸ νῦν. ἐκείνοι δὲ ἄτοπον συμ-
βαίνει καὶ τούτῳ τῷ λόγῳ καὶ τοῖς πλείστοις τῶν περὶ ψυ-
χῆς· συνάπτουσι γὰρ καὶ τιθέασι εἰς σῶμα τήν ψυχήν, οὕ-
θεν προσδιορίσαντες διὰ τίν’ αἰτίαν καὶ πῶς ἔχοντος τοῦ
σώματος. καίτοι δόξειν ἂν τούτ’ ἀναγκαίον εἶναι· διὰ γὰρ τὴν
κοινωνίαν τὸ μὲν ποιεῖ τὸ δὲ πάσχει καὶ τὸ μὲν κινεῖται τὸ
δὲ κινεῖ, τούτων δ’ οὐθέν υπάρχει πρὸς ἄλληλα τοῖς τυχόντων.
§ 23 οἱ δὲ μόνον ἐπιχειροῦσι λέγειν ποιόν τι ἡ ψυχή, περὶ δὲ τοῦ
δεξομένου σώματος οὕθεν ἐτὶ προσδιορίζουσιν, ὥσπερ ἐνδεχό-
μενον κατὰ τοὺς Πυθαγορικοὺς μύθους τὴν τυχόσαν ψυχὴν εἰς
τὸ τυχὸν ἐνδύσεσθαι σῶμα· δοκεῖ γὰρ ἐκαστὸν ἵδιον ἔχειν
εἴδος καὶ μορφήν. παραπλῆσιον δὲ λέγουσιν ὥσπερ εἰ τις
φαίνῃ τὴν τεκτονικὴν εἰς αὐλοῦς ἐνδύσεσθαι· δεῖ γὰρ τὴν μὲν
τέχνην χρησθαι τοῖς ὀργάνοις, τὴν δὲ ψυχὴν τῷ σώματι.
§ 1 ΙV. Καὶ ἄλλῃ δὲ τις δόξα παραδεδόται περὶ ψυχῆς,
πιθανῇ μὲν πολλοῖς οὐδεμιᾶς ἤττον τῶν λεγομένων, λόγους
δ’ ὥσπερ εὐθύνας δεδωκύα καὶ τοῖς ἐν κοινῷ γινομένοις λό-
γοις· ἀρμονίαν γὰρ των αὐτὴν λέγουσι· καὶ γὰρ τὴν ἁρμο-

16. προσδιορίσαντες S. Philop. 18. ποιεῖ τι τὸ STVWX. 24. καὶ]
Philop. 30. αὐτήν τινες L. VW.
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
ΠΕΡΙ ΨΥΧΗΣ Α.

νίαν κράσιν καὶ σύνθεσιν ἐναντίων εἶναι, καὶ τὸ σῶμα συγ-
§ 2 κεῖσθαι ἐξ ἐναντίων. καίτου γε ἢ μὲν ἄρμονία λόγος τίς ἐστὶ
tῶν μιχθέντων ἢ σύνθεσις, τήν δὲ ψυχὴν οὐδέτερον οὖν τ’
§ 3 εἶναι τούτων. ἐτὶ δὲ τὸ κινεῖν οὐκ ἐστὶν ἄρμονίας, ψυχῆ δὲ
§ 4 πάντες ἀπονέμουσι τούτο μάλιστ’ ὡς εἶπεν. ἄρμοζει δὲ μᾶλ-
λον καθ’ ὑγιείας λέγειν ἄρμονίαν, καὶ ὅλως τῶν σωματι-
κῶν ἀρετῶν, ἢ κατὰ ψυχῆς. φανερώτατον δ’ εἰ τις ἀπο-
διδόναι πειραθεῖ τὰ πάθη καὶ τὰ ἔργα τῆς ψυχῆς ἄρμο-
§ 5 νιὰ τυί χαλεπῶν γὰρ ἑφαρμόζειν. ἔτι δ’ εἰ λέγομεν τὴν ἅ-
ἀρμονίαν εἰς δύο ἀποβλέποντες, κυριώτατα μὲν τῶν μεγε-
θῶν ἐν τοῖς ἔχοσθι κίνησιν καὶ θέσιν τὴν σύνθεσιν αὐτῶν, ἐπει-
δάν οὕτω συναρμόζωσιν ὡστε μὴ δὲν συγγενέσ παραδέχεσθαι,
ἐπείθεν δὲ καὶ τῶν μεμιμημένων λόγων, οὐδετέρως μὲν οὖν
ἐὐλογον. ἢ δὲ σύνθεσις τῶν τοῦ σώματος μερῶν λίκαν εὐεξε-
tαστος, πολλάκι τε γὰρ αἱ συνθέσεις τῶν μερῶν καὶ πολλα-
χῶς τίνος οὖν ἢ πῶς ὑπολαβέειν τὸν νοῦν χρῆ σύνθεσιν εἶναι,
§ 6 ἢ καὶ τὸ αἰσθητικόν ἢ ὀρεκτικόν; ὁμοίως δὲ ἀτοποῦ καὶ τὸν
λόγον τῆς μίξεως εἶναι τὴν ψυχῆν. οὐ γὰρ τῶν αὐτῶν ἔχει
λόγον ἢ μίξις τῶν στοιχείων καθ’ ἢν σαρξ καὶ καθ’ ἢν ὀστοῦν. ἢ
συμβησταί οὖν πολλάς τε ψυχὰς ἔχει καὶ κατὰ πᾶν τὸ
σῶμα, ἐπεὶ πάντα μὲν ἐκ τῶν στοιχείων μεμιμημένων, ὦ δὲ
§ 7 τῆς μίξεως λόγος ἄρμονία καὶ ψυχή. ἀπαίτησει δ’ ἂν τις
τούτο γε καὶ παρ’ Ἐμπεδοκλέους. ἐκαστὸν γὰρ αὐτῶν λόγῳ
τυί φησιν εἶναι· πότερον οὖν ὁ λόγος ἐστὶν ἡ ψυχή, ἡ μᾶλ-

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 ἐγχύσεται τοῖς μέλεσιν; ἓτι δὲ πότερον ἡ
φυλία τῆς τυχούσης αἰτία μέξεως ἡ τῆς κατὰ τὸν λόγον; καὶ
αὐτὴ πότερον ὁ λόγος ἐστὶν ἡ παρὰ τὸν λόγον ἐτερόν τι;
§ 8 ταῦτα μὲν οὖν ἔχει τοιαύτα ἀπορίας· εἰ δὲ ἐστὶν ἐτερον ἡ
ψυχὴ τῆς μίξεως, τὶ δὴ ποτὲ ἀμα τῷ σαρκὶ εἶναι ἀναί-
ρεῖται καὶ τῷ τοῖς ἀλλοῖς μορίοις του ἡψουν; πρὸς δὲ τούτοις
ἐπτέρ μὴ ἐκαστον τῶν μορίων ψυχὴν ἔχει, εἰ μὴ ἐστὶν ἡ
ψυχὴ ὁ λόγος τῆς μίξεως, τὶ ἐστὶν δ᾽ φθέρεται τῆς ψυχῆς
§ 9 ἀπολειπούσης; ὅτι μὲν οὖν οὖθ᾽ ἀρμονίαν οἰόν τ ἐς ἐν τῃ
ψυχήν οὕτε κύκλῳ περιφέρεσθαι, δῆλον ἐκ τῶν εἰρημένων.
κατὰ συμβεβηκός δὲ κινεῖσθαι, καθάπερ εἰπομεν, ἐςτὶ καὶ
κινεῖν ἑαυτήν, οἰόν κινεῖσθαι μὲν εἰ ψ' ἐςτί, τούτο δὲ κινεῖσθαι
ὑπὸ τῆς ψυχῆς· ἀλλως δ᾽ οὐχ οἷον τε κινεῖσθαι κατὰ τόπον
§ 10 αὐτήν. εὐλογοῦτερον δ᾽ ἀπορήσειν ἀν τις περὶ αὐτῆς ὡς
κινομεῖν, εἰς τὰ τοιαῦτα ἀποβλέψας. φαμεν γὰρ τὴν ψυ
χήν λυπεῖσθαι χαίρειν, θαρρεῖν φοβεῖσθαι, ἕτι δὲ ὀργί
ζεσθαι τε καὶ αἰσθάνεσθαι καὶ διανοεῖσθαι· ταῦτα δὲ πάντα
κινήσεις εἶναι δοκοῦσιν. ὅθεν οἰδήπερ τις ἂν αὐτὴν κινεῖσθαι.
§ 11 τὸ δ᾽ οὐκ ἐστὶν ἀναγκαῖον. εἰ γὰρ καὶ ὅτι μάλιστα τὸ λυπεί
θαι ἢ χαίρειν ἢ διανοεῖσθαι κινήσεις εἰσὶ, καὶ ἐκαστὸν κι
νεῖσθαι τούτων, τὸ δὲ κινεῖσθαι ἐστὶν ὑπὸ τῆς ψυχῆς, οἷον τὸ
ὀργίζεσθαι ἢ φοβεῖσθαι τῷ τῆς καρδίαν ὡθὶ κινεῖσθαι, τὸ
δὲ διανοεῖσθαι ἢ τοιοῦτον ἱσως ἢ ἐτερὸν τι· (τούτων δὲ συμ-
βαίνει τὰ μὲν κατὰ φορὰν τυχῶν κινομένων, τὰ δὲ κατ᾽
§ 12 ἀλλοιωσιν· ποιὰ δὲ καὶ πῶς, ἐτερὸς ἐστὶ λόγος;) τὸ δὲ λέγειν

TVX. 408b 8. τῷ τῆς κ.] τὸ τ. κ. VBz. || κινεῖσθαι ἡ οἴδειν, τὸ V. 9. τοιοῦτοι] τὸ τοῖτο Be. τῷ τοῦτο Tor. || ἱσως ἢ] ἵσως SV.
something else which is implanted in the members? And fur-
ther 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 out-
side the ratio?

Difficulties then of this kind may be raised upon the sup-
position 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 annhilated
when the flesh and the other parts of the animal organism are
destroyed—and further, if, after giving up the view which re-
gards 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 cir-
cular movement. It may however, as we have said, be moved
and move itself incidentally, so far as that in which it is con-
tained may be moved, and this itself moved by the soul: other-
wise, 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.
ὅργιζεσθαι τὴν ψυχήν ὁμοίου καὶ εἰ τις λέγοι τὴν ψυ-
χήν ύπαινειν ἡ οἰκοδομεῖν· βέλτιον γὰρ ἵσως μὴ λέγεω τὴν
ψυχήν ἑλεεῖν ἡ μουθάνει ἡ διανοεῖσθαι, ἀλλὰ τὸν ἀνθρω-
πον τῇ ψυχῇ· τούτῳ δὲ μὴ ὡς εἰς εἰκώνη τῆς κυνήγεως ὀψης, ἀλλ' ὅτε μὲν μέχρι εἰκώνης, ότε δ' ἀπ' εἰκώνης, οἶον ἡ μὲν
αισθήσεις ἀπὸ των δ', ἡ δ' ἀνάμνησις ἀπ' εἰκώνης ἐπὶ τὰς ἐν
§ 13 τοῖς αἰσθητηρίοις κυνήσεως ἡ μονάς. ὁ δὲ νοῦς ἐοικέν ἐγγύνεσθαι
οὐσία τις οὐσα, καὶ οὐ φθείρεσθαι. μᾶλιστα γὰρ ἐφθείρετ' ἀν
ὑπὸ τῆς ἐν τῷ γῆρα ἀμαυρώσεως' νῦν δ' ἴσως ὁπερ ἐπὶ τῶν αἰσθητηρίων συμβαίνει' εἰ γὰρ λάβοι ὁ πρεσβύτης ὄμμα
tουν, βλέποι ἀν ὥσπερ καὶ ὁ νέος. ὥστε τὸ γῆρας οὐ
tῷ τῆς ψυχῆς τι πεπονθέναι, ἀλλ' ἐν δ', καθάπερ ἐν μέ-
§ 14 θαίς καὶ νόσους· καὶ τὸ νοεῖν δὴ καὶ τὸ θεωρεῖν μαραίνεται
ἀλλοι τινὸς ἐσω φθειρομένου, αὐτὸ δὲ ἀπαθὲς ἑστιν. τὸ δὲ δια-
νοεῖσθαι καὶ φιλεῖν ἡ μισεῖν οὐκ ἑστιν εἰκών πάθη, ἀλλὰ
tουν τοῦ ἐχοντος εἰκών, ἢ εἰκών ἔχειν. διὸ καὶ τούτου φθειρο-
μένου οὐτε μνημονεύει οὐτε φιλεῖν· οὐ γὰρ εἰκών ἄν, ἀλλὰ τοῦ
kοινοῦ, ο ἀπόλωλεν· ο δὲ νοῦς ἴσως θειότερον τι καὶ ἀπαθὲς
§ 15 ἑστιν. ὃτι μὲν οὖν οὐχ οἰόν τε κυνεῖσθαι τὴν ψυχήν, φανερὸν 30
ἐκ τούτων· εἰ δ' ὅλως μὴ κυνεῖται, δὴλον ὡς οὐδ' ύπ' ἑαυτῆς.
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 pitits 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 πολύ δὲ τῶν εἰρημένων ἀλογοτατον τὸ λέγειν ἄριθμον εἶναι τὴν ψυχήν κινοῦνθ' ἐαυτῶν· υπάρχει γὰρ αὐτοῖς ἀδύνατον· πρῶτα μὲν τὰ ἐκ τοῦ κυνείσθαι συμβαίνοντα, ἰδίᾳ δ' ἐκ τοῦ λέγειν αὐτὴν ἄριθμον· πῶς γὰρ χρὴ νοῆσαι μονάδα κινοῦν-409α μένην, καὶ ύπὸ τίνος, καὶ πῶς, ἀμερῆ καὶ ἀδιάφορον οὖν· § 17 σαν; εἰ γὰρ ἐστὶ κωντική καὶ κωντή, διαφέρει δει. έτι δ' ἐπεὶ φασίν κωντείσαν γραμμήν ἐπίπεδον ποιῶν, στιγμὴν δὲ γραμμήν, καὶ αἱ τῶν μονάδων κωντῆσεις γραμμαὶ ἔσονται· § ἡ γὰρ στιγμὴ μονάς ἐστὶ θέσων ἔχουσα· δ' ὁ ἄριθμὸς τῆς § 18 ψυχῆς ἤδη ποὺ ἐστι καὶ θέσων ἔχει. έτι δ' ἄριθμον μὲν εἰν ἀφέλη τις ἄριθμον ἡ μονάδα, λειτεται ἀλλος ἄριθμος· τὰ δὲ φυτὰ καὶ τῶν ζῴων πολλὰ διαφοροῦμενα ζῆ, καὶ δο- § 19 κεὶ τὴν αὐτὴν ψυχὴν ἔχειν τῷ εἰδει. δόξειε δ' ἢν οὐθὲν δια-10 φέρειν μονάδας λέγειν ἡ σωμάτικα μικρά· καὶ γὰρ ἐκ τῶν Δημοκρίτου σφαιρῶν εὰν γένωνται στιγμαί, μόνον δὲ μένῃ τὸ ποσόν, ἐσταὶ τὶ ἐν αὐτῷ τὸ μὲν κινοῦν τὸ δὲ κινοῦμενον, ὦσπερ ἐν τῷ συνεχεί· οὐ γὰρ διὰ τὸ μεγέθει διαφέρειν ἡ μικρότητι συμβαίνει τὸ λειθέν, ἀλλ' ὅτι ποσόν. διὸ ἀναγ-15 καὶν εἶναι τὶ τὸ κυνήσων τὰς μονάδας. εἰ δ' ἐν τῷ ζῷω τὸ κινοῦν ἡ ψυχή· καὶ ἐν τῷ ἄριθμῷ, ὡστε οὖ τὸ κινοῦν καὶ τὸ κινοῦμενον ἡ ψυχή, ἀλλὰ τὸ κινοῦν μόνον. εἰδεχέται δὲ δὴ πῶς μονάδα ταύτην εἶναι; δεὶ γὰρ υπάρχειν τινὰ αὐτὴν § 20 διαφορὰν πρὸς τὰς ἀλλας· στιγμῆς δὲ μοναδικῆς τίς ἃν εἰη20 διαφορὰ πλὴν θέσις; εἰ μὲν οὖν εἰςίν ἔτεραι αἱ ἐν τῷ σώματι μονάδες καὶ αἱ στιγμαί, 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 re-
sulting 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 some-
where and possesses a certain position, it follows that the move-
ments 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 dif-
ferent 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 quan-
tity alone remain, still there will be in this as in everything con-
tinuous, 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
καθέξιε γὰρ χώραν στιγμῆς. καίτοι τί κωλύει ἐν τῷ αὐτῷ εἶναι, εἰ δύο, καὶ ἀπείρους; ὅν γὰρ ὁ τόπος ἀδιαίρετος, § 21 καὶ αὐτά. εἰ δὲ αἱ ἐν τῷ σώματι στιγμαί ἀριθμὸς ὁ τῆς ψυχῆς, ἦ εἰ δὲ ἐκ τῶν ἐν τῷ σώματι στιγμῶν ἀριθμὸς ἡ ψυχή, διὰ τὸ ὁπλήστη ψυχήν ἔχουσι τὰ σώματα; στιγμαί § 22 γὰρ ἐν ἀπασι δοκοῦσιν εἶναι καὶ ἀπειρο. ἔτι δὲ πῶς οἶδοι τε χωρίζονται τὰς ψυχὰς καὶ ἀπολύονται τῶν σωμάτων, εἰ γε μὴ διαιροῦνται αἱ γραμμαὶ εἰς στιγμὰς; § 1 V. Συμβαίνει δὲ, καθάπερ εἴπομεν, τῇ μὲν ταὐτὸ λέγειν τοῖς σώμα τι λεπτομερές αὐτήν τιθεῖσι, τῇ δὲ ὀσπερ Δημόκριτος κινεῖσθαι φησιν ὑπὸ τῆς ψυχῆς, ἵδιον τὸ ἄτοπον. εἴπερ γὰρ ἕστων ἡ ψυχή ἐν παντὶ τῷ αἰσθανομένῳ σώματι, ἀναγκαῖον ἐν τῷ αὐτῷ δύο εἶναι σώματα, εἰ σώμα τι ἡ ψυχή· τοῖς δὲ ἀριθμοῖς λέγουσιν, ἐν τῇ μιᾷ στιγμῇ πολλάς στιγμὰς ἢ πάν σώμα ψυχῆν ἔχειν; εἰ μὴ διαφέρσῃ τις ἀριθμὸς ἐγγύνεται καὶ ἀλλος τις τῶν ὑπαρχοῦσιν ἐν τῷ σώματι στιγμῶν. συμβαίνει τε κινεῖσθαι τὸ τῶν ὑπὸ τοῦ ἀριθμοῦ, καθάπερ καὶ Δημόκριτον ἔφαμεν αὐτὸ κινεῖν, τί γὰρ διαφέρει σφαίρας λέγειν σμικρὰς ἢ μονάδας μεγάλας, ἢ ὅλως μονάδας φερομένας; ἀμφότερος γὰρ ἄναγ. § 2 τῷ σώματι στιγμῶν. συμβαίνει τε κινεῖσθαι τὸ τῶν ὑπὸ τοῦ ἀριθμοῦ, καθάπερ καὶ Δημόκριτον ἔφαμεν αὐτὸ κινεῖν, τί γὰρ διαφέρει σφαίρας λέγειν σμικρὰς ἢ μονάδας μεγάλας, ἢ ὅλως μονάδας φερομένας; ἀμφότερος γὰρ ἄναγ. § 3 καὶ συμβαίνει τὸ τῶν τῷ κινεῖσθαι ταῦτας. τοῖς δὲ συμπλέ-ξασιν εἰς τὸ αὐτὸ κίνησιν καὶ ἀριθμῶν ταῦτας τε συμβαίνει καὶ πολλὰ ἐτερα τοιαῦτα· οὐ γὰρ μόνον ὀρισμὸν ψυχῆς ἀδύνατον τοιοῦτον εἶναι, ἀλλὰ καὶ συμβεβηκός. δὴν 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
ΠΕΡΙ ΨΥΧΗΣ Α.

tis epitheirhsein ek tou logou toutou ta paidi kai ta erga. 15
tis psichis apodidounai, oin logosmouis, aiosthisieis, hdonas,
lypas, osa alla toinata. Osper gar eipomev proteron,
§ 4 oudei manteusasthai raxion e' auton. triou de tropyw para-
dedomenon kath ois orizountai tis psichis, ois mev to kynhti-
kotaton apefhnanta twi kwein eauto, ois de sowa to leiw-
tomerostaton h to astroamatata ton allon. taute de
 Tinai aporia te kai wpeunantioses echei, dieklythamev
§ 5 schedon. leiptetai de' episkexasbhai pous legetai to ek
tw stoucheion autin eina. legounai mev gar, iv aiosthanita te
twn ontwn kai ekastoun gnwrizei, anagkaiw de simebainwv
polla kai adynata twl logw. tithentei gar gnwrizein tis
omois to omioin, osper av ei tin psichin ta pragmata
tidynes. ois esti de moua taute, polla de kai etera,
§ 6 mallon de' isos apeira ton arithmon to ek touton. eis oin
mew ouin estin ekastou touton, estou gnwseis twn psichwn kai
aiosthanestei. alla to sunolov tis gnwrisei h aiosthsetai,
oin to theos h anvhrwpos h sarkh h ostou; omoiw de kai
ostion allo twn sunveteon ov gar appostoiw exouta ta stou-
checia touton ekaston, alla logw twn kai sunvetei, kathapere
phosi kai Empeodokles to ostou.

h de xwron epipros en eusternous xoanosiw

tw duo touton oktow merewon laxe nystidos aylhwn,

tesapara de' Hfaiostou. ta de' ostea leu' egenvoto.

oudein ouin ofelos einai ta stoucheia en tis psichis, ei mi kai oi
logoi enesountai kai hen sunvethes. gnwriei gar ekaston to
omoion, to de' ostoun h ton anvhrwpon outhein, ei mi kai taui

18. mantevzdai STUVW. 24. aiosthai TW. 31. twn. 5
ou—ou de' WX. 410a 1. alla ostwv Tor. Bekk. E. ostwv allo STUVWX.
leukaphevno ETVW Tor. 7. eviewei E. Tor.
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 imagina-
tion to conjecture from it what would be their character.

Thus then we have gone through the difficulties and objec-
tions 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

The object of this conception of the soul is, say its sup-
porters, to explain how it can perceive the objects of existence
and gain knowledge of each individual thing. A number of im-
possibilities, however, necessarily follow on this doctrine. It
assumes, to begin with, that like is known by like, thus iden-
tifying, 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 un-
limited 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 ad-
justment, 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,
§ 7 καὶ περὶ τῶν ἄλλων. ἔτι δὲ πολλαχῶς λεγομένου τοῦ ὅντος (σημαίνει γὰρ τὸ μέν τὸ δὲ τὸ μὴ τῶν διαιρεθεὶσῶν κατηγοριῶν) πότερον ἐξ ἀπάντησειν εἰ ἔνεστον ἐν τῇ ψυχῇ λίθος ἢ ἀνθρωπός; ὅμως δὲ καὶ τὸ ἀγαθὸν καὶ τὸ μὴ ἀγαθὸν. τῶν αὐτῶν δὲ τρόπουν τῶν ἄλλων ἔτι δὲ πολλαχῶς λεγομένου τοῦ ὅντος (σημαίνει γὰρ τὸ μὲν τὸ δὲ ποσὸν ἢ ποιῶν ἢ καὶ τῶν ἄλλων τῶν διαιρεθεὶσῶν κατηγοριῶν) πότερον ἐξ ἀπάντησειν εἰ ἔνεστον τῶν ἐστιν ἡ ψυχή ἡ οὐ; ἀλλ' οὗ δοκεῖ κοινὰ πάντων εἶναι στοιχεῖα. ἃρ' οὖν ἃ τῶν οὐσιῶν ἐκ τούτων μόνων; τῶς οὖν γνώσκει καὶ τῶν ἄλλων ἐκαστοῦν; ἡ φήσουσιν ἐκάστου γένους εἶναι στοιχεία καὶ ἀρχάς ἰδίαις, ἐξ ὧν τὴν ψυχήν συνεστάναι; ἐσται ἀρα ποσὸν καὶ ποιῶν καὶ οὐσία. ἀλλ' ἀδύνατον ἐκ τῶν τοῦ ποσοῦ στοιχείων οὐσίαν εἶναι καὶ μὴ ποσόν. τοῖς δὲ λέγονσιν ἐκ πάντων ταύτα τε καὶ τοιαῦτα ἑτέρα συμβαίνει.

§ 8 ἀτοπον δὲ καὶ τὸ φάναι μὲν ἀπαθείς εἶναι τὸ ὀμοίον ὑπὸ τοῦ ὀμοίου, αἰσθάνεσθαι δὲ τὸ ὀμοίον τοῦ ὀμοίου καὶ γνώσκειν τῷ ὀμοίῳ τὸ ὀμοίον. τὸ δ' αἰσθάνεσθαι πάσχειν τι καὶ κινεῖται τιθέασιν ὁμοίως δὲ καὶ τὸ νοεῖν τε καὶ γνώσκειν.

§ 9 πολλάς δὲ ἀπορίας καὶ δυσχερείας ἔχοντος τοῦ λέγειν, καθάπερ Ἐμπεδοκλῆς, ὡς τοῖς σωματικοῖς στοιχείοις ἐκαστά γνωρίζεται καὶ πρὸς τὸ ὀμοίον, μαρτυρεῖ τὸ νῦν λεχθέν· ὃς γὰρ ἔνεστον ἐν τοῖς τῶν ζῴων σώμασιν ἀπλῶς γῆς, οἶνος ὀστᾶ νεῦρα τρίχες, οὐθενός αἰσθάνεσθαι δοκεῖ, ὅστ' οὐδὲ τῶν ἑκάστην τῶν ἀρχῶν ἄγνοια.

17. μόνων STUXV. 20. ἀλλ' ἀδύνατον...καὶ μὴ ποσὸν ant6 ἔται—οὐσία Trend. 29. πρὸς τὸ ὀμοίον] τῷ ὀμοίῳ τῷ ὀμοίῳ Tor. || λεχθέν] λεχθῆσθειςον Τ 30. ἐστιν 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
πλείων ἢ σύνεσις ύπάρξει: γνώστεται μὲν γὰρ ἐν ἐκαστον, πολλὰ δὲ ἀγνοήσει πάντα γὰρ τάλλα. συμβαίνει δ’ Ἐμπεδοκλεῖ γε καὶ ἀφρονεστατον εἶναι τὸν θεόν· μόνος γὰρ τῶν ἰσοτιχεῖων ἐν οὐ γνωριεῖ, τὸ νείκος, τὰ δὲ θυτή πάντα· ἐκ § 11 πάντων γὰρ ἐκαστον. ὅλως τε διὰ τῶν αἰτίων οὐχ ἀπαντα ὑπενθύμισε τὰ ὄντα, ἐπειδὴ πάν ἡ στοιχείων ἡ ἐκ στοιχείων ἐνός ἡ πλειόνων ἡ πάντων; ἀναγκαῖον γὰρ ἐστιν ἐν τι γεν
§ 12 νάσκειν ἡ τινὰ ἡ πάντα. ἀπορήσειε δ’ ἂν τις καὶ τί ποτ’ ἐστὶ τὸ ἑνοποιοῦν αὐτά· ὕλη γὰρ ἐοικέ τὰ γε στοιχεῖα, κυριώτατον δ’ ἐκεῖνό τὸ συνέχον ὡ τί ποτ’ ἐστίν’ τῆς δὲ ψυχῆς εἶναι τὶ κρείττον καὶ ἀρχὸν ἀδύνατον· ἀδυνατῶτερον δ’ ἔτε τοῦ νοῦ· εὐλογοῦν γὰρ τούτον εἶναι προγενεστἀτον καὶ κύριον κατὰ φύσιν· τὰ δὲ στοιχεῖα φασὶ πρῶτα τῶν ὄντων εἶναι.
§ 13 πάντες δὲ καὶ οἱ διὰ τὸ γνωρίζειν καὶ αἰσθάνεσθαι τὰ ὄντα τὴν ψυχῆν ἐκ τῶν στοιχείων λέγουτε αὐτὴν· καὶ οἱ τὸ κυνητικώτατον, οὐ περὶ πάσης λέγουσι ψυχῆς. οὔτε γὰρ τὰ αἰσθανόμενα πάντα κυνητικά· φαίνεται γὰρ εἶναι τινὰ μόνον τῶν ζωῆς κατὰ τόπον. καίτοι δοκεῖ γε ταύτῃ μόνῃ τῶν κυνητικών κυνηῖν ἡ ψυχή τὸ ζῶν. ὁμοίως δὲ καὶ ὅσιοι τῶν νοῶν καὶ τὸ αἰσθητικὸν ἐκ τῶν στοιχείων ποιοῦσιν· φαίνεται γὰρ τὰ τε φυτὰ ζῆν οὐ μετέχοντα φόραις οὔτε αἰσθητεῖσως, § 14 καὶ τῶν ζωῶν πολλὰ διάνοιαν οὐκ ἐξεῖν. εἰ δὲ τις καὶ ταῦτα

3. πλεόν SUVWXγ. 6. γνωρίζει E. Tor. 8. ἡ στ.] ἦτοι στ. Tor. 12. δ’ pr. E. Tor., γὰρ ceteri. 18. ἀπάντης SUVWXγ.
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

4—2
παραχωρήσεις, καὶ θείη τὸν νοῦν μέρος τι τῆς ψυχῆς, ὁμοίως δὲ καὶ τὸ αἰσθητικόν, ὦν δὲ ἀν οὕτω λέγοιεν καθόλου περί
§ 15 πάσης ψυχῆς οὐδὲ περὶ ὅλης μιᾶς. τοῦτο δὲ πέπονθε καὶ ὁ ἐν τοῖς Ὄρθοκοις ἔπεσε καλομένους λόγος· φησὶ γὰρ τὴν ψυχὴν ἐκ τοῦ ὅλου εἰσίναι ἀναπνεοῦντων, φερομένην ὑπὸ τῶν ἀνέμων. οὐχ οἶον τε δὴ τοῖς φυτοῖς τοῦτο συμβαίνειν οὐδὲ τῶν ζῴων ἐνίοτο, εἴπερ μὴ πάντα ἀναπνέουσιν. τοῦτο δὲ 411α
§ 16 λέηθε τούς οὔτως ὑπειληφότας. εἰ δὲ δεῖ τὴν ψυχὴν ἐκ τῶν στοιχείων ποιεῖν, οὐθὲν δὲν δεῖ εἶ ἀπάντων· ἰκανὸν γὰρ ἑτέρων μέρος τῆς ἐναντίωσεως ἐαυτὸ τε κρίνει καὶ τὸ ἀντικείμενον. καὶ γὰρ τῷ εὐθείᾳ καὶ αὐτὸ καὶ τὸ καμπύλου γινώσκομεν 5 κριτής γὰρ ἀμφότερον ὁ κανῶν, τὸ δὲ καμπύλου οὐθ' ἐστιν
§ 17 οὕτε τοῦ εὐθείας. καὶ ἐν τῷ ὅλῳ δὲ τινὲς αὐτὴν μεμιχθαὶ φασιν, ὦθεν ὦσος καὶ Θαλῆς φύθη πάντα πλήρη θεῶν εἶναι.
§ 18 τοῦτο δὲ ἔχει τινὰς ἀπορίας· διὰ τίνα γὰρ αἰτίαν ἐν μὲν τῷ ἀέρι ἢ τῷ πυρὶ οὕσα ἡ ψυχὴ οὐ ποιεῖ ζῷον, ἐν δὲ τοῖς μν- 10
§ 19 κτοῖς, καὶ ταύτα βελτίων ἐν τούτοις εἶναι δοκοῦσα· (ἐπιζητήσει γὰρ ἀν τις καὶ διὰ τίνα αἰτίαν ἢ ἐν τῷ ἀέρι ψυχῆ τῆς
§ 20 ἐν τοῖς ζῴοις βελτίων ἑστὶ καὶ ἀθαναστέρα.) συμβαίνει δ' ἀμφότερως ἀτόπον καὶ παράλογον· καὶ γὰρ τὸ λέγειν ζῷον τὸ πῦρ ἢ τὸν ἀέρα τῶν παραλογιστέρων ἑστὶ, καὶ τὸ 15
§ 21 μὴ λέγειν ζῷα ψυχῆς ἐνούσης ἀτόπον. ὑπολαβεῖν δ' ἐοίκασιν εἶναι τὴν ψυχὴν ἐν τούτοις, ὅτι τὸ ὅλον τοὺς μορίους ὀμοιεῖ. ὁπέτ' ἀναγκαῖον αὐτοῖς λέγειν καὶ τὴν ψυχὴν ὀμοιοίδο τοῖς μορίοις εἶναι, εἰ τῷ ἀπολαμβάνεσθαι τι τοῦ περιέχοντος ἐν τοῖς ζῴοις ἐμψυχα τὰ ζῷα γίνεται. εἰ δ' ὁ μὲν ἀρχί διασπῶ- 20

26. καθόλου omit. TUV. Tor. 27. odoi μᾶς ETUVW Trendl., odoi peri μᾶς SX. 15. παράλογον SUX. 19. ἀπολαμβάνειν STUW.
27. odoi μᾶς ETUVW Trendl., odoi peri μᾶς SX. 411a 2. eiter Bekk. Tor. 12. γὰρ] ἕ' pr. E, δ' WX.
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 ὅμοιοί, ἡ δὲ ψυχὴ ἀνομοιομερής, τὸ μὲν τι αὐτῆς ὑπάρξει δήλων ὡτι, τὸ δ' οὖχ ὑπάρξει. ἀναγκαῖον οὖν αὐτῆς ἡ ὀμοιομερὴ εἶναι ἡ μὴ ἐνυπάρχειν ἐν ὅτι ὁ μορίῳ τοῦ παν-§ 22 τοῦ. φανερὸν οὖν ἐκ τῶν εἰρημένων ὡς οὖτε τὸ γνωσκεῖν ὑπάρ-χει τῇ ψυχῇ διὰ τὸ ἐκ τῶν στοιχείων εἶναι, οὔτε τὸ κινεῖ—25
§ 23 σθαί αὐτῆς καλῶς οὖδ' ἀληθῶς λέγεται. ἐπεὶ δὲ τὸ γνω-σκεῖν τῆς ψυχῆς ἐστὶ καὶ τὸ αἰσθάνεσθαι τε καὶ τὸ δοξά-ζειν, ἐτι δὲ τὸ ἐπιθυμεῖν καὶ βουλέσθαι καὶ ὅλως αἱ ὀρέξεις, γίνεται δὲ καὶ ἡ κατὰ τόπον κίνησις τοῖς ζῶσις ὑπὸ τῆς ψυχῆς, ἐτι δ' αὐξή τε καὶ ἀκμὴ καὶ φθίσις, πότερον ὅλη 30 τῇ ψυχῇ τούτων ἐκαστον ὑπάρχει; καὶ πάση νοοῦμεν τε καὶ 411α ἀισθανόμεθα καὶ τῶν ἄλλων ἐκαστον ποιοῦμεν τε καὶ πάσχο-μεν, ἡ μορίῳς ἔτερους ἑτερα; καὶ τὸ ἐξῆν δὴ πότερον ἐν τοῖς τούτων ἐστὶν ἐν ἡ καὶ ἐν πλεῖστον ἡ πάσχω, ἡ καὶ ἄλλο τι
§ 24 αἴτιον; λέγουσι δὴ τινες μεριστὴν αὐτῆς, καὶ ἄλλω μὲν 5 νοεῖν ἄλλῳ δὲ ἐπιθυμεῖν. τι οὖν δὴ ποτε συνέχει τῆν ψυχήν, εἰ μεριστὴ πέφυκεν; οὗ γὰρ δὴ τὸ γε σώμα. δοκεῖ γὰρ τού-
ναυτίον μᾶλλον ἡ ψυχὴ τὸ σώμα συνέχειν ἐξελθοῦσης γοῦν διαπνεύται καὶ σήτεται. εἰ οὖν έτερον τι μίαν αὐτῆν ποιεῖ, ἐκεῖνο μάλιστ' ἄν εἰς ψυχήν. δεησε δὲ καὶ πάλιν κάκειν ιο
ζητεῖν, πότερον ἐν ἡ πολυμερές. εἰ μὲν γὰρ ἐν, διὰ τι οὐκ εὐθέως καὶ ἡ ψυχὴ ἐν; εἰ δὲ μεριστὸν, πάλιν ὁ λόγος ζη-
tήσει τι τὸ συνέχον ἐκεῖνο, καὶ οὔτω δὴ πρόεισην ἐπι τὸ
§ 25 ἀπειρον. ἀπορήσειε δ' ἀν τις καὶ περι τῶν μορίων αὐτῆς, τίν' ἔχει δύναμιν ἐκαστὸν ἐν τῷ σώματι. εἰ γὰρ η δὴ ψυχή 15
πάν τὸ σῶμα συνέχει, προσηκεὶ καὶ τῶν μορίων

28. δὲ καὶ τὸ SUWX || βουλεύεσθαι TUVWXy. 30. αἰέθης STUVWX.
411α 2. αἰεθ. καὶ κινοεύομαι καὶ EVW Tor. 6. ἄλλω] ἄλλῳ 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
€καστόν συνέχειν τι τού σώματος. τούτο δ’ έοικεν αδυνάτως τούς γάρ μόριου ἢ πώς ὁ νοῦς συνέξει, χαλεπῶς καὶ πλά-

§ 26 σαί. φαίνεται δὲ καὶ τὰ φυτὰ διαρρούμενα θην καὶ τῶν θῶν ἐνεὰ τῶν ἐντόμων, ὡς τὴν αὐτὴν έχοντα ψυχήν τῷ ἐτέει, εἰ καὶ μὴ ἄριθμῷ· ἐκάτερον γούν τῶν μορίων αἰσθησιν έχει καὶ κωεῖται κατὰ τόπουν ἐπὶ τινα χρόνον. εἰ δὲ μὴ διατελόων, οὐθέν ἄτοπον· ὀργανα γὰρ οὐκ έχουσιν ὡστε σω-

ζειν τὴν φύσιν. ἀλλ’ οὐδὲν ήττον ἐν ἐκατέρῳ τῶν μορίων ἀπαντ’ ἐνυπάρχει τὰ μόρια τῆς ψυχῆς, καὶ ομοειδῆ εἰσίν 25 ἀλλήλοις καὶ τῇ ὀλη, ἀλλήλων μὲν ὡς οὐ χωριστὰ ὄντα, § 27 τῆς δ’ ὀλης ψυχῆς ὡς διαφερήσ οὐσις. έοικε δὲ καὶ ἢ ἐν τοῖς φυτοῖς ἀρχή ψυχῆς τις εἶναι· μόνης γὰρ ταύτης κοινωνεῖ καὶ ζῶα καὶ φυτά. καὶ αὐτῆ μὲν χωρίζεται τῆς αἰσθητικῆς ἀρχῆς, αἰσθησιν δ’ οὐθέν ἀνευ ταύτης έχει.
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.
§ 1 Τά μὲν δή ὑπὸ τῶν πρῶτερον παραδεδομένα περὶ ψυχῆς εἰρήνηθω, πάλιν δὲ ὡσπερ ἕξ ὑπαρχῆς ἐπανίστημεν, πειρώμενοι διορίσατι τί ἐστιν ψυχή καὶ τίς ἂν εἶναι κοινότατος § 2 λόγος αὐτῆς. λέγομεν δὴ γένος ἐν τι τῶν ὄντων τῆς οὐσίας, ταύτης δὲ τὸ μὲν ὡς ὑλή, δὲ καθ’ αὐτὸ μὲν οὖκ ἐστὶν τὸ δὲ τι, ἄτερον δὲ μορφήν καὶ εἶδος, καθ’ ἂν ἂν λέγεται τὸ τι, καὶ τρίτον τὸ ἐκ τούτων. ἐστὶ δ’ ἢ μὲν ὡς δύναμις, τὸ δ’ εἶδος ἐντελέχεια, (καὶ τούτῳ διὰ χάριν, τὸ μὲν ὡς ἐπιστήμη, § 3 τὸ δ’ ὡς τὸ θεωρεῖν). οὐσία δὲ μάλιστ’ εἶναι δοκοῦσι τὰ σώματα, καὶ τούτων τὰ φυσικά: ταύτα γὰρ τῶν ἄλλων ἀρχαὶ. τῶν δὲ φυσικῶν τὰ μὲν ἔχει ζωῆν, τὰ δ’ οὐκ ἔχειν. ζωῆν δὲ λέγομεν τὴν δὲ αὐτοῦ τροφῆν τε καὶ αὐξήσεως καὶ φθίσεως. ὥστε πάν σῶμα φυσικὸν μετέχουν ζωῆς οὐσία ἂν

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, firstly, 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 εἶθ, οὐσία δ' οὗτος ὡς συνθέτη. ἔπει δ' ἐστὶ σῶμα καὶ τοιοῦτος, ζωὴν γὰρ ἔχον, οὐκ ἂν εἶ ὑπὸ σῶμα ψυχῆ; οὐ γὰρ ἐστὶ τῶν καθ' ὑποκειμένου τὸ σῶμα, μᾶλλον δ' ὡς ὑποκειμένου καὶ ὑλή. ἀναγκαίον ἄρα τὴν ψυχὴν οὐσίαν εἶναι ὡς εἴδος σώματος φυσικοῦ δυνάμει ζωῆν ἔχοντος. 20 ἡ δ' οὐσία ἐντελέχεια. τοιοῦτον ἄρα σώματος ἐντελέχεια. 5 χεια. αὐτή δὲ λέγεται διχῶς, ἡ μὲν ὡς ἐπιστήμη, ἡ δ' ὡς τὸ θεωρεῖν. φανερὸν οὖν ὅτι ὡς ἐπιστήμη· ἐν γὰρ τῷ ὑπάρχειν τὴν ψυχὴν καὶ ὑπνος καὶ ἐγρήγορος ἢστιν, ἀνάλογον δ' ἡ μὲν ἐγρήγορος τῷ θεωρεῖν, ὃ δ' ὑπνος τῷ ἐχειν καὶ μη ἐνεργεῖν. προτέρα δὲ τῇ γενέσει ἐπὶ τοῦ αὐτοῦ ἡ ἐπιστήμη. διὸ ψυχῇ ἐστὶν ἐντελέχεια ἡ πρώτῃ σώματος

§ 6 φυσικοῦ δυνάμει ζωῆν ἔχοντος. τοιοῦτο δὲ, ὃ ἂν ἢ ὀργανικόν. ὀργανά δὲ καὶ τὰ τῶν φυτῶν μέρη, ἀλλὰ παντελῶς ἀπλά, οἶον τὸ φύλλον περικαρπίου σκέπασμα, τὸ δὲ περικάρπιον καρποῦ. αἱ δὲ ρίζαι τῷ στόματι ἀνάλογον· ἀμφοῦ γὰρ ἐλκεῖ τὴν τροφήν. εἰ δὴ τι κοινὸν ἐπὶ πᾶσης ψυχῆς δεῖ λέγειν, εἰ ἂν ἐντελέχεια ἡ πρώτῃ σώματος φυσικοῦ

§ 7 ὀργανικοῦ. διὸ καὶ οὐ δεῖ ζητεῖν εἰ ἐν ἡ ψυχῇ καὶ τὸ σῶμα, ὥσπερ οὖδὲ τῶν θηρῶν καὶ τὸ σχήμα, οὖδ' ὡς τῆς ἐκάστου ὑλῆς καὶ τὸ οὐ ὑλή· τὸ γὰρ ἐν καὶ τὸ εἶναι ἐπεὶ πλεον...
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 χῶς λέγεται, τὸ κυρίως ἡ ἐντελέχεια ἔστιν. καθόλου μὲν οὖν εἰρηται τι ἐστιν ἡ ψυχή· οὐσία γὰρ ἡ κατὰ τὸν λόγον. τούτῳ δὲ τὸ τί ἦν εἶναι τῷ τουφί σώματι, καθάπερ εἶ τι τῶν ὑπάρχων κυστικῶν ἡ σῶμα, οὗτος πέλεκος· ἦν μὲν γὰρ ἂν τὸ πελέκει εἶναι ἡ οὐσία αὐτοῦ, καὶ ἡ ψυχή τούτος· χωρισθείσης γὰρ ταύτης οὐκ ἂν ἐτί πελέκεις ἦν, ἀλλὰ ἡ ὦμωνύμως. νῦν δὲ ἐστὶ πέλεκος· οὐ γὰρ τοιοῦτον σώματος τὸ τί ἦν εἶναι καὶ ὁ λόγος ἡ ψυχή, ἀλλὰ φυσικὸν τουφί ἐχον·

§ 9 τοσο ἀρχὴν κυνήσεως καὶ στάσεως ἐν ἑαυτῷ. θεωρεῖν δὲ καὶ ἐπὶ τῶν μερῶν δεῖ τὸ λεχθέν. εἶ γὰρ ἦν ὁ ὄφθαλμος ἡ φων, ψυχὴ ἄν ἦν αὐτὸς ἡ ὄψις· αὐτὴ γὰρ οὐσία ὄφθαλμος ἡ κατὰ τὸν λόγον. οὗτος ὑπάρχως ἡ φων, πλὴν ὦμωνύμως, καθάπερ ὁ λίθως καὶ ὁ γεγραμμένος. δεῖ δὴ λαβεῖν τὸ ἐπὶ μέρους ἐφ’ ὅλου τοῦ ζωντος σώματος· ἀνάλογον γὰρ ἔχει ὡς τὸ μέρος πρὸς τὸ μέρος, οὕτως ἡ ὦλη αἰσθητικὸς πρὸς τὸ ὄλου

§ 10 σῶμα τὸ αἰσθητικὸν, ἢ τοιοῦτον. ἐστὶ δὲ οὐ τὸ ἀποβεβληκὸς 25 τὴν ψυχὴν τὸ δυνάμει ἄν ὡστε ζην, ἀλλὰ τὸ ἐχον. τὸ δὲ

§ 11 στέρμα καὶ ὁ καρπὸς τὸ δυνάμει τουφί σῶμα. ὡς μὲν οὖν ἡ τρήσις καὶ ἡ ὀρασις, οὕτω καὶ ἡ ἐγγυργορις ἐντελέχεια, ὡς δ’ ἡ ὄψις καὶ ἡ δύναμις τοῦ ὑπάρχον, ἡ ψυχή 413a τὸ δὲ σῶμα τὸ δυνάμει ὡν· ἀλλ’ ὁστερ ὁ ὄφθαλμος ἡ κόρη καὶ ἡ ὄψις, κακεῖ ἡ ψυχή καὶ τὸ σῶμα τὸ ἔστων.

9. Λέγεται om. SUWX. 15. coni. Tor. εἰν δ’ εὖχ ἔστιν. 20. coni. Tor. ὁ δ’ ἀφόθ. τὸ σύνα|ν, ἢ δὲ κώρη ὑπη ὄψεως. || ἀπολογισθης TVW. Trend. 21. ἔστιν] ἐν EX, αὐτῆς’ Tor. 24. οὕτως om. UVWX. 413a 2. ὁ om. ESV. Tor. 3. ἔστιν ἀντι γρων 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.
ΠΕΡΙ ΨΥΧΗΣ Β.

§ 12 ὅτι μὲν οὖν οὐκ ἔστιν ἡ ψυχὴ χωριστὴ τοῦ σώματος, ἡ μέρη τινὰ αὐτῆς, εἰ μεριστὴ πέφυκεν, οὐκ ἀδηλοῦ ἐνώπιον γὰρ ἡ ἐντελέχεια τῶν μερῶν ἔστιν αὐτῶν· οὐ μὴν ἀλλ᾽ ἐνιά γε οὐθὲν κωλύει, διὰ τὸ μηθενὸς εἶναι σώματος ἐντελεχείας.

§ 13 ἔτι δὲ ἁδηλοῦ εἰ οὕτως ἐντελέχεια τοῦ σώματος ἡ ψυχὴ ὀσπερ πλωτήρ πλοῖου. τύπῳ μὲν οὖν ταύτῃ διωρίσθω καὶ ὑπογεγράφθω περὶ ψυχῆς.

Π. "Επεὶ δὲ ἐκ τῶν ἁσαφῶν μὲν φανερωτέρων δὲ γίγνεται τὸ σαφὲς καὶ κατὰ τὸν λόγον γνωριμώτερον, περαιτέρως πάλιν οὖτως ἐπελθεῖν περὶ αὐτῆς· οὐ γὰρ μόνον τὸ ὅτι δεῖ τὸν ὀριστικὸν λόγον δηλοῦν, ὀσπερ οἱ πλείστοι τῶν ὁρῶν λέγουσιν, ἀλλὰ καὶ τὴν αἰτίαν ἐνυπάρχει καὶ ἐμφαίνει σθαί. νῦν δὲ ὀσπερ συμπεράσμαθ᾽ οἱ λόγοι τῶν ὁρῶν εἰς τίνι οὖν τί ἐστιν τετραγωνισμός; τὸ ἵσον ἐτερομήκει ὁρθογώνων εἶναι ἰσόπλευρον. ὁ δὲ τοιούτος ὁρος λόγος τοῦ συμπεράσματος. ὁ δὲ λέγων ὅτι ἐστίν ὁ τετραγωνισμὸς μέσης εὑρεσίς,

§ 2 τοῦ πράγματος λέγει τὸ αἰτίον. λέγομεν οὖν ἀρχὴν λαβόντες τῆς σκέψεως, διωρίσθαι τὸ ἐμφύσχον τοῦ ἀψύχου τῷ ζην. πλεοναχῶς δὲ τοῦ ζῆν λεγομένου, κἂν ἐν τοῖς ἐνυπάρχῃ μόνον, ζῆν αὐτὸ φαμεν, οἶον νοῦς, αἰσθησις, κίνησις καὶ στάσις ἡ κατὰ τόπον, ἐτι κίνησις ἡ κατὰ τρο-§ 3 φίλην καὶ φθίνων τε καὶ αὔξησιν. διὸ καὶ τὰ φύσιμα πάντα δοκεῖ ζῆν· φαίνεται γὰρ ἐν αὐτοῖς ἔχοντα δύναμιν

17. ἐστὶν ὁ τετρ. ESTUX. 18. Λόγος om. ETV. 20. Λέγωμεν TW. 21. σκέψεως ἐσκέψεως τοῦ πράγματος SUXW. 25. φθίσις 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
καὶ ἀρχὴν τουαύτην, δὲ ἦσα αὐξησίν τε καὶ φθίσων λαμβάνουσι κατὰ τοὺς ἐναντίους τόπους· οὐ γὰρ ἄνω μὲν αὐξη- 
ται κάτω δ᾽ οὐ, ἀλλὰ ὡμοίως ἐπ᾽ ἀμφω καὶ πάντοσε ἐκ-
τρέφεται καὶ ζῆι διὰ τέλους, ἐως ἀν δύνηται λαμβάνειν 30
§ 4 τρόφην· χωρίζεσθαι δὲ τοῦτο μὲν τῶν ἄλλων δυνατῶν, τὰ
δ᾽ ἀλλα τοῦτον ἀδύνατον ἐν τοῖς θυητοῖς. φανερὸν δ᾽ ἐπὶ
tῶν φυομένων· οὐδεμια γὰρ αὐτοὶς ὑπάρχει δύναμις ἄλλῃ
ψυχῆς. τὸ μὲν οὖν ζῆι διὰ τὴν ἀρχὴν ταύτην ὑπάρχει τοῖς 413h
ζῶσι, τὸ δὲ ζῶον διὰ τὴν αἰσθησιν πρῶτως· καὶ γὰρ τὰ
μὴ κινούμενα μηδ' ἀλλάττοντα τόπον, ἑχουντα δ' αἰσθησιν
§ 5 ζῶα λέγομεν καὶ οὐ ζῆν μόνον. αἰσθησίως δὲ πρῶτον ὑπάρ-
χει πάνω ἀφή. ἃσπερ δὲ τὸ θρεπτικὸν δύνατα χωρίζει-
σθαι τῆς ἀφῆς καὶ πάσης αἰσθησίως, οὔτως ἡ ἀφή τῶν
ἄλλων αἰσθησιῶν· θρεπτικὸν δὲ λέγομεν τὸ τοιοῦτον μόριον
tῆς ψυχῆς οὐ καὶ τὰ φυτὰ μετέχει· τὰ δὲ ζῶα πάντα
φαίνεται τὴν ἀπτικὴν αἰσθησιν ἑχουτα· δὲ ἦν δ' αἰτίαν
§ 6 ἐκάτερον τούτων συμβέβηκεν, ὑστερον ἐροῦμεν. τὸν δ᾽ ἐπὶ τοιούτων εἰρήνως μόνον, ὅτι ἐστὶν ἡ ψυχή τῶν εἰρημένων τοῦ-
tων ἀρχή καὶ τοῦτος ὀρισται, θρεπτικῷ, αἰσθητικῷ, διανοη-
§ 7 τικῷ, κινήσει. πότερον δὲ τοῦτων ἐκαστὸν ἐστὶ ψυχή ἢ μόριον
ψυχῆς, καὶ εἰ μόριον, πότερον οὔτως ὡστ' εἶναι χωριστὸν
λόγῳ μόνον ἢ καὶ τόπῳ, περὶ μὲν τῶν τούτων οὐ χαλεπῶν 15
§ 8 ἱδεῖν, ἐνα δὲ ἀπορίαν ἔχει. ἃσπερ γὰρ ἐπὶ τῶν φυτῶν ἐνα
διαφοροῦμενα φαίνεται ζῶντα καὶ χωριζόμενα ἀπ' ἀλλήλων,
ὡς οὖσας τῆς ἐν τούτων ψυχῆς ἐντελεχεία μὲν μᾶς ἐν ἐκάστῳ
φυτῷ, δυνάμει δὲ πλεούνων, οὔτως ὀρῶμεν καὶ περὶ ἔτερας
διαφορὰς τῆς ψυχῆς συμβαίνου ἐπὶ τῶν ἐντόμων ἐν τοῖς 20
διατεμνομένωι· καὶ γὰρ αἰσθησιν ἐκάτερον τῶν μερῶν ἔχει

29. πάντωσε καὶ τρέφεται Trend. Tor. Bekk. πάντη ἐκτρέφεται τε καὶ SUX, 
pάντη ἐσά καὶ τρέφεται τε καὶ ET. 413h 8. φιόμενα ETVW Tor. 15. τοῦτον 
on. SUWX. 18. αὐτοῖς SUVX.
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 ὅρεξιν· ὅπως μὲν γὰρ αἰσθησις, καὶ λύπῃ τε καὶ ἡδονῇ, § 9 ὅπου δὲ ταῦτα, ἔξ ἀνάγκης καὶ ἑπιθυμία. περὶ δὲ τοῦ νοῦ καὶ τῆς θεωρητικῆς δυνάμεως οὐδέν τω φανερών, ἀλλὰ ἐοικε ἡ ψυχῆς γένος ἐτερον εἶναι, καὶ τούτῳ μόνον ἐνδέχεται χωρίς
§ 10 ἑσθαι, καθάπερ τὸ ἀδίδων τοῦ φθαρτοῦ. τὰ δὲ λοιπὰ μóρια τῆς ψυχῆς φανερών ἐκ τοῦτων ὅτι οὐκ ἔστι χωριστά, καθάπερ τινὲς φασίν· τὸ δὲ λόγῳ ὅτι ἐτερα, φανερῶν· αἰσθητικῶ γάρ εἶναι καὶ δοξαστικῶ ἐτερον, εἶπερ καὶ τὸ αἰσθάνεσθαι τοῦ δοξάζειν. ὁμοίως δὲ καὶ τῶν ἄλλων ἔκαστον τῶν εἰρημέ-
§ 11 νων. ἦτι δ' ἐνώς μὲν τῶν ζῷων ἀπανθ' ὑπάρχει ταῦτα, τυσὶ δὲ των τοῦτων, ἐτέρους δὲ ἐν μόνον. τούτῳ δὲ ποιεῖ δια-
ϕοράν τῶν ζῷων· διὰ τίνα δ' αἰτίαν, ὑστερον ἐπισκεπτέον. παραπλήσιον δὲ καὶ περὶ τὰς αἰσθήσεις συμβεβηκεν· τά μὲν γὰρ ἔχει πάσας, τὰ δὲ τινάς, τὰ δὲ μίαν τὴν ἀναγ-
§ 12 καυστάτην, ἁφην. ἐπεὶ δὲ δ' ζῷων καὶ αἰσθανόμεθα διχῶς λέγεται, καθάπερ δ' ἐπιστάμεθα, λέγομεν δὲ τὸ μὲν ἑπι-
στήμην τὸ δὲ ψυχῆν· ἐκατέρω γὰρ τοῦτων φαμέν ἐπιστα-
σθαι· ὁμοίως δὲ καὶ δ' ὑγιαίνουμεν, τὸ μὲν ὑγιεῖα, τὸ δὲ μορίῳ τυλυνόμενον τοῦ σώματος ἡ καὶ ὅλως τοῦ τοῦτων δὲ ἡ μὲν ἑπιστήμην τε καὶ ὑγίεια μορφὴ καὶ εἶδος τι καὶ λόγος καὶ οἶον ἐνερ-
γειᾳ τοῦ δεκτικοῦ, ἡ μὲν τοῦ ἑπιστημονικοῦ, ἡ δὲ τοῦ ὑγιαστι-

the power of local movement, and if sensation, then also in addition imagination and desire: for where sense is present, 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 afterwards. 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 determining 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 ἡ τῶν ποιητικῶν ὑπάρχειν ἐνέργεια), ἡ ψυχή δὲ τοῦτο ὃ ξώμεν καὶ αἰσθανόμεθα καὶ διανοούμεθα πράττως· ὡστε λόγος τις ἄν εἰη § 13 καὶ εἴδος, ἀλλ' οὐχ ὑλή καὶ τὸ ὑποκείμενον. τριχῶς γὰρ λεγομένης τῆς οὐσίας, καθάπερ εἰπομεν, ὅν τὸ μὲν εἴδος, τὸ δὲ ὑλή, τὸ δὲ εἴς ἀμφοῖν τοῦτων δ' ἡ μὲν ὑλή δύναμις, τὸ δὲ εἴδος ἐντελέχεια· ἐπεὶ δὲ τὸ εἴς ἀμφοῖν ἐμφυχον, οὐ τὸ σῶμα ἐστιν ἐντελέχεια ψυχῆς, ἀλλ' αὕτη σώματος τινος. καὶ διὰ τοῦτο καλῶς ὑπολαμβάνουσιν οἷς δοκεῖ μὴν ἄνευ σώματος εἶναι μήτε σῶμα τι ἡ ψυχή· σῶμα μὲν γὰρ οὐκ ἔστι, σώματος δὲ τι, καὶ διὰ τοῦτο ἐν σώματι ὑπάρχει, καὶ ἐν σώματι τοιούτῳ, καὶ οὐχ ὡςπερ οἱ προτεροθεν εἰς σῶμα ἐνήρμοζον αὐτήν, οὔθεν προσδιορίζοντες ἐν τίνι καὶ ποίως, καίτερ οὐδὲ φαινομένον τοῦ τυχόντος δέχεσθαι τὸ § 14 νοσ. καὶ διὰ τοῦτο καλῶς ὑπολαμβάνουσιν οἷς δοκεῖ μὴν ἄνευ σώματος εἶναι μήτε σῶμα τι ἡ ψυχή· σῶμα μὲν γὰρ οὐκ ἔστι, σώματος δὲ τι, καὶ διὰ τοῦτο ἐν σώματι ὑπάρχει, καὶ ἐν σώματι τοιούτῳ, καὶ οὐχ ὡςπερ οἱ προτεροθεν εἰς σῶμα ἐνήρμοζον αὐτήν, οὔθεν προσδιορίζοντες ἐν τίνι καὶ ποίως, καίτερ οὐδὲ φαινομένον τοῦ τυχόντος δέχεσθαι τὸ § 15 τυχόν. οὔτω δὲ γίνεται καὶ κατὰ λόγον· ἐκάστου γὰρ ἡ ἐντε- λέσεια ἐν τῷ δυνάμει ὑπάρχοντι καὶ τῇ οἰκείᾳ ὑλῇ πέφυκεν ἐγγίνεσθαι. ὅτι μὲν οὖν ἐντελέχεια τις ἐστὶ καὶ λόγος τοῦ δυνάμειν ἔχοντος εἶναι τοιοῦτον, φανερὸν ἐκ τοῦτων.

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.
ΠΕΡΙ ΨΤΧΗΣ Β.

§ 1. III. Τών δὲ δυνάμεων τῆς ψυχῆς αἱ λεκθείσαι τοῖς μὲν ύπάρχουσι πάσαι, καθάπερ εἴπομεν, τοῖς δὲ τωὺς αὐτῶν, 30 ἐνίοις δὲ μία μόνη. Δυνάμεις δὲ εἴπομεν θρησκευόμενοι, αἰσθητικοὶ, όρεξιν ἐκ τοῦ τοῦτον μόνον, ἐτέρους δὲ τούτοις ταῦτα καὶ τοὺς αἰσθητικοὺς. εἰ δὲ τοὶ αἰσθητικοὶ, καὶ τὸ 414 φησιν. Όρεξιν μὲν γὰρ ἐπιθυμία καὶ θυμὸς καὶ συμπνήμα, τὰ δὲ θύμα πάντα ἔχουσι μίαν γε τῶν αἰσθητικῶν, τῆν ἀφήν. δὲ αἰσθητικοὶ ύπάρχειν, τούτῳ ἡ δύο τῇ καὶ λύπη καὶ τῷ θρῆνι καὶ λυπηρόν, οἷς δὲ ταύτα, καὶ ἡ ἐπιθυμία. τοῦ 5 γαρ ἠδονὴς ορεξίς αὐτή. εἰτε δὲ τῆς τροφῆς αἰσθητικῶν ἐξουσίων, τῆς τροφῆς αἰσθητικῶν ἐξουσίων, ἐπειδὴ γὰρ καὶ ύγρός καὶ θερμὸς καὶ ψυχρός, τούτων δὲ αἰσθητικῶν αἵθης, τοῖς δ' ἄλλως αἰσθητικῶς κατὰ συμπνήματος· οὔθεν γὰρ εἰς τροφὴν συμβάλλεται ψόφος οὐδὲ χρώμα, εἰδή δ' ἡ δ' ὅπως ἐν τῷ τῶν ἀπτῶν ἐστιν. πεῖνα δὲ καὶ δίψα ἐπιθυμία, καὶ ἡ μὲν πεῖνα ἐξουσία καὶ θερμοῦ, ἡ δὲ δίψα ψυχροῦ καὶ ύγροῦ, ὅ δ' ἐκ τούτων ἐστιν. διασαφητέον δὲ περὶ αὐτῶν ὡστερον, νῦν δὲ ἐπὶ τοσοῦτον εἰρήσθω, ὅτι τῶν ζῴων τοῖς ἐχουσίς ἀφήν καὶ ορεξίς υπάρχει. 15 § 4 χεί. περὶ δὲ φαντασίας ἀδήλου, ὡστερον δὲ ἐπισκέπτετον. ἐνίοις δὲ πρὸς τούτοις ύπάρχει καὶ τὸ κατὰ τόπον κυνηγικών, ἐτέρους δὲ καὶ τὸ διανοητικόν καὶ νοῦς, οἷον ἀνθρώποι καὶ

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 τοιοῦτον ἐτερῶν ἐστιν ἢ καὶ τμιωτέρον. δὴ λόγον ὁμὸν ὅτι τὸν αὐτὸν τρόπον εἰς ἂν εἰη λόγος ψυχῆς τε καὶ σχῆματος. 20 οὔτε γὰρ ἐκεῖ σχῆμα παρὰ τὸ τρίγωνον ἐστι καὶ τὰ ἐφεξῆς, οὔτε ἐνταῦθα ψυχῆ παρὰ τὰς εἰρημένας. γένοιτο δὲ ἃν καὶ ἐπὶ τῶν σχημάτων λόγος κοινός, ὃς ἐφαρμόσει μὲν πᾶσιν, ἰδίος δὲ οὐδενὸς ἐσται σχῆματος. ὡμοίως δὲ καὶ ἐπὶ ταῖς εἰρημέναις ψυχαῖς. διὸ γελοIoν ζητεῖ τὸν κοινὸν λόγον καὶ 25 ἐπὶ τούτων καὶ ἐφ’ ἐτέρων, ὃς οὐδενὸς ἐσται τῶν ὄντων ἰδίος λόγος, οὐδὲ κατά τὸ οἰκεῖον καὶ ἄτομον εἶδος, ἀφεῖνας τὸν § 6 τοιοῦτον. παραπλησίως δ’ ἔχει τῷ περὶ τῶν σχημάτων καὶ τὰ κατὰ ψυχήν: ἄει γὰρ ἐν τῷ ἐφεξῆς ὑπάρχει δυνάμει τὸ πρότερον ἐπὶ τε τῶν σχημάτων καὶ ἐπὶ τῶν ἐμψύχων, 30 οἷον ἐν τετραγώνω μὲν τρίγωνων, ἐν αἰσθητικῷ δὲ τὸ θρεπτικόν. ὥστε καθ’ ἐκαστον ζητητέον, τὸς ἐκάστου ψυχή, οἶον τίς § 7 φυτοῦ καὶ τίς ἀνθρώπου ἡ θηρίου. διὰ τίνα δ’ αἰτίαν τῷ ἐφεξῆς οὕτως ἔχουσι, σκεπτέον. ἀνευ μὲν γὰρ τοῦ θρεπτικοῦ τὸ αἰσθητικὸν οὐκ ἐστιν· τοῦ δ’ αἰσθητικοῦ χωρίζεται τὸ θρεπτικόν ἐν τοῖς φυτοῖς. πάλιν δ’ ἄνευ μὲν τοῦ ἀπτικοῦ τῶν ἄλλων αἰσθήσεων οὐδεμία ὑπάρχει, ἀφ’ δ’ ἄνευ τῶν ἄλλων ὑπάρχει: πολλὰ γὰρ τῶν ἐφών οὕτ’ ὤψιν οὕτ’ ἀκοὴν ἔχουσιν 5 οὕτ’ ὀσμῆς αἰσθησίων. καὶ τῶν αἰσθητικῶν δὲ τὰ μὲν ἔχει τὸ κατὰ τόπων κυνητικόν, τὰ δ’ οὐκ ἔχει· τελευταίον δὲ καὶ ἐλάχιστον λογισμὸν καὶ διάνοιαν ὁς μὲν γὰρ ὑπάρχει λογισμὸς τῶν φθαρτῶν, τούτως καὶ τὰ λοιπὰ πάντα, ὁς δ’ ἐκείνων ἐκαστον, οὐ πάσι λογισμὸς, ἀλλὰ τοῖς μὲν 10

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 θεωρη-
τικοῦ νοῦ ἐτερος λόγος. ὅτι μὲν οὖν ὁ περὶ τούτων ἐκαστον
λόγος οὗτος οἰκειότατος καὶ περὶ ψυχῆς, δῆλον.

§ 1. Αναγκαῖον δὲ τοῖς μέλλονται περὶ τούτων σκέψιν ποιεῖ-
σθαι λαβεῖν ἐκαστὸν αὐτῶν τί ἐστιν, εἴδ' οὔτως περὶ τῶν ἔχο-
μένων καὶ περὶ τῶν ἀλλῶν ἐπιζητεῖν. εἰ δὲ χρὴ λέγειν τί ἐκα-
στὸν αὐτῶν, οἷον τί τὸ νοητικὸν ἢ τὸ αἰσθητικὸν ἢ τὸ θρητι-
κόν, πρότερον ἔτι λεκτέον τί τὸ νοεῖ καὶ τί τὸ αἰσθάνεσθαι. πρό-
τεραι γάρ εἰσί τῶν δυνάμεων ἐνέργειαι καὶ αἱ πράξεις κατὰ
tὸν λόγον. εἰ δ' οὗτωσ, τούτων δ' ἐτι πρότερα τὰ ἀντικείμενα. δὲ
τεθεωρηκέναι, περὶ ἑκείων πρῶτον ἃν δεόν διορίσαι διὰ τὴν

§ 2. αὐτὴν αἰτίαιν, οἷον περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ. ὡστε πρῶτον περὶ τροφῆς καὶ γεννήσεως λεκτέον· ἡ γὰρ θρητικὴ
ψυχή καὶ τοῖς ἀλλοις ὑπάρχει, καὶ πρώτη καὶ κοινοτάτη
dυνάμεις ἐστὶν ψυχῆς, καθ' ἣν ὑπάρχει τὸ ζῷον ἀπασιν. ἢς ἑστὼν
ἔργα γεννήσαι καὶ τροφῆ χρῆσθαι. φυσικῶτατον γὰρ τῶν
ἐργῶν τοῖς ζῴων, ὥσα τέλεια καὶ μὴ πηροματα, ἡ τῆν γένε-
σιν αὐτομάτην ἔχει, τὸ ποιησάται ἐτερον οἶον αὐτὸ, ζῷον μὲν
ζῷον, φυτὸν δὲ φυτὸν, ἵνα τοῦ ἀεὶ καὶ τοῦ θείου μετέχοισιν ἢ
δύνανται· πάντα γὰρ ἑκείνου ὀρέγεται, κάκεινον ἑνεκα πράττει.

11. ταύτη μόνην SUX. 15. τί ἐστιν om. SUX. 16. ἢ καὶ SUX Trend.
19. πρότερα E Ald. Sylb., πρότερον STUVWX. 26. χρῆσασθαι STUVX
Trend., χρῆσαι Bek. Tor. 28. αὐτόματων SUX.
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
ΠΕΡΙ ΨΤΧΗΣ Β.

§ 3 ἀλλ' οἶνον αὐτὸ, ἀριθμῷ μὲν οὐχ ἔν, εἰδει δ' ἔν. ἔστι δὲ ἡ ψυχή τοῦ ζῶντος σώματος αἰτία καὶ ἀρχή. ταύτα δὲ πολλαχῶς λέγεται. ὕμοιως δ' ἡ ψυχή κατὰ τοὺς διωρισμένους τρόπους τρεῖς αἰτία· καὶ γὰρ ὅθεν ἡ κίνησις αὐτή, καὶ οὐδὲν ἔνεκα, καὶ οὐς ἡ οὐσία, τῶν ἐμψυχῶν σωμάτων ἡ ψυχή

§ 4 αἰτία. ὅτι μὲν οὖν ὡς οὐσία, δὴλον· τὸ γὰρ αἰτίον τοῦ εἶναι πᾶσιν ἡ οὐσία, τὸ δὲ ζῷν τοῖς ζῷσι τὸ εἶναι ἐστὶν, αἰτία δὲ καὶ ἀρχὴ τούτων ἡ ψυχή· ἐτι τοῦ δυνάμει ὄντος λόγος ἡ

§ 5 ἐντελέχεια. φανερῶν δ' ὡς καὶ οὐ ἐνεκεν ἡ ψυχή αἰτία· ὥσπερ γὰρ ὁ νοῦς ἐνεκά τοῦ ποιεῖ, τὸν αὐτὸν τρόπον καὶ ἡ φύσις, καὶ τούτ' ἐστιν αὐτή τέλος. τοιοῦτον δ' ἐν τοῖς ἱδίως ἡ ψυχή κατὰ φύσιν· πάντα γὰρ τὰ φυσικὰ σώματα τῆς ψυχῆς ὁργανά, καὶ καθάπερ τὰ τῶν ἱδίων, οὔτω καὶ τὰ τῶν φυτῶν, ὡς ἐνεκα τῆς ψυχῆς ὄντα. διυττὼς δὲ τὸ οὐδὲν καὶ τὸ φύσεως εἰσαγαγεῖ τὸν κόσμον εἰς ἀρχήν τῆς ψυχῆς.
it were the same, because, though not one numerically, it continues 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 existence 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 alteration 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 carried in this direction: while their growth upwards is caused by
πῦρ ὡσαύτως. οὔτε γὰρ τὸ ἀνω καὶ κάτω καλῶς λαμβάνει· οὐ γὰρ ταύτῳ πᾶσι τὸ ἄνω καὶ κάτω καὶ τῷ παντὶ, ἀλλὰ ὡς ἡ κεφαλὴ τῶν ζύφων, οὔτως αἱ ρίζαι τῶν φυτῶν, εἰ χρῆ τὰ ὄργανα λέγειν ἐτερα καὶ ταύτᾳ τοῖς ἔργοις. πρὸς δὲ τούτοις τι τὸ συνέχον εἰς τάναντία φερομενα τὸ πῦρ καὶ τὴν γῆν; διασπασθῆσεται γάρ, εἰ μὴ τι ἔσται τὸ κω-
λύσον· εἰ δ' ἔσται, τούτ' ἐστὶν ἡ ψυχή καὶ τὸ αἰτίον τοῦ
§ 8 αὐξάνεσθαι καὶ τρέφεσθαι. δοκεῖ δὲ τισιν ἢ τοῦ πυρὸς φύσις ἀπλῶς αἰτία τῆς τροφῆς καὶ τῆς αὐξήσεως εἶναι· καὶ γὰρ ἀυτὸ φαίνεται μόνον τῶν σωμάτων ἡ τῶν στοιχείων τρεφό-
μενον καὶ αὐξόμενον. διὸ καὶ ἐν τοῖς φυτοῖς καὶ ἐν τοῖς ἥφαις ὑπολάβοι τις ἀν τοῦτο ἐστὶ τὸ ἐργαζόμενον. τὸ δὲ συναίτου μὲν πάς ἐστὶν, οὐ μὴν ἀπλῶς γε αἰτίου, ἀλλὰ 
μᾶλλον ἡ ψυχή· ἡ μὲν γάρ τοῦ πυρὸς αὐξήσεις εἰς ἀπει-
ρον, ἐως ἂν ἢ τὸ καυστών, τῶν δὲ φύσει συνισταμένων πάν-
των ἐστὶ πέρας καὶ λόγους μεγέθους τε καὶ αὐξήσεως· ταῦτα
§ 9 δὲ ψυχῆς, ἀλλ' οὐ πυρὸς, καὶ λόγον μᾶλλον ἡ ύλης. ἐπεὶ 
δ' ἡ αὐτὴ δύναμις τῆς ψυχῆς θρεπτικὴ καὶ γεννητικὴ, περὶ 
τροφῆς ἀναγκαῖον διωρίσθαι πρῶτον· ἀφορίζεται γὰρ πρὸς 
τὸς ἀλλὰς δυνάμεις τῷ ἐργῷ τοῦτῳ. δοκεῖ δ' εἶναι ἡ τροφὴ 
τὸ ἐναντίον τῷ ἐναντίῳ, οὐ πάν δὲ παντὶ, ἀλλ' ὁσα τῶν 
ἐναντίων μη μόνον γένεσιν εἶ ἀλλήλων ἐχουσιν ἀλλὰ καὶ 
αὐξησιν· γίνεται γὰρ πολλὰ εἰς ἀλλήλων, ἀλλ' οὐ πάντα 
ποσά, οἰον ύγίεις ἐκ κάμνουτος. φαίνεται δ' οὐδ' ἐκείνα τῶν 
αὐτῶν τρόπων ἀλλήλους εἶναι τροφή, ἀλλὰ τὸ μὲν υδώρ

416 ζ. καὶ τῷ παντὶ uncis incl. Sus. 7. καλῶς ETX Tor. 11. ἡ 
tῶν στοιχείων uncis incl. Tor. 12. αὐξάνομεν SUVWX. 18. δὲ τῆς ψ.
ET Tor. 24. πάντα om. SUXy, corr. E. 25. ποσά 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.
πυρί τροφή, τὸ δὲ πῦρ οὐ τρέφει τὸ ὑδρ. ἐν μὲν οὖν τοῖς ἀπλοῖς σώμασι ταῦτ' εἶναι δοκεῖ μάλιστα τὸ μὲν § 10 τροφῆ το ὅ ὑδρ. τρεφόμενον. ἀπορίαν δ' ἔχει: φασὶ γὰρ οἱ μὲν τὸ ὁμούν τῷ ὁμοίῳ τρέφεσθαι, καθάπερ καὶ αὐξά- 30 νεσθαι, τοῖς δ' ὥσπερ εἴπομεν τοῦμπαλω δοκεῖ, τὸ ἐναντίον τῷ ἐναντίῳ, ὥς ἀπαθοῦς ὄντος τοῦ ὁμοίου ὑπὸ τοῦ ὁμοίου, τὴν δὲ τροφὴν μεταβάλλει καὶ πέπτεσθαι· ἡ δὲ μετα- βολὴ πάσῳ εἰς τὸ ἀντικείμενον ἡ τὸ μεταξύ. ἐτι πάσχει τι τῇ τροφῆ ὑπὸ τοῦ τρεφομένου, ἀλλ' οὐ τοῦτο ὑπὸ τῆς τρόφης, ὥσπερ οὐδ' ὅ τέκτων ὑπὸ τῆς ὑλῆς, ἀλλ' ὑπ' ἐκεῖ· 416° νου αὐτή· ο ὅ τέκτων μεταβάλλει μόνον εἰς ἐνέργειαν ἐξ § 11 ἀργίας. πότερον δ' ἐστὶν ἡ τροφή τὸ τελευταῖον προσγνώ- μενον ἡ τὸ πρῶτον, ἔχει διαφοράν. εἰ δ' ἀμφω, ἀλλ' ἡ μὲν ἄπεπτος ἡ δὲ πεπεμμένη, ἀμφοτέρως ἀν ἐνδέχοιτο τὴν τροφὴν λέγειν. ἡ μὲν γὰρ ἄπεπτος, τὸ ἐναντίον τῷ ἐναν- τίῳ τρέφεται, ἡ δὲ πεπεμμένη, τὸ ὁμοῖον τῷ ὁμοίῳ. ὡστε φανερὸν ὅτι λέγουσί τινα τρόπον ἀμφότεροι καὶ ὀρθῶς καὶ § 12 οὐκ ὀρθῶς. ἐπεὶ δ' οὐθὲν τρέφεται μὴ μετέχον ἐστὶς, τὸ ἐμ- ψυχόν ἀν εἰς σῶμα τὸ τρεφόμενον, ἡ ἐμψυχόν, ὡστε καὶ 10 § 13 ἡ τροφή πρὸς ἐμψυχόν ἐστι καὶ οὐ κατὰ συμβεβηκός. ἐστι δ' ἐτερον τροφή καὶ αὐξητικῷ εἶναι· ἡ μὲν γὰρ ποσὸν τι τῷ ἐμψυχῷ, αὐξητικὸν, ἡ δὲ τόδε τι καὶ οὐσία, τροφή· σώζει γὰρ τῇ οὔσιαν, καὶ μέχρι τοῦτον ἐστὶν ἐως ἀν καὶ τρέφηται· καὶ γενέσεως ποιητικὸν οὐ τοῦ τρεφομένου, ἀλλ' 15 οἶνον τὸ τρεφόμενον· ἡ γὰρ ἐστὶν αὐτῷ οὐσία, γεννᾷ δ' οὐθὲν αὐτὸ ἐαυτὸ, ἀλλὰ σώζει. ὥστ' ἡ μὲν τοιαύτη τῆς 28. ἄλλων SUX. 32. ὑπὸ τοῦ ὁμοίου om. EW. 416° 3. προσκαρφόμενον Them. 15. γεννήσεως ES. 16. αὐτῷ ἡ οὐσία Trend. Bekk. EL. 17. αὐτὸ om. ETVW.
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-
ψυχής ἀρχὴ δύναμις ἐστὶν οἷα σῶζει τὸ ἔχον αὐτὴν ἣν
tωυτὸν, ἡ δὲ τροφὴ παρασκευάζει ἑνεργεῖν διὸ στερηθεὶ
§ 14 τροφῆς οὐ δύναται εἶναι. ἔπει δ' ἐστὶ τρία, τὸ τρεφόμενον ἃν
καὶ ὧ τρέφεται καὶ τὸ τρέφον, τὸ μὲν τρέφον ἐστὶν ἡ
πρώτη ψυχή, τὸ δὲ τρεφόμενον τὸ ἔχον αὐτὴν σῶμα, ὧ
§ 15 δὲ τρέφεται, ἡ τροφή. ἔπει δὲ ἀπὸ τοῦ τέλους ἀπαντά
προσαγορεύειν δίκαιον, τέλος δὲ τὸ γεννησαί οἶον αὐτῷ,
§ 16 εἰν ἂν ἡ πρώτη ψυχὴ γεννητικὴ οἶον αὐτῷ. ἔστι δὲ ὧ τρέ- 25
φεται διττῶν, ὄσπερ καὶ ὧ κυβερνᾶ, ἡ χεῖρ καὶ τὸ πη-
δάλιον, τὸ μὲν κυνῶν καὶ κυνούμενον, τὸ δὲ κυνών μόνον.
πᾶσαν δ' ἀναγκαίων τροφῆς δύνασθαι πέπτεσθαι, ἐργάζεται
dὲ τὴν πέψιν τὸ θερμὸν: διὸ πᾶν ἐμψυχον ἔχει θερμότητα.
tύπῳ μὲν οὖν ἡ τροφὴ τί ἐστὶν εἰρηταί: διασαφητέον δ' 30
ἔστιν ύστερον περὶ αὐτῆς ἐν τοῖς οἰκείοις λόγοις.

§ 1 V. Διωρισμένων δὲ τούτων λέγωμεν κοινῇ περὶ πάσης
αισθήσεως. ἡ δ' αἰσθήσεις ἐν τῷ κυνείσθαι τε καὶ πάσχειν
συμβαίνειν, καθάπερ εἰρηται: δοκεῖ γὰρ ἀλλοώσις τις εἶ-
nαι. φασὶ δὲ τινες καὶ τὸ ὁμοίον ὑπὸ τοῦ ὁμοίου πάσχειν. 35
tούτο δὲ πώς δυνατῶν ἡ ἀδύνατον, εἰρήκαμεν ἐν τοῖς καθόλουν 41

§ 2 λόγοι περὶ τοῦ ποιεῖν καὶ πάσχειν. ἔχει δ' ἀπορίαν διὰ τὶ

25. γεραντικῶν ESTWX Ald. 27. κυνών μόνον Them. Philop.
33. τε] τι STWX. 37.
scribed it, is a power adapted for preserving that which posses-
sess 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 recog-
nised: \textit{first}, the object nourished; \textit{secondly}, that with which it is
nourished; and \textit{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.

\textbf{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 sub-
ject of the active and the passive processes. It suggests however
καὶ τῶν αἰσθήσεων αὐτῶν οὐ γίνεται αἰσθήσεις, καὶ διὰ τί ἀνευ τῶν ἔξω ὑποδούσων αἰσθήσεων, ἐνόντως πυρὸς καὶ γῆς καὶ τῶν ἀλλών στοιχείων, ὅτι ἐστὶν ἡ αἰσθήσεις καθ' αὐτὰ ἡ τὰ 5 συμβεβηκότα τοῦτος. δῆλον οὖν ὅτι τὸ αἰσθητικὸν οὐκ ἐστὶν ἐνεργεία, ἀλλὰ δυνάμει μόνον. διὸ καθάπερ τὸ καυστὸν οὐ καίεται αὐτὸ καθ' αὐτῷ ἀνευ τοῦ καυστικοῦ· ἵκαιε γὰρ ἢν ἑαυτὸ, καὶ οὖθεν ἐδείκτο τοῦ ἐντελεχεία πυρὸς ὁντος. ἐπειδὴ δὲ τὸ αἰσθάνεσθαι λέγομεν διχῶς (τὸ τε γὰρ δυνάμει ἀκούοι 10 καὶ ὅρων ἀκούει καὶ ὅρων λέγομεν, καὶ τύχῃ καθεδοῦν, καὶ τὸ ἡδὴ ἐνεργοῦν), διχῶς ἢν λέγοιτο καὶ ἡ αἰσθήσεις, ἡ μὲν ὡς δυνάμει, ἡ δὲ ὡς ἐνεργεία. ὀμοίως δὲ καὶ τὸ αἰσθητὸν § 3 τὸ τε δυνάμει ὁν καὶ τὸ ἐνεργεία. πρῶτον μὲν οὖν ὡς τοῦ αὐτοῦ ὁντος τοῦ πᾶσχει καὶ τοῦ κινεῖσθαι καὶ τοῦ ἐνεργεῖν 15 λέγομεν· καὶ γὰρ ἐστὶν ἡ κίνησις ἐνεργεία τις, ἀτελῆς μέντοι, καθάπερ ἐν ἐτέρως εἰρηται. πάντα δὲ πᾶσχει καὶ κινεῖται ὑπὸ τοῦ ποιητικοῦ καὶ ἐνεργεία ὁντος. διὸ ἐστὶ μὲν ὡς ὑπὸ τοῦ ὀμοίου πᾶσχει, ἐστὶ δὲ ὡς ὑπὸ τοῦ ἄνομου, καθάπερ ἐπομεν· πᾶσχει μὲν γὰρ τὸ ἄνομον, πετοῦθος δ' 20 § 4 ὀμοίων ἔστιν. διαιρετέον δὲ καὶ περὶ δυνάμεως καὶ ἐντελε- χειας· νῦν γὰρ ἀπλῶς λέγομεν περὶ αὐτῶν. ἐστὶ μὲν γὰρ ὡς ὁντως ἐπιστήμων τι ὡς ἢν ἐποιμεν ἀνθρωπον ἐπιστήμων, ὡτι ὁ ἀνθρώπος τῶν ἐπιστημονων καὶ ἔχοντων ἐπιστήμην· ἐστὶ δ'
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
ὅς ἦδη λέγομεν ἐπιστήμονα τὸν ἐχοντα τὴν γραμματικήν. ἀλλ' ὁ μὲν ὅτι τὸ γένος τοιούτου καὶ ἡ ὤλη, ὁ δ' ὅτι βουλήθησε δυνατὸς θεωρεῖν, ἀν μὴ τι κωλύσῃ τῶν ἔξωθεν.' ὁ δ' ἦδη θεωρῶν ἐντελεχεία ὡν καὶ κυρίως ἐπιστάμενος τόδε τὸ Α. ἀμφότεροι μὲν οὖν οἱ πρῶτοι κατὰ δύναμιν ἐπιστήμονες, ἀλλ' ὁ μὲν διὰ μαθήσεως ἀλλοιωθεὶς καὶ πολλάκις ἐξ ἐναντίας μεταβαλῶν ἐξεως, ὁ δ' ἐκ τοῦ ἕχεω τὴν αἰσθήσεω ἢ 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 ὁντος ὑπὸ τοῦ ἐντελεχεία ὁντος καὶ ὁμοίου, οὕτως ὡς δύναμις ἐχεῖ πρὸς ἐντελεχεῖαν' θεωρών γὰρ γίνεται τοῦ ἐχον 5 τὴν ἐπιστήμην, ὁπερ ἡ οὐκ ἔστιν ἀλλοιωσθαι (εἰς αὐτὸ γὰρ ἡ ἐπίδοσις καὶ εἰς ἐντελεχειαν) ἡ ἔτερον γένος ἀλλοιωσθεως. διὸ οὐ καλῶς ἐχεὶ λέγειν τὸ φρονοῦν, ὡταν φρονη, ἀλλοιώσθαι, ὡσπερ οὐδὲ τὸν οἰκοδόμον ὡταν οἰκοδομη. τὸ μὲν οὖν εἰς ἐντελεχειαν ἁγον ἐκ δυνάμει ὁντος κατὰ τὸ νοοῦν καὶ ὡταν φρονοῦν οὺ διδασκαλίαν ἀλλ' ἔτερον ἐπωνυμίαν ἐχειν δι' καινον'. τὸ δ' ἐκ δυνάμει ὁντος μανθάνον καὶ λαμβάνον ἐπιστήμην ὑπὸ τοῦ ἐντελεχεία ὁντος καὶ διδασκαλικοῦ ἡτοι οὐδὲ πάσχειν φατέον, ὡσπερ εἰρηται, ἡ δύο τρόπους εἶναι ἀλ-

25. ἐπιστασθαι SX. 28. ὁ δ' ἦδη ἐτίτοι δ' ἦδη θεωρῶν Tor. 30. πρῶτοι unc. incl. Tor. 417 14. ὡσπερ εἴρηται om. SX.
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
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λοιώσεως, τὴν τε ἐπὶ τὰς στερητικὰς διαθέσεις μεταβολὴν 15
§ 6 καὶ τὴν ἐπὶ τὰς ἔξεις καὶ τὴν φύσιν. τοῦ δ' αἰσθητικοῦ ἢ μὲν
πρῶτη μεταβολὴ γίνεται ὑπὸ τοῦ γεννώστος, ὅταν δὲ γεν-
νηθῇ, ἔχει ἡδὴ ὁσπερ ἐπιστήμην καὶ τὸ αἰσθάνεσθαι. καὶ
τὸ κατ' ἐνέργειαν δὲ ὦμοίως λέγεται τῷ θεωρεῖν· διαφέρει
δὲ, ὅτι τοῦ μὲν τὰ ποιητικὰ τῆς ἐνεργείας ἔξωθεν, τὸ ὄρατον 20
καὶ τὸ ἀκούστων, ὦμοίως δὲ καὶ τὰ λοιπὰ τῶν αἰσθητῶν.
αἴτιον δ' ὅτι τῶν καθ' ἐκαστὸν ἢ κατ' ἐνέργειαν αἰσθήσεις, ἢ
δ' ἐπιστήμη τῶν καθόλου· ταύτα δ' ἐν αὐτῇ πώς ἔστι τῇ
ψυχῇ. διὸ νοήσαι μὲν ἐπὶ αὐτῷ, ὁπόταν βούλησαι, αἰσθά-
νεσθαι δ' ὦμκ ἐπ' αὐτῷ· ἀναγκαῖον γὰρ ὑπάρχειν τὸ αἴσθη-
tὸν. ὦμοίως δὲ τούτ' ἔχει καὶ ταῖς ἐπιστήμαις ταῖς τῶν αἰ-
sθητῶν, καὶ διὰ τὴν αὐτὴν αἰτίαν, ὅτι τὰ αἰσθήτα τῶν καθ'
ἐκαστὰ καὶ τῶν ἔξωθεν. ἀλλὰ περὶ μὲν τούτων διασαφῆσαι
§ 7 καὶ ρῶς γένοιτ' ἀν καὶ εἰσαύθης. νῦν δὲ διωρίσθω τοσοῦτον, ὅτι
ὡν ἀπλοῦ ὄντος τοῦ δυνάμει λεγομένου, ἀλλὰ τοῦ μὲν ὡσπερ 30
ἀν εἴποιμεν τῶν παῖδα δύνασθαι στρατηγεῖν, τοῦ δὲ ὡς τῶν ἐν
ηλικία ὄντα, οὔτως ἔχει τὸ αἰσθητικὸν. ἐπεὶ δ' ἀνώνυμος
αὐτῶν ἢ διαφορά, διώρισται δὲ περὶ αὐτῶν ὅτι ἔτερα καὶ 418b
πῶς ἔτερα, χρήσθαι ἀναγκαῖον τῷ πάσχει καὶ ἀλλο-
ούσθαι ὡς κυρίως ὀνόμασιν. τὸ δ' αἰσθητικὸν δυνάμει ἔστιν
ὁιν τὸ αἰσθητῶν ἡδὴ ἐντελεχεία, καθάπερ εἰρηται. πάσχει
μὲν οὖν οὐχ ὦμοιον ὄν, πεποιθὸς δ' ὦμοίωσαι καὶ ἔστιν 5
ὁιν 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. Ῥεκτεόν δὲ καθ’ ἐκάστην αἰσθήσιν περὶ τῶν αἰσθή-
τῶν πρῶτον. λέγεται δὲ τὸ αἰσθητὸν τριχῶς, διὸ δύο μὲν καθ’
αὐτὰ φαμεν αἰσθάνεσθαι, τὸ δὲ ἐν κατὰ συμβεβηκός. τῶν
δὲ δύο τὸ μὲν ἵδιον ἐστὶν ἐκάστης αἰσθήσεως, τὸ δὲ κοινὸν τὸ
πασῶν. λέγω δ’ ἵδιον μὲν δ’ ἐνδέχεται ἐτέρα αἰσθήσει
αἰσθάνεσθαι, καὶ περὶ δ’ ἐνδέχεται ἀπατηθῆναι, οἶνον
ὄψις χρώματος καὶ ἀκοῆ ψόφου καὶ γεύσις χυμοῦ. ἡ δ’
ἀφὴ πλείους μὲν ἔχει διαφοράς· ἀλλ’ ἐκάστη γε κρίνει περὶ
tούτων, καὶ οὐκ ἀπατᾶται ὅτι χρώμα οὐδ’ ὅτι ψόφος.
§ 3 ἀλλὰ τι τὸ κεχρωσμένον ἢ ποῦ, ἢ τί τὸ ψοφοῦν ἢ ποῦ. τὰ
μὲν οὖν τοιαῦτα λέγεται ἵδια ἐκάστον, κοινὰ δὲ κίνησις, ἡρε-
μία, ἀριθμός, σχῆμα, μέγεθος· τὰ γὰρ τοιαῦτα οὐδεμιᾶς
ἐστὶν ἵδια, ἀλλὰ κοινὰ πάσαις· καὶ γὰρ ἀφῇ τε κίνησις
§ 4 ἐστὶν αἰσθητὴ καὶ ὄψει. κατὰ συμβεβηκός δὲ λέγεται αἰ-
θητῶν, οἶνον ei τὸ λευκὸν εἶπ Πιάροις νῦσ· κατὰ συμβε-
βηκός γὰρ τούτο αἰσθάνεται, ὅτι τῷ λευκῷ συμβεβηκε
tοῦτο οὐ αἰσθάνεται. διὸ καὶ οὐδὲν πάσχει ἣ τοιοῦτον ὑπὸ τοῦ
αἰσθητῶν. τῶν δὲ καθ’ αὐτὰ αἰσθητῶν τὰ ἵδια κυρίως ἐστὶν
αἰσθητά, καὶ πρὸς ὅ ὡς οὐσία πέφυκεν ἐκάστης αἰσθήσεως.

418 19. πάσαις om. UX || ἀφῇ τε κίνησις vulg. ἀφῇ κίνησις τις, κιν. τε τι. 20. post ὅψει editi ante Bekk. καθ’ αὐτὰ μὲν οὖν ἐστὶν αἰσθήτα ταύτα. 23. ὃ 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 Daires: 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. ὦ μὲν οὖν ἐστὶν ἡ ὁψις, τοῦτ' ἐστὶν ὀρατόν. ὀρατὸν δ' ἐστὶν χρώμα τε, καὶ ὁ λόγως μὲν ἐστὶν εἰπεῖν, ἀνώνυμον δὲ τυγχάνει ὁν. δὴλον δὲ ἐσται ὁ λέγομεν προελθοῦσι μάλιστα. τὸ γὰρ ὀρατὸν ἐστὶ χρώμα. τούτο δ' ἐστὶ τὸ ἐπὶ τοῦ καθ' αὐτὸ ὀρατοῦ. καθ' αὐτὸ δὲ οὐ τῷ λόγῳ, ἀλλ' ὤτι ἐν τῷ έαντῷ ἔχει τὸ αὐτικόν τοῦ εἶναι ὀρατόν. πάντως χρώμα κινητικόν ἐστι τοῦ κατ' ἐνέργειαν διαφανοῦς, καὶ τοῦτ' ἐστὶν αὐτοῦ

§ 2 ἐστὶν. ἐστὶ δὴ τι διαφανεὶς. διαφανεῖς δὲ λέγω δ' ἐστὶ μὲν ὀρατόν, οὐ καθ' αὐτὸ δὲ ὀρατόν ὡς ἀπλῶς εἰπεῖν, ἀλλὰ δὲ ζ' ἀλλότριον χρώμα. τοιοῦτον δὲ ἐστιν ἁγρ καὶ ὧδωρ καὶ πολλὰ τῶν στερεῶν: όμο ἀγρὶ ὧδωρ οὐδ' ἑ ἁγρ διαφανεῖς, ἀλλ' ὤτι ἐστὶ τις φύσις ὑπάρχουσα ἡ αὐτή ἐν τούτοις ἀμφοτέρους καὶ ἐν τῷ άιδῷ τῷ ἀνω σώματι. φῶς δὲ ἐστιν ἡ τούτου ἐνέργεια τοῦ διαφανοῦς ή διαφανεῖς. δυνάμει δὲ ἐν ὃ τοῦτ' ἐστι, καὶ τὸ 10 σκότος. τὸ δὲ φῶς οἷον χρώμα ἐστὶ τοῦ διαφανοῦς, ὅταν ἡ ἐντελεχεία διαφανείς ύπὸ πυρὸς ἡ τοιοῦτον οἷον τὸ ἀνω σώμα; καὶ γὰρ τοῦτο τι ὑπάρχει ἐν καὶ ταυτών. τὶ μὲν οὖν τὸ διαφανεῖς καὶ τὶ τὸ φῶς, εἰρηται, ὦτι οὔτε πῦρ οὐδ' οἷος σῶμα οὐδ' ἀπορροφή σώματος οὕδενος (εἰ̆ γὰρ ἄν σῶμα τι καὶ 15 οὕτως), ἀλλὰ πυρὸς ἡ τοιοῦτον τινὸς παρουσία ἐν τῷ διαφανείς οὐδὲ γὰρ δυὸ σώματα ἀμα δυνατὸν ἐν τῷ αὐτῷ εἶναι.

28. μᾶλιστα om. SUX. 418b 3. ὀράσαι ETy Tor. 7. στερεῶν οἷον ἰέλασ κράτσιλλος. οἱ T et margo U. 8. τι om. ESTVW Bekk. Trend. 11. ἡ om. E.
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 ἐίναι τῷ σκότει. ἐστὶ δὲ τὸ σκότος στέρησις τῆς τοιαύτης ἔξεσις ἐκ διαφανοῦς, ὡστε δὴ λοι ὃτι καὶ ἡ τούτου παρουσία τὸ φῶς ἐστὶν. καὶ οὐκ ὀρθῶς Ἐμπε- 20 δοκίλης, οὐδὲ εἰ τις ἄλλος οὕτως εἴρηκεν, ὡς φερομένου τοῦ φωτὸς καὶ γιγνομένου ποτὲ μεταξὺ τῆς γῆς καὶ τοῦ περι- ἔχοντος, ἡμᾶς δὲ λαυθάνοντος· τούτῳ γὰρ ἐστὶ καὶ παρὰ τὴν ἐν τῷ λόγῳ ἀληθείαν καὶ παρὰ τὰ φαινόμενα. ἐν μι- κρῷ μὲν γὰρ διαστήματι λάθοι ἀνέπω ἀπὸ ἀνατολῆς δὲ ἑπὶ 25

§ 4 δυσμᾶς τὸ λαυθάνειν μέγα λίαν τὸ αἴτημα. ἐστὶ δὲ χρώ- ματος μὲν δεκτικόν τὸ ἄχρον, ψόφον δὲ τὸ ἄγομον. ἄχρον δὲ ἐστί τὸ διαφανὲς καὶ τὸ ἀόρατον ἡ τὸ μόλις ὀρῶμενον, οἶον δοκεῖ τὸ σκοτεινὸν. τοιοῦτον δὲ τὸ διαφανὲς μὲν, ἀλλ' οὐχ ὅταν ἡ ἐντελεχεία διαφανεῖς, ἀλλ' ὅταν δυ- 30 νάμει, ἡ γὰρ αὐτὴ φύσις ὅτε μὲν σκότος ὅτε δὲ φῶς ἐστίν. οὐ πάντα δὲ ὅρατά ἐν φωτὶ ἐστὶν, ἀλλὰ μοῦν ἐκάστου τὸ ὀικεῖον χρῶμα· ἐνά γὰρ ἐν μὲν τῷ φωτὶ οὐχ ὀρᾶται ἐν δὲ τῷ σκότει ποιεῖ ἀισθησιν, οἶον τὰ πυρώδη φαινόμενα καὶ λάμποντα (ἀνώνυμα δ' ἐστὶ ταῦτα ἐνὶ ὄνοματι), οἶον μύκης, κέρας, κεφαλαὶ ἵχθυων καὶ λεπίδες καὶ ὀψθαλ- 5 μοί· ἀλλ' οὐδενὸς ὀρᾶται τούτων τὸ ὀικεῖον χρῶμα. δὲ ἂν

§ 5 μὲν οὖν αἰτίαν ταῦτα ὀρᾶται, ἄλλος λόγος. νῦν δ' ἑπὶ το- σοῦτον φαινομένον ἐστιν, ὅτι τὸ μὲν ἐν φωτὶ ὀρῶμενον χρῶμα. διὸ καὶ οὐχ ὀρᾶται ἀνευ φωτὸς· τοῦτο γὰρ ἂν αὐτὸ τὸ χρώματι εἶναι τὸ κυνητικὸ εἶναι τοῦ κατ' ἐνέργειαν διαφα- 10 νοῦς· ἡ δ' ἐντελεχεία τοῦ διαφανοῦς φῶς ἐστίν. σημειοῦν δὲ τού- του φαινομένον· ἐάν γὰρ τις θῇ τὸ ἔχον χρῶμα ἐπ' αὐτῆν τὴν ὄψιν, οὖν οὕσα τε· ἀλλὰ τὸ μὲν χρῶμα κινεῖ τὸ δια-
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.
фаνές, οὗν τὸν ἄερα, ὑπὸ τούτον δὲ συνεχοῦς ὅντος κωτία
§ 6 τὸ αἰσθητήριον. οὐ γὰρ καλῶς τοῦτο λέγει Δημόκριτος οἶνος·
μενος, εἰ γένουτο κενὸν τὸ μεταξὺ, ὀρᾶσθαι ἂν ἀκριβῶς καὶ
εἰ μύρμηξ ἐν τῷ ὑπακούει τοῦτο γὰρ ἀδύνατον ἀπὸ τῆς πα-
σχοντος γὰρ τι τοῦ αἰσθητικοῦ γίνεται τὸ ὄραν. ὑπ’ αὐτοῦ
μὲν οὖν τοῦ ὀρωμένου χρώματος ἀδύνατον, λείπεται δὲ ὑπὸ
tοῦ μεταξὺ, ὅστις ἀναγκαῖον τι εἶναι μεταξὺ· κενοῦ δὲ γενο-
§ 7 μένον οὐχ ὅτι ἀκριβῶς, ἀλλ’ ὅλως οὐθὲν ὄφθησεται. δι’ ἣν
μὲν οὖν αἰτίαν τὸ χρώμα ἀναγκαῖον ἐν φωτί ὀρᾶσθαι, εὑρη-
tαι. πῦρ δὲ ἐν ἀμφοῖν ὄραται, καὶ ἐν σκότει καὶ ἐν φωτί,
kαὶ τούτο ἔξ ἀνάγκης· τὸ γὰρ διαφανὲς ὑπὸ τούτον γίνεται
§ 8 διαφανὲς· ὁ δ’ αὐτὸς λόγος καὶ περὶ ψόφου καὶ ὀσμῆς 25
ἐστὶν· οὐθὲν γὰρ αὐτῶν ἀπότομον τοῦ αἰσθητηρίου ποιεῖ τὴν
αἰσθήσιν, ἀλλ’ ὑπὸ μὲν ὀσμῆς καὶ ψόφου τοῦ μεταξὺ κυ-
νείται, ὑπὸ δὲ τούτο τὸν αἰσθητηρίων ἐκάτερον. ὅταν δ’ ἐπ’
αὐτὸ τις ἐπιθῆ τὸ αἰσθητήριον τὸ ψόφουν ἢ τὸ ὄζουν, οὐδεμιὰν
ἀισθήσιν ποιῆσαι. περὶ δὲ ἄφης καὶ γεύσεως ἔχει μὲν ἐν 30
ὄμοιως, οὐ χαίρεται δὲ· δι’ ἦν δ’ αἰτίαν, υἱὸν ἑσται δὴ
§ 9 τὸ δὲ μεταξὸς ψόφου μὲν ἀγρ, ὀσμῆς δ’ ἀνώνυμον· κοινὸν
γὰρ δὴ τι πάθος ἐπ’ ἄερος καὶ ὑδάτος ἐστιν, ὥσπερ τὸ δια-
φανὲς χρώματι, οὔτω τῷ ἔχοντι ὀσμῆν ὃ ἐν ἀμφοτέροις
ὑπάρχει τούτοις· φαίνεται γὰρ καὶ τὰ ἐνυδρα τῶν ζών 35
ἐχεῖν αἰσθησιν ὀσμῆς. ἀλλ’ ὁ μὲν ἄνθρωπος καὶ τῶν πεζῶν 419
ὄσα ἀναπνεῖτο, ἀδύνατε ὀσμᾶσθαι μὴ ἀναπνέουνται. ὃ δ’ αἰτία
καὶ περὶ τούτων υἱὸν ἑσται. οὐν δὲ πρῶτον περὶ
ψόφου καὶ ἀκοῆς διορίσωμεν.

14. δὲι δὴ ETW. 18. αἰσθητηρίου VW. 19. δὴ ETW. 20. ἄναπνεῖ—
μεταξὺ om. SUX. 33. δὴ om. SUVWX. 4194. ἀκοῆς ὀσμῆσεις 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. Ἐστι δὲ διίττος ὁ ψόφος. ὃ μὲν γὰρ ἐνεργειά τις, ὃς δὲ δύναμις: τὰ μὲν γὰρ οὐ φαίμεν ἔχειν ψόφον, οἶνον σπόγγον, ἔρια, τὰ δὲ ἔχειν, οἶνον χαλκὸν καὶ ὅσα στερεά καὶ λεία, ὦτι δύναται ψοφήσαι. τούτῳ δὲ ἐστὶν αὐτοῦ μεταξὺ καὶ τῆς ἀκοῆς.

§ 2 ἐμποιησαι ψόφον ἐνεργείαν. γίνεται δὲ ὁ κατ' ἐνεργείαν ψόφος ἀεὶ τινος πρὸς τι καὶ ἐν τινὶ πληγῇ γάρ ἐστὶν ἡ ποι–ούσα. διὸ καὶ ἀδύνατον εἰνὸς οὖντος γενέσθαι ψόφου· ἔτερον γὰρ τὸ τύπτον καὶ τὸ τυπτόμενον· ὥστε τὸ ψοφοῦν πρὸς τι ψοφεῖ. πληγὴ δ' οὖ γίνεται ἀνευ φορᾶς. ἁπτομέν, οὖ τῶν τυχόντων πληγῆς ὁ ψόφος· οὔθενα γὰρ ποιεῖ ψόφον ἔρια ἢν πληγῇ· ἀλλὰ χαλκὸς καὶ ὅσα λεία καὶ κοῖλα, ὁ μὲν χαλκός, ὅτι λείος· τὰ δὲ κοῖλα τῇ ἀνακλάσει πολλάς ποιεῖ πληγάς μετὰ τὴν πρώτην, ἀδύνατοντος ἐξελθέων τοῦ κυνηγέων. ἔτι ἀκούεται ἐν ἀέρι καὶ ὅδατι, ἀλλ' ἓττον.

§ 3 οὖκ ἐστὶ δὲ ψόφου κύριος ὁ ἀὴρ οὐδὲ τὸ ὑδωρ· ἀλλὰ δεῖ στερεῶν πληγήν γενέσθαι πρὸς ἄλληλα καὶ πρὸς τὸν ἀέρα. τούτῳ δὲ γίνεται, ὅταν ὑπομένῃ πληγεὶς ὁ ἀὴρ καὶ μὴ διαχυθῇ. διὸ ἐὰν ταχέως καὶ σφοδρῶς πληγῇ, ψοφεῖ· δεῖ γὰρ φθάσαι τὴν κύησιν τοῦ ῥαπιζόντος τὴν θρύψιν τοῦ ἀέρος, ἁπτομέν ἀν οἱ σωμάτων ὁ ὀρμαθῶν ψάμμων τύπτοις τις φερόμεν.

§ 4 νον ταχύ. ἦχω δὲ γίνεται, ὅταν ἀπὸ τοῦ ἀέρος εἰνὸς γενομέ- απὸ τοῦ ἀλλῆλον τὸ διερίσκεται καὶ κολύσαν θρυβάνει πάλιν ὁ ἀὴρ ἀπωσθῇ, ἁπτομεν σφαίρα. ἐοικε δὲ ἀεὶ γίνεσθαι ἦχω, ἀλλ' οὖ σαφῆς, ἐπεὶ συμβαίνει γε ἐπὶ τοῦ ψόφου.
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 φωτὸς· καὶ γὰρ τὸ φῶς ἀεὶ ἀνακλάται (οὗδε γὰρ ἄν ἐγίνετο πάντη φῶς, ἀλλὰ σκότος ἐξω τοῦ ἥλιουμμένου), ἀλλ' οὐχ οὕτως ἀνακλάται ὡσπερ ἄφρ' ὑδατος ἤ χαλκοῦ ἢ καὶ των άλλων τῶν λείων, ὡστε σκιάν ποιεῖν, § 5 ἢ τὸ φῶς ὀρίζομεν. τὸ δὲ κενὸν ὀρθῶς λέγεται κύριον τοῦ ἀκούειν. δοκεῖ γὰρ εἶναι κενὸν ὁ ἀήρ, οὕτως δ' ἐστιν ὁ ποιῶν ἀκούειν, ὅταν κυνηθῇ συνεχῇ καὶ εἰς. ἀλλὰ διὰ τὸ ψαθυρὸς 35 εἶναι οὐ γεγονεί, ἀν μὴ λείον ἢ τὸ πληγήν. τότε δὲ εἰς γ' 420α νεται ἀμα διὰ τὸ ἐπίπεδον· ἐν γὰρ τὸ τοῦ λείου ἐπίπεδον. § 6 ψοφητικῶν μὲν οὖν τὸ κυνητικὸν ἕνος ἀέρος συνεχεία μέχρις ἀκοῆς, ἀκοὴ δὲ συμφυής ἀέρι. διὰ δὲ τὸ ἐν ἀέρι εἶναι, κυνουμένου τοῦ ἐξω τὸ εἰσος κυνεί. διόπερ οὐ πάντη τὸ ἔριον ἀκούει, 5 οὗδε πάντη διερχεται ὁ ἀήρ· οὐ γὰρ πάντη ἔχει ἀέρα τὸ κυνηρόμενον μέρος καὶ ἐμψυχον. αὐτὸ μὲν δὴ ἄψωφον ὁ ἀήρ διὰ τὸ εὐθρυπτον· ὅταν δὲ καλυθῇ βρύπτεσθαι, ἡ τούτου κύνησις ψόφος. δ' ἐν τοῖς ὠσὶν ἐγκαταφιδομήτητα πρὸς τὸ ἀκίνητος εἶναι, ὅπως ἀκριβῶς αἰσθάνεται πάσας τὰς δια- 10 φορὰς τῆς κυνῆσεως. διὰ ταύτα δὲ καὶ ἐν ύδατι ἀκούομεν, οτι οὐκ εἰσέρχεται πρὸς αὐτὸν τὸν συμφυή ἀέρα· ἀλλ' οὗδε εἰς τὸ οὐδ' διὰ τὰς ἐλικας. ὅταν δὲ τούτο συμβῆ, οὐκ ἀκούει· οὗδ' ἂν ἡ μὴνηγ' κάμη, ὡσπερ τὸ ἐπὶ τῆς κόρης δέρμα ὅταν κάμη. ἀλλὰ καὶ σημείων 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
§ 7 ἡχεῖν αἰεὶ τὸ οὐς ὠσπερ τὸ κέρας. ἀεὶ γὰρ οἰκείαν τινὰ κινησιν ὁ ἀνὴρ κνεῖται ὁ ἐν τοῖς ὄσων ἀλλὰ ὁ ψόφος ἀλλότριος καὶ οὐκ ἰδίος. καὶ διὰ τούτο φασὶν ἀκούειν τῷ κενῷ καὶ

§ 8 ἀφάλλεσθαι καὶ σείεσθαι. ἀι δὲ διαφορά τῶν ψοφοῦντων ἐν τῷ κατ' ἐνέργειάν ψόφῳ δηλοῦνται ὠσπερ γὰρ ἄνειν φωτὸς οὐχ ὀρᾶται τὰ χρώματα, οὕτως οὐδὲ ἄνεις ὁ ψόφος τὸ ὄξυ καὶ τὸ βαρὺ. ταῦτα δὲ λέγεται κατὰ μεταφορὰν ἀπὸ τῶν ἀπτῶν τῷ μὲν γὰρ ὅξυ κυνεὶ τὴν αἰσθησιν ἐν ὀλίγῳ χρόνῳ ἐπὶ πολὺ, τὸ δὲ βαρὺ ἐν πολλῷ ἐπὶ ὀλίγῳν. οὐ δὴ ταχὺ τὸ ὅξυ, τὸ δὲ βαρὺ βραδὺ, ἀλλὰ γίνεται τοῦ μὲν διὰ τὸ τάχος ἡ κινήσις τουσίας, τοῦ δὲ διὰ βραδυτήτα.

καὶ ἔοικεν ἀνάλογον ἔχειν τῷ περὶ τὴν ἀφήν ὅξει καὶ ἀμβλυών οἰον ὅθεὶ διὰ τὸ κυνεῖν τὸ μὲν ἐν ὀλίγῳ, τὸ δὲ ἐν πολλῷ, ὥστε συμβαίνει τῷ μὲν ταχὺ τῷ δὲ βραδὺ ἐναι. περὶ μὲν οὖν ψόφου

§ 9 ταύτῃ διωρίσθω. ἦ δὲ φωνῇ ψόφος τίς ἐστιν ἐμψυχων τῶν 5 γὰρ ἀψυχῶν 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
φωνεῖν, οὗν αὐλὸς καὶ λύρα καὶ ὀσὰ ἄλλα τῶν ἀφύχων ἀπότασιν ἔχει καὶ μέλος καὶ διάλεκτον' ἐσκε γάρ ὅτι καὶ ἡ φωνὴ ταῦτ' ἔχει. πολλὰ δὲ τῶν ζύφων οὐκ ἔχουσι φωνήν, οὗν τὰ τε ἁναμα καὶ τῶν ἐναίμων ἰχθύεσι· ἀλλ' 10 οἱ λεγόμενοι φωνεῖν, οὗν ἐν τῷ 'Αχελώῳ, ψῳβούσι τοῖς βραγχίοις ἦ των ἔτερῳ τουρωτῷ καὶ τοῦτ' εὐλόγως, εἴπερ § 10 ἀέρος κίνησις τίς ἐστὶν ὁ ψόφος' φωνή δ' ἐστὶ ζύφων ψόφος, καὶ οὐ τῷ τυχόντι μορίῳ. ἀλλ' ἐπεὶ πάν ψοφεῖ τύπτοντός τως καὶ τι καὶ ἐν τοίς, τούτο δ' ἐστὶν ἄρη, εὐλόγως ἀν 15 φωνοῖ ταῦτα μόνα ὁσα δέχεται τὸν ἁέρα. ἦδη γὰρ τῷ ἀναπνεομένῳ καταχρῆται ἡ φύσις ἐπὶ δύο ἔργα, καθάπερ τῇ γυλάττῃ ἐπὶ τε τὴν γεύσιν καὶ τὴν διάλεκτον, ὅν ἡ μὲν γεύσις ἀναγκαίον (διὸ καὶ πλείσωσ υπάρχει), ἡ δ' ἐρμηνεύει ἑνεκα τοῦ εὗ, οὗτο καὶ τῷ πνεύματι πρὸς τε τὴν θερ- 20 μότητα τὴν ἐνότος ὑς ἀναγκαῖον (τὸ δ' αὔτιον ἐν ἔτεροις § 11 εἰρήσεται) καὶ πρὸς τὴν φωνήν, ὅπως ὑπάρχη το εὗ. ὀργάνων δὲ τῇ ἀναπνοῆ ὁ φάρυγξ' οὐ δ' ἑνεκα καὶ τὸ μορίῳ ἐστὶ τούτο, πλεύμων τούτῳ γὰρ τῷ μορίῳ πλείστον ἔχει τὸ θερμὸν τὰ πεζὰ τῶν ἄλλων. δεῖται δὲ τῆς ἀναπνοῆς καὶ 25 ὁ περὶ τὴν καρδίαν τότους πρῶτος. διο ἀναγκαίον εἴσω ἀναπνεομένου εἰσινεύα τὸν ἁέρα. ὅστε η διηγή' τοῦ ἀναπνεομένου ἀέρος ύπὸ τῆς ἐν τούτοις τοῖς μορίοις ψυχῆς πρὸς τὴν καλυμμένην ἀρτηρίαν φωνή ἐστιν. οὐ γὰρ πᾶς ζύφων ψόφος φωνῆ, καθάπερ εἴπομεν (ἔστι γὰρ καὶ τῇ γυλάττῃ ψοφεῖν καὶ 30 ως οἱ βήτποντες), ἀλλά δὲ ντ ψυχικὸν τε ἐναι τὸ τύπτον καὶ μετὰ φαντασία τυώς· σημαντικὸς γὰρ ἦ τις ψόφος ἐστὶν ἡ φωνή, καὶ οὐ τοῦ ἀναπνεομένου ἀέρος, ὀσπερ ἡ βητ'·

8. γάρ] δὲ SUV. 10. ἰχθύες· ἀλλ'] Vulg. ἰχθύες· καὶ τούτ' εὐλόγως... ψόφος. ἀλλ' οἱ λεγόμενοι... τουρωτῷ. 13. τίς om. SUVX. 20. ἑνεκεν STUVWX. 21. ὑπάρχει ΕV. 24. πνεύμων STUVWX. 28. ψυχικὸς δυνάμεως πρὸς W. 33. βητ' ET.
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 ἀλλὰ τοῦτο τύπτει τὸν ἐν τῇ ἀρτηρίᾳ πρὸς αὐτὴν. σημεῖον 421α δὲ τὸ μὴ δύνασθαι φωνεῖν ἀναπνέοντα μηδὲ ἐκπνέοντα, ἀλλὰ κατέχοντα· κινεῖ γὰρ τούτο οἱ κατέχον. φανερὸν δὲ καὶ διότι οἱ ἰχθύες ἀφωνοὶ οὐ γὰρ ἔχουσι φάρυγγα. τούτο δὲ τὸ μόριον οὐκ ἔχουσιν, ὅτι οὐ δέχονται τῶν ἀέρα οὐδ' ἀνα—5 πνεύμων. δὲ ἢν μὲν οὖν αἰτίαν, ἔτερος ἐστι λόγος.

§ 1 ΙΧ.: Περὶ δὲ ὁσμῆς καὶ ὁσφραντοῦ ἡττον εὐδιόριστον ἐστι τῶν εἰρημένων· οὐ γὰρ δήλον ποίον τί ἐστιν ἡ ὁσμή, οὕτως ως ὁ ψόφος ἢ τὸ χρῶμα. αἰτίων δ' ὅτι τὴν αἰσθησιν ταύτην οὐκ ἔχομεν ἁκριβῆ, ἀλλὰ χεῖρον πολλῶν ζώων φαύλως γὰρ ἀνθρώπους ὀσμάται, καὶ οὖθεν οὐκ λέγεται τῶν ὁσφραντῶν ἄνευ τοῦ λυπηροῦ ἢ τοῦ ἱδέους, ως οὖν ὁυτὸς ἁκριβοῦς τοῦ αἰσθή-

§ 2 τηρίου. εὐλογοῦν δ' οὕτω καὶ τὰ σκληρόφθαλμα τῶν χρωμάτων αἰσθάνεσθαι, καὶ μὴ διαδήλους αὐτοῖς εἶναι τὰς διαφόρας τῶν χρωμάτων πλήν τῷ φοβερῷ καὶ ἁφόβῳ. οὗτῳ 15 δὲ καὶ τὰς ὁσμὰς τὸ τῶν ἀνθρώπων γένος· ἐοικε μὲν γὰρ ἀνάλογον ἔχεων πρὸς τὴν γεύσιν καὶ ὁμοῖος τὰ εἴδη τῶν χυμῶν τοῖς τῆς ὁσμῆς, ἀλλ' ἁκριβεστέραν ἔχομεν τὴν γεύσιν διὰ τὸ εἶναι αὐτὴν ἁφῆν των, ταῦτην δ' ἔχεων τὴν αἰσθησιν τῶν ἀνθρώπων ἁκριβεστάτην· ἐν μὲν γὰρ ταῖς ἄλλαις 20 λειποῦν πολλῶν τῶν ζώων, κατὰ δὲ τὴν ἁφήν πολλῷ τῶν ἄλλων διαφερόντως ἁκριβοῖ. διὸ καὶ φρονιμοτάτων ἐστὶ τῶν ζώων. σημεῖον δὲ τὸ καὶ ἐν τῷ γένει τῶν ἀνθρώπων παρὰ τὸ αἰσθητήριον τούτο εἶναι εὐφυεῖς καὶ ἁφεῖς, παρ' ἄλλο

coughing: rather with this air we strike the air within the windpipe 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
δὲ μηδέν ὦι μὲν γὰρ σκληρόσαρκοι ἄφυες τὴν διάνοιαν, 25
§ 3 οἱ δὲ μαλακόσαρκοι εὐφυεῖς. ἔστι δ’, ὡσπερ χυμὸς ὦ μὲν
gλυκὸς ὦ δὲ πικρός, οὖτω καὶ ὀσμαί. ἀλλὰ τὰ μὲν ἔχουσι
tὴν ἀνάλογον ὀσμῆν καὶ χυμὸν, λέγω δὲ οἶνον γλυκεῖαν
ὀσμῆν καὶ γλυκὺν χυμὸν, τὰ δὲ τοῦναυτίον. ὦμοιος δὲ καὶ
dρίμεια καὶ αὐστηρὰ καὶ ὤξεια καὶ λιπαρὰ ἔστιν ὀσμῆ. 30
ἀλλ’ ὡσπερ εἶπομεν, διὰ τὸ μὴ σφόδρα διαδήλους εἶναι
tὰς ὀσμὰς ὡσπερ τοὺς χυμοὺς, ἀπὸ τούτων εἶληφε τὰ ὀνο-
ματα καθ’ ὀμοιότητα τῶν πραγμάτων’ ἦ μὲν γὰρ γλυκεῖα, 421b
κρόκου καὶ μέλιτος, ἦ δὲ δρίμεια, θύμου, καὶ τῶν τοιούτων’
§ 4 τὸν αὐτὸν δὲ τρόπον καὶ ἔπὶ τῶν ἄλλων. ἔστι δ’ ὡσπερ
ἡ ἀκοή καὶ ἐκάστη τῶν αἰσθήσεων, ἦ μὲν τοῦ ἀκουστοῦ
καὶ ἀνηκούστου, ἦ δὲ τοῦ ὅρατον καὶ ἀοράτου, καὶ ἡ ὀσφρη-5
σις τοῦ ὀσφραντοῦ καὶ ἀνοσφράντου. ἀνοσφραντον δὲ τὸ μὲν
παρὰ τὸ ὀλως ἀδύνατον ἔχειν ὀσμῆν, τὸ δὲ μικρὰν ἔχον
§ 5 καὶ φαύλην. ὦμοιος δὲ καὶ τὸ ἀγευστὸν λέγεται. ἔστι δὲ
καὶ ἡ ὀσφρησις διὰ τοῦ μεταξῆς, οἶνον ἄρεσ ἦ ὑδάτος· καὶ
γὰρ τὰ ἐνυδρα δοκοῦσιν ὀσμῆς αἰσθάνομαι. ὦμοιος δὲ καὶ 10
tὰ ἐναμια καὶ τὰ ἁναμα, ὡσπερ καὶ τὰ ἐν τῷ ἄρει καὶ
γὰρ τοῦτων ἐνα πόρρωθεν ἀπαντᾶ πρὸς τὴν τροφὴν ὑποσμα
§ 6 γυνόμενα. διὸ καὶ ἀπορον φαίνεται, εἰ πάντα μὲν ὦμοιος
ὁσμᾶται, ὦ δ’ ἀνθρωπος ἀναπνεύων μὲν, μη ἀναπνεόν ὑπὸ
ἀλλ’ ἐκπνεῶν ἦν κατέχων τὸ πνεῦμα οὐκ ὀσμᾶται, οὕτε 15
πόρρωθεν οὐτ’ ἐγγύθειν, οὐδ’ ἂν ἐπὶ τοῦ μυκτῆρον ἐντὸς τεθῆ.
καὶ τὸ μὲν ἐπ’ αὐτῷ τιθεμένου τῷ αἰσθητηρῷ ἀναίσθητον
eῖναι κοινὸν πάντων· ἀλλὰ τὸ ἄνευ τοῦ ἀναπνεύν μη αἰσθά-
νεσθαι ἰδιον ἐπὶ τῶν ἀνθρώπων’ δήλον δὲ πειρωμένοις. ὡστε
τὰ ἁναμα, ἐπειδή οὐκ ἀναπνέουσιν, ἐτέραν ἂν τῷ αἰσθήσιν 20

tὸ φ. ETUV Tor. 10. ὦμοιος δὲ] δὲ om. ETW, ὦμοιος καὶ ἔναμα 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.
έχοι παρά τάς λεγομένας. ἄλλ' ἀδύνατον, εἴπερ τῆς ὁσ-
μῆς αἰσθάνεται· ἡ γὰρ αἰσθησις καὶ δυσώδες καὶ εὐδώδες
.osgiφρησις ἐστιν. ἐτὶ δὲ καὶ φθειρόμενα φαίνεται ὑπὸ τῶν
ἰσχυρῶν ὀσμῶν ὑφί διντερ ἄνθρωπος, οἰδὼν ἀσφαλτὸν καὶ
θείον καὶ τῶν τοιούτων. ὁσφραίνεσθαι μὲν οὖν ἄναγκαιον, 2
§ 7 ἄλλ' οὖν ἀναπνέοντα. ἔοικε δὲ τοὺς ἄνθρωπος διαφέρειν
τὸ αἰσθητήριον τούτο πρὸς τὸ τῶν ἄλλων ζῴων, ἀςπερ
τὰ ὀμματα πρὸς τὰ τῶν σκληροφθάλμων· τὰ μὲν γὰρ
ἐχει φράγμα καὶ ἀςπερ ἔλυτρον τὰ βλέφαρα, ἀ μὴ κυνή-
σας μὴ δ' ἀναστάσας οὖχ ὄρα· τὰ δὲ σκληρόφθαλμα οὐδέν
ἐχει τοιοῦτον, ἄλλ' εὐθέως ὄρα· τὰ γνώμενα ἐν τῷ δια-
φανεί. οὔτως οὖν καὶ τὸ ὁσφραντικὸν αἰσθητήριον τούς μὲν
ἀκάλυφες εἶναι, ἀςπερ τὸ ὀμμα, τοῖς δὲ τὸν ἀέρα δεχο-
μένους ἔχεων ἐπικάλυμμα, ὁ ἀναπνεύστων ἀποκαλύπτεσθαι,
§ 8 διευρυνομένων τῶν φλεβῶν καὶ τῶν πόρων. καὶ διὰ τοῦτο
τὰ ἀναπνέοντα οὖν ὀμματα εἶν τῷ ψυγῷ· ἀναγκαῖον γὰρ
.osgiφρανθήναι ἀναπνεύσαντα, τούτῳ δὲ ποιεῖν ἐν τῷ ψυγῷ
ἀδύνατον. ἔστι δ' ἡ σμήνη τοῦ ξηροῦ, ἀςπερ ὁ χυμὸς τοῦ
ψυγοῦ· τὸ δὲ ὁσφραντικὸν αἰσθητήριον δυνάμει τοιοῦτον.
§ 1 X. Τὸ δὲ γευστῶν ἐστιν ἀπτόν τυ καὶ τοῦτ' αὔτιον τοῦ
μὴ εἶναι αἰσθητὸν διὰ τοῦ μεταξ' ἄλλοτριον ὄντος σώματος·
οὐδὲ γὰρ ἡ ἄφη. καὶ τὸ σώμα δὲ ἐν ὃ ὁ χυμὸς, τὸ γευ-
στόν, ἐν ψυγῷ ὥς ψηlv τούτῳ δ' ἀπτόν τυ. διὸ κἂν εἰ ἐν
ὑδάει ἢμεν, ἡσθανόμεθ' ἀν ἐμβληθέντος τοῦ γλυκέος,
§ 2 οὐκ ἦν δ' ἀν ἡ αἰσθησις ἢμων διὰ τοῦ μεταξ' ἀλλὰ τῷ
μυχῆναι τῷ ψυγῷ, καθάπερ ἐπὶ τοῦ ποτοῦ. τὸ δὲ χρῶμα

This, however, is impossible, so far as they actually have a
sense of smell; and their perception of what is pleasant or dis-
agreeable 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 some-
thing 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
ουχ οντως ὀρᾶται τῷ μέγυνυσθαι, οὐδὲ ταῖς ἀπορροῖαις. ὅσ
μὲν οὖν τὸ μεταξὺ οὐθὲν ἔστιν· ὅς δὲ χρώμα τὸ ὀρᾶτον, οὖτω
τὸ γενεστὸν ὁ χυμός. οὐθὲν δὲ ποιεῖ χυμοῦ αἰσθησιν ἀνευ
ὑγρότητος, ἀλλ' ἔχει ἐνεργεία ἣ δυνάμει ὑγρότητα, οἰον τὸ
ἀλμυρόν' εὐήκτητον τε γὰρ αὐτὸ καὶ συντηκτικὸν γλώττησ.
§ 3 ὡσπερ δὲ καὶ ἡ ὦψις ἐστὶν τού τε ὀρᾶτοι καὶ τοῦ ἀοράτου (τὸ
γὰρ σκότος ἀοράτον, κρίνει δὲ καὶ τούτο ἡ ὦψι). ἔτι τοῦ
λιαν λαμπροῦ (καὶ γὰρ τούτο ἀοράτον, ἄλλον δὲ τρόπον τοῦ
σκότους), ὁμοίως δὲ καὶ ἡ ἀκοὴ ψόφου τε καὶ σιγῆς, ἀν
tὸ μὲν ἀκουστὸν τὸ δ' οὐκ ἀκουστὸν, καὶ μεγάλου ψόφου,
καθάπερ ἡ ὦψις τοῦ λαμπροῦ (ἂσσερ γὰρ ὁ μικρὸς ψόφος
ἀνήκουστος, τρόπον τινα καὶ ὁ μέγας τε καὶ ὁ βίαως')
ἀοράτον δὲ τὸ μὲν ὅλως λέγεται, ὡσπερ καὶ ἐπ' ἄλλων τὸ
ἀδύνατον, τὸ δ', εὰν πεφυκός μὴ ἔχῃ ἡ φαύλως, ὡσπερ
tὸ ἀπον καὶ τὸ ἀπύρημον' οὖτω δὴ καὶ ἡ γεύσις τοῦ γενεστὸν
τε καὶ ἀγεύστου τοῦτο δὲ τὸ μυκρὸν ἡ φαύλου ἔχουν χυμὸν
ἡ φθαρτικὴ τῆς γεύσεως. δοκεῖ δ' εἶναι ἀρχὴ τοῦ ποτὸν καὶ
ἀποτον' γεύσις γάρ τις ἀμφότερα' ἀλλὰ τὸ μὲν φαύλη
§ 4 καὶ φθαρτικῇ τῆς γεύσεως, τὸ δὲ κατὰ φύσιν' ἐστὶ δὲ κοι
νὸν ἄφης καὶ γεύσεως τὸ ποτὸν. ἐπεὶ δ' ὕγρον τὸ γενεστὸν,
ἀνάγκη καὶ τὸ αἰσθητήριον αὐτοῦ μῆτε ὕγρον εἶναι ἐντελε-
χεί μῆτε ἀδύνατον ὑγραίνεσθαι. πάσχει γὰρ τῷ ἡ γεύ-
σις ὑπὸ τοῦ γενεστοῦ, ἢ γενεστόν. ἀναγκαῖον ἀρα ὑγραίνησαι
tὸ δυνάμενον μὲν ὑγραίνεσθαι σωζόμενον, μη ὕγρον δὲ, τὸ

19. τηκτῶν SUX. 29. το om. ETU. 422b 1. 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 over-brilliant, 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
γενοτικον αισθητήριον. σημείων δὲ τὸ μὴτε κατάξηρον οὖσαν 5 τὴν γλώτταν αἰσθάνεσθαι μὴτε λίαν υγρὰν ἄτη γὰρ ἄφη γίνεται τοῦ πρῶτον υγροῦ, ὡσπερ ὅταν προγεματίσας τις ἵσχυρος χυμὸς γεύσηται ἐτέρων καὶ οἷον τοῖς κάμνουσι πικρὰ πάντα φαίνεται διὰ τὸ τῇ γλώττῃ πλήρει τοιαύτης υγρό- § 5 τητος αἰσθάνεσθαι. τὰ δὲ εἰδὴ τῶν χυμῶν, ὡσπερ καὶ ἐπὶ τῶν χρωμάτων, ἀπλὰ μὲν τάναντία, τὸ γλυκὺ καὶ τὸ πικρόν, ἔχομενα δὲ τοῦ μὲν τὸ λιπαρόν, τοῦ δὲ τὸ ἁλμυρόν μεταξὺ δὲ τούτων τὸ τε δριμὸ καὶ τὸ αὐστηρὸν καὶ στρυφνὸν καὶ ὃς· σχεδὸν γὰρ αὐτὰ δοκοῦσιν εἶναι διαφορὰ χυμῶν. ὥστε τὸ γενοτικὸν ἐστὶ τὸ δυνάμει τοιοῦτον, γενοτόν δὲ τὸ πουτικὸν ἐντελεχείᾳ αὐτῶν.

§ 1 XI. Περὶ δὲ τοῦ ἀπτοῦ καὶ ἄφης ο αὐτῶς λόγως. εἰ γὰρ ἡ ἄφη µῆ µία ἑστὶν αἰσθήσεις ἀλλὰ πλείους, ἀναγκαῖον καὶ τὰ ἀπτὰ αἰσθητὰ πλεῖον εἶναι. ἔχει δὲ ἄπορίας πότερον πλείους εἰσὶν ἡ µία, καὶ τί τὸ αἰσθητήριον τὸ τοῦ ἀπτοῦ ἀπτικῶν, 20 πότερον ἡ σὰρξ καὶ εν τοῖς ἄλλοις τὸ ἀνάλογον, ἢ οὔ, ἀλλὰ τούτο µὲν ἑστὶ τὸ μεταξὺ, τὸ δὲ πρῶτον αἰσθητήριον ἄλλο τί § 2 ἑστὶν ἐντός. πάσα τε γὰρ αἰσθήσεως µᾶς ἐναντιώσεως εἶναι δοκεῖ, οἷον ὁµίς λευκοῦ καὶ µέλανος καὶ ἀκοῦ ὁξέως καὶ βαρέως καὶ γεύσεως πικροῦ καὶ γλυκεός· εν δὲ τοῦ ἀπτοῦ 25 πολλαὶ ἔνεισιν ἐναντιώσεως, θερμῶν ὕψχρον, ἕηρῶν ύγρῶν, σκληροῦ µαλακῶν, καὶ τῶν ἄλλων ὁσα τοιαύτα. ἔχει δὲ τινα λύσιν πρὸς γε ταύτην τὴν ἄπορίαν, οτὶ καὶ ἐπὶ τῶν

8. χυμοῦ om. E. 17. καὶ περὶ ἄφης ETy Tor. 20. ἀπτῶν ἀπτικῶν] ἀπτικῶν ESTUVXıy, ἀπτοῦ W. 26. εἰσὶν STUVX.
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
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άλλων αἰσθήσεων εἰςιν ἐναντιώσεις πλείους, οἷον ἐν φωνῇ οὐκ ὑπὸνον ὄξυτης καὶ βαρύτης, άλλα καὶ μέγεθος καὶ μικράτης καὶ λειώτης καὶ τραχύτης φωνῆς καὶ τουαθ' ἑτέρα. εἰςὶ δὲ καὶ περὶ χρώμα διαφοραί τουαθαί ἑτεραι. άλλα τί τό ἐν τῷ ὑποκείμενον, ὠσπερ ἁκοῇ ψόφος, οὔτω τῇ ἁφῇ, οὐκ ἑστιν

§ 3 ἐνδῆλον. πότερον δ' ἐστὶ τῷ αἰσθητήριον ἐντός, ἣ οὐ, ἀλλ' εὐθέως ἣ σάρξ; οὔδεν δοκεὶ οὑμεῖον εἶναι τῷ γίνεσθαι τῇ 423° αἰσθήσεων ἀμα θυγγανομένων. καὶ γὰρ νῦν εἴ τις περὶ τὴν σάρκα περιτείνειν οἷον ὑμένα ποιήσας, ὁμοίως τῇ αἰσθήσεως εὐθέως ἁφάμενος εὐσήμανεν καίτοι δήλων ὡς οὐκ ἑστιν ἐν

§ 4 τούτῳ τῷ αἰσθητήριον εἴ δὲ καὶ συμφυνεῖ γένοιτο, θάττων ἐτί δικνοῖτ' ἂν ἡ ἁίσθησις. διὸ τοιοῦτο μόριον τοῦ σώματος ἐοικεν οὔτως ἔχειν ὠσπερ ἄν εἰ κύκλῳ ἡμῖν περιπετεύθηκε ὁ ἁήρ. ἐδοκούμεν γάρ ἄν εἴ τινι αἰσθάνεσθαι καὶ ψόφου καὶ χρώματος καὶ σῶμης καὶ μία τῇ αἰσθήσεις εἶναι ὄψις ἁκοῇ ὀσφρησις, νῦν δὲ διὰ τῷ διωρίσθαι δι' οὗ γίνονται καὶ κινήσεις, 10 φανερὰ τὰ εἰρημένα αἰσθητήρια ἑτερα ὄντα. ἐπὶ δὲ τῆς ἁφῆς τούτῳ νῦν ἄδηλον' εἴ ἀέρος μὲν γὰρ ἡ ὕδατος ἀδύνατον συν- στήναι τῷ ἐμψυχον σῶμα: δεῖ γάρ τι στερεῖν εἶναι. λείπεται δὴ μικτὸν εἴ γῆς καὶ τούτων εἶναι, οἷον βούλεται ἡ σάρξ καὶ τῷ ἀνάλογον ὅστε ἀναγκαῖον καὶ τῷ σῶμα εἶναι μεταξύ τοῦ 15 ἀπτικοῦ προσπεφυκός, δὲ οὗ γίνονται καὶ αἰσθήσεις πλείους

§ 5 οὖσαι. δηλοὶ δ' οτι πλείους ἡ ἐπὶ τῆς γλώττης ἁφῆς ἀπάντων γὰρ τῶν ἀπτῶν αἰσθάνεται κατὰ τῷ αὐτῷ μόριον καὶ χυμοῦ. εἰ μὲν οὖν καὶ ἡ ἄλλη σάρξ ἱστάνετο τοῦ χυμοῦ, ἐδόκει ἄν

34. δήλων SUX. 423a 2. νῦν om. SUX. 4. ἁφάμενος] ἁφαίμενος
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
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Η αὐτή καὶ μία εἶναι αἰσθησις η γεύσις καὶ η ἀφήν νῦν δὲ 20
§ 6 δύο διὰ τὸ μὴ ἀντιστρέφειν. ἀπορήσεισ δ' ἂν τις, εἰ παῦν
σῶμα βάθος ἔχει τοῦτο δ' ἐστὶ τὸ τρίτον μέγεθος δὲ δ' ἐστὶ
δύο σωμάτων μεταξύ σῶμα τι, οὐκ ἐνδέχεσθαι ταῦτα ἄλλη-
λων ἀπεσθαί. τὸ δ' ὑγρὸν οὐκ ἔστιν ἄνευ σώματος, οὐδὲ τὸ
dιερόν, ἄλλ' ἀναγκαῖον ὑδωρ εἶναι ἡ ἔχειν ὑδωρ. τὰ δὲ 25
ἀπτόμενα ἄλληλον ἐν τῷ ὑδατι. μη ἐξηρῶν τῶν ἄκρων ὄν-
tῶν, ἀναγκαῖον ὑδωρ ἔχειν μεταξὺ, οὐ ἀνάπλεα τὰ ἐσχατα:
εἰ δὲ τούτο ἄληθες, ἀδύνατον ἄψασθαι ἄλλο ἄλλου ἐν ὑδατι.
tὸν αὐτὸν δὲ τρόπον καὶ ἐν τῷ ἀέρι (ὅμοιως γὰρ ἔχει ὁ ἀὴρ
πρὸς τὰ ἐν αὐτῷ καὶ τὸ ὑδωρ πρὸς τὰ ἐν τῷ ὑδατι. λαυ-
θάνει δὲ μᾶλλον ἦμᾶς, ὀσπερ καὶ τὰ ἐν τῷ ὑδατι ζῆσα,
§ 7 εἰ διερόν διεροῦ ἀπεσταΐ. πότερον οὐν πάντων ὁμοίως ἐστίν ἡ 423β
αἰσθησις, η ἄλλων ἄλλως, καθάπερ νῦν δοκεῖ ἡ μὲν γεύσις
καὶ ἡ ἀφήν τῷ ἀπεσθαί, αἰ δ' ἂλλαι ἀποθεῖ; τὸ δ' οὐκ
ἔστιν, ἄλλα καὶ τὸ σκληρὸν καὶ τὸ μαλακὸν δὲ ἑτέρων αἰ-
σθανόμεθα, ὀσπερ καὶ τὸ ψυχητικὸν καὶ τὸ ὀρατὸν καὶ τὸ
 объяρατῶν ἄλλα τὰ μὲν πόρρωθεν, τὰ δ' ἐγγύθεν διὸ
λαυθάνει, ἐπεὶ ἀἰσθανόμεθα γε πάντων διὰ τοῦ μέσου ἄλλο
ἐπὶ τούτων λαυθάνει. καίτοι καθάπερ εἰσαμεν καὶ πρότερον,
καὶ εἰ δ' ὤμένως αἰσθανόμεθα τῶν ἀπτῶν ἀπάντων λαυθά-
νοντος ὅτι διείργει, ὁμοίως ἄν ἔχουμεν ὀσπερ καὶ νῦν ἐν 10
τῷ ὑδατι καὶ ἐν τῷ ἀέρι δοκοῦμεν γὰρ αὐτῶν ἀπεσθαί
§ 8 καὶ οὐδὲν εἶναι διὰ μέσου. ἄλλα διαφέρει τὸ ἀπτῷ τῶν ὀρα-
tῶν καὶ τῶν ψυχητικῶν, ὅτι ἐκεῖνων μὲν αἰσθανόμεθα τῷ
tὸ μεταξὺ ποιεῖν τι ἡμᾶς, τῶν δὲ ἀπτῶν οὐχ ὑπὸ τοῦ με-

23. δὺο om. SUVX. || aυτὰ EWy.  27. 0η] σ STUVX.  423β 5, ψυχητοῦ SX.
6. τὸ SVX. || τὸ SUVX.  9. αἰσθανόμεθα STUVX Ald.
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, 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 however 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


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tαξιν ἀλλ' ἁμα τῷ μεταξύ, ὥσπερ ὁ δὲ ἄσπιδος πληγεὶς. οὐ γὰρ ἡ ἀσπίς πληγεῖσα ἐπάταξεν, ἀλλ' ἁμί' ἁμφος
§ 9 συνέβη πληγὴν. ὅλως δ' οὐκεν ἡ σάρξ καὶ ἡ γλώττα, ὡς ὁ ἀγγα καὶ τὸ ὑδωρ πρὸς τὴν ὀψιν καὶ τὴν ἀκοήν καὶ τὴν ὀσφρησιν ἔχουσιν, οὔτως ἔχειν πρὸς τὸ αἰσθητήριον ὥσπερ ἔκειν ἐκαστον. αὐτοῦ δὲ τοῦ αἰσθητηρίου ἀπευθείαν 20 οὔτ' ἐκεῖ οὔτ' ἐντάθη γένοιτ' ἀν αἰσθησις, οἷον εἰ τις σῶμα τὸ λευκὸν ἐπὶ τοῦ ὀμμάτος θεῖη τὸ ἔσχατον. ἤ καὶ δήλον ὅτι ἐντὸς τοῦ τοῦ ἀπτοῦ αἰσθητικόν. οὔτω γὰρ ἂν συμβαίνοι ὁπερ καὶ ἐπὶ τῶν ἄλλων ἐπιτιθεμένων γὰρ ἐπὶ τὸ αἰσθητήριον οὐκ αἰσθανεται, ἐπὶ δὲ τὴν σάρκα ἐπιτιθεμένων αἰσθάνα- 25
§ 10 νεται' ὅστε τὸ μεταξὺ τοῦ ἀπτικοῦ η σάρξ. ἄπται μὲν οὖν εἰσὶν αἰ διαφοραὶ τοῦ σώματος ἢ σῶμα λέγω δὲ διαφοράς αἰ τὰ στοιχεῖα διορίζουσι, θερμόν ψυχρόν, ἡπρόν ἡγρόν, περὶ
§ 11 δὲν εἰρήκαμεν πρότερον ἐν τοῖς περὶ στοιχείων. τὸ δὲ αἰσθητήριον αὐτῶν τὸ ἀπτικόν, καὶ ἐν δ' ἡ καλουμένη ἀφή ὑπάρ- 30 χει πρῶτο, τὸ δυνάμει τοιοῦτον ἐστὶ μόριον τὸ γὰρ αἰσθάνεσθαι πάσχειν τι ἐστιν' ὡστε τὸ ποιοῦ ὅπλον αὐτὸ ἐνεργεία, τοιοῦτον ἐκεῖνο ποιεῖ δυνάμει ὄν. διὸ τοῦ ὁμοίως θερμοῦ καὶ ψυχροῦ ἡ σληροῦ καὶ μαλακοῦ οὐκ αἰσθανόμεθα, ἀλλὰ τῶν ὑπερβολῶν, ὅς τῆς αἰσθήσεως οἷον μεσοτητὸς τῶν οὔσης τῆς ἐν τοῖς αἰσθητοῖς ἐναντίωσεως. καὶ διὰ τοῦτο κρίνει τὰ 5 αἰσθητά. τὸ γὰρ μέσον κριτικῶν γίνεται γὰρ πρὸς ἐκατέρων αὐτῶν θάτερον τῶν ἄκρων' καὶ δεὶ ὥςπερ τὸ μέλλον αἰσθήσθαι λεικοῦ καὶ μέλανος μηδέτερον αὐτῶν εἶναι ἐνεργεία, δυνάμει δ' ἁμφω, (οὔτω δὲ καὶ ἐπὶ τῶν ἄλλων) καὶ ἐπὶ τῆς
§ 12 ἀφής μῆτε θερμοῦ μῆτε ψυχρῶν. ἐτὶ δ' ὥςπερ ὀρατοῦ καὶ

13. ἐκεῖνα ESTUXX. 16. ἄλλ' ἁμί' ἁμφω E. Tor., ἁμί' om. ceteri.
20. ἀπτομένων UVX. 21. τὸ σῶμα Tor. 24. ὥςπερ SUVX. καὶ om.
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 \textit{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.
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αόράτου ἦν πως ἡ ὄψις, ὁμοίως δὲ καὶ αἱ λοιπαὶ τῶν ἀντικειμένων, οὕτω καὶ ἡ ἀφή τοῦ ἄπτον καὶ ἀνάπτου ἀναπτοῦ δ' ἔστι τὸ τε μικρὰν ἔχον πάμπαν διαφορὰν τῶν ἄπτων, οἷον πέποθεν ὁ ἀήρ, καὶ τῶν ἄπτων αἱ ύπερβολαί, ὃςπερ τὰ φθαρτικά. καθ' ἐκάστην μὲν οὖν τῶν αἰσθησεων εἰρηται τύπῳ.

ΧΙΙ. Καθόλου δὲ περὶ πάσης αἰσθησεως δεὶ λαβεῖν οτι ἡ μὲν αἰσθησις ἐστὶ τὸ δεκτικὸν τῶν αἰσθητῶν εἰδῶν ἀνευ τῆς ὕλης, οἷον ὁ κηρὸς τοῦ δακτυλίου ἀνευ τοῦ σιδήρου καὶ τοῦ χρυσοῦ δέχεται τὸ σημεῖον; λαμβάνει δὲ τὸ χρυσοῦν ἢ τὸ χαλκοῦν σημεῖον, ἀλλ' οὐχ ἢ χρυσὸς ἢ χαλκός. ὁμοίως δὲ καὶ ἡ αἰσθησις ἐκάστου ὑπὸ τοῦ ἐχοντος χρώμα ἢ χυμὸν ἢ ψόφον πάσχει, ἀλλ' οὐχ ἢ ἐκαστον ἐκείνων λέγεται, ἀλλ' § 2 ἢ τοιοῦτο, καὶ κατὰ τὸν λόγον. αἰσθητήρων δὲ πρῶτον ἐν δ' ἢ τοιαύτη δύναμις. ἐστὶ μὲν οὖν ταύταν, τὸ δ' εἶναι ἔτε- 25 ρον μέγεθος μὲν γὰρ ἂν τι ἐχθ' ἡ αἰσθαιρήμοναν' οὐ μὴν τὸ γε αἰσθητικοῦ εἶναι, οὔτ' ἢ αἰσθησις μέγεθος ἐστὶν, ἀλλὰ λό- § 3 γος τις καὶ δύναμις ἐκείνου. φανερὸν δ' ἐκ τούτων καὶ διὰ τί ποτε τῶν αἰσθητῶν αἱ ύπερβολαὶ φθείρουσι τὰ αἰσθητή- ρια: ἐὰν γὰρ ἢ ἱσχυροτέρα τοῦ αἰσθητήρου ἡ κίνησις, λύε- 30 ταῖ ὁ λόγος, (τούτω δ' ἦν ἡ αἰσθησις), ὃςπερ καὶ ἡ συμ- § 4 φωνία καὶ ὁ τόνος κρονομένων σφόδρα τῶν χορδῶν. καὶ διὰ

Touch, again, is occupied at once with the tangible and the intangible, just as we saw that eye-sight was in a way perceptive both of the visible and the invisible and that the other senses equally applied themselves to opposites. By the intangible must here be understood both that which presents too slight differences to be discriminated by touch, (for instance, air,) and also those objects of touch which are in such excess as to be destructive of all sense-perception. A sketch has thus been given of the separate senses.

CHAPTER XII.

The general character of sense in all its forms is to be found in seeing that sense-perception is that which is receptive of the forms of things sensible without their matter, just in the same way as wax receives the impress of the seal without the iron or the gold of which it is composed and takes the figure of the gold or bronze but at the same time not as bronze or gold.

Similarly, sense receives the impress of each object that possesses colour, or flavour, or sound, not however, in so far as each of them is such and such a definite individual, but rather so far as it is of such and such a general character, and relatively to its notion. An organ of sense-perception then is reached so soon as any part displays this power of apprehending the general character of objects. And thus the organ and the faculty of sense are essentially and fundamentally the same, although they manifest themselves in different ways; otherwise in fact, the faculty perceiving would be as it were a sort of magnitude: whereas neither the essential character of perception nor the faculty of sense can be described as a magnitude—rather it is a power to read the essential notion of the object.

These considerations shew why sentient impressions in excess destroy the organ of sense. The reason is that if the movement of the organ of sense be too strong, the relation, which, as we have seen, sense involves, is broken, much in the same manner as harmony and tone become discordant when the strings are violently struck. The same fact explains also
ΠΕΡΙ ΨΤΧΗΣ Β.

τί ποτε τὰ φυτὰ οὐκ αἰσθάνεται, ἔχοντα τι μόριον ψυχικῶν καὶ πάσχοντα τι ὑπὸ τῶν ἀπτῶν καὶ γὰρ ψύχεται καὶ θερμαίνεται· αἵτιον γὰρ τὸ μὴ ἔχειν μεσότητα, μηδὲ τοιαύτην ἀρχὴν οὐκ ἥκει ἐδέχεσθαι τῶν αἰσθητῶν, ἀλλὰ § 5 πάσχειν μετὰ τῆς ὕλης. ἀπορήσειε δ’ ἂν τίς εἰ πάθοι ἄν τι ὑπ’ ὀσμῆς τὸ ἀδύνατον ὀσφρανθῆναι, ἢ ὑπὸ χρώματος τὸ μὴ δυνάμενον ἰδεῖν ὀμοίως δὲ καὶ ἐπὶ τῶν ἄλλων. εἰ δὲ § τὸ ὀσφραντὸν ὀσμῆ, εἰ τι ποιεῖ, τὴν ὀσφρησιν ἢ ὀσμή ποιεῖ. ὥστε τῶν ἀδύνατων ὀσφρανθῆναι οὐθὲν ὦν ὡς τὰ πάσχειν ὑπ’ ὀδηγῆς ὦ δ’ αὐτὸς λόγος καὶ ἐπὶ τῶν ἄλλων οὐδὲ τῶν δυνατῶν, ἀλλ’ ἢ αἰσθητικοῦ ἐκαστον. ἀμα δὲ δῆλον καὶ οὕτωσι. οὕτε γὰρ φῶς καὶ σκότος οὕτε ψόφος οὕτε ὀσμή οὐδὲν ποιεῖ 10 τὰ σώματα, ἀλλ’ ἐν ὦς ἔστιν, οὐκ ἄρ’ ὁ μετὰ βροντῆς § 6 διάστησι τὸ ξύλον. ἀλλὰ τὰ ἁπτὰ καὶ οἱ χυμοὶ ποιοῦσιν· εἰ γὰρ μή, ὑπὸ τίνος ἀν πάσχοι τὰ ἄψυχα καὶ ἄλλοιοῖτο· ἂρ’ οὐν κάκεινα ποιήσει; ἢ οὐ πᾶν σῶμα παθητικὸν ὑπ’ ὀσμῆς καὶ ψόφου καὶ τὰ πάσχοντα ἀόριστα, καὶ οὐ μένει, οἶνον 15 ἄρ’ ὀξεῖ γὰρ ὕσπερ παθῶν τι. τι οὐν ἐστὶ τὸ ὀσμᾶσθαι παρὰ τὸ πάσχειν τι; ἢ τὸ μὲν ὀσμᾶσθαι αἰσθάνεσθαι, ἢ δ’ ἄρ’ παθῶν ταχέως αἰσθητός γίνεται.
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 fundamental 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 substance 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 "Ότι δ’ οὖκ ἔστιν αἰσθησις ἑτέρα παρὰ τὰς πέντε (λέγω δὲ ταύτας ὀψιν, ἀκοῆν, ὀσφυρησιν, γεῦσιν, ἀφήν), ἐκ τῶν δὲ πιστεύοντες ἄν τις. εἰ γὰρ παντὸς οὐ ἔστιν αἰσθησις ἀφῆς καὶ νῦν αἰσθησις ἔχομεν (πάντα γὰρ τὰ τοῦ ἀπτοῦ ή ἄπτον πάθη τῇ ἀφῇ ἦμιν αἰσθητά ἔστιν), ἀνάγκη τ’, εἰπτε ἐκλείπει τις αἰσθησις, καὶ αἰσθητήριον τι ἦμιν ἐκλείπει, καὶ ὅσων μὲν αὐτῶν ἀπτόμενοι αἰσθανόμεθα, τῇ ἀφῇ αἰσθηντά ἔστιν, ἦν τυγχάνομεν ἔχοντες. οὔσα δέ διὰ τῶν μεταξὺ, καὶ μή αὐτῶν ἀπτόμενοι, τοῖς ἀπλοῖς, λέγω δ’ οἴον ἀέρι καὶ ὐδατὶ.

§ 2 ἔχει δ’ οὕτως, ὡστε εἰ μὲν δ’ ἐνὸς πλείως αἰσθητὰ ἑτέρα ὑμντα ἀλλήλων τῷ γένει, ἀνάγκη τοῦ ἔχοντα τὸ τοιοῦτον αἰσθητῆριον ἀμφοῦν αἰσθητικῶν ἐστιν. οἴον εἰ ἑξ ἀέρος ἐστὶ τὸ αἰσθητήριον, καὶ ἔστιν ὁ ἄηρ καὶ ψόφου καὶ χρόας: εἰ δὲ πλείω τοῦ αὐτοῦ, οἴον χρόας καὶ ἄηρ καὶ ὑδατ (ἀμφω γὰρ διαφανή). καὶ ὁ τὸ ἑτερον αὐτῶν ἔχον μόνον αἰσθήσεται τοῦ δ’ ἀμ-

§ 3 φοίν. τῶν δὲ ἀπλῶν εἰ δύο τούτων αἰσθητηρία μόνον ἔστιν,

424 Β 22. τῶν εὐ. τῶν δήλων ΣΧ. 27. αὐτῶν] αὐτοὶ TW. 29. ἀπλῶν διαστῆσαι λ. ΤΘΥ. 425 Α 2. αἰσθησεῖται ἄμφων Bekk., τῶν ἀμφῶν L., τοῦ δ’ ἀμφῶν 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

W. AR.
εξ αέρος καὶ υδατος· ἡ μὲν γὰρ κόρη υδατος, ἡ δὲ ἀκοή αέρος, ἡ δὲ ὀσφρησις θατέρου τούτων. τὸ δὲ πῦρ ἡ οὐθενὸς ἡ σκούρα τὰντων· οὐθὲν γὰρ ἀνευ θερμότητος αἰσθητικοῦ· γη δὲ ἡ οὐθενός, ἡ εν τῇ ἀφή μάλιστα μέμικται ἰδίως. διὸ λέιποιν
§ 4 ἄν μηθὲν εἶναι αἰσθητήριοιν εξω υδατος καὶ αέρος. ταῦτα δὲ καὶ νῦν ἐχουσιν ἐνα ξαία. πᾶσαι ἀρα αἱ αἰσθήσεις ἔχονται ύπό τῶν μη ἀτελῶν μηδὲ πεπηρωμένων· φαίνεται γὰρ καὶ ἡ ἀσπάλαξ ὑπὸ τὸ δέρμα ἐχουσα ὀφθαλμοὺς· ὥστε ἐμὴ τι ἐτερόν ἐστι σῶμα, καὶ πάθος δὲ μηθενὸς ἐστὶ τῶν ἐνταῦθα
§ 5 σωμάτων, οὐδεμία ἄν εκλείποι αἰσθήσεις. ἀλλὰ μὴν οὐδὲ τῶν κοινῶν οἰόν τι εἶναι αἰσθητήριοιν τι ἰδίοιν, ἄν ἐκάστη ἀισθήσει αἰσθανόμεθα κατὰ συμβεβηκός, οἷον κινήσεως, στάσεως, σχήματος, μεγέθους, ἀριθμοῦ, ἐνὸς· ταῦτα γὰρ πάντα κινήσει αἰσθανόμεθα, οἷον μέγεθος κινήσει· ὥστε καὶ σχῆμα· μέγεθος γὰρ τι τὸ σχῆμα· τὸ δὲ ἥρεμον τῷ μὴ κινεῖσθαι· ὁ δὲ ἀριθμὸς τῇ ἀποφάσει τοῦ συνεχοῦς καὶ τοῖς ἰδίοις· ἐκάστη γὰρ ἐν αἰσθάνεται αἰσθήσεις. ὥστε δῆλον ὅτι ἀδύνατον ὅτου ἰδίαιν αἰσθήσεων εἶναι τούτων, οἷον κινήσεως· οὔτω γὰρ ἐσται
§ 6 ὡσπερ νῦν τῇ ὅσπει τὸ γλυκὸ αἰσθανόμεθα· τοῦτο δ' ὅτι ἀμφοῖν ἐχοντες τυγχάνομεν αἰσθήσεων, ἣ καὶ ὅταν συμπέσον αμα γνωρίζομεν. ἐι δὲ μη, οὐδαμῶς ἀν ἀλλ' ἡ κατὰ συμβεβηκός ἱσθανόμεθα, οἷον τὸν Κλέωνος υἱὸν 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
ΠΕΡΙ ΨΤΧΗΣ Γ.

Κλέωνος υίος, ἀλλ' οτι λευκός, τούτῳ δὲ συμβέβηκεν νῦν
§ 7 Κλέωνος εἶναι. τῶν δὲ κοινῶν ἡμὴ ἔχομεν αἰσθήσιν κοινήν,
οὐ κατὰ συμβεβηκός· οὐκ ἄρ' ἐστὶν ἴδια· οὐδαμῶς γὰρ ἂν
γνωθανόμεθα ἀλλ' ἡ οὖτως ὄσπερ εἰρήται τῶν Κλέωνος υἱον
ήμας ὤραν. τὰ δ' ἀλλήλων ἴδια κατὰ συμβεβηκός αἰσθά-5ο
νουται αἱ αἰσθήσεις, οὐχ ἢ αὐταί, ἀλλ' ἢ μία, ὅταν ἁμα
γένηται ἡ αἰσθήσις ἐπὶ τοῦ αὐτοῦ, οἶνον χολῆν ὅτι πικρὰ 425b
καὶ ξανθή· οὐ γὰρ δὴ ἐτέρας γε τὸ εἰπέων ὅτι ἁμφω
ἐν' διὸ καὶ ἀπατάται, καὶ ἐὰν ἢ ξανθόν, χολῆν οἶεται
§ 8 εἶναι. ζητήσεις δ' ἂν τις τίνος ἑνεκα πλείους ἔχομεν αἰσθήσεις,
ἀλλ' οὐ μίαν μόνην. ἡ ὀπως ζητον λανθάνῃ τὰ ἀκολουθοῦντα 5
καὶ κοινά, οἶνον κίνησις καὶ μέγεθος καὶ ἀριθμός· εἰ γὰρ
ἡν ἡ ψυχή μόνη, καὶ αὐτῇ λευκοῦ, ἑλάνθανεν ἄν μᾶλλον
καὶ ἐδοκεί ταῦτο εἶναι πάντα διὰ τὸ ἀκολουθεῖν ἀλλήλους
ἀμα χρώμα καὶ μέγεθος. νῦν δ' ἔπει καὶ ἐν ἐτέρῳ αἰ-
σθητῷ τὰ κοινά υπάρχει, δὴλον ποιεῖ ὅτι ἄλλο τι ἐκαστὸν 10
αὐτῶν.

II. Ἐπεὶ δ' αἰσθανόμεθα ὅτι ὀρῶμεν καὶ ἀκούομεν, ἀνάγκη

χολή STUVWXy.  5. μόνον SUX. || ἥττον] μὴ TVWXy.  8. καὶ]
καὶ LSTUVWX.  9. ἀμα] coni. Tor. ἀμ.
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
ΠΕΡΙ ΨΤΧΗΣ Γ.

§ 2 ἢ τῆς ὁψεις αἰσθάνεσθαι ὃτι ὀρᾷ, ἢ ἐτέρα. ἂλλ' ἡ αὐτῇ ἔσται τῆς ὁψεως καὶ τοῦ ὑποκειμένου χρώματος. ἀντε ἡ δύο τοῦ αὐτοῦ ἐσονται ἡ αὐτῇ αὐτής. ἤτι δ' εἰ καὶ ἐτέρα εὐή ἡ τῆς ὁψεως αἰσθήσεις, ἡ εἰς ἀπειρον εἶσιν ἡ αὐτῇ τις ἐσται αὐτῆς.

§ 3 τον. φανερὸν τούνιν ὅτι οὐχ ἐν τῷ τῆς ὁψεις αἰσθάνεσθαι καὶ γιὰρ ὅταν μὴ ὀρῶμεν, τῇ ὁψει κρίνομεν καὶ τὸ σκότος καὶ τὸ φῶς, ἂλλ' οὐξ ὀσαύτως. ἔτι δὲ καὶ τὸ ὀρῶν ἐστὼν ὡς κεχρωμάτιστων τὸ γὰρ αἰσθητήριον δεκτικοῦ τοῦ αἰσθητοῦ ἄνευ τῆς ὀλῆς ἔκαστον· διὸ καὶ ἀπελθόντων τῶν αἰσθητῶν ἔνεισων

§ 4 αἱ αἰσθήσεις καὶ φαντασία ἐν τοῖς αἰσθητηρίοις. ἢ δὲ τοῦ αἰσθητοῦ ἐνεργεία καὶ τῆς αἰσθήσεως ἢ αὐτῇ μὲν ἐστὶ καὶ μία, τὸ δ' εἶναι οὐ ταύτων αὐταῖς· λέγω δ' οἶον ψόφος ὁ κατ' ἐνεργείαν καὶ ἀκοή ἢ κατ' ἐνεργείαν· ἐστὶ γὰρ ἀκοῇ ἔχουσα· μὴ ἀκούειν, καὶ τὸ ἔχουσιν ὀφθαλμόν καὶ ψυφη. ὅταν δ' ἐνεργῇ τὸ δυνάμενον ἀκούειν καὶ ψυφή τὸ δυνάμενον ψυφῆ, τότε ἡ κατ' ἐνεργείαν ἀκοή ἂμα γίνεται καὶ ὁ κατ' ἐνεργείαν ψοφος, ὅν εἰπεῖν αὖ τις τὸ μὲν εἶναι ἄκουσιν τὸ δὲ ψόφησιν. 426ο

§ 5 εἱ δ' ἐστὶν ἡ κίνησις καὶ ἡ ποιήσις καὶ τὸ πόθος ἐν τῷ ποιου·
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 ἄκοην τὴν κατ’ ἐνέργειαν ἐν τῇ κατὰ δύναμιν εἶναι· ἡ γὰρ τοῦ ποιητικοῦ καὶ κωνητικοῦ ἐνέργεια ἐν τῷ πάσχοντι ἐγγίνεται. διὸ οὐκ ἀνάγκη τὸ 5 κινοῦν κωεῖσθαι. ἡ μὲν οὖν τοῦ ψοφητικοῦ ἐνέργεια ἐστὶ ψόφος ἡ ψόφησις, ἡ δὲ τοῦ ἀκουστικοῦ ἄκοη ἡ ἀκουσία· διετέν γὰρ ἡ § 6 ἄκοη, καὶ διετέν ὁ ψόφος. ὁ δ’ αὐτὸς λόγος καὶ ἐπὶ τῶν ἀλλών αἰσθήσεων καὶ αἰσθητῶν. ὁσπερ γὰρ ἡ ποίησις καὶ ἡ πά- θησις ἐν τῷ πάσχοντι ἀλλ’ οὐκ ἐν τῷ ποιοῦντι, οὐτω καὶ ἡ τοῦ 10 αἰσθητοῦ ἐνέργεια καὶ ἡ τοῦ αἰσθητικοῦ ἐν τῷ αἰσθητικῷ. ἀλλ’ ἐπ’ ἐνώπιον μὲν ἄνομασται, οἷον ἡ ψόφησις καὶ ἡ ἀκουσία, ἐπὶ δ’ ἐνώπιον ἄνωνυμον βάτερον· ὀρασίς γὰρ λέγεται ἡ τῆς ὑφεως ἐνέργεια, ἡ δὲ τοῦ χρώματος ἄνωνυμος, καὶ γεῦσις ἡ τοῦ § 7 γευστικοῦ, ἡ δὲ τοῦ χυμοῦ ἄνωνυμος. ἐπεὶ δὲ μία μὲν ἐστὶν 15 ἐνέργεια τοῦ αἰσθητοῦ καὶ τοῦ αἰσθητικοῦ τὸ δ’ εἶναι ἐτερ- ρον, ἀνάγκη ἀμα φθείρεσθαι καὶ σώζεσθαι τὴν οὕτω λεγο- μένην ἄκοην καὶ ψόφον, καὶ χυμὸν δὴ καὶ γεῦσιν καὶ τὰ ἀλλα ὀμοίως· τὰ δὲ κατὰ δύναμιν λεγόμενα οὐκ ἀνάγκη.

§ 8 ἀλλ’ οἱ πρότερον φυσιολόγοι τοῦτο οὐ καλῶς ἔλεγον, οὔθεν 20 οἰόμενοι οὔτε λευκόν οὔτε μέλαν εἶναι ἄνευ ὑφεως, οὔθε χυ- μὸν ἄνευ γεῦσεως. τῇ μὲν γὰρ ἔλεγον ὀρθῶς, τῇ δ’ οὐκ ὀρθῶς· διχός γὰρ λεγομένης τῆς αἰσθήσεως καὶ τοῦ αἰσθητι- τοῦ, τῶν μὲν κατὰ δύναμιν τῶν δὲ κατ’ ἐνέργειαν, ἐπὶ τοῦτον μὲν συμβαίνει τὸ λεχθὲν, ἐπὶ δὲ τῶν ἐτέρων οὐ συμ. 25

11. ἐνέργεια καὶ ἡ τοῦ αἰσθητικοῦ om. TUW. 15. ἐστὶν ἡ ἐνέργεια ἡ E. Tor. 20. πρότερον 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
βαίνει. ἀλλ' ἐκεῖνοι ἀπλῶς ἔλεγον περὶ τῶν λεγομένων οὐχ
§ 9 ἀπλῶς. εἰ δ' ἡ συμφωνία φωνῆ τίς ἔστιν, ἣ δὲ φωνὴ καὶ
ἡ ἀκοή ἔστιν ὡς ἐν ἔστι καὶ ἔστιν ὡς οὐχ ἐν τῷ αὐτῷ,
λόγος δ' ἡ συμφωνία, ἀνάγκη καὶ τὴν ἀκοήν λόγον τινα
ἐίναι. καὶ διὰ τούτο καὶ φθείρει ἐκαστὸν ὑπερβάλλον, καὶ τὸ 30
ὄξυ καὶ τὸ βαρύ, τὴν ἀκοήν' ὁμοίως δὲ καὶ ἐν χυμοῖς τὴν
γεῦσιν, καὶ ἐν χρώμασι τὴν ὀψιν τὸ σφόδρα λαμπρὸν ἡ 426b
ζοφερόν, καὶ ἐν ὁσφρήσει ἡ ἱσχυρὰ ὁσμή καὶ γλυκεῖα
καὶ πικρά, ὡς λόγον τῶν όντος τῆς αἰσθήσεως. διὸ καὶ
ηδέα μὲν, ὅταν εἰλικρινῇ καὶ ἀμυγῇ ἀγγεῖαι εἰς τὸν λόγον
οἰς τὸ ὀξύ ἢ γλυκό ἢ ἄλμυρὸν' ἦδεα γὰρ τότε. ὡς δὲ ἡ
μᾶλλον τὸ μικτὸν συμφωνία ἢ τὸ ὀξύ ἢ βαρύ, ἀφὴν δὲ
τὸ θερμαντὸν ἢ ψυκτὸν ἢ δ' αἰσθήσεις ὁ λόγος· ὑπερβάλ-
§ 10 λοντα δὲ λυπεῖ ἡ φθείρει. ἐκάστη μὲν οὖν αἰσθήσεις τοῦ ὑπο-
κειμένου αἰσθητοῦ ἐστίν, ὑπάρχουσα ἐντὸς αἰσθητηρίῳ ἡ ἀισθη-
tήριον, καὶ κρίνει τὰς τοῦ ὑποκειμένου αἰσθητοῦ διαφοράς, οἷον 10
λευκὸν μὲν καὶ μέλαν ὄψιν, γλυκῦ δὲ καὶ πικρὸν γεῦσιν.
ὁμοίως δ' ἔχει τούτῳ καὶ ἐπὶ τῶν ἄλλων. ἔπει δὲ καὶ τὸ
λευκόν καὶ τὸ γλυκὺ καὶ ἐκαστὸν τῶν αἰσθητῶν πρὸς ἐκαστὸν
κρίνομεν, τίνι καὶ αἰσθανόμεθα ὅτι διαφέρει; ἀνάγκη δὴ αἰ-
§ 11 σθήσει' αἰσθητὰ γάρ ἔστιν. ἢ καὶ δὴ λοῦν ὅτι ἡ σὰρξ οὐκ ἔστι 15
τὸ ἐσχατον αἰσθητήριον' ἀνάγκη γὰρ ἣν ἀπτόμενον αὐτοῦ

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 κρῖνον· οὔτε δὴ κεχωρισμένοις ενδέχεται κρίνειν ὅτι ἔτερον τὸ γλυκὺ τοῦ λευκοῦ, ἀλλὰ δεὶ ἐν τινὶ ἁμφο δῆλα εἶναι. οὔτω μὲν γὰρ κἂν εἰ τοῦ μὲν ἐγὼ τοῦ δὲ σὺ αἰσθοῖο, δῆλον ἄν εἴη ὅτι ἔτερα ἀλλήλων. δεὶ δὲ τὸ ἐν λέγειν ὅτι ἔτερον· ἔτερον γὰρ τὸ γλυκὺ τοῦ λευκοῦ. λέγει ἄρα τὸ αὐτὸ.

§ 12 ὁστε ὡς λέγει, οὔτω καὶ νοεῖ καὶ αἰσθάνεται. ὅτι μὲν οὖν οὐχ οἶν τε κεχωρισμένοις κρίνειν τὰ κεχωρισμένα, δῆλον· ὅτι δ᾽ οὔδ᾽ ἐν κεχωρισμένῳ χρόνῳ, ἐντεῦθεν. ὁστερ γὰρ τὸ αὐτὸ λέγει ὅτι ἔτερον τὸ ἀγαθὸν καὶ τὸ κακὸν, οὔτω καὶ ὅτε βάσιν ἔτερον λέγει ὅτι ἔτερον, καὶ βάτερον, οὔ κατὰ συμβεβηκός τὸ ὅτε· λέγω δ᾽, οἰον νῦν λέγω ὅτι ἔτερον, οὐ μὲντοι ὅτι νῦν ἔτερον ἀλλὰ οὔτω λέγει, καὶ νῦν, καὶ ὅτι νῦν ἀμα ἁρα. ὁστε

§ 13 ἄχωριστον καὶ ἐν ἄχωρίστῳ χρόνῳ. ἀλλὰ μὴν ἀδιῶνατον ἀμα τὰς ἐναντίας κινήσεις κινεῖσθαι τὸ αὐτὸ ἢ ἀδιαίρετον καὶ ἐν ἀδιαιρέτῳ χρόνῳ. εἰ γὰρ γλυκὺ ὁδί κινεῖ τὴν αἰσθησιν ἢ τὴν νόησιν, τὸ δὲ πικρὸν ἐναντίως, καὶ τὸ λευκὸν ἐτέρως. 427⁴ ἅρ′ οὖν ἀμα μὲν καὶ ἀριθμῷ ἀδιαίρετον καὶ ἄχωριστον τὸ κρῖνον, τῷ εἶναι δὲ κεχωρισμένον; ἡστι δὴ πως ὃς τὸ διαιρετὸν τῶν διηρημενῶν αἰσθάνεται, ἡστι δ᾽ ὡς ἢ ἀδιαιρετον τῷ

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 διαιρετῶν, τόπῳ δὲ καὶ ἄριθμῷ ἀδιαίρετον. η΄ 5
οὐχ οἶνον τε; δυνάμει μὲν γὰρ τὸ αὐτὸ καὶ ἀδιαίρετον τά
ναυτία, τῷ δὲ εἶναι οὐ, ἀλλὰ τῷ ἐνεργεῖσθαι διαιρετῶν, καὶ
οὐχ οἶνον τε ἀμα λευκὸν καὶ μέλαν εἶναι, οὐστ' οὐδὲ τὰ εἰδή
§ 15 πάσχειν αὐτῶν, εἰ τουοῦτον ἡ αἰσθησία καὶ ἡ νόησις. ἀλλ' 10
αὐτὸν ὑπὸρεῖ τὸν καλοῦσι τῶν στυγμών, ἡ μία καὶ ἡ δύο, ταῦτα καὶ διαιρετή. ἡ μὲν οὖν ἀδιαίρετον, ἐν τὸ κρίνον ἐστὶ καὶ ἀμα, 15
ἡ δὲ διαιρετῶν ὑπάρχει, διὸ τῷ αὐτῷ χρῆται σημείῳ ἀμα.
ἡ μὲν οὖν δυοὶ χρῆται τῷ πέρατι, δύο κρίνει καὶ κεχωρι-
σμένα ἐστὶν ός κεχωρισμένων' ἡ δ' ἐν, ἐνὶ καὶ ἀμα. περὶ 20
μὲν οὖν τῆς ἀρχῆς ἡ φαμέν τὸ ζῷον αἰσθητικοῦ εἶναι, διω-
ρίσθω τὸν τρόπον τούτον.

III. Ἡ ἐπεὶ δὲ δύο διαφοραῖς ὀρίζονται μάλιστα τὴν ψυχήν, 25
κωνήσει τε τῇ κατὰ τὸν καὶ τῷ νοεῖν καὶ τῷ κρίνειν καὶ
αἰσθάνεσθαι, δοκεῖ δὲ καὶ τῷ νοεῖν καὶ τῷ φρονεῖν ὁποίο
αἰσθάνεσθαι τι εἶναι' ἐν ἀμφοτέροις γὰρ τούτοις κρίνει τι τῇ 30
ψυχῇ καὶ γνωρίζει τῶν ὄντων καὶ οἱ γε ἀρχαῖοι τὸ φρο-

6. διαιρετῶν καὶ ἀδιαίρετον UWy Ald. Syllb. Tor. 10. ὁποίο εἰ και ἀριθμῷ
τῶν στυγμῶν coni. Trend. 11. καὶ ἀδιαίρετος καὶ διαιρετή' η' k.t.L. Tor. 12.
κεχωρισμένω ELT, ὁσ κεχωρισμένων VS. 16. ὀρίζοντας 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
νεῖν καὶ τὸ αἰσθάνεσθαι ταῦτάν εἶναι φασιν, ὡσπερ καὶ Ἕμ-
πεδοκλῆς εἶρηκε "πρὸς παρεῦν γὰρ μῆτις αέξεται ἄνθρώ-
ποις" καὶ ἐν ἄλλοις "ὅθεν σφίσσω αἰεὶ καὶ τὸ φρονεῖν ἀλ-
λοία παρίσταται." τὸ δ' αὗτο τούτοις βούλεται καὶ τὸ Ὀμῆ. 25
§ 2 ρου "τοῖος γὰρ νόσος ἐστίν." πάντες γὰρ οὗτοι τὸ νοεῖν σωμα-
tικὸν ὡσπερ τὸ αἰσθάνεσθαι ὑπολαμβάνουσιν, καὶ αἰσθάνε-
σθαί τε καὶ φρονεῖν τῷ ὁμοίῳ τὸ ὁμοίου, ὡσπερ καὶ ἐν τοῖς
καὶ ἀρχαῖς λόγοις διαφαίνεται· καὶ τοῖς ἐδεί ἄμα καὶ περὶ
tοῦ ἡπατήσθαι αὐτοῦς λέγειν' οἰκεῖστον γὰρ τοῖς ζύγοις,
καὶ πλεῖστοι ὁμοίως ἐν τούτῳ διατείλει ἡ ψυχῆ. διὸ ἀνάγκη
ἠτοί ὡσπερ ἐνοι λέγοντο, πάντα τὰ φανόμενα εἶναι ἀληθῆ,
ἡ τὴν τοῦ ἀνομοίου θίξεων ἀπάθεια εἶναι· τοῦτο γὰρ ἐναντίον τῷ
τῷ ὁμοίῳ σοφοῖς γνωρίζειν' δοκεῖ δὲ καὶ ἡ ἀπάτη καὶ §
§ 3 ἡ ἐπιστήμη τῶν ἐναντίων ἡ αὐτὴ εἶναι. ὅτι μὲν οὐν οὐ ταὐ-
tόν ἐστι τὸ αἰσθάνεσθαι καὶ τὸ φρονεῖν, φανερὸν τοῦ μὲν
γὰρ πάσι μέτεστι, τοῦ δὲ ὁλίγοις τῶν ζώσων. ἀλλ' οὕδε τὸ
νοεῖν ἐν ὧν ἐστὶ τὸ ὁρθός καὶ τὸ μὴ ὁρθῶς, τὸ μὲν ὁρθῶς
φρόνησι καὶ ἐπιστήμη καὶ δόξα ἀληθῆς, τὸ δὲ μὴ ὁρθῶς 10
tάναντια τούτων' οὕδε τούτο δ' ἐστὶ ταῦτα τῷ αἰσθάνεσθαι· ἡ
μὲν γὰρ αἰσθητις τῶν ἰδίων αἰὲ ἀληθῆς, καὶ πάσιν ὑπάρ-
χει τοῖς ζώσων, διανοεῖσθαι δ' εἶνέχεται καὶ γνωστῶς, καὶ
§ 4 οὕδεν ὑπάρχει ὧν μὴ καὶ λόγος· φαντασία γὰρ ἔτερον καὶ

tούτοις STVWy. 5. τῷ ὀμοίῳ τῷ ὁμαίων Trend. 11. ταῦταν 1. τὸ αὐτὸ STUWVX.
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:

W. AR.
αἰσθήσεως καὶ διανοίας. αὐτῇ τε οὐ γίγνεται ἄνευ αἰσθήςεως καὶ διανοίας, ὡς ἐστὶν ὑπόλοψις, ὅτι ὅ ὅμως ἐστίν ἡ αὐτῇ νόησις καὶ ὑπόλοψις, φανέρων. τούτῳ μὲν γὰρ τὸ πάθος ἐφ᾽ ἡμῖν ἐστίν, ὅταν βουλαμέθα (πρὸ ὁμμάτων γὰρ ἐστὶν πουσασθαί, ὡςπερ οἱ ἐν τοῖς μνημονικοῖς τιθέμενοι καὶ εἰδωλοποιοῦντες), δοξάζειν δ᾽ ὅμως ἐφ᾽ ἡμῖν ἀνάγκη γὰρ ἡ πρωτεύουσιν ἀληθεύειν. ἐτι δὲ ὅταν μὲν δοξάζωμεν δεινόν τι ἡ φοβερόν, εὐθὺς συμπάσχομεν, ὁμοίως δὲ κἂν θαρραλέον· κατὰ δὲ τὴν φαντασίαν ὀσαύτως ἔχομεν ὡςπερ ἂν 
§ 5 οἱ θεώμενοι ἐν γραφῇ τὰ δεινὰ ἡ θαρραλέα. εἰσὶ δὲ καὶ αὐτὴς τῆς ὑπολήψεως διαφοράς, ἐπιστήμη καὶ δόξα καὶ ὁρώνσις καὶ τάναττα τοῦτων, περὶ ἄν τῆς διαφορᾶς ὑπὲρ ἐστὶ λόγος. περὶ δὲ τοῦ νοεῖν, ἐπει ἐτερον τοῦ αἰσθάνεσθαι, τούτου δὲ τὸ μὲν φαντασία δοκεῖ εἶναι τὸ δὲ ὑπολήψις, περὶ φαντασίας διορίσαντας οὕτω περὶ θατέρου λεκτέων.
§ 6 εἰ δὴ ἐστὶν ἡ φαντασία καθ᾽ ἦν λέγομεν φαντασμά τι 428a ἡμῖν γίγνεσθαι καὶ μὴ εἰ τι κατὰ μεταφορὰν λέγομεν, μία τὸς ἐστὶ τοῦτων δύναμις ἡ ἐξίς, καθ᾽ ἦν κρίνομεν καὶ ἀληθεύσαμεν ἡ πευδόμεθα. τοιαύτα δ᾽ εἰσὶν αἰσθήσεις, δόξα.
§ 7 ἐπιστήμη, νοῦς. ὅτι μὲν οὖν οὐκ ἐστὶν αἰσθήσεις, δήλον ἢ τῶν. ἀισθήσεις μὲν γὰρ ἦτοι δύναμις ἡ ἐνέργεια, οἶνον ὀψαὶς καὶ ὀρασίς, φαίνεται δὲ τι καὶ μηθετέρον ὑπάρχουσιν τούτων, οἶνον τὰ ἐν τοῖς ὑπνοῖς. εἶτα αἰσθήσεις μὲν ἂεὶ 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
ϕαντασία δ’ οὐ. εἰ δὲ τῇ ἐνεργείᾳ τὸ αὐτὸ, πάσῳ ἄν ἐνδέχοτα τοὺς θηρίους φαντασίαν ύπάρχειν. δοκεῖ δ’ οὐ, οἶον οἱ μύρμηκι μὲν ἡ μελίτη, σκόλικη δ’ οὐ. εἶτα αἱ μὲν ἀληθείς αἰεί, αἱ δὲ φαντασίαι γίνονται αἱ πλείους ψευδεῖς. ἐπειδ’ οὐδὲ λέγομεν, ὅταν ἐνεργῶμεν ἀκριβῶς περὶ τὸ αἰσθητόν, οὗτοι φαίνεται τούτο ήμῖν ἀνθρώπος· ἀλλὰ μᾶλλον ὅταν μὴ ἐναργῶς αἰσθητομέθα, τότε ἡ ἀληθῆς ἡ ψευδῆς, καὶ ὅπερ δὲ

§ 8 ἐλέγομεν πρότερον, φαίνεται καὶ μῦσιν ὀράματα. ἀλλὰ μὴν οὐδὲ τῶν αἰεὶ ἀληθευόντων οὐδεμία ἐσται, οἶον ἐπιστήμη ἡ νοῦς: ἔστι γὰρ φαντασία καὶ ψευδῆς. λείπεται ἁρὰ ἰδεῖν εἰ δόξα· γίνεται γὰρ δόξα καὶ ἀληθῆς καὶ ψευδῆς. ἀλλὰ δόξη μὲν ἐπεται πίστις (οὐκ ἐνδέχεται γὰρ δοξάζοντα οἷς δοκεῖ μὴ πιστεύειν), τῶν δὲ θηρίων οὐθενὶ ύπάρχει πίστις, φαντασία δὲ πολλοίς. ἐπὶ πάση μὲν δόξη ἀκολουθεῖ πίστις, πίστει δὲ τὸ πεπείσθαι, πειθοὶ δὲ λόγοι· τῶν δὲ θηρίων

§ 9 ἐνώς φαντασία μὲν ὑπάρχει, λόγος δ’ οὐ. φανερὸν τοῖνυν ὅτι οὐδὲ δόξα μετ’ αἰσθήσεως, οὐδὲ δ’ αἰσθήσεως, οὐδὲ συμπλοκὴ δόξης καὶ αἰσθήσεως φαντασία ἄν εἰη, διὰ τε ταῦτα καὶ δὴλον ὅτι οὐκ ἄλλον τωσ’ ἐστιν ἡ δόξα, ἀλλ’ ἐκεῖνον ἐστιν οὗ καὶ αἰσθήσεις· λέγω δ’, ἐκ τῆς τοῦ λευκοῦ δόξης καὶ αἰσθήσεως ἡ συμπλοκὴ φαντασία εἴστην’ οὐ γὰρ δὴ ἐκ τῆς δόξης μὲν τῆς τοῦ ἁγαθοῦ, αἰσθήσεως δὲ τῆς τοῦ βλ. λευκοῦ. τὸ οὖν φαίνεσθαι ἐστὶ τὸ δοξάζειν ὅπερ αἰσθάνεται 428

§ 10 μὴ κατὰ συμβεβηκός. φαίνεται δὲ καὶ ψευδῆ, περὶ ὅν

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-
ομα υπόληψιν ἀληθῆ ἔχει, οὖν φαίνεται μὲν ὁ ἦλιος πο- διαίως, πέπεισται δ' εἶναι μείζων τῆς οἰκουμένης. συμβαί- νει οὖν ἦτοι ἀποβεβληκέναι τὴν ἐαυτοῦ ἀληθῆ δόξαν, ἢν εἶχε 
σωζομένου τοῦ πράγματος, μὴ ἐπιλαθόμενον μηδὲ μεταπει- 
σθέντα, ἢ εἰ ἐτί ἔχει, ἀνάγκη τὴν αὐτὴν ἀληθῆ εἶναι καὶ 
ψευδή. (ἀλλὰ ψευδῆς ἐγένετο, ὅτε λάθοι μεταπεσοῦν τὸ πρά- 
γμα.) οὔτ' ἀρα ἐν τι τούτων ἐστίν οὔτ' ἐκ τούτων ἡ φαντα-
§ 11 σία. ἀλλ' ἐπειδὴ ἐστι κινηθέντος τούδε κινεῖσθαι ἐτερον ὑπὸ 
τούτοι, ἡ δὲ φαντασία κίνησις τις δοκεῖ εἶναι καὶ οὐκ ἄνευ 
αἰσθήσεως γίγνεσθαι ἀλλ' αἰσθανομένους καὶ ὃν αἰσθήσις 
ἔστιν, ἐστὶ δὲ γίγνεσθαι κίνησιν ὑπὸ τῆς ἐνεργείας τῆς αἰσθή-
σεως, καὶ ταῦτα ὡμοίαν ἀνάγκη εἶναι τῇ αἰσθήσει, εἰ δὲν 
αὐτῇ ἡ κίνησις οὔτε ἄνευ αἰσθήσεως ἐνδεχομένη οὔτε μὴ ἀι-
σθανομένους ὑπάρχειν, καὶ πολλὰ κατ' αὐτὴν καὶ ποιεῖν 
§ 12 καὶ πάσχειν τὸ ἔχον, καὶ εἶναι καὶ ἀληθῆ καὶ ψευδῆ. τοῦτο 
δὲ συμβαίνει διὰ τάδε, ἡ αἰσθήσις τῶν μὲν ἰδίων ἀληθῆς 
ἔστιν ἢ ὅτι ὁλίγουσιν ἔχουσα τὸ ψεῦδος. δεύτερον δὲ τοῦ 
συμβεβηκέναι ταῦτα καὶ ἐνταῦθα ἡ ἐνδεχεται διαψευ-
δέσθαι: ὅτι μὲν γὰρ λευκὸν, οὐ ψεύδεται, εἰ δὲ τοῦτο τὸ 
λευκὸν ἢ ἀλλὸ τι, ψεύδεται. τρίτον δὲ τῶν κοινῶν καὶ ἑπομέ-

νων τοῖς συμβεβηκόσιν, οῖς υπάρχει τὰ ἴδια· λέγω δ' οἶν 
κίνησις καὶ μέγεθος, δ' συμβεβηκέ τοῖς αἰσθητοῖς, περὶ ἁ 
§ 13 μαλακτικά ἡ ἡδί ἐστιν ἀπατηθήναι κατὰ τὴν αἰσθήσις. ἢ δὲ 25
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 ἦ ὑπὸ τῆς ἐνεργείας γυνομένη διοίσει τῆς αἰσθήσεως τῆς ἀπὸ τούτων ἄναμι ἔναν αἰσθήσεων. καὶ ἡ μὲν πρῶτη παραρτήμασις τῆς αἰσθήσεως ἀληθῆ, αἱ δὲ ἔτεραι καὶ παρακλήσεις καὶ ἀποκόλλησις εἰς ἄνευ δὲ ἤθελος καὶ μάλιστα ἄτοι πάροικο τὸ αἰσθήματον ἣ. εἰ οὖν μὴ ήθελεν μὲν ἄλλο ἤς ἐπὶ τὰ εἰρήμενα ἦ ἡ φαντασία, τοῦτο δὲ ἐστίν τὸ λεγόμενον, ἡ φαντασία ἄν εἰη κίνησις 4291

§ 14 ὑπὸ τῆς αἰσθήσεως τῆς κατ᾽ ἐνέργειαν γυνομένην. ἔπει δὲ ἡ ὅμοια μάλιστα αἰσθητικὴ ἐστι, καὶ τὸ ὄνομα ἀπὸ τοῦ φῶς
§ 15 εἰρήθην, ὅτι ἄνευ φωτὸς οὐκ ἐστὶν ἰδεῖν. καὶ διὰ τὸ ἐμμένειν καὶ ὅμοιως εἶναι ταῖς αἰσθητικῆς, πολλὰ κατ᾽ αὐτὰς πρῶτη τε τὰ ζῷα, τὰ μὲν διὰ τὸ μὴ ἤχει νόημα, οἶνον τὰ θηρία, τὰ δὲ διὰ τὸ ἐπικαλύπτεται τοῦ νοῦν ἐνίοτε πάθει ἡ νόσος ἡ ὑπνώ, οἶνον ὁ αὐτροποί. . . . περὶ μὲν οὖν φαντασίας, τί ἐστι καὶ διὰ τί ἐστιν, εἰρήθην ἐπὶ τοσοῦτον.

IV. Περὶ δὲ τοῦ μορίου τοῦ τῆς ψυχῆς ἡ γυνώσκει τε ἡ 10 ψυχή καὶ φρονεῖ, εἰτε χωριστοῦ ὄντος εἰτε καὶ μὴ χωριστοῦ κατὰ μέγεθος ἄλλα κατὰ λόγον, σκεπτέων τιν ἢ ἤχει δια-
§ 2 φοράν, καὶ πῶς ποτὲ γίνεται τὸ νοεῖν. εἰ δὴ ἐστὶ τὸ νοεῖν ὡσπερ τὸ αἰσθάνεσθαι, ἡ πάσχεω τι ἄν εἰη ὑπὸ τοῦ νοητοῦ
§ 3 ἡ τι τοιούτου ἐτερον. ἀπαθεῖς ἁρὰ δεὶ εἶναι, δεκτικὸν δὲ τοῦ 15 εἰδοὺς καὶ δυνάμεις τοιοῦτον ἄλλα μὴ τοῦτο, καὶ ὅμοιως ἤχειν,

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
ὁσπέρ τὸ αἰσθητικὸν πρὸς τὰ αἰσθήτα, οὐτώ τὸν νοῦν πρὸς τὰ νοητά. ἀνάγκη ἁρα, ἐπεὶ πάντα νοεῖ, ἀμιγή εἶναι, ὁσ-
περ φησὶν Ἀναξαγόρας, ἕνα κρατῆ, τούτο δὲ ἐστὶν ἕνα γνω-
ρίζη, παρεμφαινόμενον γὰρ κωλύει τὸ ἀλλότριον καὶ ἀντι-20
φράστει: ὡστε μηδὲ αὐτοῦ εἶναι φύσιν μηδεμίαν ἀλλὰ ή
tαινή, ὅτι δυνατόν. ὁ ἀρα καλούμενος τῆς ψυχῆς νοῦς
(λέγω δὲ νοῦν ὃ διανοεῖται καὶ ὑπολαμβάνει ή ψυχή)§ 4 οὐθὲν ἐστὶν ἐνεργείας τῶν ὅντων πρὶν νοεῖν. διὸ οὐδὲ μεμιχθαί
eὐλογον αὐτὸν τῷ σώματι ποίος τις γὰρ ἄν γίγνοντο, ψυ-25
χρὸς ἡ θερμός, ἡ καὶ ὅργανον τι εἶσ, ὁσπερ τῷ αἰσθητικῷ
νῦν δ’ οὐθὲν ἐστὶν. καὶ εἴ δὴ οἱ λέγουσε τῆς ψυχῆς εἶναι τό-
πον εἰδῶν, πλὴν ὅτι οὐτε δὴ ἀλλ’ ἡ νοητική, οὐτε ἐντελε-
§ 5 χείᾳ ἀλλὰ δυνάμει τὰ εἴδη. ὅτι δ’ οὐχ ὁμοία ἡ ἀπάθεια
τοῦ αἰσθητικοῦ καὶ τοῦ νοητικοῦ, φανερὸν ἐπὶ τῶν αἰσθητηρίων 30
καὶ τῆς αἰσθήσεως. ἡ μὲν γὰρ αἰσθησίς οὐ δύναται αἰσθάνε-
σθαι ἐκ τοῦ σφόδρα αἰσθητοῦ, οἶδον ψόφου ἐκ τῶν μεγάλων 429b
ψόφων, οὐδ’ ἐκ τῶν ἱσχυρῶν χρωμάτων καὶ ὀσμῶν οὔτε
ὀράν οὔτε ὀσμᾶσθαι. ἀλλ’ ὁ νοῦς ὅταν τι νοήσῃ σφόδρα νοη-
tόν, οὐχ ἦττον νοεῖ τὰ ύποδεέστερα, ἀλλὰ καὶ μᾶλλον τὸ
§ 6 μὲν γὰρ αἰσθητικὸν οὐκ ἄνευ σώματος, ὃ δὲ χωριστός. ὅταν 5
δ’ οὕτως ἐκαστα γένηται ὁς ἐπιστήμων λέγεται ὁ κατ’ ἐνέρ-
γειαν (τούτο δὲ συμβαίνει, ὅταν δύνηται ἐνεργεῖν δ’ αὐτοῦ),
ἐστι μὲν ὁμοίως καὶ τότε δυνάμει πῶς, οὐ μὴν ὁμοίως καὶ

18. ἐπειδὴ SUVWXy. 25. γὰρ ἃν τίς LSTUXW. 429b 1. ὅλον
tοῦ ψ. STVXy. 6. ὡς ὁ ἐπ. ELTUVX Tor. 8. ὁμοίως 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 obstructs 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 εὐρεῖν· καὶ αὐτὸς δὲ αὐτοῖν τὸτε δύναται νο- 7 εἰν. ἐπεὶ δὲ ἄλλο ἐστὶ τὸ μέγεθος καὶ τὸ μεγέθει εἶναι καὶ 10 ὑδρω καὶ ὑδατι εἰναι: (οὐτω δὲ καὶ ἐφ' ἐτέρων πολλῶν, ἀλλ' οὐκ ἐπὶ πάντων· ἐπ' ἐνίων γὰρ ταυτῶν ἐστι') τὸ σαρκὶ εἰναι καὶ σάρκα ἢ ἀλλῳ ἢ ἄλλως ἔχοντι κρίνει· ἢ γὰρ σάρξ οὐκ ἀνευ τῆς ὕλης, ἀλλ' ὥσπερ τὸ σημόν, τόδε ἐν τῳδε. τῷ μὲν οὖν αἰσθητικῷ τὸ θερμὸν καὶ τὸ ψυχρὸν κρίνει καὶ ὃν 15 λόγος τις ἢ σάρξ· ἄλλω δὲ ἤτοι χωριστῷ, ἢ ως ἡ κεκλα- σμενὴ ἔχει πρὸς αὐτὴν ὅταν ἐκταθῇ, τὸ σαρκὶ εἰναι κρί- 8 νει. πάλιν δ' ἐπὶ τῶν ἐν ἀφαίρεσει οὐτῶν τὸ εὐθὺ ως τὸ 9 σημόν· μετὰ συνεχοῦς γάρ· τὸ δὲ τὶ ἦν εἰναι, εἰ ἐστιν ἐτέρων τὸ εὐθεὶ εἶναι καὶ τὸ εὐθὺ, ἄλλω· (ἔστω γὰρ δνᾶς.) ἐτέρῳ 20 ἀρα ἢ ἐτέρως ἔχοντι κρίνει. καὶ ὅλως ἃρα ὡς χωριστὰ τὰ 11. καὶ τὸ ὕδατι Ε. 13. ἔχοντι om. ELSUV. || κρίνει ὃ νοὺς ἢ EL Ald. 16. ἢ om. SUVWX. 20. ἄλλο TVX Bz. 21. καὶ om. LSTUVX. || ἀρα om. pr. E. 23. ἀπλοῦς 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 commonalty 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, εὖ δέ το τὸ νοητὸν εἶδει, ἡ μεμυγμένον τι ἐξεί, ὁ
§ 11 ποιεῖ νοητὸν αὐτὸν ὅσπερ τὰλλα. ἡ τὸ μὲν πάσχειν κατὰ
κοινὸν τι. διὸ εἰρηταὶ πρότερον, ὅτι δυνάμει πῶς ἐστὶ τὰ νοητὰ. 30
ὁ νοῦς, ἀλλ' ἐνελεχεῖα οὐδέν, πρὶν ἂν νοῇ. δεὶ δ' οὕτως ὅσ-
περ ἐν γραμματείᾳ ὃ μηθέν ύπάρχει ἐνελεχεῖα γεγραμ- 430a
§ 12 μένον' ὅσπερ συμβαίνει ἐπὶ τοῦ νοῦ. καὶ αὐτὸς δὲ νοητός ἐστιν
hotmail 38
§ 12 μένον' ὅσπερ συμβαίνει ἐπὶ τοῦ νοῦ. καὶ αὐτὸς δὲ νοητός ἐστιν
ὁσπερ τὰ νοητὰ. ἐπὶ μὲν γὰρ τῶν ἄνευ ὑλῆς τὸ αὐτὸ ἐστιν
τὸ νοοῦν καὶ τὸ νοούμενον· γὰρ ἐπιστήμην ἡ θεωρητικὴ καὶ
τὸ οὕτως ἐπιστητὸν τὸ αὐτὸ ἐστιν· τοῦ δὲ μὴ ἂει νοεῖν τὸ αὐ-
5
tion ἐπισκεπτέον· ἐν δὲ τοῖς ἔχουσιν ὑλῆν δυνάμει ἐκαστὸν
ὅστε τῶν νοητῶν. ὅστε ἐκεῖνοι μὲν οὐχ ὑπάρξει νοῦς (ἀνευ
γὰρ ὑλῆς δύναμις ὁ νοῦς τῶν τοιούτων), ἐκεῖνος δὲ τὸ νοητὸν
ὑπάρξει.

V. Ἐπεὶ δ' ὅσπερ ἐν ἀπάσῃ τῆς φύσει ἐστὶ τι τὸ μὲν 10
ὑλῆ ἐκαστῷ γένει (τούτο δὲ ὁ πάντα δυνάμει ἐκεῖνα), ἐτερον
δὲ τὸ αἰτίων καὶ ποιητικῶν, τῷ ποιεῖν πάντα, οἴον ἡ τέχνη

30. διειρήται S. ὅ ὑπάρχηται Ald. διέχρηται Vulg.
31. ὁ ὅ ὑπάρχσιν L.V.W.
430a 1. δ' om. ESUVXy ὑπάρχειν SUVX. 8. δύναμις ἐστὶν ὁ LSUVWX.
11. δ' om. y, ὅτι UVX. 12. τῷ ὅ τῷ LT.X.
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 ὑπάρχειν ταῦτα τὰς διαφοράς. καὶ ἔστιν ὁ μὲν τοιοῦτον νοῦς τῷ πάντα γίνεσθαι, ὥστε τῷ πάντα ποιεῖν, ὡς ἔξεις τις, οἶδον τὸ φῶς· τρόπον γάρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει ὅντα χρώματα ἐνεργεία χρώματα. καὶ οὕτως ὁ νοῦς χωριστὸς καὶ § 2 ἀμηγῆς καὶ ἀπαθῆς τῇ υστίᾳ ὑν ἐνεργεία. ἀεὶ γὰρ τιμωτέρον τὸ ποιοῦν τοὺς πάσχοντος καὶ ἡ ἀρχὴ τῆς υλῆς. τὸ δ' αὐτὸ ἔστιν ἡ κατ' ἐνεργείαν ἐπιστήμη τῷ πράγματι· ἡ δὲ κατὰ δύναμιν χρόνῳ προτέρα ἐν τῷ ἐνί, ὅλως δὲ οὐδὲ χρόνῳ. ἀλλ' οὖς ὅτε μὲν νοεῖ ὅτε δ' οὐ νοεῖ. χωρισθεῖς δ' ἐστὶ μόνων τοῦθ' ὑπερ ἐστί, καὶ τούτῳ μόνῳ ἀδανατω καὶ αἴδιον. οὐ μνημονεύομεν δὲ, ὅτι τούτῳ μὲν ἀπαθές, ὁ δὲ παθητικὸς νοῦς φθαρτός, καὶ ἀνευ τούτου οὐθέν νοεῖ.

VI. Ἡ μὲν οὖν τῶν ἀδιαρέτων νόησις ἐν τούτωσι, περὶ δ' οὖκ ἔστι τὸ ψεύδος· ἐν οἷς δὲ καὶ τὸ ψεύδος καὶ τὸ ἄλληθε, σύνθεσις τις ἡ δὴ νοημάτων ὁσπέρ ἐν οὐτῶν, καθάπερ Ἐμπεδοκλῆς ἐφή "ἡ πολλῶν μὲν κόρσαι ἀναχένες ἐβλάστησαν," ἐπείτα συντίθεσθαι τῇ φιλίᾳ. οὗτῳ καὶ ταύτῃ κεχωρισμένα § 2 συντίθεται, οἷον τὸ ἀσύμμετρον καὶ ἡ διάμετρος. ἄν 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 ἐσομένων, τὸν χρόνον προσεννοῶν καὶ συντιθεῖς. τὸ 43ο
γὰρ ψεῦδος ἐν συνθέσει ἀεὶ καὶ γὰρ ἂν τὸ λευκὸν μὴ λευ-
κὸν, τὸ μὴ λευκὸν συνέθηκεν. (ἐνδέχεται δὲ καὶ διαίρεσιν
φάναι πάντα.) ἀλλ' οὖν ἔστι γε οὐ μόνον τὸ ψεῦδος ἢ ἀληθεῖς,
ὅτι λευκὸς Κλέων ἐστίν, ἀλλὰ καὶ οὗτι ἢν ἢ ἔσται. τὸ δὲ ἐν 5
§ 3 ποιοῦν, τοῦτο ὁ νοῦς ἐκαστόν. τὸ δ’ ἀδιαίρετον ἐπεὶ διχῶς, ἢ
dυνάμει ἢ ἐνεργεία, οὐθέν κωλύει νοεῖν τὸ ἀδιαίρετον, ὅταν
νοῇ, τὸ μῆκος (ἀδιαίρετον γὰρ ἐνεργεία) καὶ ἐν χρόνῳ ἀδιαὶ-
ρέτῳ ὁμοίως γὰρ ὁ χρόνος διαιρετὸς καὶ ἀδιαιρετος τῷ
μήκει. οὐκοῦν ἔστων εἰπεῖν ἐν τῷ ἡμίσει τί ἐνόει ἐκατέρωθ’ οὐ
γὰρ ἔστων, ἀν μὴ διαιρεθῇ, ἀλλ’ ἢ δυνάμει. χωρὶς δ’ ἐκα-
τερον νοῶν τῶν ἡμίσεων διαιρεῖ καὶ τὸν χρόνον ἁμα’ τότε
δ’ οἴονει μῆκη. εἰ δ’ ὡς ἐς ἀμφοῦν, καὶ ἐν τῷ χρόνῳ τῷ
§ 4 ἐπ’ ἀμφοῦν. τὸ δὲ μὴ κατὰ ποσὸν ἀδιαίρετον ἀλλὰ τῷ εἰ-
 δει νοεῖ ἐν ἀδιαιρέτῳ χρόνῳ καὶ ἀδιαιρέτῳ τῆς ψυχῆς. 15
κατὰ συμβεβηκὸς δὲ, καὶ οὐχ ἢ ἐκεῖνα διαιρεῖ, ὦ νοεῖ
καὶ ἐν ὃ χρόνῳ, ἀλλ’ ἢ ἀδιαιρετα: ἐνεστὶ γὰρ καὶ τούτοις
τί ἀδιαιρετον, ἀλλ’ ἵσως οὐ χωριστόν, ὃ ποιεῖ ἐνα τὸν χρόνον
καὶ τὸ μῆκος. καὶ τοῦθ’ ὁμοίως ἐν ἀπαντὶ ἔστι τῷ συνεχεῖ

43οβ 2. τὸ μὴ λευκῶν λευκῶν σ. Trend. 4. πάντα] παῦτα coni. To. 7.
tὸ ἀδ.] τὸ διαιρέτον ἢ ἀδιαιρέτου conj. Tor. 10. ἐνοεῖ L. Tor., ἐνοεὶ SVX, ἐνοεῖς y,
ἐνοεῖν TUW. 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. Anyhow 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 considering that the indivisible and continuous presents itself before us in two forms, either as potential or as actual. There is therefore nothing to prevent us conceiving extended and thus indivisible 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 potentially: 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 χρόνω καὶ μήκει. ἢ δὲ στυγμὴ καὶ πᾶσα διαίρεσις, καὶ τὸ οὐτὸς ἀδιαίρετον, δηλούται ὦσπερ ἡ στέρησις. καὶ ὁμοιος ὁ λόγος ἐπὶ τῶν ἄλλων, ὅτι πῶς τὸ κακὸν γυωρίζει ἡ
§ 6 τὸ μέλαιν τὸν ἐναντίῳ γάρ πως γυωρίζει. δεὶ δὲ δυνάμει εἶναι τὸ γυωρίζον καὶ ἐν εἶναι ἐν αὐτῷ. εἰ δὲ τυι μὴ ἐστιν ἐναντίον τῶν αἰτίων, αὐτὸ ἐαυτὸ γινώσκει καὶ ἐνεργεῖα ἐστὶ
§ 7 καὶ χωριστόν. ἔστι δ' ἡ μὲν φάσις τι κατὰ τινος, ὦσπερ ἡ κατάφασις, καὶ ἀληθῆς ἡ ψευδῆς πάσας· ὃ δὲ νόος οὐ πᾶς, ἀλλ' ὅ τι τί ἐστιν κατὰ τὸ τί ἤν εἶναι ἀληθῆς, καὶ οὔ τι κατὰ τινος· ἀλλ' ὦσπερ τὸ ὁρᾶν τοῦ ἰδίου ἀληθὲς, εἰ δ' ἀνθρωπος τὸ λευκὸν ἡ μη, οὐκ ἀληθὲς αἱ, οὕτως ἔχει ὀσα ἀνευ ὦλης.

VII. Τὸ δ' αὐτὸ ἐστιν ἡ κατ' ἐνεργειαν ἐπιστημη τῷ πράγματε 431 1 ματι. ἢ δὲ κατὰ δύναμιν χρόνως προτέρα ἐν τῷ οἴ, ὀλος δὲ οὐδὲ χρόνῳ· ἐστι γὰρ ἐξ ἐντελεχεία ὀντόσ πάντα τὰ γνῶμενα. φαύνεται δὲ τὸ μὲν αἰσθητὸν ἐκ δυνάμει ὀντος τοῦ αἰσθητικοῦ ἐνεργεία ποιοῦν· οὐ γὰρ πάσχει οὐδ' ἀλλοιοῦται. διὸ ἄλλο εἴδος τούτοι κινήσεως· ἡ 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 elucidated 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 opposed to it, such a faculty knows itself by its own agency, and is realized in full activity and independently of all bodily conditions. 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-
ένεργεία ἣν, ἦ δ' ἀπλῶς ἐνεργεία ἐτέρα ἦ τοῦ τετελεσμένου.

§ 2 τὸ μὲν οὖν αἰσθάνεσθαι ὁμοιὸν τῷ φάναι μόνον καὶ νοεῖν. ὡταν δὲ ἢδυ ἦ λυπηρὸν, οἴον καταφάσα ἢ ἀποφάσα, διώκει ἦ φεύγει. καὶ ἔστι τὸ ἦδεσθαι καὶ λυπεῖσθαι τὸ ἐνεργεῖν τῇ αἰσθητικῇ μεσότητι πρὸς τὸ ἀγαθὸν ἡ κακὸν, ἦ τοιαῦτα. καὶ ἡ φυγὴ δὲ καὶ ἡ ὀρέξει τοῦτο ἦ κατ' ἐνεργείαν, καὶ οὐχ ἔτερον τὸ ὀρεκτικὸν καὶ φευκτικὸν, οὔτε ἀλλήλων οὔτε τῇ διανοητικῇ ψυχῇ τὰ φαντάσματα οἴον αἰσθήματα ὑπάρχει. ὡταν δὲ ἀγαθὸν ἦ κακὸν φήσῃ ἢ ἀποφήσῃ, φεύγει ἢ διώκει. διὸ οὐδέποτε νοεῖ ἄνευ φαντάσματος ἡ ψυχή· ὁστερ δὲ ὁ ἀτρὶ τὴν κόρην τοιαύτη ἐποίησεν, αὐτὴ δ' ἔτερον καὶ ἡ ἀκοή ὀφθαλμῶς· τὸ δὲ ἐσχατον ἔν, καὶ μία μεσότης· τὸ δ' ἐναι αὐτῇ

§ 3 τοῦ αἰσθητικοῦ· ἄλλα τὸ ἐναι ἄλλο. τῇ δὲ διανοητικῇ ψυχῇ τὰ φαντάσματα οἴον αἰσθήματα ὑπάρχει. ὡταν δὲ ἀγαθὸν ἦ κακὸν φήσῃ ἢ ἀποφήσῃ, φεύγει ἢ διώκει. διὸ οὐδέποτε νοεῖ ἄνευ φαντάσματος ἡ ψυχή· ὁστερ δὲ ὁ ἀτρὶ τὴν κόρην τοιαύτη ἐποίησεν, αὐτὴ δ' ἔτερον καὶ ἡ ἀκοή ὀφθαλμῶς· τὸ δὲ ἐσχατον ἔν, καὶ μία μεσότης· τὸ δ' ἐναι αὐτῇ

§ 4 πλεῖω. τίνι δ' ἐπικρίνει τί διαφέρει γλυκὺ καὶ θερμὸν, εἰρηται μὲν καὶ πρότερον, λεκτέον δὲ καὶ ὀδε. ἔστι γὰρ ἐν τῷ οὕτω δὲ καὶ ὡς ὅρος, καὶ ταῦτα ἐν τῷ ἀνάλογον καὶ τῷ ἀριθμῷ ὃν ἔχει πρὸς ἐκάτερον, ὡς ἐκεῖνα πρὸς ἀλληλαία· τί γὰρ διαφέρει τὸ ἀπορεῖν πῶς τὰ μὴ ὁμογενὴ 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
ΠΕΡΙ ΨΥΧΗΣ Γ.

η τάναντία, οίνον λευκὸν καὶ μέλαν; ἐστω δὴ ὡς τὸ Α τὸ λευκὸν πρὸς τὸ Β τὸ μέλαν, τὸ Γ πρὸς τὸ Δ ὡς ἐκεῖνα πρὸς ἄλληλα: ὡστε καὶ ἐναλλάξ. εἰ δὴ τὰ ΓΔ ε倒在地 εἰ ὑπάρχοντα, οὕτως ἔξει ὁσπερ καὶ τὰ ΑΒ, τὸ αὐτὸ μὲν καὶ ἐν, τὸ δ' εἶναι οὐ τὸ αὐτό, κάκεινο ὤμοιος. οδ' αὐτὸς λόγος καὶ εἰ τὸ μὲν Α τὸ γλυκὸ εἶη, τὸ δὲ Β τὸ λευ- 431

§ 5 κόν. τὰ μὲν οὖν εἰδὴ τὸ νοητικὸν ἐν τοῖς φαντάσμασι νοεῖ, καὶ ὡς ἐν ἐκείνοις ὁρισται αὐτῷ τὸ διωκτὸν καὶ φευκτὸν, καὶ ἑκτὸς τῆς αἰσθήσεως, ὅταν ἐπὶ τῶν φαντασμάτων ἢ, κινεῖται, οἰνον αἰσθανόμενος τὸν φρυκτὸν ὅτι πῦρ, τῇ κοινῇ

§ 6 γνωρίζει ὁρῶν κινούμενον, ὅτι πολέμιος. ὅτε δὲ τοῖς ἐν τῇ ψυχῇ φαντάσμασιν ἢ νοήμασιν ὁσπερ ὁρῶν λογίζεται καὶ βουλεύεται τὰ μέλλοντα πρὸς τὰ παρόντα· καὶ ὅταν εἰπη ὡς ἐκεί τὸ ἦν ἢ λυπηρόν, ἐνταῦθα φεύγει ἢ διώκει, καὶ ὅλως ἐν πράξει. καὶ τὸ ἀνευ δὲ πράξεως, τὸ ἀληθὲς 10 καὶ τὸ ψεῦδος ἐν τῷ αὐτῷ γένει ἐστὶ, τῷ ἀγαθῷ καὶ κακῷ.

§ 7 ἄλλα τῷ γε ἀπλῶς διαφέρει καὶ τινί. τὰ δὲ ἐν ἀφαιρέσει λεγόμενα νοεῖ ὁσπερ ἂν εἰ τὸ συμόν, ἢ μὲν συμόν,
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 *qua* snubnosed the mind cannot conceive this abstractedly and by itself, but *qua* hollow can by
οὐ κεχωρισμένως, ἃ δὲ κολλών, εἰ τις ἐνόει ἑνεργεῖα, ἀνέυ τῆς σαρκὸς ἀν ἐνόει ἐν ἃ τὸ κολλών. οὕτω τὰ μαθηματικά
§8 οὐ κεχωρισμένα ώς κεχωρισμένα νοεῖ, ὅταν νοῇ ἑκεῖνα. ὅλως
dὲ ὁ νοὺς ἐστὶν ὁ κατ’ ἑνεργεῖαν τὰ πράγματα νοῶν. ἀνὰ
dὲ ἐνδεχεται τῶν κεχωρισμένων τι νοεῖν οὐτα αὐτὸν μὴ
ceehorisménov megéthous, ἡ οὐ, σκεπτέον ύστερον.

VIII. Νῦν δὲ περὶ ψυχῆς τὰ λεχθέντα συγκεφαλαίωσαν-
tes, ἐπώμεν πάλιν ὅτι ἡ ψυχὴ τά ὅντα πῶς ἐστὶ πάντα,
ἡ γὰρ αἰσθητὰ τὰ ὅντα ἡ νοητά, ἐστὶ δ’ ἡ ἐπιστήμη μὲν
tὰ ἐπιστητά πῶσ, ἡ δ’ αἰσθητὸς τὰ αἰσθητά’ πῶς δὲ τούτο,
§2 δὲι ζητεὶ. τέμνεται οὐν ἡ ἐπιστήμη καὶ ἡ αἰσθητὸς εἰς τὰ
πράγματα, ἡ μὲν δυνάμει εἰς τὰ δυνάμει, ἡ δ’ ἐντελε-
χεῖα εἰς τὰ ἐντελεχεία, τῆς δὲ ψυχῆς τὸ αἰσθητικὸν καὶ
tὸ ἐπιστημονικὸν δυνάμει ταὐτά ἐστι, τὸ μὲν ἐπιστητοῦ τὸ
dὲ αἰσθητὸν. ἀνάγκη δ’ ἡ αὐτὰ ἡ τὰ εἰδὴ εἶναι. αὐτὰ
μὲν γὰρ δὴ οὐ: οὐ γὰρ ὃ λίθος ἐν τῇ ψυχῇ, ἀλλὰ τὸ
eidos’ ὡστε ἡ ψυχή ὀσπερ ἡ χεῖρ ἐστιν’ καὶ γὰρ ἡ χεῖρ
ὀργανῶν ἐστὶν ὄργανων, καὶ ὁ νοὺς εἴδος εἰδῶν καὶ ἡ αἰ-
§3 σθητὸς εἴδος αἰσθητῶν. ἐπεὶ δὲ οὐδὲ πράγμα υἱθέν ἐστι
παρὰ τὰ μεγέθη, ὥς δοκεῖ, τὰ αἰσθητὰ κεχωρισμένον, ἐν
tοῖς εἶδοι τοῖς αἰσθητοῖς τὰ νοητά ἐστι, τά τε ἐν ἀφαι-5

15. ἐν ἃ om. SUV. 16. Altera a Simplicio lectio traditur: οὐ κεχω-
risménos ώς κεχωρισμένως. 17. νοῶν om. LU. pr. E. Tor. 24. εἰς om.
EL. || εἰς τὰ πρ. || coni. Tor. ὀσπερ καὶ τὰ πρ. 25. τὰ δυνάμει] δυνάμεις L. Tor. et
pr. E. 26. τὰ ἐντ. || ἐντελεχείας L. pr. E. Tor. 27. τὸ ἀντε ἐπ. om. ELSUVX
|| ταῦτα STUWVWX ταῦτων Bekk., || ἐστι, τὸ μὲν ἐπιστημονικὸν τὸ ἐπιστητὸν τὸ δὲ
αἰσθητικὸν τὸ αἰσθητὸν Tor.
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
πέσει λεγόμενα, καὶ ὁ σά τῶν αἰσθητῶν ἔξεις καὶ πάθη.
καὶ διὰ τοῦτο ὦτε μὴ αἰσθανόμενος μηθὲν οὕθεν ἂν μάθων
οὐδὲ ξυνιόν ὅταν τε θεωρητικῷ, ἀνάγκη ἁμα ψάντοσμά τι
θεωρεῖν τὰ γὰρ ψάντοσματα ὡσπερ αἰσθητικά ἐστι,
πλὴν ἀνευ ὑλῆς. ἔστι δὲ ἡ ψάντοσμα ἔτερον φάσεως καὶ ἠ
ἀποφάσεως, συμπλοκῆ γὰρ νοημάτων ἐστὶ τὸ ἀληθὲς ἡ
ψεῦδος. τὰ δὲ πρῶτα νοημάτα τῖν διοίκει τοῦ μὴ φαν-
τάσματα εἶναι; ἡ οὐδὲ τάλλα φαντάσματα, ἀλλ' οὖν ἀνευ
ψάντοσμάτων.

IX. Ἐπεὶ δὲ ἡ ψυχὴ κατὰ δύο ὀρισταὶ δυνάμεις ἡ τῶν
ξώων, τῷ τε κριτικῷ, ὁ διανοιας ἔργον ἐστὶ καὶ αἰσθητικῆς,
καὶ ἐτί τῷ κινεῖν τὴν κατὰ τόπον κίνησιν, περὶ μὲν αἰσθητι-
κῆς καὶ νοῦ διακρίσθω τοσαῦτα, περὶ δὲ τοῦ κινουόντος,
tί ποτὲ ἐστὶ τῆς ψυχῆς, σκέπτεσθαι, πότερον ἐν τί μόριον
αὐτῆς χωριστῶν ἄν ἡ μεγεθεὶ ἡ λόγῳ, ἡ πᾶσα ἡ ψυχή,
kαὶ εἰ μόριον τι, πότερον ἵδιον τι παρὰ τὰ εἰσοδότα λέγε-
§ 2 σθαν καὶ τὰ εἰρημένα, ἡ τούτων ἐν τι. ἔχει δὲ ἀπορίαν
εὑρίσκεις τῶς τε δεὶ μόρια λέγειν τῆς ψυχῆς καὶ πόσα.
τρόπον γὰρ των ἀπειρω φαίνεται, καὶ οὐ μόνον ἂ τινες
λέγουσι διορίζοντες, λογιστικῶν καὶ θυμικῶν καὶ ἐπιθυμητικῶν,
kαὶ, οὶ δὲ τὸ λόγον ἔχον καὶ τὸ ἀλογον κατὰ γὰρ τὰς

42ο 5. ἐν ομ. ELSUV. 8. ἡ ψυχή LSXy. ἡ ψυχή Tor. ἡ ψυχή ΕΤΥΥΧX.
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-
διαφοράς δι' ας ταύτα χωρίζουσιν, καὶ ἄλλα φανεῖται μόρια μείζω διάστασιν ἔχοντα τούτων, περὶ ὅν καὶ νῦν εὑρηται, τὸ τε θρηστικῶν, ὃ καὶ τοὺς φυτοῖς ὑπάρχει καὶ πάσι τοῖς ζῴοις, καὶ τὸ αἰσθητικῶν, ὃ οὔτε ὃς ἀλογον οὔτε

§ 3 ὡς λόγον ἔχον θεία ἂν τις ῥαδίως. ἐτι δὲ τὸ φανταστικῶν, ὃ τῷ μὲν εἶναι πάντων ἔτερον, τίνι δὲ τούτων ταύτων ἡ ἔτε- 

§ 4 ψυχή, ἐν ἐκάστῳ ἐσται ὀρέξις. καὶ δὴ καὶ περὶ οὐ νῦν ὃ λόγος ἐνέστηκε, τί τὸ κινοῦν κατὰ τόπον τὸ ζῷον ἐστών; τὴν 

§ 5 λὴν ἀπορίαν. ἀλλὰ περὶ τῆς κατὰ τόπον κινῆσεως, τί τὸ κινοῦν τὸ ζῷον τὴν πορευτικὴν κίνησιν, σκεπτέον. ὅτι μὲν οὖν 

§ 6 κίμωσιν ταύτην. ὁμοίως δὲ οὐδὲ τὸ αἰσθητικῶν πολλὰ γάρ ἐστὶ τῶν ζῴων ἄ αἰσθησιν μὲν ἔχει, μόνιμα δ' ἐστὶ καὶ ἀκι- 

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 expiration, 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 ἀτελέσεων· τὰ δὲ τοιαῦτα τῶν ξύλων τέλεια καὶ
οὐ πηρωματά ἐστιν· σημεῖον δ᾽ ὅτι ἔστι γεννητικά καὶ ἀκμὴν
ἔχει καὶ φθορὰν· ἀστι ἐξέχει ἄν καὶ τὰ ὀργανικὰ μέρη τῆς
§ 7 πορείας. ἀλλὰ μὴν οὐδὲ τὸ λογιστικὸν καὶ ὁ καλούμενος νοῦς
ἐστὶν ὁ κυνῶν· ὁ μὲν γὰρ θεωρητικὸς οὐθέν νοεῖ πρακτὸν, οὐδὲ
λέγει περὶ φευγτοῦ καὶ διωκτοῦ οὐθέν, ή δὲ κίνησις ἡ φεύγου-
tός τι ἡ διώκοντός τί ἐστιν. ἀλλ᾽ οὐδ᾽ ὅταν θεωρῆτι τι τοιοῦτον,
ἦνὴ κελεύει φεύγειν ἡ διώκει, οἶνον πολλάκις διανοεῖται
φοβερών τι ἡ ἠδύ, οὐ κελεύει δὲ φοβεῖσθαι, ἡ δὲ καρδία
§ 8 κείεται, ἀν δ᾽ ἠδύ, ἐτερὼν τι μόριον. ἐτι καὶ ἐπιτάττοντος
τοῦ νοῦ καὶ λεγούσης τῆς διανοιας φεύγειν τι ἡ διώκεων οὐ
κείεται, ἀλλὰ κατὰ τὴν ἐπιθυμίαν πράττει, οἶνον ᾧ ἀκρατῆς.
καὶ ὅλως δὲ ὀρῶμεν ὅτι ὁ ἔχων τὴν ἰατρικὴν οὐκ ἱάται, ὡς
ἐτέρου τινὸς κυρίου οὐτος τοῦ ποιεῖν κατὰ τὴν ἐπιστῆμην, ἀλλ᾽
οὐ τῆς ἐπιστῆμῆς. ἀλλὰ μὴν οὐδ᾽ ἡ ὁρέξις ταύτης κυρία τῆς
κινήσεως· οἱ γὰρ ἐγκρατεῖσι ὅργομενοι καὶ ἐπιθυμοῦντες οὐ
πράττουσιν ὃν ἔχουσι τὴν ὁρέξιν, ἀλλ᾽ ἀκολουθοῦσι τῷ νῷ.
Χ. Φαίνεται δέ γε δύο ταύτα κυνοῦντα, ἡ ὁρέξις ἡ νοῦς,
eἰ τις τὴν φαντασίαν τιθείη ὁς νόησιν των. πολλὰ γὰρ παρὰ
tὴν ἐπιστῆμην ἀκολουθοῦσι ταῖς φαντασίαις, καὶ ἐν τοῖς ἀλ-
λοις ξύλοις οὐ νόησις οὐδὲ λογισμὸς ἐστιν, ἀλλὰ φαντασία.

24. ἔστι om. I.STUVWXy. 27. νοεὶ] ἔστερε EL. 433a 11. ἄλλοις] ἀλόγοις W.
the animals in question are perfect, and not mutilated: they pos-
sess generative powers, and exhibit both development and decay. And therefore [—if sense alone were a sufficient reason for the
course 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 any-
thing 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 inconti-
nent. 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 con-
trary, the lead of reason.

CHAPTER X.

There are, however, at least two faculties which are mani-
festly 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 ratici-
nation, but simply this power of representing images of sense,
ἀμφω ἀρα ταῦτα κινητικὰ κατὰ τόπον, νοῦς καὶ ὀρέξις.

§ 2 νοῦς δὲ ὁ ἑνεκὰ τοῦ λογιζομένου καὶ ὁ πρακτικὸς διαφέρει δὲ τοῦ θεωρητικοῦ τῷ τέλει. καὶ ἡ ὀρέξις ἑνεκὰ τοῦ πᾶσα· οὐ γὰρ ἡ ὀρέξις, αὐτὴ ἄρχῃ τοῦ πρακτικοῦ νοῦ· τὸ δὲ ἐσχατον ἄρχῃ τῆς πράξεως. ἀρχὴ εἰδότως ταῦτα δύο φαίνεται τὰ κινοῦντα, ὀρέξις καὶ διάνοια πρακτικῆ· τὸ ὀρεκτικὸν γὰρ κινεῖ, καὶ διὰ τούτο ἡ διάνοια κινεῖ, ὅτι ἄρχῃ αὐτὴς ἐστὶ τὸ

§ 3 ὀρεκτον. καὶ ἡ φαντασία δὲ ὅταν κινηῇ, οὐ κινεῖ ἀνευ ὀρέξις. ἐν δὴ τι τὸ κινοῦν, τὸ ὀρεκτόν. εἰ γὰρ δύο, νοῦς καὶ ὀρέξις, ἐκίνουν, κατὰ κοινῶν ἀν τι ἐκίνουν εἶδος. νῦν δὲ ο μέν νοῦς οὐ φαίνεται κινοῦν ἀνευ ὀρέξις; ἡ γὰρ βούλησις ὀρέξις· όταν δὲ κατὰ τὸν λογισμὸν κινηται, καὶ κατὰ βούλησιν κινεῖται. ἡ δ' ὀρέξις κινεῖ παρὰ τὸν λογισμὸν. ἡ γὰρ ἐπιθυμ-

§ 4 μία ὀρέξις τις ἐστίν. νοῦς μὲν οὐν πᾶς ὀρθός, ὀρέξις δὲ καὶ φαντασία καὶ ὀρθή καὶ οὐκ ὀρθή. διὸ αἰεὶ κινεῖ μὲν τὸ ὀρεκτόν, ἀλλὰ τοῦτο ἐστὶ ὡς τὸ ἁγαθὸν ἡ τὸ φαινόμενον ἁγαθόν· οὐ τὰν δὲ, ἀλλὰ τὸ πρακτὸν ἁγαθὸν πρακτόν δ' ἐστὶ

§ 5 τὸ ἐνδεχόμενον καὶ ἄλλως ἔχειν. ὃτι μὲν οὖν ἡ τοιαύτη δύναμις κινεῖ τῆς ψυχῆς ἡ καλουμένη ὀρέξις, φαινέτο. τοῖς δὲ διαφοροῦσι τὰ μέρη τῆς ψυχῆς, ἐὰν κατὰ τὰς δυνάμεις διαφορῶσι καὶ χωρίζωσι, πάμπολλα γίνεται, πρακτικῶν, αἰ-

18. ὀρεκτῶν EL. Trend. Tor.: ceteri ὀρεκτικῶν. 29. πρακτικῶν ἁγ. L.
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,
σθητικών, νοητικών, βουλευτικών, ἕτε φρεκτικών ταῦτα γὰρ πλέον διαφέρει ἄλληλων ἢ τὸ ἐπιθυμητικόν καὶ θυμικόν.

§ 6 ἐπεὶ δ' ὀρεξεῖς γίνονται ἑναντίαι ἄλληλαις, τούτῳ δὲ συμβαινεῖ ὅταν ὁ λόγος καὶ ἡ ἐπιθυμία ἑναντίαι ἄσι, γίνεται δ' ἐν τοῖς χρόνοις αὐσθησιν ἐξουσίων (ὁ μὲν γὰρ νοὸς διὰ τὸ μέλλον ἀνθέλκειν κελεύει, ἡ δ' ἐπιθυμία διὰ τὸ ἡθή φαίνεται γὰρ τὸ ἡθή ἡθο καὶ ἀπλῶς ἡθο καὶ ἀγαθον ἀπλῶς, διὰ τὸ μὴ ὀράν τὸ μέλλον), εἴδει μὲν ἐν ἄν εἴη τὸ κινοῦν τὸ ὀρεκτικόν, ἣ ὀρεκτικόν, πρῶτον δὲ πάντων τὸ ὀρεκτόν (τούτῳ γὰρ κινεῖ οὐ κινούμενον τῷ νοηθῆναι ἢ φαντασθῆναι), ἀριθμῷ

§ 7 δὲ πλεῖώ τὰ κινοῦντα. ἐπειδὴ δ' ἐστὶ τρία, ἐν μὲν τὸ κινοῦν, δεύτερον δ' δ' κινεῖ, τρίτον τὸ κινούμενον τὸ δὲ κινοῦν διττὸν, τὸ μὲν ἀκίνητον, τὸ δὲ κινοῦν καὶ κινούμενον ἐστὶ δὲ τὸ μὲν ἀκίνητον τὸ πρακτόν ἀγαθόν, τὸ δὲ κινοῦν καὶ κινούμενον τὸ ὀρεκτικὸν (κινεῖται γὰρ τὸ ὀρεγόμενον ἢ ὀρέγεται, καὶ ἡ ὀρεξίς κινησις τῆς ἐστὶν ἢ ἐνέργεια), τὸ δὲ κινούμενον τὸ ξέφον ὦ δ' κινεῖ ὀργάνῳ ἡ ὀρεξίς, ἡθο τούτο σωματικόν ἐστιν διὸ ἐν τοῖς κινοῖς σώματος καὶ ψυχῆς ἐργος θεωρητέου περὶ

§ 8 αὐτοῦ. νῦν δὲ ὡς ἐν κεφαλαίῳ εἰπεῖν, τὸ κινοῦν ὀργανικῶς ὅπου ἄρχῃ καὶ τελευτῇ τὸ αὐτό, οἰον ὁ γιγαλυμός ἐνταῦθα γὰρ τὸ κυρτὸν καὶ κοιλὸν τὸ μὲν τελευτή τὸ δ' ἄρχῃ διὸ τὸ μὲν ήρεμεῖ δὲ κινεῖται, λόγῳ μὲν ἐτέρα

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-
οὐτα, μεγέθει δ’ ἀχώριστα: πάντα γὰρ ὤσει καὶ ἐλξει κινεῖται. διὸ δὲ ὁσπερ ἐν κύκλῳ μένειν τι, καὶ ἐντεῦθεν ἀρ−
§ 9 χεσθαι τὴν κύνησιν. ὅλως μὲν οὖν, ὁσπερ εἰρηται, ἢ ὀρεκτικὸν τὸ ζῷον, ταύτῃ αὐτοῦ κυνητικὸν ὀρεκτικὸν δὲ οὐκ ἀνεῖ
φαντασίας: φαντασία δὲ πᾶσα ἡ λογιστικὴ ἡ αἰσθητική. ταύτης μὲν οὖν καὶ τὰ ἄλλα ζώα μετέχει.

XI. Σκεπτέον δὲ καὶ περὶ τῶν ἀτελῶν, τί τὸ κινοῦν ἐστὶν, οἷς ἀφῇ μόνον ὑπάρχει αἰσθησίς, πότερον ἐνδέχεται φαν−
tασίαν ὑπάρχειν τοῦτοι, ἢ οὐ, καὶ ἐπιθυμίαν. φαίνεται γὰρ
λύτη καὶ ἡδονὴ ἐνοῦσα. εἰ δὲ ταύτα, καὶ ἐπιθυμίαν ἀνάγκη.
φαντασία δὲ πῶς ἂν ἐνείη; ἢ ὁσπερ καὶ κινεῖται ἀορίστως,
§ 2 καὶ ταύτ' ἐνεστὶ μὲν, ἀορίστως δ' ἐνεστιν. ἢ μὲν οὖν αἰσθητικὴ
φαντασία, ὁσπερ εἰρηται, καὶ ἐν τοῖς ἄλλοις ζῷοις ὑπάρ−
χει, ἢ δὲ βουλευτικὴ ἐν τοῖς λογιστικοῖς: πότερον γὰρ πρά−
ξει τόδε ἢ τόδε, λογισμὸν ἢδη ἐστὶν ἔργον καὶ ἀνάγκη ἐνί
μετρεῖν τὸ μείζον γὰρ διόκει. ὡστε δύναται ἐν ἐκ πλεοῦ−
νων φαντασμάτων ποιεῖν. καὶ αἵτιν τοῦτο τοῦ δόξαν μὴ
dοκεῖν ἔχειν, ὅτι τὴν ἐκ συλλογισμοῦ οὐκ ἔχει, αὐτὴ δὲ ἐκεί−

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 νην’ διό τὸ βουλευτικὸν οὐκ ἔχει ἡ ὁρεξία. νικᾷ δὲ ἐνίοτε καὶ κινεῖ τὴν βούλησιν· ὅτε δ’ ἐκείνη ταύτην, ὥσπερ σφαίρα, ἡ ὁρεξία τὴν ὁρεξίαν, όταν ἀκρασία γένηται. φύσει δὲ ἄει ἡ ἀνω ἀρχικωτέρα καὶ κινεῖ. ὧστε τρεῖς φορὰς ἡδη κωνεῖσθαι. 15

§ 4 τὸ δ’ ἐπιστημονικὸν οὐ κωνεῖται, ἀλλὰ μένει. ἔπει δ’ ἡ μὲν καθόλου ὑπόληψις καὶ λόγος, ἡ δὲ τοῦ καθ’ ἐκαστα (ἡ μὲν γὰρ λέγει ὅτι δεὶ τὸν τοιοῦτον τὸ τοιώδε πράττειν, ἡ δὲ ὅτι τόδε τὸ νῦν τοιώδε, κάγω δὲ τοιósδε) ἡδη αὕτη κινεῖ ἡ δόξα, οὐχ ἡ καθόλου. ἡ ἀμφοῦ, ἀλλ’ ἡ μὲν ἠρεμοῦσα μᾶλ- 20 λο, ἡ δ’ οὐ.

XII. Τὴν μὲν οὖν θρεπτικῆν ψυχῆν ἀνάγκη πᾶν ἔχειν ὅτι περ ἃν ἤθη καὶ ψυχήν ἔχειν ἀπὸ γενέσεως μέχρι φθοράς· ἀνάγκη γὰρ τὸ γενόμενον αὐξησιν ἔχειν καὶ ἀκμῆν καὶ φθίσιν, ταῦτα δ’ ἀνεύ τροφῆς ἀδύνατον ἀνάγκη ἄρα ἐνείναι τὴν θρεπτικῆν δύναμιν ἐν πάσι τοῖς φυσικοῖς καὶ φθινονυσί.

§ 2 αἰσθήσεως δ’ οὖν ἀναγκαῖον ἐν ἀπασί τοῖς ἃσωσι· οὐτε γὰρ ὀσων τὸ σῶμα ἀπλοῦν, ἐνδὲξεται ἀφὴν ἔχειν, (οὐτε ἀνεύ ταύτης ὀφν τε οὐθὲν εἶναι ἃσων) οὐτε ὅσα μὴ δεκτικᾷ τῶν ἡδη· ἀνεύ τῆς ὑλῆς. τὸ δὲ ἃσων ἀναγκαῖον αἰσθήσεων 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
εἰ μηθέν μάτην ποιεῖ ἡ φύσις. ἐνεκά του γὰρ πάντα ὑπάρχει τὰ φύσει, ἡ συμπτώματα ἔσται τῶν ἐνεκά του. εἰ οὖν πᾶν σῶμα πορευτικὸν μὴ ἔχον αἰσθήσιν, φθέροιτο ἃν καὶ ἐάς τέλος οὐκ ἂν ἔλθοι, οἳ ἐστὶ φύσεως ἐργον πῶς γὰρ θρέψεται; τοῖς μὲν γὰρ μονύμους ὑπάρχει τοῦτο οἶδεν πεφύκασιν.

§ 4 οὐχ οἴον τε δὲ σῶμα ἔχειν μὲν ψυχὴν καὶ νοῦν κριτικόν, αἰσθήσιν δὲ μὴ ἔχειν, μὴ μόνιμον ὑπὸ γεννητὸν δέ. ἀλλὰ μὴν οὐδὲ ἀγέννητον διὰ τί γὰρ οὐχ ἔξει; ἡ γὰρ τῇ ψυχῇ βέλτιον 5 ἡ τῷ σῶματι. νῦν δὲ οὐδέτερον ἡ μὲν γὰρ οὐ μᾶλλον νοήσει, τὸ δὲ οὐθέν ἔσται μᾶλλον δὲ ἐκεῖνο. οὐθὲν ἁρα ἔξεις ψυχὴν

§ 5 σῶμα μὴ μόνιμον ἀνευ αἰσθήσεως. ἀλλὰ μὴν εἰγε αἰσθήσιν ἕξει, ἀνάγκη τὸ σῶμα εἶναι ἡ ἀπόλου ἡ μικτόν. οὐχ οἴον τε δὲ ἀπόλου. ἀφὴν γὰρ οὐχ ἔξεις, ἔστι δὲ ἀνάγκη.

§ 6 ταῦτην ἔχειν. τοῦτο δὲ ἐκ τῶν δῆλον. ἐπεὶ γὰρ τὸ ἔφοιτον σῶμα ἐμψυχόν ἔστι, σῶμα δὲ ἀπαν ἀπτόν, ἀπτόν δὲ τὸ αἰσθητὸν ἁφὴ, ἀνάγκη καὶ τὸ τοῦ ἔφοιτον σῶμα ἀπτικὸν εἶναι, εἰ μελλει σωζεσθαι τὸ ἔφοιτο. αἱ γὰρ ἀλλαὶ αἰσθησεις δὲ ἐτέρων αἰσθάνονται, οὐ̈ον ὀσφηρησὶς ὁψὶς ἀκοῆ 15 ἀπτόμενον δὲ, εἰ μὴ ἔξεις αἰσθησιῶν, οὐ δυνήσεσται τα μὲν φεύγειν τὰ δὲ λαβεῖν εἰ δὲ τοῦτο, ἄδυνατον ἔσται σωζεῖ

§ 7 σθαι τὸ ἔφοιτο. διὸ καὶ ἡ γενοσὶς ἐστων ὀσπερ ἁφῆς τις τρο-

434b 2. τὸ οἶδεν πεφύκασιν Bekk. Tor. 5. γὰρ οὐχ ἔξει TUVWy.

γὰρ ἐξεῖ Bekk 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
φῆς γάρ ἔστω, ἢ δὲ τροφὴ τὸ σῶμα τὸ ἀπτόν. ψόφος δὲ καὶ χρῶμα καὶ ὁσμὴ οὐ τρέφει, οὐδὲ ποιεῖ οὔτ' αὔξησιν οὔτε φθίσιν. ὡστε καὶ τὴν γεύσιν ἀνάγκη ἀφήν εἶναι τινα, διὰ τὸ τοῦ ἀπτοῦ καὶ θρεπτικοῦ αἰσθησιν εἶναι. ἀνταί μὲν οὖν ἀναγκαῖα τῷ ζῷῳ, καὶ φανερῶν ὅτι οὐχ οἶον τε ἄνευ § 8 ἀφῆς εἶναι ζῷον. αἱ δὲ ἄλλαι τοῦ τε εὖ ἐνεκα καὶ γένει ζώων ἦδη οὐ τῷ τυχόντι, ἀλλὰ τυσίν, οἶον τῷ πορευτικῷ ἀνάγκη ὑπάρχειν' εἰ γὰρ μέλλει σῶζεσθαι, οὐ μόνον δεῖ ἀπτόμενον αἰσθάνεσθαι ἄλλα καὶ ἀποθεῖν. τούτῳ δ' ἀν εἴη, εἰ διὰ τοῦ μεταξ' αἰσθητικῶν ἑτ' τῷ ἐκείνῳ μὲν ὑπὸ τοῦ § 9 αἰσθητοῦ πάσχει καὶ κινεῖται, αὐτὸ δ' ὑπ' ἐκείνου. ὡσπερ γὰρ τὸ κινοῦν κατὰ τόπον μέχρι τοῦ μεταβάλλειν ποιεῖ, 30 καὶ τὸ ὄσσαν ἔτερον ποιεῖ ὡστε ὅθεν, καὶ ἔστι διὰ μέσου ἡ κίνησις, καὶ δὴ τὸ μὲν πρῶτον κινοῦν ὅθει οὐκ ὅθούμενον, τὸ δ' ἑσχάτον μόνον ὅθειται οὐκ ὅσαν, τὸ δ' μέσον ἀμφότερον, πολλὰ δὲ μέσα, οὕτως εἴπ' ἀλλοiocάσκοι, πλὴν ὅτι μένοντα 435α ἑν τῷ αὐτῷ τόπῳ ἀλλοιοί, οἶον εἰ εἰς χηρόν βάπτισαι τις, μέχρι τοῦτον ἐκκύνησθη, ἐς ἐβαπτισθεὶς λίθος δὲ οὐδέν, ἄλλα ὑδωρ μέχρι πόρρω. ὅ δ' ἀπή ἐπὶ πλείστον κινεῖτα καὶ ποιεῖ καὶ πάσχει, ἐὰν μένη καὶ εἰς ἦ. διὸ καὶ περὶ ἀνα-κλάσεως βέλτιον ἢ τὴν οὕσιν ἐξοίσουσαν ἀνακλάσθαι, τὸν ἀέρα πάσχειν ὑπὸ τοῦ σχήματος καὶ χρώματος, μέχρι περ ὦν

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
ΠΕΡΙ ΨΧΙΠΣ Π.

αὐ εἰς ἥ. ἐπὶ δὲ τοῦ λείου ἑστὶν εἰς· διὸ πάλιν οὐτὸς τὴν ὑψιν κυνεί, ὀσπερ ᾧν εἰ τὸ ἐν τῷ κηρῷ σημεῖον διεδιδότο μέχρι τοῦ πέρατος.

XIII. "Ωτὶ δ' οὐχ οἴον τε ἀπλοῦν ἐναι τὸ τοῦ ζῷου σῶμα, φανερὸν, λέγω δ' οἴον πύρινον ἢ ἀέρινον. ἀνευ μὲν γὰρ ἀφῆς οὐδεμίαν ἐνδέχεται ἀλλήν αἰσθητὴν ἐχειν· τὸ γὰρ σῶμα ἀπτικὸν τὸ ἐμψυχὸν πᾶν, ὀσπερ εἰρηται. τὰ δὲ ἀλλα ἐξω γῆς αἰσθητήρια μὲν ἀν γένουτο, πάντα δὲ τῷ δι' ἐτέρουν αἰσθάνεσθαι ποιεῖ τὴν αἰσθησιν καὶ διὰ τῶν μεταξύ· ἡ δ' ἀφῆ τῶν αὐτῶν ἀπτεσθαὶ ἐστιν, διὸ καὶ τοῦνομα τοῦτο ἔχει. καίτοι καὶ τὰ ἀλλα αἰσθητήρια ἀφῆς αἰσθάνεται, ἀλλὰ δι' ἐτέρουν' αὐτὴ δὲ δοκεῖ μόνη δι' αὐτῆς. ὡστε τῶν μὲν τοιοῦτων στοιχείων οὐθέν ἂν εἰη σῶμα τοῦ ζῷου. οὐδὲ δὴ γῆς· πάντων γὰρ ἡ ἀφῆ τῶν ἀπτῶν ἑστὶν ὀσπερ μεσότης, καὶ δεκτικὸν τὸ αἰσθητήριον ὦ μόνου ὁσαι διαφοραῖ γῆς εἰσὶν, ἀλλὰ καὶ θερμοῦ καὶ ψυχροῦ καὶ τῶν ἀλλων ἀπτῶν ἀπάντων· καὶ διὰ τοῦτο τοῖς ὡστοῖς καὶ ταῖς θρεξί καὶ τοῖς τοιοῦτοις μορίοις οὐκ αἰσθανάμεθα, ὅτι γῆς ἐστίν. καὶ τὰ φυτὰ διὰ τοῦτο οὐδεμίαν ἔχει αἰσθησιν, ὅτι γῆς ἐστίν· ἀνευ δὲ ἀφῆς οὐδεμίαν οἴον τε ἀλλὴν ὑπάρχειν, τοῦτο δὲ τὸ αἰσθητήριον οὐκ ἑστιν οὔτε γῆς οὔτε ἀλλου τῶν ἡμέρων οὐδένος· φανερὸν τοῖς ὅτι ἀνάγκη μόνης ταύτης στερεσκόμενα ἡς αἰσθήσεως τὰ ζῷα ἀποθνήσκειν· οὔτε γὰρ ταύτην ἐχειν οἴον τε μὴ ζῷον, οὔτε ζῷον ὅν ἀλλήν ἐχειν ἀνάγκη πλὴν ταύτης· καὶ διὰ τοῦτο τὰ μὲν ἀλλα αἰσθηταὶ τὰ ταῖς υπερβολαῖς οὐ διαφθείρει τὸ ζῷον, οἴον ἡμέρα

15. αἰσθητικά VW. 22. αἰσθητήριων] αἰσθητικῶν γ.
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 ὀσμή, ἀλλὰ μόνον τὰ αἰσθητήρια, ἂν μὴ κατὰ συμβεβηκός, ὅιον ἂν ἀμα τῷ ψόφῳ ὅσις γένηται καὶ πληγῇ, καὶ ὑπὸ ὀραμάτων καὶ ὀσμῆς ἑτερα κινεῖτα, ὃ τῇ ἀφή φθείρει. καὶ ὁ χυμὸς δὲ ἤ ἂμα συμβαίνει § 3 ἀπτικὸν εἶναι, ταῦτη φθείρει. ἡ δὲ τῶν ἀπτῶν ὑπερβολή, ὁιον θερμῶν καὶ ψυχρῶν καὶ σκληρῶν, ἀναιρεῖ τὸ ἄφων ταντὸς μὲν γὰρ αἰσθητοῦ ὑπερβολή ἀναιρεῖ τὸ αἰσθητήριον, ὅστε καὶ τὸ ἄπτων τὴν ἀφήν, ταῦτη δὲ ἀριστάται τὸ ζῆν αἴνευ γὰρ ἀφῆς δὲ δεδεικται ὅτι ἀδύνατον εἶναι ἄφων. διὸ ἡ τῶν ἀπτῶν ὑπερβολή ἡ μόνον τὸ αἰσθητήριον φθείρει, ἀλλὰ καὶ τὸ ἄφων, ὅτι ἀνάγκη μόνην ἔχειν ταύτην. τὰς δὲ ἄλλας αἰσθήσεις ἔχει τὸ ἄφων, ὅσπερ εἰρήται, οὐ τοῦ εἶναι ἐνεκα ἀλλὰ τοῦ εὖ, οἴον ὅψιν, ἐπεὶ ἐν ἀέρι καὶ ὡδαί, ἰπως ὀρᾶ, ὀλως δὲ ἐπεὶ ἐν διαφανεί, γεῦσιν τε διὰ τὸ ἔσοδο καὶ λυπηρόν, ἵνα αἰσθάνηται τὸ ἐν τροφῇ καὶ ἐπιθυμῇ καὶ κινῆται, ἀκοὴ δὲ ὅπως σημαίνῃ τι αὐτῷ, γιλῶσαν δὲ ὅπως 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. ἣ κατ’ ἀκριβείαν] 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 ἀκριβεία. The chief passages bearing on this are the following:

 Ἀναλ. Ποστ. 1. 24, 86b 17, ἢ μᾶλλον εἶ ἀρχής τῆς ὅπτων ἀκριβεστάρα ἀπόδειξις. ἐστι δὲ τοιαῦτῃ ἡ καθόλου μᾶλλον. Μεταφ. Α. 2. 982a 25, ἀκριβεστάτας δὲ τῶν ἑπιστημῶν οἱ μᾶλλον τῶν πρώτων εἰσίν’ αἱ γὰρ εἶ ἑλαστόνων ἀκριβεστάραι τῶν ἐκ προσθέσεως λεγομένων, ἡδον ἀριθμητικὴ γεωμετρίας. So in Εἰκ. VI. 5, 1141a 16, σοφία is said to be ἀκριβεστάτη τῶν ἑπιστημῶν: and in Μεταφ. Α. 995bl 15, we have τὴν δ’ ἄκριβευσιν τὴν μαθηματικὴν οὐκ ἐν ὑπασιν ἀπασιτήτον ἀλλ’ ἐν τοῖς μὴ ἔχουσιν ἔρημοι. διὸτερ οὐ φυσικῶς ἐστιν τρόπος—a statement rather in contradiction with the present treatise’s inclusion of psychology in φυσική. And indeed in De Coelo, ΜΜ. 1, physic is given as an instance of τὰ ἐκ προσθέσεως, and contrasted with τὰ ἐς ἀφαρέσεως of mathematics. In claiming therefore ἀκριβεία 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 (ἀρχητήριον 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 ἀκριβεῖς καὶ αὐτάρκεις 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 πρῖτοι in the phenomena of life, the ἀρχη 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 ἀκριβεῖ διότι καὶ ταῖς ἄλλαις ἐπιστήμαις παρὰ ψυχῆς ἡ ἀκριβεία, τῷ διαμισσῷ δὲ ὅτι σχεδὸν διὰ πάντων διήκει τῶν ὄντων ἡ τῆς ψυχῆς φύσις ἀπὸ τῆς ἐσχάτης ἀρχήμορη τῆς φυσικῆς μέχρι τῆς πρώτης. Simplicius notes, ἀκριβεστέρα δὲ γνώσεις ἡ ἀναγκαία καὶ ἀπαράδειπτος καὶ ἡ οἰκεία τῷ γνώσει, and insists specially on the affinity between the subject knowing and the object known, the fact of συναίσθησεις and the ἐπιστροφή of the soul upon itself implied in psychology.

402a 3. τὴν τῆς ψυχῆς ἱστορίαν] Torstrik reads περὶ τῆς ψυχῆς on the ground that ἱστορία means not cogitatio but investigatio, and that the preposition is therefore necessary. On the meaning of ἱστορία as equivalent to enquiries or researches, De Quincey has some happy remarks (Essay on Philosophy of Herodotus). Cf. Introduction, p. xxiv.

402a 7. ἐπιτηθοῦμεν δὲ θεωρῆσαι] With this statement of the sphere and questions of psychology, compare and contrast Plato, Phaedrus, 271a, δῆλον ἄρα ὅτι ὁ ὁθωμομαχός τε καὶ ὅτι ἄν ἄλλος σπουδή τέχνην ῥυτικήν διδὼ πρῶτον πάση ἀκριβείᾳ γράψει τε καὶ ποιήσει ψυχήν ἰδεῖν, πύτερον ἐν καὶ ὀμοίῳ πέφικεν, ἡ κατὰ σώματος μορφήν πολυείδεις, κτλ.

402a 6. ἦστι γὰρ ὁδὸν ἀρχὴ τῶν ζωῶν] This view of the importance of ψυχή in the study of animal life is especially emphasized in the Treatise on the Parts of Animals: so, e.g., I. 1, 6, ὁπλιθοῦσας γοῦν (ψυχῆς) οὐκείτι ζωῶν ἐστι. For the meaning of ἀρχὴ in Aristotle, see Metaph. A. 1, 1013, where Aristotle distinguishes six senses in which ἀρχή may be used and concludes 1013a, 17, πασῶν μὲν οὖν κοινῶν τῶν ἀρχῶν τὸ πρῶτον εἶναι ὅθεν ἡ ἔστιν ἡ γίγνεται ἡ γιγνώσκεται. Cf. also De Gen. Anim. v. 7, 788a 14, τούτο γὰρ ἦστι τὸ ἀρχὴν εἶναι τὸ αὐτὴν μὲν αὐτίκα εἶναι πολλάκις δ' ἀλλο ἄνωθεν μὴδέν. See also Cope's Rhetoric, Vol. I. p. 126. Its use in the present passage is almost identical with that of the De Coelo, II. 2, 284b 26, ἀρχὰς γὰρ ταῦτα λέγω ὅθεν ἀρχοται πρῶτων αἱ κινήσεις τοῖς ἔχουσιν. And still more closely does it agree with Meta. K. 1, 1060a 1, ἀρχὴ γὰρ τὸ συναισθημόν: that is the
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soul is so much the condition of animal life, that its removal involves also the destruction of the animal.

402a 7. τὴν τὴν φύσιν αὐτῆς καὶ τὴν οὐσίαν] Notwithstanding that in Metα, Δ. 4, 1014b, φύσις is said to be sometimes equivalent to ἡ τῶν φύσεων οὐσία, and that further πάσα 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 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 inquiries of the metaphysician.

402a 8. εἴθ’ ὅσα συμβεβηκέντες περὶ αὐτῆς] By the 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.

Sec Metaph. Δ. 30, 1025a 30, λέγεται δὲ καὶ ἀλλως συμβεβηκός οἷον δῶσα ὑπάρχει ἕκαστο καθ’ αὑτὸ μὴ ἐν τῇ οὐσίᾳ οὕτα, οἷον τῷ τριγώνῳ τὸ δύο ὀρθὰ ἔχειν. Similarly in Anal. Post. I. 7, 75a 42 science is said to involve a ὑποκείμενον οὐ τὰ πάθη καὶ τὰ καθ’ αὑτὰ συμβεβηκότα δηλοὶ ἡ ἀπόδειξις. Cp. Cope's Rhetoric, I. 7, § 1, p. 27.

402a 9. ὅν τὰ μὲν Ἰδια 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 (ζῷον). By the Ἰδια πάθη we must understand particularly thought: by the second class pleasure, pain, sense-perceptions, &c., as Themistius explains.

§ 2. 402a 12. λέγω δὲ τοῦ περὶ τὴν 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 ἐστιν καὶ refers to this general conception embodied in the unity of a single type. Thus we have τὸ πρώτον ἐνυπάρχον δὲ λέγεται ἐν τῷ τί ἐστιν τοῦτο γένος, Metα. Δ. 28, 1024b 5: τὸ δὲ γένος βουλεῖται τὸ τί ἐστι σμαίνει καὶ πρῶτον ὑποτίθεται τῶν ἐν τῷ ὀρθῷ λεγόμενων, Τοῦ Ἐν. VI. 5, 142b 28.

402a 15. τῶν κατὰ συμβεβηκός Ἰδιῶν] By Ἰδια κατὰ συμβεβηκός Aristotle would seem to mean relative properties: qualities which attach to something when viewed in reference to something else. Ὁ. Τοῦ ν. v. 1, 128b 10, ἀποδεῖθαι δὲ τῷ ἰδίῳ ἢ καθ’ αὑτὸ καὶ αὐτοί, ἢ πρὸς τέτοιο καὶ ποίητο, οἷον καθ’ αὑτὸ μὲν ἀνθρώπου τὸ ζῷον ἤμερον φύσις, πρὸς τέτοιο δὲ οἷον ἐν νήκες πρὸς σώμα, ὅτι τὰ μὲν πρωστατικόν τὸ δ’ ὑπηρετικοίν ἐστι. 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 ἴδιον κατὰ συμβεβηκός. So again it is an ἴδιον of man relatively to horse to be a biped.

402b18. τὸ πραγματευόμαι] Cope, Rhet. 1. 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, 997b21, K. 1, 1059b10, K. 7, 1064a3.

402b19. τὸτερον ἀπόδειξις τίς ἐστιν ἢ διαίρεσις] 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, 81b40, μακάνειμεν ἡ ἐπαγωγὴ ἢ ἀπόδειξις. ἢτι δ’ ἢ μὲν ἀπόδειξις ἐκ τῶν καθόλου, ἢ 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, 91b32, οὔτε γὰρ ὁ ἐπάγων ἵσως ἀποδείκνυσιν, ἀλλ’ ὄριον ὑποῦλοι τί. 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 αὐτίκα καὶ τοῦ διὰ τί (Post. An. I. 24, 85b23); it is τῶν ἀναγκαίων and ἐξ ἀναγκαίων, and it cannot possibly attach to individual sensible things as such—τῶν οὐσίων τῶν αἰσθητῶν τῶν καθ’ ἐκαστα ὑπ’ ἐστιν ἀπόδειξις (Meta. Z. 15, 1039a28). But while ἀπόδειξις thus tries to reduce the laws of facts from the general conception which overrules 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 ἴσων τὸ μέσον, ἐν ἀπαντή τε τούτο ζητεῖται (Post. Anal. II. 2, 90b7). Διαίρεσις 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 ἐστι 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 petītīo principīī. So he expresses himself in Prior. Anal. I. 31, 46b31, ἐστι γὰρ ἡ διαίρεσις ὁσῶν ἀπεκκριθησαί εὐκλογομοσ’ ὃ μὲν γὰρ δει γειῇ ἀρετῇς, συλλογίζομαι δ’ ἄλι τῶν ᾠθετεν..., ἐν μὲν οὖν ταῖς ἀποδείξεις, ὅταν δὲ τι συλλογίζομαι ύπαρχει, δεὶ τὸ μέσον, δε’ οὐ γίνεται ὁ συλλογομοσ’, καὶ ἢτον δεὶ εἶπαι καὶ μὴ καθόλου τοῦ πρῶτον τῶν ἀκρών’ ἢ δε’ διαίρεσις τούτων τί Βούλεται τὸ γὰρ καθόλου λαμβάνει μέσον. 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. 91v, ἀσπερ γὰρ ἐν τοῖς συμπεράσμασι τοῖς ἄνευ τῶν μέσων ἐὰν τις εἴη ὅτι τούτων ὑπόταν ἀνάγκη τοῦτο εἶναι, ἐνδέχεται ἐρωτησαί διὰ τί, οὖν καὶ εἶν τοῖς διαρρητικῶς ὁρεῖς. τί ἐστιν ἄνθρωπος; ἦρων θυγτών, ὑπόσων, δίσων, ἀπτερων. διὰ τί; παρ’ ἑκάστην πρόσθεσιν’ ἑρεί γὰρ καὶ δείξει τῇ διαρέσει, ἢς οὕτω, ὅτι πῶν ἢ θυγτῶν ἢ ἄθων. ὁ δὲ τοιοῦτος λόγος ἄπαι ποὺ ἦσαν ἁρμικοῖ. ἡς’ εἰ καὶ ἀπεδείκνυτο τῇ διαρέσει, ἀλλ’ ὃ γ’ ἁρμικοί οὐ συλλογισμὸς γίνεται. Τὸ a similar effect does Aristotle shew in Part. Anim. 1. 3, 642b, 21, that a dichotomy of negatives is impracticable: ἔτι στερήσει μὲν ἀναγκαῖοι διαρέει καὶ διαρραύωσιν οἱ διχοτομοῦντες. οὐκ ἔστι δὲ διαφορὰ στερήσεως ἥ στερήσεις’ ἄθων τὸν οὐδὲ εἶναι τοῦ μὴ οὕτω, οἷον τῆς ἁπάντας ἢ τοῦ ἀπτεροῦ ἀσπερ περώσεως καὶ ποθῶν.

402a, 21. ἄλλαι γὰρ ἀλλων ἁρχαί, καθάπερ ἁρμικῶν καὶ ἐπιπέδων] The ἁρχαί of number would be the existence of the unit, the presupposition of superfluities would be extension. Aristotle distinguishes between common or universal principles and special or οἰκεῖοι ἁρχαί, restricted to a particular science and not to be transferred from one science to another. Anal. Post. I. 32, 88b, 27, αἱ γὰρ ἁρχαὶ δεῦτε ἐξ ὁν τε καὶ περὶ ὃ ὁ μὲν οὖν ἐξ ὁν κοινων, αἱ δὲ περὶ ὧν ἡ, οἷον ἁρμικοῦ, μέγεθος. And valid reasoning, Aristotle insists, must be conducted with special reference to these specific principles: οἱ μὴ ἐκ τῶν οἰκεῖων ἁρχῶν λόγοι ἄνωθεν, Gen. An. 748a, 8. Cp. especially Post. Anal. I. 7, 75a, 38, οὐκ ἀρα ἔστιν ἐξ ἀλλοῦ γένους μεταβάντα δεῖξαι οἷον τῷ γεωμετρικῷ ἁρμικῷ. 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—ἐξ ὁν μὲν οὖν ἢ ἁπόθεσις ἐνδέχεται τὰ αὐτὰ εἶναι; ὁν δὲ τῷ γεων ἀπερα ὁμοιοτήτικο καὶ γεωμετρικό ὁυκ ἔστι τῷ ἁρμικῷ ἁπόθεσις ἐφαρμόζει ἐπί τὰ τοῖς μεγέθης συμβεβηκότα, εἰ μὴ τὰ μεγέθη ἁρμικοὶ εἰσι.

§ 3. 402a, 24. πότερον τὸ γὰρ ταύτα καὶ οὐσία ἢ ποιών] 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 πόσων and the physicists those who identified it with a ποιῶν in so far as they considered it a harmony or blending of elements.

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

§ 5. 402b, 7. τὸ δὲ ζώου τὸ καθάλοι ἢτοι οὐδέν ἢστιν ἢ ὑστερον] 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 hypothethical 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: ἣρ οἱ τῶν γενῶν
καὶ τῶν εἰδῶν ὀρισμοὶ νοημάτων εἰσὶν ὀρισμοὶ ἡ φύσεως ἐν τοῖς καθ' ἐκαστὸν ὑφασμάτων. Αὐτὸς θέσεις ἐν τοῖς καθ’ ἐκαστὸν ὑφασμάτων. Αὐτὸς θέσεις ἐν τοῖς καθ’ ἐκαστὸν ὑφασμάτων. This no doubt is conceived principally in regard to definition, but it is substantially the same question as Porphyry onwards raised.

§ 7. 402b 15. ἀντικείμενα] For the meaning of the term see Metaph. Δ. 10, 1018b 20, ἀντικείμενα λέγεται ἀντίφασις καὶ τάναστία καὶ τὰ πρός τι καὶ στέρησις καὶ ἔτι καὶ εἶπ ὃν καὶ εἶπ ἢ ἔσχηται. Here the term would seem to be practically restricted to τὰ πρός τι and to be almost equal to 'objects' as the things which are set over against the function. And so as Bonitz observes (Index 64a 18) the word is used here in its local significance.


402b 25. πάσης γὰρ ἀπεδείξεω] γὰρ would seem intended to explain καλλίστο : This knowledge of a thing through its related phenomena and effects is only practically as good a method as may be : for &c.


403a 8. εἰ δ’ ἐστὶ καὶ τοῦτο φαντασία] The question is discussed particularly in Bk. III., chapters 6—10.

§ 10. 403a 11. εἰ δὲ μὴν ἐστὶν ἢδον] 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—\( \gamma \) ἀναίρεσις τοῦ ἑγουμένου συναναρέεται τῷ ἑπώμενον.

403\(^{a}\) 14. οὐ μὲν οὖν \( \gamma \) ἀναίρει τοῦτον \( \chi \)ωρισθέν τὸ \( \varepsilon \)ᾶθο\] τοῦτον it might be thought admits of being taken either with \( \gamma \)αναίρει or with \( \chi \)ωρισθέν. With the former construction however, there is the awkwardness of \( \tau \)ο\( \nu \)τον in the neuter or masculine while referring to \( \sigma \)φαίρα, a feminine; with the latter construction (in which \( \tau \)ο\( \nu \)τον is taken with \( \chi \)ωρισθέν) we may understand the genitive as equal to either \( \chi \)άλκου or, in the more general sense adopted by Philoponus and Simplicius, τοῦ \( \upsilon \)ποκεμένου. Bonitz (Hermes, viii. 416) reads with \( \Sigma \)ο\( \nu \)το (i.e. κατά \( \sigma \)τειμήν) in place of \( \tau \)ο\( \nu \)τον 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.

403\(^{a}\) 18. ἀμα γὰρ τούτους πάσχει τι τὸ σῶμα] Torstrik regards this clause as the marginal addition of a copyist.

403\(^{a}\) 25. \( \lambda \)όγοι \( \upsilon \)νικοί.] Trendelenburg aptly compares the \( \lambda \)όγαι \( \sigma \)περιματικοί of the Stoics: and Philoponus paraphrases as \( \varepsilon \)ῶθ \( \upsilon \)ὲκ \( \tau \)οῦ \( \varepsilon \)ῶτα \( \varepsilon \)γόντα \( \kappa \)αὶ \( \omega \) \( \chi \)ωριστά.

§ 11. 403\(^{a}\) 27. \( \varepsilon \)ῶθ \( \varphi \)υσικοῦ \] \( \varepsilon \)ῶθ would seem to mean 'without adding any further arguments.' With this inclusion of psychology in \( \varphi \)υσική, may be compared the significant words of Plato, Phaedrus, 270 C, \( \psi \)υχῆς σὺν \( \varphi \)ύσιν \( \alpha \)ξίων \( \lambda \)όγου κατανύσας \( \sigma \)ιν \( \delta \)υστάν \( \varepsilon \)ῶτα \( \tau \)ῆς \( \tau \)οῦ \( \delta \)ιοῦ \( \varphi \)ύσεως.

403\(^{b}\) 7. τίς \( \omega \)ν \( \varphi \)υσικός τούτων \] Here, as Trendelenburg observes, we must understand by \( \varphi \)υσικός, the physicist as he ought to be—\( q u a l i s \) esse debet ut rei naturam visi exponat. With the general sentiment cp. the Melaph. Z. II. 1037\(^{a}\) 16, \( \omega \)ν γὰρ \( \mu \)όνον \( \pi \)ερὶ ὑπὸ \( \upsilon \)ῆς \( \delta \)ητ \( \varphi \)ωρίζειν τῶν \( \varphi \)υσικῶν ἀλλὰ καὶ \( \tau \)ῆς κατὰ τῶν \( \lambda \)όγων καὶ \( \mu \)άλλων: and for Aristotle's conception of \( \varphi \)υσική and its relation to psychology, see the Introduction, p. xxvii.

403\(^{b}\) 9. \( \varepsilon \)οὐκ \( \varepsilon \)τίς \( \omega \)ν \( \pi \)ερὶ τὰ \( \pi \)άθη \( \tau \)ῆς \( \varepsilon \)λης τὰ \( \mu \)ὴ \( \chi \)ωριστά, \( \mu \)ὴ\( \eta \)\( \chi \)ωριστά \( \kappa . \tau \lambda . \) 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 \( \varphi \)υσικός 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 \( \delta \)\( \varepsilon \) \( \upsilon \)ὗ \( \tau \)εκάτερος \]. 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 (τοιούθεν σώματος, οὐσίας ήλθ) 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 τοιούθεν and on οὐσίας and regard the clause ὑπόστα de μὴ τοιούθε, ἄλλος...τέκτων ἢ ιατρός 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.

eἰσαγόντα κατὰ μὲν τὴν ἀρχήν διαλεκτικοῦ μὲν εἶναι τὸν ἐκ τοῦ εἴδους ὀρισμῶν, φυσικὸν δὲ τὸν ἐκ τῆς ὑλῆς, εἶναι προελθὼν καὶ εἰσαγὸν ὅτι φυσικὸν ἐστὶν ὁ ἀξίωμα ἀποδεδομένος ὀρισμός, ζητεῖ εἰκόνας περὶ τῶν λοιπῶν δύο ὀρισμῶν, τοῦ τε ἐκ τῆς ὑλῆς μόνης καὶ τοῦ ἐκ τοῦ εἴδους, τίμην ἀν εἰς τεχνίτων ἐκάτερον ὄρισμός. καὶ περὶ μὲν τοῦ ἐκ τοῦ εἴδους μόνον ὅτι ἐστὶ διαλεκτικοῦ οὐδὲν λέγει. ἦδη γὰρ εἰσεῖν. περὶ δὲ τοῦ ἐκ τῆς ὑλῆς μόνης λέγει ὅτι οὐκ ἐστὶν οὐθεμένα τέχνη περὶ ὑλῆς μόνης καταγωγοῦν, πάσα γὰρ τέχνη εἰδος ἐπιθείμα θετείται τῇ ὑποθέσειν ἐκάτερη ὑλή...διὰ μὲν οὖν τοῦ εἰσείν περὶ "πάντα" διακρίνει αὐτὸν (i.e. τον φυσικὸν τον καθ' ἐκάστοτε τεχνίτων' ἐκεῖνων γὰρ ἐκάστο τοῦ μερικὸν τε ἔχει. διὰ δὲ τοῦ εἰσείν τον "τοιούτου σώματος" ἐξώρισε 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 ἦ οὐκ ἐστὶ τοὺς περὶ τὰ πάθη τῆς ὑλῆς τὰ μὴ χωριστά, μὴ δὲ χωριστά, ἄλλος ᾧ τὸν φυσικὸν περὶ ἀπανθ' κ.τ.λ.

The interpretation given by Trend. agrees with the paraphrase of Themistus 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. ἦ δὲ κεχωρισμένα, ὁ πρῶτος φιλόσοφος] Cr. Meta. E. 1, 1026a 12, ἦ μὲν γὰρ φυσικῇ περὶ ἀχώριστα μὲν ἄλλον ἄκινητο, τῆς δὲ μαθηματικῆς ἐνια περὶ
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 Alcmaeon (§ 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 recognises 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" 23. ὅπως τὰ μὲν καλῶς εἰρημένα λάβωμεν] For the motive of Aristotle’s résumé of past opinions on a subject, cp. De Coelo, I. 10, ἀμα δὲ καὶ μᾶλλον ἢν εἴπῃ πιστὰ τὰ μελλόντα λεχθήσεται προανακοινών τὰ τῶν ἁμαρτωτῶν λόγων δικαιώματα τὸ γὰρ ἐρήμων καταδικάζεται δοκεῖν ἢττον ἢν ἡμῖν ὑπάρχοι καὶ γὰρ δὲι διαστήσας ἀλλ’ οὐκ ἀντιδίκους εἶναι τοὺς μελλοντας ταλθεῖς κρίνων ἰκανοῖς: and see also De Respici. 470b 11 and Metaph. B. 1, 995b 27, ὡστὶ δὲ τοῖς εὑρορῆσαι βουλομένους προορίζων τὸ διαστήσαι καλῶς. Trendelenburg and most of the editors place in 21 the comma before προειλθώντας: Torstrik places it after προειλθώντας and construes it with εὑρορεῖν δέι.

§ 3. 404a 1. ἀπείρων γὰρ ὄντων σχεμάτων] Cp. De Coelo, III. 4, 303a 13, ποιῶν δὲ καὶ τὸ ἑκάστου τὸ σχῆμα τῶν στοιχείων οὐδὲν ἐπιδιόρθωσαν ἀλλὰ μοῦν τὸ πυρὶ τὴν σφαιρὰν ἀπόδοκαν ἀέρα δὲ καὶ τὰ ἄλλα μεγέθει καὶ μικρότητι διελθοντας, ἀσ οὐδέναν αὐτῶν τὴν φύσιν οἶναν πανσπερμίαν πάνω τῶν στοιχείων: also III. 8, 306b 32, and De Gen. 1. 8. The psychology of Democritus lay in a particular application of his general atomic theory. That theory reduced all existence to a void (κένων) on the one hand, a fixed space (πλῆρες) on the other, this last consisting of an infinite multitude of atoms or particles qualitatively similar. To such
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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 εν ποιόντες τὴν ὑποκείμενην αὐτῶν τὰλλα τοῖς πάθεσιν αὐτῆς γεννώτω, τὸ μακρὸ καὶ τὸ πυκνόν ἀρχῆς τιθέμενοι τῶν παθημάτων, τῶν αὐτῶν τρόπων καὶ αὑτῶν τὰς διαφορὰς αἰτίας τῶν ἀλλων εἶναι φασιν, τάστατα μέντοι τρεῖς εἶναι λέγουσι, σχῆμα δὲ καὶ τάξιν καὶ θέσιν διαφέρειν γὰρ φασι τὸ ἦν ῥυσμῷ καὶ διαθεκῇ καὶ τροχῷ μόνῳ. τούτων δὲ ὁ μὲν ῥυσμὸς σχῆμα ἔστιν, ἡ δὲ διαθεκὴ τάξις, ἡ δὲ τροχῆ θέσις. This Aristotle illustrates by the letters of the alphabet, διαφέρει τὸ μὲν Α τοῦ Ν σχῆματι, τὸ δὲ ΑΝ τοῦ ΝΑ τάξει, τὸ δὲ Ζ τοῦ Ν δεσεὶ). 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. ῥυσμοὺς ἤξις ἐστὶν Ἀβδηρική, σημαίνει δὲ τὸ σχῆμα.

Philoponus, 7b.

§ 4. 404a 20. ἐπὶ ταὐτὸ δὲ φέρονται διανύστατα εἰς Πλάτωνα καὶ Ζενοκράτην καὶ Ἀλκημαίαν. Philop. Cp. particularly Plato, Phaedrus, 245 c, μὴ ἄλλο τι εἶναι τὸ αὐτῷ ἐστὶν κινοῦ καὶ ψυχῆν, καὶ Latin, 895 A, where ψυχῆ is defined as τὴν διανύσματιν αὐτής κινεῖν κίνησιν.

§ 5. 404a 29. διὸ καλῶς ποιήσαι τὸν Ὀμηρον] Cp. Meta. Γ. 1, 1009b 28, φασὶ δὲ καὶ τὸν Ὀμηρον ταὐτὴν ἔχοντα φανερώθαι τὴν δόξαν ὅτι ἐποίησε τὸν Ἐκτορά οἷος ἐξέστη ὑπὸ τὴν πληγῆς καίσαι ἀλλοφρονώστα. 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 δὲ τοῦ φρονείν ἐπὶ τοσοῦτον εὑρίσκει ὅτι γίνεται συμμέτρως ἐχούσης τῆς ψυχῆς μετὰ τὴν κίνησιν ἐὰν δὲ περιθέρμος τετόρευχος γένηται μεταλλάττειν φήσι. διὸ δὲ καὶ τοὺς παλαιοὺς καλῶς τετέθ' ὑπολαβεῖν ὅτι ἐστὶν ἀλλοφρονών.

404b 1. πολύχωρο μὲν γὰρ τὸ αἴττων τοῦ καλῶς καὶ ὀρθῶς τῶν νοῶν λέγει] Cp. Metaph. A. 3, where Aristotle says of Anaxagoras νοῶν δὴ τις εἰπὼν εἴναι καθάπερ ἐν τοῖς εἴροι καὶ ἐν τῇ φύσει τοῦ αἴττων τοῦ κόσμου καὶ τῆς τάξεως πάσης οἰων νήφων ἐφάνη παρ' εἰκή λέγοντας τούς πρῶτοροι—and the words which
NOTES. I. 2.

Diogenes Laertius, ii. 6, quotes from the beginning of his treatise: πάντα χρήματα ἦν ὡμού ἐστα νοὺς ἀλθῶν αὐτὰ διεκόσμησε. Anaxagoras’ conception of νοὺς—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 (i. 33) as occurring en τῷ πρώτῳ τῶν φυσικῶν [partly extracted in Preller, Histor. Phil. § 123 (5th ed.), § 53 (4th ed.)] and particularly the words καὶ τὰ συμμισγόμενα τε καὶ ἀποκρινόμενα καὶ διακρινόμενα πάντα ἑγὼ νοὺς καὶ ὅπως ἐμέλλεν ἐσεθαί καὶ ὁποία ἦν καὶ ὁσα τῶν ἑστι, καὶ ὁποία ἑσται πάντα διεκόσμησε νοὺς. With Anaxagoras’ ascription of νοὺς to all animate and living objects, cp. the spurious περὶ φυσών, 815b 11, ὁ δὲ Ἀναξάγορας καὶ ὁ θεομόρφος καὶ ὁ Ἑπεδόκης καὶ νοῦν καὶ γνῶσιν εἶπον ἐξειν τὰ φυτά.

§ 7. 404b 18. ὁμοίως δὲ καὶ ὕπο τοῦ περὶ φιλοσοφίας λεγομένως διωρίσθη, αὕτη μεν τὸ ζῷον, 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 ζῷον 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 and Themistius, but is also in harmony with the use of the expression in the Timaeus itself. (Timaeus, 30 b, αὕτως οὖν δὴ κατὰ λόγον τῶν εἰκότα δει λέγειν τόνδε τῶν κόσμων ζῴων ἐμψυχον ἐννοοῦν τε τῇ ἀληθείᾳ διὰ τὴν τοῦ θεοῦ γενέσθαι πρόνοιαν.) 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 ζῷον—may be resolved into the ideas of unity, of length, of breadth, and 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 mind and the ideal qualities of things is knowledge possible.

The chief objection to this interpretation is the difficulty in explaining τὰ δ’ ἄλλα ὀμοιοτρόπως. If the αὐτὸ ζῷον be the universe as an object of thought, the ἄλλα 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 ἄλλα understands τὰ ἐπιστητά, τὰ δοξαστά and τὰ αἰσθητά, the αὐτὸ τὸ ζῷον 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’
ἄλλα not as an addition, but an antithesis to the αὐτὸ ζῷον 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 (τὰ δ' ἄλλα ὑμωνύτροποι). 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 αὐτὸ τὸ ζῷον and the essential object expressed in τὰ δ' ἄλλα: 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 (ἐπὶ δὲ καὶ ἄλλως). These are reason, understanding (ἐπιστήμη), opinion, and sense-perception. These it has to be shewn are parallel to the essential qualities of objects. But what are the essential qualities of objects? The answer is numbers—οἱ μὲν γὰρ ἀριθμοὶ τὰ εἶδος αὐτὰ (αὐτὰ is omitted by SX) καὶ ἀρχαὶ ἑλέγοντο—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—ἐλεῖ δ' ἐκ τῶν ὁσικεῖων.

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 quadrity: 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 μῆκος is called duality in the second, and the πλῆθος and βαθύς of the first passage become the ἐπίπεδον and στερεόν 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 Begriff; the discursive understanding is like duality, like abstract length (μοναχῶς γὰρ ἐφ’ ἐν) because, i.e. it starts from a premiss and by one direct line of deductive argument or ratiocination it arrives at one conclusion: opinion (δόξα) 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 συγκεκιμένην ἐκ τῶν αὐτῶν ἄρχων ἐξ ὀντέρ ὁ ἐκδητικὸς ἄριστος...ἐκκόμως γιγανόσκειν τὰ ὅντα.

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 ἐἶδος of things constitute also the ἐἴδη of the cognitive mind: it is, in the words 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 ἐἴδη 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. γενέσαι καὶ ἀρετή προτέραν καὶ προεβιβάζειν ψυχήν σώματος ὡς δεσπότιν καὶ ἀρξώσαν ἀρξομένου ἔκπεισθάντο (ὁ θεός) ἐκ τῶν ἔτη καὶ τοιούτη τρόπῳ. τῆς ἀμφιστοῦ καὶ διὰ κατὰ ταύτα ἐξοφυλλούσας ὑπόσεις καὶ τῆς οὖ περὶ τὰ σώματα γεγομένης μερισθής τρίτον ἐξ ἀρμούν ἐν μέσῳ ἔκπεισθάντου μερισθής τῆς τε ταύτῃ φύσεως αὐτῆς καὶ τῆς θατέρου, καὶ κατὰ ταύτα ἐξεπεισθήσθησαν ἐν μέσῳ τοῦ το ἀμφιστού καὶ του κατὰ τὰ σώματα μεριστοῦ καὶ τρία λαβών αὐτὰ ὡσα ἐκεικράσθαν ἐν μίαν παρὰ ἰδεάς, τῆς θατέρου φύσεις δύσμακτον ὑπόσεις εἰς ταὐτῶν ἐξωμομήτων βίας. But over and above the Timaeus, Aristotle refers to certain λεγόμενα περὶ φιλοσοφίας, as containing the doctrines under consideration.

404b 18. ὁμοίως δὲ καὶ ἐν τούτῳ περὶ φιλοσοφίας λεγόμενοι] Simplicius explains the writings here referred to as τὰ περὶ τοῦ ἄγαθον αὐτῶς ἐκ τῆς Πλάτωνου ἀναγεγραμμένα συννοσίας· ἐν οἷς ἱστορεῖ τὰς τε Πυθαγορείους καὶ Πλατωνικὰς περὶ τῶν ὅντων δόγματα· and similarly Philopoön—τὰ περὶ τάγαθον ἐπιγραμμένα περὶ φιλοσοφίας λέγει. ἐν ἐκεῖνοι δὲ καὶ ἀγράφους συννοσίας τοῦ Πλάτωνος ἱστορεῖ ὁ Ἀραστότητας. Titze (De Seric) 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 ἄρα μοι δόγματα of the Physics IV. 2, 209b 15, where Aristotle, after saying that in the Timaeus Plato identifies ἀλή and χώρα because the μεταληπτικῶν and χώρα are one
and the same, adds ἄλλον δὲ τρόπον ἑκεῖ τε λέγων τὸ μεταληπτικόν καὶ ἐν τοῖς λεγομένοις ἀγγάριον δόγμασιν ὡμοι τῶν τόπων καὶ τὴν χώραν τὸ αὐτὸ ἀπε-φύσατο. Bonitz (Ind. Aris. 98* 59, quoted in Trend., p. 182) would seem to have misunderstood Bernays' position.

§ 8. 404* 29. ἀποφημήμενα τὴν ψυχήν ἀρθύμων κινοῦσθα ἑαυτῶν] Simplicius and Philoponus refer the theory in question to Xenocrates. So Simplicius: Σεινοκράτος οὗ τῆς ψυχῆς ὤντος λόγος βουλομένου τὴν μεσύτητα αὐτῆς τῶν τε ἐδῶν καὶ τῶν εἰδισκουμένων ἁμα καὶ τὸ ἔδων αὐτῆς ἐνδείκνυται. 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 ταυτοῦ καὶ τοῦ ἐτέρου συμμετέχειν, ὅπο τὸ μὲν ἐστὶ κινήσεως ἀρχὴ καὶ μεταβολῆς τὸ δὲ μορφή, ψυχῆν γεγονέναι, μηδὲν ἤτοι τοῦ ἱσταναι καὶ ἱστασθαι ἐνδεικνύει η τοῦ κινεῖσθαι καὶ κινεῖν ὄντη.

§ 10. 405* 4. τὸ τε ὑπο κυνηγικὸν τὴν φύσιν τῶν πρῶτων ὑπελεύσασιν] 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 ψυχήν as object to ὑπελεύσασιν and translates: Dem entsprechend definiren sie die Seele. Sie betrachten nämlich als Seele dasjenige unter den Principien 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, εὐθυγον γὰρ καὶ λιᾶν πιθανὸν τὴν κυνηγικότατὴν αὐτίαν ἐν ταῖς πρῶταις ἀρχαι κατατάσσεται.


§ 15. 405* 21. Διογένης δ' ἀστέρ καὶ ἑτεροὶ τινες, ἀδήρα] 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 εἰρήνει: 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, ἀπαντᾷ προθυμομένους ἅναγκει εἰς τὴν ἄρχην πολλὰ διαμαρτανόν τῶν εἰφόλων.

§ 16. 405* 25. καὶ Ἡράκλειτος δ' τὴν ἄρχην εἶναι φότις ψυχῆν, ἐπεὶ τὴν αναθυμιά-σιν] Philoponus comments as follows: εἰρήνη πολλάκις ὅτι ἄρχην ἔδεγεν εἴναι τῶν ἄνωτος ὥστε τὸ πῶς τοῦ ἄρχην, ὡς ὑπ' ἀριστοτέλης φοροῖ, ἡ φως ὑπερβαίη ἐστὶ πνεῦμα. ἀλλὰ πῶς ἔδεγεν τὴν ἔκρην ἀναθυμίσασιν, ἐκ τούτης οὐν εἶναι καὶ τὴν ψυχὴν ὡς κυνηγὸ καὶ λεγομερεστὰτης. 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 ἄναβασις represents the upward way (ἀνάρ άνά) we can understand how αὐτὴ ἤκυκλη σοφιστή (Bywater, Frag. 74)—how the driest and fiercest soul is the wisest.

405a 27. τὸ δὲ κυνούμενον] 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 τοιοὶ αὐτοῖς ἐμβαίνομεν τε καὶ οὐκ ἐμβαίνομεν, εἰμὲν τε καὶ οὐκ εἰμὲν: 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. A. 6.


§ 18. 405b 1. τῶν δὲ φορτικοστέρων...καθάπερ Ἰππων] A similar depreciation of Hippo (a contemporary with Pericles) is to be found in Meta. A. 3, 984b 3, Ἰππωνα γὰρ οὐκ ἂν τις ἀξιώσει θείαι μετὰ τούτων διὰ τὴν εὐτέλειαν αὐτοῦ τῆς διανόησις.

§ 19. 405b 5. ἀίμα, καθάπερ Κριτίας] Philoponus quotes the hexameter, ἀίμα γὰρ ἀνθρώπως περικάρδιον ἐστὶν νόημα 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. πλὴν εἶ τις αὐτὴν εἰρήκεν ἐκ πάντων ἑναί] Philoponus refers to Empedocles as the thinker who regarded soul as resulting from a combination of all the elements.

§ 20. 405b 14. πλὴν ἐνός] The exception is explained by the Ἀναβάσις δὲ μόνος of l. 19.

§ 22. 405b 21. τοιοῦτος δ' ἀν πῶς γνωριμεῖ] The question here raised—how reason if it have nothing in common with other objects is to know them—is started again in Bk. iii. 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. ὁσοὶ δ' ἐναισώσεις] Empedocles would be an illustration: just as Hippo and Heraclitus would be of those who resolve mind into βάτερων τῶν ἐναισώσεων.

405b 27. διὰ τοῦτο καὶ τὸ ζῆν ἄνωμαται] The etymology referred to is of course that which connects ζῆσι with ζῆσι to seethe and foam.

405b 28. οἱ δὲ τὸ ψυχρὸν διὰ τὴν ἄναψιν καὶ τὴν κατάψιν] This derivation of ψυχρόν from ψυχρός on account of the refrigeration in respiration is given us in the Crátiles of Plato, p. 399 E, οἷμαι τι τοιούτον νοεῖν τούς τὴν 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 (καρδινώσιν) 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), (β) 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 (ἕψυσις) 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 δ' ἐστί τούτο ὀοῦσος ἔχουσι, μη ἄλλο τι εἶναι τῷ αὐτῷ ἐαυτῷ κυνὼν ἡ ψυχή, εἴ τις ἀνάγκης ἀγένσιον τε καὶ ἀδάνατον ψυχή ἀν εὑρή. And in the *Laws*, 895 E, he writes διὶ ψυχῆς τοιῶνα, τίν τούτων λόγος; ἐχομεν ἄλλον πάλιν τὸν νῦν διὶ ῥήθητα, τῷ δυσμένῳ αὐτὴν αὐτὴν κατέχουσιν.  

§ 2. 406a 3. πρότερον εἰρητα] The reference is not, as Trendelenburg supposes, to *De An. 1.* 2, 2, 403b 29, but as Bonitz, after Themistius and Simplicius,
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points out, to *Phys. Θ. 5*, particularly 257b 20, ἦτι οὐκ ἀνάγκη τῷ κινών κινεῖσθαι εἰ μὴ ύπ’ αὐτοῦ. οὐκ is omitted before ἀναγεννήθων in S, but this must be a mere clerical error.

§ 3. 406a 12. τεσσάρων δὲ κινήσεων αὐτῶν] Cr. *Metaflh. Α. 2*, 1060b 9, εἰ δὴ αἱ μεταβολαι τέταρτες ἢ κατὰ τὸ τί ἢ κατὰ τὸ ποιοῦ ἢ που ἢ ποιεῖ καὶ γένεσις μὲν ἢ ἀπλὴ καὶ φθορὰ ἢ κατὰ τίδα, αὐξήσεις δὲ καὶ βρείσεις ἢ κατὰ τὸ πάσον, ἄλλωσις δὲ ἢ κατὰ τὸ πάσον, εἰς ἐναντίωσιν ἥν εἰπεν τὰς καθ’ ἐκαστὸν αἱ μεταβολαι. But in *Meta. K. 11*, 1068a 1, γένεσις καὶ 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. ἦτι δ’ εἰ φύσει κινεῖται, κἂν βία κινηθεὶς’ κἂν εἰ βία, καὶ φύσει Ariotel’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 premiss 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 *éποιο facto* be moved by internal: and Themistius omits the passage in his paraphrase, commencing simply τῷ δὲ τάς ἀναχαρών τό γρο καὶ βιαίνων αναχαρών τωδέ εἶναι κινήσεως τῆς πυρήνης καὶ ὑπέρμαν’ εἰς ὁ γὰρ κινεῖται φύσει, ἐκ τούτου καὶ βία κινήσεται. Yet in the *De Coel. III. 2*, 300b 21, Aristotle after identifying βία with παρὰ φύσιν adds ἀλλὰ μὴν εἰ παρὰ φύσιν ἐστὶ τις κινήσεως ἀνάγκη εἶναι καὶ κατὰ φύσιν, παρ’ ἥν αὕτη. 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. 406b 27. ἦτι δ’ εἰ μὲν ἄνω κινήσεται, πῦρ ἔσται] The force of this argument would seem to be that the ascription of natural movement to the soul (after
the \( \beta \lambda \omega \upsilon \kappa \nu \eta \varsigma \varepsilon \) 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.

\[\S 6. \, 406^b \, 30. \, \varepsilon \tau \iota \, \delta \, \varepsilon \pi \epsilon \, \varphi \alpha \iota \nu \varepsilon \tau \iota \alpha \varsigma \tau o \, \tau o \, \tau \sigma \omega \mu a \] Since the soul, Aristotle now argues, moves the body with its own movements, the body will also conversely (\( \alpha \nu \tau \iota \sigma \tau \rho \varepsilon \gamma \alpha \sigma i s \)) 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 406\( ^b \) 4 \( \tau \omega \nu \tau \iota \, \delta \, \varepsilon \pi \omicron \upsilon \tau \iota \) \( \alpha \nu \, \tau o \, \alpha \nu \iota \sigma \tau \alpha \theta \alpha i \tau i \, \tau \tau \varepsilon \nu \varepsilon \tau a \tau o \, \tau o \, \zeta \omega \omicron \omicron \) are such a \textit{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 (\textit{Hermes}, VII. 425), "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."

\[\S 7. \, 406^b \, 5. \, \tau \nu \, \delta \, \kappa \alpha \tau \vartheta \sigma \nu \varepsilon \tau \iota \, \sigma \nu \mu \beta \varetheta \varetheta \kappa \omega s \, \kappa \nu \iota \sigma \iota \nu \varsigma \varsigma \nu \, \kappa \alpha \nu \, \epsilon \tau \iota \rho \o \nu \, \kappa \nu \iota \omicron \omicron \] 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 \( \alpha \iota \sigma \zeta \theta \iota \gamma \sigma \tau o \)—which are external—and thus the movement of the mind cannot well be conceived as something essential and intrinsic.

\[\S 8. \, 406^b \, 11. \, \alpha \lambda \lambda \, \mu \eta \nu \, \kappa a \iota \, \epsilon \tau \iota \, \kappa \iota \nu \iota \tau \iota \nu \, \kappa a \iota \, \kappa \iota \nu \iota \nu \, \iota \nu \] 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 \( \epsilon \kappa \sigma \tau \alpha \alpha \iota \varsigma \) 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 (\( \alpha \lambda \lambda \, \epsilon \tau \iota \nu \, \eta \, \kappa \iota \varsigma \iota \varsigma \) 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’ ἐστιν ἡ κίνησις κ.τ.λ. simply as a continuation of εἶ μὴ κατὰ συμβεβηκέ, 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 αὐτή κινοῖτ’ ἂν] Trendelenburg conjectures καὶ αὐτή κινοῖτ’ ἂν οὐσία, on the ground that the consequent as it stands does nothing but repeat the antecedent. Torstrik thinks that καθ’ αὐτήν in b 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 παραπλησίων λέγων Φιλίστρω] 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 ἐναργῆς λιαν ὦτι κινεῖται τὸ ζῷον οὐ προκιμήθησις κατά τόπον ἐνδοθεν τής φυσῆς, ἀλλὰ προελομένης μόνον καὶ κρινότερα εὐθές ὑπηρετεῖται τό οὐσία.

§ 11. 406b 25. τὸν αὐτὸν δὲ τρόπον καὶ ὁ Τιμαῖος φυσικοῖ] The reference is undoubtedly not to Timaeus the Pythagorean, but to the Dialogue of Plato so entitled. See Timaeus, p. 36a. The work is referred to in similar terms in Aristotle's De Sensu, c. 2, ὁσπέρ ὁ Τιμαῖος λέγει, where just before we have καὶ ἐν τῷ Τιμαίῳ γέγρασται (see Trendelenburg, Platonis de 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 ἔδωκεν αὐτῷ τὸ πρότον καὶ τὸ συγγενές. τῷ δὲ τὰ πάντα ἐν αὐτῷ ἔδωκεν καὶ τὰ συγγενεῖς. τῷ δὲ τὰ πάντα ἐν αὐτῷ ἔδωκεν καὶ τὰς σχήματα. διό καὶ σφαιροεδές, ἐκ μέσῳ πάντως πρῶς τὰς τελευτάς ἢσον ἀπέχει, κυκλοεδές αὐτὸ ἐτομκυκλό, πάντως τελευτάτων ὑμίσι τοι, τὸν ἀεικατ’ σχημάτων, νομίζεις μιρίς κάθοι ὑμós ἀνοικό...κύκλωσεν ἀπ’ ἀνείμεναν αὐτῷ τὴν τού σῶματος οἰκείαν, τῶν ἐπτὰ τὴν περὶ νοῦν καὶ φρόνημαν μιλίτα ὄσωσ. διὸ δὴ κατὰ ταύτα ἐν τῷ αὐτῷ καὶ ἐν ἑαυτῷ περιαγαγόν αὐτῷ ἐποίησεν κύκλω κινεῖσαν στρεφόμενον...τὴν δὲ δὴ ψυχῆν οὐχ ὡς νῦν ύστεραν ἐπιχειροῦμεν λέγειν, οὕτως ἐμμαυτεριστάτο καὶ ὁ θέος νεωτέρας...ὁ δὲ καὶ γενέσεις καὶ ἀρετή προτέρας καὶ πρεσβυτέρας ψυχήν σώματος ὡς ἐποτότι καὶ ἀρξοῦναν ἀρξομένον, ἐνυπηστήκατο ἐκ τῶν τε καὶ τοιοῦτο ἀρχον. τῆς ἀμερίστου καὶ ἀς κατὰ ταύτα ἔχουσαν υὐσίας καὶ τῆς αὐτή περὶ τὰ σώματα γιγαντίας μεριστῆς τρίτων ἐξ ἀμφοῖν ἐν μέσῳ ψυκτεράστησεν υὐσίας εἶδος τῆς τοῦ πρὸς τὸ νόσος καὶ τῆς διερέσκονται καὶ τὰταύτα ἔξω θέσιν ἐκ μέσο τοῦ τοῦ ἀμερίστου καὶ τοῦ κατὰ τὰ σώματα μεριστόν, καὶ τρίᾳ λαθῶν αὐτὰ ὡστα συνεκεράστησεν εἰς μιᾶν πάντα ἱδέαν, τῆς διερεύνης ὄψειν δύσματον υὐσίαν εἰς ταύτῶν.
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εὐναρμότερον βίον. The soul is viewed by Plato as compounded would be the same and the dis-
similar—to autó and to ἔτερον.

406b 31. εἰς κύκλου κατέκαμψεν] Cpr. Timaeus, 36 c, ταύτην οὖν τὴν ἑξάτασιν πάσαν, ὀπλήθν κατὰ μήκος σχίσασα μέσην πρὸς μέσην ἐκατέρτων ἄλληλαις οἷς Χ προσβαλὸν κατέκαμψεν εἰς κύκλου, ἔμφασα αὐτάς τε καὶ ἄλλας ἐν τῷ καταντικρῷ τῆς προσβολῆς, καὶ τῇ κατὰ ταύτα καὶ ἐν ταύτῳ περιμεγγεμένη κυμήσει πέρι σι αὐτάς ἔλαθε, καὶ τὸν μὲν ἔξω τὸν ὃ' ἐντὸς ἐποιεῖτο τῶν κύκλων. τὴν μὲν οὖν ἔξω φορὰν ἑπεφήματε εἶναι τῆς ταύτων φύσεως, τὴν δ' ἐντὸς τῆς βατέρου.

§ 12. 407a 3. τὴν γὰρ τοῦ παντός δήλου ὅτι ταούτην εἶναι βουλεῖται οὖν ποτ' ἔστιν ὁ καλοῦμενος νοῦς] So Trendelenburg appropriately quotes Philoponus as shew-
ing 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—ἡ δὲ τῆς λογικῆς ψυχῆς κίνησις κύκλοι τις εἶναι ἔσχεν ὅτι τε ἐνεργεῖ καὶ ἐφιστάει καὶ αὐτῇ εἰσάγει γεγονότας· αὐτὴ περὶ αὐτῆς ἡπούσα τε καὶ ἐφιστόκουσα. 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. τοῦτων γὰρ ἡ κίνησις οὐ κυκλοφορία] The action of sense and appetite cannot, as reason may (see note on 407a 3) 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. πῶς γὰρ δὴ καὶ νοσεῖς μέγεθος ὅν; πότερον καθόλου ἡ ὀφθαλμώ τῶν μορίων τῶν αὐτῶν;] So Trend. emended the reading adopted by Bekker—μέγεθος ὅν ὀφθαλμῶν τῶν μορίων τῶν αὐτῶν. Torstrik in place of καθόλου would read καθ' ὄλον which both Simplicius and Philoponus use in their paraphrase: and he further inserts ὄγων after καθ' ὄλον. But this addition seems unnecessary—that ὄγων occurs in the expanded paraphrase of Themistius no way makes it particularly likely that it occurred in the contracted text of Aristotle. Susemmihl would read ὀφθαλμών μορίω τῶν αὐτῶν; μορίω.

§ 14. 407a 19. ἀναγκαῖον δὲ τῶν νοιῶν εἶναι τῶν κύκλων τούτων] Here, as Trendelenburg remarks, emphasis must be laid on τοῦτων—a circle of this kind, i.e. expressed in matter. Cpr. Philoponus: τὸ γὰρ τούτον διεκτικόν τὸ αἰσθητὸν αὐτὸ ἑμαίνει· τοῦτο γὰρ ἐστὶ τὸ δεικνύμενον.

§ 15. 407a 22. αὖ ἡ ταούτη περιφορὰ νόσησις] Torstrik would reject νόσησις as an interpretation of περιφορά. The sentence following he would regard as interrogative, in accordance with Simplicius' and Philoponus' commentary of whom the former says ἐρωτά οὖν τί ἂν νοσεῖς, and the latter τί οὖν τούτο ἔστι. He reads accordingly δή τί.

407a 23. τῶν μὲν γὰρ πρακτικῶν νοῆσεων ἔστι πέρατα] 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 speculative is essentially bounded and determined. The practical reason is so because it always puts itself an end or τέλος 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 nous, and the noetôν become identical. Cp. Metaph. Α. 7, 1072b 20, αὐτῶν δὲ νοεῖ ὁ νοῦς κατὰ μεταλήψιν τοῦ νοητοῦ. νοητὸς γὰρ γίνεται διϊγγάνων καὶ νοῶν, διότι ταῦτα νοῦς καὶ νοητῶν τὸ γὰρ δεκτικὸν τοῦ νοητοῦ καὶ τῆς οὐσίας νοῦς.

§ 17. 407a 32. ἔτι δ’ ἡ νόησις οὐκεκν ἢρμῆσαι τινὶ καὶ ἐπιστάσει μᾶλλον ἡ κίνησις] 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 ἄσται ἐν ἂν τὰ ἁμερή στῇ καὶ τὰ καθιλούν, ἰδὼν τοιούτη ζῷαν, ἐν ζῷοιν. Trendelenburg well compares Plato, Phaedo, 96 B, ἐκ δὲ μνήμης καὶ δόξης λαβωῦσι τὸ ἢρμῆσαι κατὰ ταύτα γίγνεσθαι ἐπιστήμην. Cp. also Physics, VII. 3, 247b 4, τὸ γὰρ ἢρμῆσαι καὶ στήναι τὴν διάνοιαν ἐπιστήμαθα καὶ φρονέων λέγομεν, and Problem. XXX. 14, 95b 35, ἡ ἐπιστήμη δοκεῖ εἶναι ὅτι τὴν ψυχήν ἱστημαι.

§ 18. 407a 34. ἀλλὰ μὴν οὐδὲ μακάριον] Cp. De Coelo, II. 1, 284a 25, οὐδὲ γὰρ τῆς ψυχῆς ὁμοὶ ν’ εἶναι τὴν τοιαύτην ἦλπιν ἀνθρώπου καὶ μακάριον...ἀλλ’ ἀναγκαῖον Ἰεωνὸς τινος μοίραν κατέχειν αὐτήν αἰώνιον καὶ ἀτρπον. Torstrik thinks the words corrupt, and supposes Aristotle to have written ἢ νοῦσια. This absence of the negative seems to some extent warranted by the paraphrase of Themistius, οἱ δὲ τὴν κίνησιν οὐσίαν αὐτῶν ποιοῦστε, φύσιν αὐτῶν ποιοῦσι τὴν λυμανομέρειν τὰς ἐνεργείας. But the negative can I think be explained by viewing the argument as of that dialectical kind which is customary in Aristotle. Aristotle, that is, has said that this ascription 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. βέλτιον τῷ νῷ μὴ μετὰ σώματος εἶναι] Aristotle is here confusing 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 ταυτὸν signifies number, the διότι 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 ν).

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 (διάνοια or ἀρματική) 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 it fixed proportion and law” (Zeller, *Plato and older Academy*, English Trans. p. 346).

§ 22. 407b 13. συμβαίνει καὶ τούτῳ τῷ λόγῳ καὶ τοῖς πλείστοις τῶν περὶ ψυχῆς] Under this would be included all theories of transmigration or μετεμψιχώσεις.

§ 23. 407b 24. ὥσπερ εἰ τις φαίη τὴν τεκτονικὴν εἰς αὐλὸς ἐνθυόσθαι] Whatever be the exact meaning of this, the general sense evidently is that of an incongruous connection—a union of incombinables. Themistius brings this out still more glaringly by his paraphrase: ὥσπερ εἰ τις φαίη εἰς αὐλὸς ἐνθυόσθαι τὴν ύφασμικὴν ἢ τὴν χαλκευτικὴν εἰς κεράδας. The criticism, as Trendelenburg remarks, already anticipates Aristotle’s conception of the soul as an ἐντελέχεια 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 psychological 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 psychological 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. πιθανή μὲν πολλοῖς The expression is taken from the Phaedo, p. 88 D, as Philoponus reminds us: καὶ ὁ ἐν τῷ Φαῖδον Σίμμας φησίν ὡς οὐδὲν οὕτως αὐτῷ περὶ ψυχῆς πιθανός φαίνετο λόγος ὡς ὁ λέγων αὐτὴν ἁρμοσίαν.

407b 29. λόγοις τ' ὁππέρ εὐθύναι δεδοκινή καὶ τοῖς ἐν κοινῷ γινομένοις λόγοις] Bernays (Dialoge, p. 14) discusses this passage, and contends that λόγοις 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 εὐθύναι 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 λόγοις τ’. But in that case ὁππέρ is left rather without anything to explain it: we should require to read εὐθύναι τ’ ὁππέρ εἰσεῖν δεδοκινή. It would seem then that λόγοι 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: δεδοκινή δὲ εὐθύνας καὶ ἐξήτασμένη καὶ ἐν τοῖς κοινοῖς λόγοι καὶ ἐν τοῖς ἱδίοις. In consequence of this, Torstrik makes the suggestion that the original text must have contained the words καὶ ἐν ἱδίοις, but finally settles that καὶ before τοῖς λόγοις means etiam.

For the different interpretations that may be given of the ἐν κοινῷ γινομένοι λόγοι see Bernays’ exhaustive treatise on the dialogues of Aristotle. Bernays (perhaps rightly enough) identifies the λόγοι in question with what are otherwise called ἔξωτεροι: but would seem to be mistaken in identifying such λόγοι with definite works of Aristotle. The ἔξωτεροι 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, 7 (p. 501): “ἔξωτεροι λόγοι sind also ungefähr Raisonnements welche ohne strenge systematischen Zweck über irgend einen Gegenstand von gebildeten Leuten überhaupt ausgesprochen werden.” Similarly Torstrik refers the phrase to the discussions of men of culture (eas disputatoines quales homines elegantiores instituere solent). And this interpretation would seem necessary both for Eth. Nic. I. 13 and Metaphys. 1096b 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, 432a 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 τεβρύλληται: 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 Εὐθεμος ἢ 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 Phaedo as to his own dialogue Eudemus: αὐτοτόμον ἡμᾶς καὶ τὸν Ἐὐθεμον, λέγων δὲ καὶ τὴν ὑπ’ αὐτοῦ ἐν τῷ διάλογῳ τῷ Εὐθεμῷ γραφέντας ἐλεγκτικῶς τῆς 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, 1482b 6): τῇ ἀρμονίᾳ, φησί, τοῦ σώματος ἐναπρότιον ἐστὶν ἡ ἀναμοστία τοῦ σώματος, ἀναμοστία δὲ τοῦ ἐμφύτου σώματος νόσος καὶ ἀσθένεια καὶ αἰσχος· ὥς τό μὲν ἀσυμμετρία τῶν στοιχείων ἡ νόσος, τό δὲ τῶν ὁμοιομερῶν ἡ ἁσθένεια, τό δὲ τῶν ὁργανικῶν τὸ αἰσχος· εἰ τοῖνυν ἡ ἀναμοστία νόσος καὶ ἀσθένεια καὶ αἰσχος, ἡ ἀρμονία δρα ὑγεία καὶ ἱσχύς καὶ καλλος· ψυχὴ δὲ υδόει ἐστιν τοῦτων οὐτε ὑγεία φησί οὔτε ἱσχύς οὔτε καλλος· ψυχὴ γὰρ εἶχε καὶ ὁ Θεός ἀσχίστως ὡν’ οὐκ ἄρα ἐστὶν ἡ ψυχὴ ἀρμονία.

The reference however here is probably mainly to the Phaedo of Plato, particularly p. 92. ταύτα σοι συμβαίνει λέγειν ὅταν φησί μὲν εἶναι τὴν ψυχὴν πρὸς καὶ εἰς ἀνθρώπου εἴδος τε καὶ σώμα ἀφικέσθαι εἶναι δ’ αὐτὴν ὑγιεινὴν ἐκ τῶν οὐδέπω ὑπατιών. οὔ γὰρ δὴ ἀρμονία γέ σοι σοι τοιούτων ἐστὶν, ὃ ἀπεικόσις κ.τ.λ. § 5. 40δ8 5. ἄλθεται τοῦ ἀρμονίας εἰς δύο ἀποβλέποντες] Bonitz (Hermes, vii. 431) points out that this argument only repeats the first argument in which the meanings of ἀρμονία are similarly distinguished (καίνης ἡ μὲν ἀρμονία λόγος τῆς ἐστι τῶν μιχθείων ἡ 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. 40δ8 24. δ’ ἐστίν ἔτερον ἡ ψυχή τῆς μίξεως] 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, τακτᾶς 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), ὅτι μὲν οὖν οἱ λέγοντες ἀρμονίαν τὴν ψυχῆν
NOTES.

1. Aristotle himself solves this paradox by the conception of the soul as a ‘substance of body’.

2. Torrmins regards the passage from Anaxagoras (18.20) as entirely parallel and confined to a criticism of the doctrines of Empedocles and the problem of the distinction among the different arguments adduced in §§2–6.

3. Aristotle regards the question under discussion as essentially the same as that of the passage from Empedocles, which he must understand Aristotle

4. Plutolus: a movement of the heart or (more likely) of some

5. cf. 408a.13. Theophrastus (Spengele & Lipp) comments as follows: "A movement of the heart or (more likely) of some..."
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 μοναί (v. Anai. Post. II. 19, 99b 36 and De Inson. 461a 18). And as ανάμνησις itself is like a sylogistic process (De Memor. 2, 453" 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 ἑοκεν ἐγγίνονται] 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 ουσία, a self-contained, self-subsisting substance implanted from without, and not at all influenced by the mutations of the body: it is in fact ἀπάθης. The work of thinking (νοεῖν) 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. 111. cc. 4 and 5, and may be compared with De Gen. An. 3, 736b 28, λαίπεται δὲ τοῦ νοοῦ μόνον θυράθεν ἐπεισίναι. 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 ὅπτικη 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), ἢ ὥ τ δηλον έστιν, καθάπερ τὴν αἰσθήσιν τίθεται μὴ συμπάσχειν καμοίς τοῖς ὀργανοῖς ὑπὸ τοῦ γῆρας οὖτο καὶ τὸν νοῦν μὴ συγκάμων τῷ ἐνδον ὀργανῷ καὶ οὐδὲ ἐπὶ τῆς αἰσθήσεως ἱσταται μόνης.

408b 22. ὅστε τὸ γῆρας οὐ τῷ τῆς ψυχῆς τι πεπονθέναι, ἀλλ' ἐν τῷ | Themistius is disturbed at the conclusions which would seem logically 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: εἰ γάρ τὸ γῆρας οὐν ἐν τῷ τῆς ψυχῆς πεπονθέναι ἀλλ' ἐν τῷ καθάπερ ἐν μέθας καὶ νόσους, εἰ δὲ τούτο, καὶ ἡ φυσική ἀπαθής ἀν εἴη καὶ ἡ ψυχή καὶ διὰ τούτο αδύνατο. Nor can we get over the difficulty by saying simply with Philoponus, οὗ περὶ πάσης ψυχής αὐτῷ ὁ λόγος ἀλλὰ περὶ τοῦ τοῦ καὶ τούτῳ 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 αὐτὸς μᾶλλον ἢ διδασκώντι προσέχει. 
§ 14. 408b 25. ἅλλον τινὸς ἕσω φθειρομένου] Bonitz would read ἐν ἓ in place of ἕσω as in line 23. Philoponus tries with no great success to determine what we are to understand by this internal substance: τούτο γίνεσθαι φησί τοῦ πνευματικοῦ σώματος ἐν ἓ πρώτος ἐλλάμπουσιν αἱ ψυχικές δυνάμεις φθορὰν τινὰ ὑπομένουσιν. 
§ 16. 408b 32. πολλὰ δὲ τῶν εἰρημένων ἀλογώσατον] The doctrine in question, we learn from the older commentators, was held by Xenocrates and expounded in his work περὶ φύσεως. The opinion is referred to in Anal. Post. ii. 491a 37, and Top. iii. 6, 120b 3. 
409a 1. πῶς γὰρ χρῆ νοῆσαι...καὶ πῶς...;] The first πῶς, Philoponus explains, refers to the πρῶτος τῆς γνώσεως, the second to the τρόπος τῆς κινήσεως, πότερον κατ' ευθείαν κινεῖται ἢ κύκλῳ ἢ ἄλλως πῶς. 
409a 3. διαφέρειν δεῖ] Being one thing as moving, the other thing as moved. 
§ 19. 409b 10. δόξειε δ' ἐν 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, ὅστε οὐ τὸ κινοῦν καὶ τὸ κινούμενον ἡ ψυχή, ἀλλὰ τὸ κινοῦν μόνον. Cp. Philoponus, οὐδὲν δὲ τὴν ὑπόθεσιν Δημοκρίτου λυμαίνεται τὸ ἀφελεῖν τῶν ἄτομων τὸ συνεχής οὐδὲ γὰρ διὰ τὸ συνεχή σώματα εἶναι ἑλεγον αὐτὰ κινεῖσθαι, ἀλλὰ διὰ τὸ πλήθος αὐτῶν τῇ ἀντιθέτει τῇ πρὸς ἄλληλα. 
409b 20. πρὸς τὰς ἄλλας] which do not constitute souls. 
§ 20. 409b 21. εἰ μὲν οὖν εἰσὶν ἔτεραι] The argument would seem to be a reducuntio 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 ὅν γὰρ ὁ τόπος ἀδιάφρετος, καὶ αὐτά 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, «νῦν γὰρ ὁ τόπος ἀδιάφρετος καὶ αὐτά συντιθέμενα διαφεροὺς οὐκ ουδὲν μέγεθος οὐδὲ δεῖ πλείονος τόπου. The two absurd conclusions are
restated in the following chapter, 409b 4, ἐν τῇ μιᾷ στεγής πολλὰς στεγμάς ἡ πάν σῶμα ψυχῆν ἔχειν.

§ 22. 409b 28. ἔτι δὲ πῶς οἶον 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 τὰς στεγμάς. He quotes Sophonias in support: ἔτι εἰπερ χωριστῇ ἡ ψυχῆ πῶς οἶον τε χωρίζεσθαι τὰς στεγμὰς καὶ ἀπολύεσθαι τῶν σωμάτων ἃς δὴ ψυχῆν ὑπετίθετο; οὐ γὰρ εἰς στεγμᾶς (I. γραμμᾶς) διαφέρουσιν (οὐ μέρη γὰρ αὐτῶν) οὔτε εἰς γραμμᾶς τὰ ἑπίσεδα.

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. 409b 1. ἰδιων τὸ ἀτοπον] 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 408b 33, ὑπάρχει γὰρ αὐτοῖς ἀδύνατα πρῶτα μὲν...ἰδιὰ δὲ ἐκ τοῦ λέγειν αὐτὴν ἀριθμῶν. Vahlen also argues against Torstrik in his edition of the Poetics, p. 107.

409b 5. εἰ μὴ διαφέρων κ.τ.λ.] i.e. unless the monads of the soul be different from those of the body.

§ 3. 409b 17. ὀσπερ γὰρ ἐσάρμεν πρότερον] Trend. refers to 1. 3, 4, 406a 26, τοῖνε δὲ βλάω τῆς ψυχῆς κινήσεις ἔσονται...οὐδὲ πλάτειν ῥάδιον: but this does not seem to meet the case. Aristotle is more probably referring to 1. 4, § 4, 408a 3, φανερότατον δὲ εἰ τις ἀποδιδότω τευράθη τὰ πάθη καὶ τὰ ἐργά τῆς ψυχῆς ἀριθμῶν τοιούτως-—at least the words πάθη καὶ ἐργά occur in both passages.

§ 5. 409b 27. ὀσπερ ἢν εἰ...τιθέντω] For an explanation of the process by which ἢν in this and similar forms of expression has lost its force, see Cope on Rhetoric, 1. 1, 15, "The conditional ἢν belongs to some verb in the apodosis originally expressed, afterwards left to be understood."

§ 6. 410a 5. τὸ δὲ τῶν ὅκτω] So Torstrik probably rightly amends the line. τὰ δὲ (the reading of V) will not scan, τῶν in ESTUX makes no sense. Trendelenburg conjectured τὸς δὲ τῶν ὅκτω μοιρῶν λάχε νησίδος αὐγῆς, τέσσαρας
NOTES. I. 5.

'Hphaiostou. As to νήστιδος αὔγης, Philoponus comments, σημαίνει δὲ διὰ μὲν τῆς νήστιδος παρά τὸ νάσιν τοῦ ὄρου τοῦ ὕδατος καὶ τοῦ ἄερος, διὰ δὲ τῆς αὔγης τῷ διαφάνει. In Enpedocles, i. 27, νήστις is spoken of as a goddess: Νήστις δὲ ἡ δαιμόνια τέγγει κρούνωμα βρότειον. On ἐπιθυμοῖ Simplicius remarks, ἐπιθυμοῖ δὲ τουτέστιν ἐναρμόνως, εἰρήται ἡ γῆ ὡς κύδος κατὰ τὴν τῶν Πιθαγόρειον παράδοσιν.

410\(^{a}\) 11. ἐπὶ ἐστιν ἐν τῇ ψυχῇ λίθος[ Cp. De An. III. 8, 431\(^{b}\) 29, οὐ γὰρ ὁ λίθος ἐν τῇ ψυχῇ ἀλλὰ τὸ εἴδος.

§7. 410\(^{a}\) 13. ἐπὶ δὲ πολλαχῶς λεγομένου τοῦ ὄντος 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 ποσῶν, ποιῶν, &c. will ever create anything but another ποσῶν or ποιῶν.

410\(^{a}\) 16. ἀλλʼ οὐ δοκεῖ κοινά πάντων εἰναι στοιχεῖα[ Themistius expands: ἀλλʼ οὐ δοκεῖ κοινά πασῶν εἶναι τὰ στοιχεῖα, οἷον ἀθρόοποι καὶ τοῦ ποιοῦν καὶ τοῦ πάσχειν καὶ τῶν ἐφεξῆς ἀλλʼ ἐκ μόνης τῆς οὐσίας.

410\(^{a}\) 20. ἐσται ἁρὰ ποσῶν καὶ ποιῶν καὶ οὐσία ἀλλʼ ἀδύνατον στι.λ.] Trendelenburg supposes these two sentences should be transposed and ἐσται ἁρὰ ποσῶν regarded as the consequence of ἀλλʼ ἀδύνατον. Torstrik thinks the words ἐσται...οὐσία should be struck out as not repugnant to ἀλλʼ ἀδύνατον 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 στοιχεῖα, for instance, of ποσῶν, we may suppose would be number, line, figure: those of ποιῶν 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 καὶ οὐσία—the soul remains always a concrete substance or οὐσία. But how, if it be for the time exclusively a ποσῶν is it to be simultaneously an οὐσία? the elements of ποσῶν can give rise only to a ποσῶν, those of ποιῶν only to a ποιῶν, never to an οὐσία. And thus this account fails to explain the most fundamental fact about the ψυχή—the fact, viz., that it is an οὐσία.

§9. 410\(^{a}\) 27. πολλὰς δὲ ἀπορίας...μαρτυρεῖ τὸ νῦν λεχθέν] 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 (διακερεῖας ἔχοντος τοῦ λέγειν) as G. in Trendelenburg suggests. Torstrik is perhaps right in regarding μαρτυρεῖ τὸ νῦν λεχθέν 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 λεγέω as equal to λεγείσις, to which however Philoponus and Simplicius tell us it is here equivalent.

§ 10. 410\(^b\) 6. [ἐκ πάντων γὰρ ἔκαστων] Torstrik regards as the insertion of some interpolator de Anaxagora somniátis.

§ 13. 410\(^b\) 21. ὁμοίως δὲ καὶ ὅσι τῶν νῦν καὶ τὸ αἰσθητικόν ἐκ τῶν στοιχείων ποιοῦσι.] Torstrik would reject the words τῶν νῦν καὶ τὸ αἰσθητικόν as also φοράς οὐδέ. "Ut enim," he says, "quam maxime immobiles sit 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 νῦν 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 αἰσθήσεις (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\(^b\) 27. οὖδὲ περὶ δήλης μᾶς] So Torstrik it would seem rightly; οὐδὲ μᾶς is the reading of ETUVW. Philoponus reads οὐδὲ ὅλης οὖδὲ 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. ὡν γὰρ μῆτις ὑπὲρ τῶν τὸ γνωριμικῶν τὴν ψυχὴν εἶναι τιθέντων ἀπολογούμενοι εἶσαι ὅτι οὐ περὶ πάσης ψυχῆς αὐτοῦ ὁ λόγος, ἀλλὰ περὶ τῆς ἀνθρωπίνης ἡ πάσης ἢδον τὸ γνώσεις διὰ τούτῳ φησιν ὅτι οὐδὲ περὶ δήλης μᾶς ποιοῦσι τὸν λόγον. ἡ γὰρ ἀνθρωπίνη ψυχὴ οὐ πάσα καθ’ ὅλην εκατὲρ γνωριμική ἐστιν. ἐστὶ γὰρ καὶ ἐν ταύτῃ καὶ τὸ δυμικὸν καὶ ἐπιθυμητικὸν καὶ φυτικὸν ὅν οὐδὲν αἰσθήσεως μετέχει οὐδὲ περὶ τῆς ἀνθρωπίνης ἢρα πάσης διελέξθησαν.

§ 15. 410\(^b\) 28. ἐν τοῖς Ὀρφικοῖς ἔπεσε καλουμένοις] These Orphic compositions are referred to again in De Gen. Animal, 11. 1, 734*19, ὀσπερ ἐν τοῖς καλου-
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τότε Ορφέως ἔπεσεν ἐκεῖ γάρ ὁμοίως φησὶ γέγνεσθαι τῷ ζῶον τῆς τοῦ δικτύου πλοῖῳ. As Trendelenburg remarks, the word καλομένεια in both passages implies a certain amount of doubt as to whether the verses in question should be or should not be rightly ascribed to Orpheus. So Philoponus, Καλομένεια εἰτεν ἐπιεῦχθη μὴ δοκεῖ ὁΡφεύς εἰναι τὰ ἐπὶ, ὥς καὶ αὐτὸς ἐν τοῖς περὶ φιλοσοφίας λέγει. αὐτῶν μὲν γὰρ εἶναι τὰ δόγματα. ταύτα δὲ φῆσαι Ὀμολόγητον ἐν ἑπεσθεν καταγίναιν. As to the doctrine itself in question Trendelenburg refers to Stobacu Ex. 1. 52. 95§ where Iamblichus is quoted: τινὲς τὴν ψυχήν ἀπὸ τοῦ ἀναψυχῆσθαι ὑπὸ τοῦ ψυχροῦ ἀνομάσθαι ἀποφαίνονται καὶ τοῦ ἀναπνεόμενον ἀέρα ψυχήν νομίζοντο, ὥσπερ Ἀριστοτέλης παρὰ Ὀμολόγητον εἶναι λέγειν ἐκ τῆς ψυχής ὁς εἰσεῖναι ἐκ τοῦ ὅλου ἀναπνεύσεως ἡμῶν φερομένη ὑπὸ τῶν ἀνέμων. ἐτοικε γε μὴ ὁ Ὅρφεας χαρὶς ὑπολογίζειν εἶναι διαμεῖται πολλάκις δὲ καὶ μέγας ἐπιπονεύσεως καθήκων ἐπὶ τὰς μεριστὰς ψυχὰς ἀπὸ τῆς ὅλησ ψυχῆς.

411§ 1. τοῦτο δὲ λαληθείαν τοῦτο is taken by Simplicius alone to refer to what precedes: Themistius, Philoponus and Sophon. refer it to what follows. Trendelenburg follows Simplicius.


§ 21. 411§ 17. ὅτι τὸ ὅλον τοῖς μορίοις ὁμοειδές] so that, as Themistius expands the reasoning, εἰπὲ τὸ ἐν ἡμῖν ὑδάρι ἐμψυχον καὶ τὸ πάν ὑδάρι.

411§ 20. εἰ δ' ὁ μὲν ἄλλο διασταύρωμα ὁμοειδῆς, ἡ δὲ ψυχὴ ἀναμοιρυμέρης, 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 νῆσα—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 ὁμοειδής 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 τοῦ μὲν τι ὑπάρχει τῆς ψυχῆς εἴδος τῷ ἀέρι τῷ ἐν υμῖν, τὸ δὲ τι οὐκέτι, ἄλλα τῷ ἀέρι. But the words ἡ δὲ ψυχή ἀναμοιρυμέρης 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 tan-
quam 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 ἐπάρξει δῆλον ὅτι as the gloss of an
interpolator.

§ 24. 411b 5. λέγουσι δὴ τινες μεριστὴν αὐτήν] The reference is to the
Platonic psychology as expounded in the Republic and Timaeus. Cp. Republic,
436 λ, μανθάνομεν μὲν ἑτέρῳ, θυμοῦμεθα δὲ ἄλλῳ τῶν ἐν ἑρῶ, ἐπιθυμοῖμεν δ' αὐ
tρίτῳ τινὶ τῶν περὶ τῆν 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 ἐνεπλέξεια 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 ἐνεπλέξεια is not so much like θεωρεῖν as ἐπιστήμη, 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. 412a 3. τὰ μὲν δὴ ὑπὸ τῶν πρῶτων παραδεδομένων] 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. 412b 6. λέγομεν δὴ γένος ἐν τι τῶν ὄντων τῆς οὐσίας] For an explanation of οὐσία and the other words employed by Aristotle in his definition of the ψυχή, see Appendix, p. xl.

412a 7. ταυτής δὲ τὸ μὲν ὡς ὑλὴν κ.τ.λ.] Cf. Μελαφρ. Δ. 8, 1017b 22, ἑυμβαίνει δὴ κατὰ δίο τρόπον τῆς οὐσίαν λέγεσθαι, τὸ δὴ ὑποκείμενον ἐξοχατον, ὁ μορφή κατ' ἀλλον λέγεται, καὶ δ' ἄν τόδε τι ὑπὲρ χαριστῶν ἐκ τοιοῦτον δ' ἐκάστου ἡ μορφή καὶ τὸ εἴδων: Μελα. Α. 3, 1070b 9, οὐσία δὴ τρεῖς κ.τ.λ.: Μελα. Ζ. 3, 1029b 1, μάλιστα γὰρ δοκεῖ εἶναι οὐσία τὸ ὑποκείμενον πρῶτον. τοιοῦτον δὲ τρόπον μὲν των ἡ ὑλή λέγεται, ἅλλον δὲ τρόπον ἡ μορφή, τρίτον δὲ τὸ ἐκ τοῦτων.

412a 10. It is worth while noticing that the same remark is repeated in line 22.

412a 10, καὶ ταῦτα διχῶς, τὸ μὲν ὡς ἐπιστήμη, τὸ δ' ὡς τὸ θεωρεῖν. 412b 22, αὕτη δὲ λέγεται διχῶς, ἡ μὲν ἐπιστήμη, τὸ δ' ὡς τὸ θεωρεῖν. 412b 22.

And unfortunately for Torstrik's theory, both the passages in question occur in the editio prior of the Paris MS., at least the first (412a 10) does so.
altogether, and the second as a fragment which Torstrik has filled up so as to make it agree with *22.

§ 3. 412*a 12. ταύτα γὰρ τῶν ἄλλων ἀρχαί] i.e. natural concrete bodies are the realities from which mathematical and artistic forms may be said to be derived.

412*a 16. οὐσία δ' ὁσός ὡς συνθέτη] 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 ὕλη, and others define it as a protective covering, and so give its ἐνέργεια, a third class combine the two, and state its οὐσία—οἱ δ' ἀμφό ταύτα συντίθεντες τὴν τρίτην καὶ τὴν ἐκ τούτων οὐσίαν. Cp. also Δ. 24, 1023' 31. The meaning of the qualifying phrase ὁσός 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*a 16. ἐπει δ' ἐστὶ σῶμα καὶ κοινός] 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*a 28. τοιοῦτο δὲ δὲν ἢ ὁργανικὸν] The epithet ὁργανικὸν would seem to be regarded by the writer as preferable to ζωὴν ἔχον, because while ζωὴ is the effect of soul, ὁργανικὸν refers to more essential and primary properties.

412*b 1. ὁργανα 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*b 15. κῶν δ' ἐστὶ πέλεκυς] So all the MSS. Torstrik regards the words as absurd, and amends them by omitting πέλεκυς, and reading νῦν δ' οὐκ ἐστίν, with which ψυχὴ 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 (ὅπεν γὰρ ἰσό), 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. 412b 20. ὃ δὲ ὀφθαλμὸς ὅλη ὅψεως] Torstrik thinks that the eye alone cannot be called the ὅλη of vision, and imagines Aristotle must have written ὃ δὲ ὀφθαλμὸς τὸ σύνολον, ἢ δὲ κόρη ὅλη ὅψεως—a result strengthened to his mind by the fact that the remains of the edilio prior require more words to be supplied than the vulgate offers.

412b 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. 412b 25. ἐστὶ δὲ οὐ τὸ ἀποθεσθηκός] Here, as I have tried to bring out in the translation, Aristotle is seeking to explain the remaining part of his definition in § 5, 412b 28: σπέρμα and καρπός, it is to be noted, are introduced in 412b 27 as instances of things which are not sufficiently advanced in the potentiality of life to have a soul. So Themistius, δῆλον τοίνυν ἐκ τῶν εἰρημένων ὡς οὕτω τοῦ νεκροῦ σώματος ἐντελέχεια ὡς κυρία οὕτω τοῦ σπέρματος τὸ μὲν γὰρ οὕκ ἔχει κόρην, τὸ δὲ οὐδέστω, καὶ τὸ μὲν οὕτω δύναται οὖν ἐτί, τὸ δὲ δύναται μὲν ἄλλῃ ύστερον. In fact, as Philoponus explains, by a σώμα δυνάμει κόρην ἔχων Aristotle means the τελείων ἤδη καὶ ὅρμανικόν.

§ 12. 413a 7. διὰ τὸ μηθένος εἰσαι σώματος ἐντελέχειας] 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. 413a 9. ὅσπερ πλωτὴρ] The force of the illustration would seem to be to shew that even though soul is always ἐντελέχεια 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 metaphysical 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. 413a 11. ἐπεὶ δὲ τῶν ἀσαφῶν μὲν φανεροτέρων δὲ γίγνεται τὸ σαφές] Cr. Phys. 1. 1, 184a 18: οὐ ταύτα ἦμιν τα γνώριμα καὶ ἄπλοι. διότερ ἀνάγκη τὸν τρόπον τούτον προάγει ἐκ τῶν ἀσαφεστέρων μὲν τῇ φύσει, ἦμιν δὲ σαφεστέρων ἐπὶ τὰ σαφέστερα τῇ φύσει καὶ γνωριμέστερα. ἐστὶ δὲ ἦμιν πρόσον δῆλα καὶ σαφή τὰ συγκεκριμένα μᾶλλον ύστερον δὲ ἐκ τούτων γίγνεται γνώσις τὰ στοιχεῖα καὶ αἱ ἀρχαὶ διαμορφοῦνται ταύτα. διὸ ἐκ τῶν καθόλου ἐπὶ τὰ καθὲ ἐκκατα 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 ἄπλως, the point is prior to the line, and the line again to the superfluities, relatively, on the other hand, to us and in the order of knowledge, the superfluities stands first, the point or στερμῆς 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, 1029b 4, and Anal. Post. ii. 23, 68b 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. 1. 4, 1093b 2.

413a 13. οὐ γὰρ μόνον τὸ ὅτι δεῖ τὸν ὁριστικὸν λόγον δηλοῦν] Cp. Anal. Post. ii. 8, 93b 17, where Aristotle distinguishes between a knowledge of the οὐ and a knowledge of the δεῖ, and An. Post. ii. 10, 94b 11, where three kinds of definitions are enumerated. ὄρισμὸς δ' ἐπειδὴ λέγεται ἐως λόγος τοῦ τι ἐστι, φανερῶν ὅτι ὁ μὲν τις ἐστι λόγος τοῦ τι σημαίνει τὸ ὅνωμα ἦ λόγος ἐτέρος ὑοματικῶς, οἷον τὸ τι σημαίνει, τί ἐστιν τρίγωνον. ὅπερ ἤχοντες ὅτι ἐστὶ ζητούμενο διὰ τί ἐστιν. εἰς μὲν δὴ ὄρος ἐστὶν ὄρον ὁ ἐμφανής, ἄλλος δ' ἐστὶν ὄρος λόγος ὁ δηλῶν διὰ τί ἐστιν. ὅπερ ὁ μὲν πρόσφορος σημαίνει μὲν, δεικνύει δ' οὐ, ὁ δ' ὑπήρως φανερῶν ὅτι ἐσται οἷον ἀποδείξεως τοῦ τί ἐστι, τῇ θέσει διαφέρουσα τῆς ἀποδείξεως. διαφέρει γὰρ ἐπείν διὰ τί βροτὴ καὶ τί ἐστι βροτὴ. ἐρεί γὰρ οὕτω μὲν διώτι ἀποδείχθηκεν τοῦ τῦρπος ἐν τοῖς νέφεσιν τι δ' ἐστί βροτὴ; ψφόσ ἀποδείχθηκεν πυρὸς ἐν νέφοις. ὅπερ ὁ αὐτὸς λόγος ἄλλοι τρόποι λέγεται καὶ οὐδὲν ἀποδείχθηκες συνεχιζόμενος, οὐδὲ δὲ ὄρισμος. ἐτι ἐστὶν ὄρος βροτὴς ψφόσ ἐν νέφοις τοῦτο δ' ἐστὶ τῆς τοῦ τί ἐστιν ἀποδείξεως συμπέρασμα. ὁ δ' τῶν ἀδέσφων ὄρισμὸς θεός ἐστι τοῦ τί ἐστιν ἀναπόδεικτος. ἐστὶν ἄρα ὄρισμὼς εἰς μὲν λόγον τοῦ τί ἐστιν ἀναπόδεικτος, εἰς δὲ συνολικὸν μόνον τοῦ τί ἐστι πισεῖσι διαφέρον τῆς ἀποδείξεως τρίτος δὲ τῆς τὸ τί ἐστιν ἀποδείξεως συμπέρασμα.

413a 16. νῦν δ' ὁσπερ συμπερασμαθ' οἱ λόγοι...εἰσιν] 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.

414a 19. τετραγωνισμὸς μέσης εὔθειας] 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 BCDE 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 κυνοφυνεὰ κ.τ.λ.] Themistius adds, ὅσπερ τὰ ὀστρεά.

§ 8. 413$^b$ 16. ὅσπερ γὰρ ἐπὶ 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 "operative." 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' αἰσθησιν, καὶ φαντασίαν καὶ ὀρέξιν] Freudental (p. 8) would omit the words καὶ φαντασία, because it would follow from them that all animals which possess sensation have φαντασία as well,—a result at variance with 415$^c$ 10, οἷς δ' ἑκείνων ἐκατον οὐ πάσι λογισμὸς ἀλλὰ 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.

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 a lower. 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. 414b 5. ois de taôta, kai ë. évêvnia] Cp. the previous chapter, 413b 23, where almost identical expressions were used.

§ 3. 414b 6. éti de tîs trophîs áùthian ë.ê.ósum] 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.

414b 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 ἄφη or on ἐπιθυμία.

414b 14. διασαφητέον...ὑστερον] De Sensu, cap. 4.

§ 5.  414b 25. διὸ γελοῖον ζητεῖν τὸν κοιωνὸν λόγον...ἀφέντας τὸν τοιοῦτον] 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 τοιοῦτον. 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 geometrician should study figure, not only in the abstract, but also in its specific kinds. Pacius, on the other hand, takes τοιοῦτον 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 universali in multis, quaeat 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 εἰρημένας ψυχαίς and διὸ γελοῖον) while there is this general notion, it depends for its value on the particular forms to which it applies: and, therefore (δὲ), it is ridiculous to seek a common abstract definition unless we simultaneously construct a definition of the particular kinds of soul or figure.

415a 12. ἔτερος 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 419a 9 and ἔτερος λόγος in 421a 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. ἐπίσκετε γὰρ ἐις τῶν δυνάμεων αὐτῶν ἐνέργειαν] 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; τάση δὲ τῆς τοιαύτης (δυνάμεως) προτέρα ἐστὶν ἡ ἐνέργεια καὶ λόγῳ καὶ τῇ οὐσίᾳ...τῷ λόγῳ μὲν οὖν ὅτι προτέρα δήλον τῷ γὰρ ἐνδείκνυσθαι ἐνέργησαι δυνατόν ἐστι τὸ πρῶτον δυνάτων, οἷον λέγω ὁμοδομεῖν τὸν δυναμεῖν ὁμοδομεῖν καὶ ὄρατον τὸ ὀρατόν ὁμορασθαι. [πρότερον]


415* 2. τὸ δὲ οὐ ἐπεκα διστῶν, τὸ μὲν οὐ, τὸ δὲ φῶ] 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 τοῦθεν ἐπεκα 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 inhabitaturum." 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 μεν, δὲ in the former passage, we have τοῦ, καί 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 φῶ. Themistius illustrates the distinction from Ethics, where the end may be either, (1) happiness, or (2) the individual: διστῶν τὸ τέλος, ὡς μὲν τὸ ὤν ἐνδομοστὶ, ὡς δὲ τὸ φῶ αὐτὸς ἐκαστος αὐτῷ. Cp. further Meta. Λ. 7, 1072* 1 (Bonitz, p. 499) and Physics, Π. 2,
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194* 35, διψάε γάρ το οὐ ἐνεκα' ἐφηται δ' ἐν τοῖς περὶ φιλοσοφίας, καὶ De Gen. Anit. II. 6, 742a 22.

§ 6. 415b 25. μετέχει ψυχῆς] This reading I have accepted from Torstrik, following ETV. It is a further confirmation of it that in 27 for κοινωνεί ζωῆς W reads μετέχει ψυχῆς. The result shews us, as Torstrik says, how the readings of one MS. were used to correct another.

§ 8. 416a 11. τῶν σομάτων ἦ τῶν στοιχείων] Torstrik regards the words ἦ τῶν στοιχείων as a mere interpretation, and places them accordingly in brackets.

416b 14. συναιτίων...οὐ μὴν ἄπλος γε αἰτίων] With this distinction between an actual, unconditional cause and a mere concomitant condition of existence cp. Metaph. Δ. 5, 1015b 21, ἀναγκαῖον λέγεται οὐ ἀκόμη οὐκ ἐνδέχεται ζῆν ὡς συναίτιον οἰον τὸ ἀναινεῖ καὶ τῇ τροφῆ τῷ ζῷῳ ἀναγκαῖον' ἀδύνατον γὰρ ἄκομη τοῦτον ἐστιν, and see also De Gen. Anit. 783b 21, διὸ καὶ τῶν φυτῶν τὰ λειψά σειφώλα μᾶλλον. ἄλλα περὶ μὲν τούτων ἐν ἄλλως τὸ αἰτίων λεκτέων, καὶ γάρ ἄλλα συναίτια τοῦ τουτοῦ πάθους αὐτοῖς: Eth. Níc. III. 5, 1114b 23, τῶν ἑξεσσ ὑπαίτιων ποι αὐτοὶ ἐστεμ. The distinction occurs frequently in Plato: e.g. Tim. 46 b, δοξίζεται δὲ ὑπὸ τῶν πλείστων οὐ ἐξουσία ἀλλ' αἰτία ἐστι τῶν πάντων.

§ 12. 416b 11. ἡ τροφῆ πρὸς ἐμψυχούν ἐστὶ καὶ οὐ κατὰ συμβεβηκός] Themistius paraphrases as follows: τὸ ἐμψυχον ἃν εἰς σῶμα τὸ τρεφόμενον ἢ ἐμψυχον καὶ οὐχ ἢ λεῦκον ἢ μέλαν, ὡστε καὶ ἡ τροφη πρὸς τὸ ἐμψυχον ἐστὶ καὶ οὐ πρὸς τὰ συμβεβηκότα τὸ τουτοῦ σωμάτι. Susemihl, Jahresbericht, IX. 351, suggests that we should either introduce ἢ ἐμψυχον after ἐμψυχον or omit καὶ before οὐ κατὰ συμβεβηκός.

§ 13. 416b 16. ἢ δέ γὰρ ἐστιν αὐτοῦ ην οὐσία] So I have determined to read with STVWX. Trend. and Bekker read αὐτὴ with EL: and Torstrik reads γὰρ ἐστι, supplying τὸ τρεφόμενον, and regarding αὐτὴ ην οὐσία as unnecessary.

§ 15. 416b 23. ἐπεὶ δὲ ἀπὸ τοῦ τέλους] Torstrik supposes that this sentence should be read immediately after οὐ δύναται εἶναι. But the only real reason for such a transposition is, that the words ἐστι δὲ ο ἐπὶ τρέφεται διὰ τῶν 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.
ARISTOTLE'S PSYCHOLOGY.

§ 16. 416b 25. ἔτι δὲ ὄ τρέφεται διατών] Themistius explains the words as referring, on the one hand, to the δύναμις θρεπτικῆ, which is συμφωνή, and corresponds to the hand that steers, and on the other hand to the θερμῶν ἐμφυτον which is like an ὀργανω supplied ἔδωκεν, and corresponds to the rudder. So also Alexander as quoted by Philoponus, τὸ γὰρ ὦ τρέφει τὰ διατόν οὐκ ἐπὶ τῆς τροφῆς λιπτέων, φησὶν, ἀλλὰ διατῶν λέγει τὴν θρεπτικὴν ψυχήν καὶ τὸ ἐμφυτον θερμῶν, ὅν τὸ μὲν ἐστὶν ἄκινητον ἡ θρεπτικὴ δύναμις, αὐτῇ γὰρ οὐ κινοῦμεν κινεῖ, τὸ δὲ ἐμφυτον θερμῶν κινοῦν καὶ κινοῦμενον. But Trendelenburg, following Simplicius, understands the two to be, first, heat innate in the body and moving the nutriment (κινοῦν μᾶν), and, secondly, nutriment, which while it is moved by the heat, acts in turn on the body which is being nourished (κινοῦν καὶ κινοῦμενον).

416b 31. ἐν τοῖς οἰκείοις λόγοι] 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; and Heitz thinks is referred to in De Somno, 3, 456a 4, εἴρηται δὲ περὶ τούτων ἐν τοῖς περὶ τροφῆς: and in De Part. Animal. II, 3, 650b 11, ὃν δὲ τρόπον λαμβάνει ἐξ αὐτοῦ (τοῦ αἴματος) τὰ μόρια τῆς αὐξήσεως, ἐτὶ δὲ περὶ τροφῆς ὄξως, ἐν τοῖς περὶ γενέσεως καὶ ἐν ἄλλως οἰκείοις ἐστὶν 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, 274a 21, ἐν τοῖς περὶ τῶν ἀρχῶν, III, 4, 303a 23, εἴρηται 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 be such a passive impression, we may remember the doctrine of the schools (φασὶ δὲ τινες) that like is affected or impressed by like: and then the difficulty presents itself, why do the senses not perceive themselves (417a 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 does not display its action without an actual fire. Thus then without drawing any distinction between the different words (πάσχειν,
NOTES. II. 5.

κωσθαίναι, ἐνέργειαι], 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 (πουτικὼν) and actually realized (ἐνέργεια ὑπ'). 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 (ἀλλοίωσις) or two forms of the conception must be recognised. Applying, then (§ 6), this distinction to αἰσθήσεις, we have to note that the first form of such ἀλλοίωσις, 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 ὄνομασιν) 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 ἄλλοιωσις τις εἶναι: ἄλλοιωσις 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 Μεταφ. λ. 1, 1069b 12, as a μεταβολὴ κατὰ τὸ πάθος, and in N. 1, 1088 32 it is described as κατὰ τὸ ποιόν. More fully it is said, De Gen. et Corrupt. I. 4, 310b 10, ἄλλοιωσις μὲν ἐστιν ὅταν ὑπομένων τοῦ ὑποκειμένου, αἰσθήτου ὄντος, μεταβολὴ ἐν τοῖς αὐτὸν πάθεσιν ἢ ἐναντίος ὄσιν ἢ μεταξὺ ὀιν ὅ τῶ σῶμα ὑμαίνει καὶ πάθων κάμπτει ὑπόμενον γε ταῦτα: when on the other hand, there is an entire change as when air is formed from water, γένεσις ἴδῃ τὸ τοιοῦτον. Cp. also Προς. vii. 2, § 12, ἄλλοιωσις γὰρ τόσον καὶ αἱ αἰσθήσεις. ἡ γὰρ αἰσθήσεως ἢ κατ' ἐνέργειαν κινήσεως ἢ πάθων ὑπομείους τις αἰσθήσεως. 417 1. εἰρήκαμεν ἐν τοῖς καθόλου λόγοις περὶ τοῦ ποιεῖν καὶ πάσχειν: The old commentators referred the words to Aristotle's work, Περὶ γενέσεως καὶ φθορᾶς: and 1. 7 is viewed as corresponding to the present allusion (323b,
perὶ 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 (Verlorenen Schriften, p. 80) thinks the reference is to a lost work of Aristotle's, entitled, in the list which Diogenes gives us, as perὶ τοῦ πάσχειν ἤ πεπονθέναι. The same work, he thinks, is intended in De Gen. An. 768b 22, εἰρήται δὲ περὶ αὐτῶν ἐν τοῖς περὶ τοῦ ποιεῖν καὶ πάσχειν διωρισμένοις.

§ 2. 417a 3. διὰ τι ἄνευ τῶν ἔξω οὐ ποιοῦσιν αἰσθητον] It is worth while remarking that Theombitus 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 ταῦτα μὴ ἀπλῶς κυριεῖν τὴν ἀπορίαν ταύτη 'Δριστοσκήλη ἀλλ' ὡς καθαρσιμένη μᾶλθα τῶν καὶ χαρισμεῖσαι τὴν ψυχήν τοῦ σώματος αἰσθητικήν εἶναι λεγόντων. εἰ γὰρ οἷα τε καὶ χορίς τῶν ἀργῶν αἰσθάνεσθαι, διὰ τι οὐχὶ καὶ αὐτῶν αἰσθάνεται τῶν ἀργῶν; 417a 13. ὁμοίως δὲ καὶ τὸ αἰσθητόν] So Torstrick would seem rightly to have amended the passage on a hint from Alexander: Ἅπαρ ὁ. Ἀλ. 155, 20 (Sp.) λαβῶν δὲ τὸ δεχόν λέγεσθαι τὸ αἰσθάνομεθα (καὶ γὰρ δυνάμει καὶ ἐνεργεῖ) ἐκεῖν τὸ τὸν αἰσθήσεως τὴν μὲν εἶναι δυνάμει, τὴν δὲ ἐνεργεία, ὁμοίως δὲ καὶ τὸ αἰσθητόν. All other MSS. and editions read ὁμοίως δὲ καὶ τὸ αἰσθάνεσθαι, which, as Trend. says, nera est repetitio.

§ 3. 417a 15. τοῦ αὐτοῦ ὁντος τοῦ πάσχειν...καὶ τοῦ ἐνεργείαν] The point to be observed is, it would seem, that κωινὰρθαι is the middle term by which πάσχειν is assimilated to ἐνεργείαν. Movement is involved at once in being affected and in being active, and so far the two terms are identical.


417a 18. κωνεῖται 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. διαφυγέων δὲ καὶ περὶ δυνάμεως καὶ ἐνεργείας] This would seem to be the antithesis to πρώτον μὲν ὁν τοῦ αὐτοῦ ὁντος τοῦ πάσχειν, κ.τ.λ. (15), 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 δύναμις and ἐνεργεία, 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 ὁν οἱ πρώτοι κατὰ δύναμιν ἑπερίονιν] Torstrick
unnecessarily conjectures, ἄριστοτεροι μὲν οὖν οἱ κατὰ δύναμιν ἐπιστήμονες ἐνεργεῖα γίνονται ἐπιστήμονες.

417a 32. ἐκ τοῦ ἔχειν τὴν αἰσθήσιν ἢ τὴν γραμματικὴν] Torstrik would read τὴν ἀμφιπτηκὴν in place of αἰσθήσιν, following the commentary of Themistius. But αἰσθήσιν makes perfectly good sense, and Themistius, we may suppose, merely expanded γραμματικὴ by adding on an additional illustration in ἀριθμητική.

§ 5. 417b 2. οὐκ ἐστὶ δ΄ ἀπλοῦν οὐδὲ τὸ πᾶσχεν] The different senses in which an object may be said to πᾶσχεν are

1. Destruction: so e.g. wood πᾶσχει when it is burnt,
2. Perfection: so e.g. a man πᾶσχει when he is taught.

But such passio perfectiva may be again twofold: either from mere capacity, pure potestas 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 ἔξεις (a permanent established state), see especially Categ. c. 8, 8b 28, διαφέρει ἐξεις διαθέσεως τῷ πολυχρωμωτέρον εἶναι καὶ μονομάτερον.

§ 6. 417b 17. ὑπὸ τοῦ γεννώντος] 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 αἰσθήσεως τὸ μὲν σπέρμα τοῦ ζωῆς καὶ τὸ δῶν τῇ πρώτῃ μεταβάλλει μεταβολὴν καθ’ ἑαυτόν αἰσθητικὴν. ὅταν δὲ γένηται ζῶον ἔχει ἣδη τὴν ἔξειν, ἐλλεῖπει δὲ αὐτῷ ἡ ἐνέργεια.

417b 29. καὶ φῶς γένοιτ' ἄν καὶ εἰσαύθες] 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 (ἰδιώς), or common (κοινῶς), or incidental (κατὰ συμβεβηκός), occupy the writer in this chapter. On the subject, see the Introduction, p. lxiii., and cp. De An. III. 1, 425a 15—30, and De Sensu, 4, 442b 5.


§ 3. 418a 18. τὰ γὰρ τοῖς...κοινὰ πάσχει] Simplicius somewhat pedantically points out that it is incorrect to say that the properties in question are
common to all the senses: μεγέθους γώρ καὶ σχήματος μόναν ἀντιλαμβάνωσται δύσι καὶ ἀφή: and Themistius writes, καὶ νὰ δὲ πλεῖόν: κίνησις, however, Themistius adds, entering into all our perceptions. But Philoponus seeks to shew that the different καὶ are really with very few exceptions shared by all the different senses. He begins by discussing the apparent contradiction, that while here ἁρμὸς is regarded as a perception of the senses, it is in the Physics, in combination with time, referred to reason. τὸς οὖν ἐκεί μὲν τὸν νὸιν μίν ἐπεν ἀντιλαμβάνεσθαι τοῦ ἁρμοῦ ἐνταῦθα δὲ τὴν ἀισθήσιν. Ἀλλὰ ἐπεν ὅτι αὐτὸν μὲν τὸν εἶδος τοῦ ἁρμοῦ οὐκ ἐστὶν ἀντιληπτικός' ἢ μὲν τοῦ αἰσθησιος, οὐχ ὡς τοσοῦτον ἁρμὸν ἀντιλαμβάνεται, ἀλλ' ἀπλός ὡς πεπληθυμένοι ἡ μονάδος καὶ ὡς ἐλάττων πλήθους ἡ πλεῖον' ὁ δὲ νοῦς ἐστι τὰς ἄισθήσεως καὶ τὸ τοῦ ἁρμοῦ εἰδος ἐπιγνώσκων. ὅτι δὲ καὶ ἡ ἀκοὴ τοῦ ἁρμοῦ τούτον ἀντιλαμβάνεται πρόδηλον. 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, ἐστιν οὖν ἁρμὸς μὲν πάσαις αἰσθητοὶ. στατικὴ δὲ καὶ κίνησις ὄνεος γενέσεως ταῖς λοιπαῖς' σχήμα δὲ καὶ μέγεθος ταῖς τρισὶν δύσι, ἀκοῇ, ὀσφρήσει.

CHAPTER VII.

Beginning now his analysis of the single senses, Aristotle takes up sight, and discusses its object or ὄνομα αἰσθητοῦ. This he finds is colour, and 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. δὴν δὲ ἐστι ὁ λέγομεν προελθοῦσα] The reference is to § 4, 419b 2, where this ἀνάφυσιν is explained to be τὰ πυρόθῳ φαινόμενα καὶ λämponta.

418b 1. τοῦ καὶ ἐνεργειάν διαφανοῦσα] The actually pellucid is, of course, any pellucid substance, such as air or water, when illumined by light.

§ 2. 418b 9. ἐν τῷ ἁίδιρ 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 δὴ τούτων φανερὸν ὅτι πέφυκε τις οὐσία σώματος ἀλλὰ παρὰ τὰς ἐνταῦθα συστάσεις θεωτέρα καὶ προτέρα τοῦτον ἀπάτωσοι. And this πρῶτον τῶν σωμάτων has been called οὐδηρ from ἀεὶ θεῷ (of course, a mistaken derivation); διὰπερ ὅς ήταν τοῦ ἁίδιρ ἄνω τοῦ πρῶτου σώματος παρὰ γῆν καὶ πῦρ καὶ ἁέρα καὶ ὕδωρ, αἰθέρα προσανώματος τοῦ ἀνωτέρω τόπου, ἀπὸ τοῦ θεοῦ ἀεὶ τῶν ἁίδιων χρόνων θέμενοι τὴν ἐπωνυμίαν αὐτῷ. (270b 22).

418b 10. δυνάμει δὲ ἐν φι τοῦτοι ἐστὶ] Torstrik would punctuate δυνάμει δὲ, ἐν φι, which would give the meaning that where the pellucid or light is present, there darkness is also potentially present.
NOTES. II. 7.

418\textsuperscript{b} 14. οὐδ' ὀλως σῶμα] After σῶμα and before οὐδ' ἀπορρῇ Torstrik would insert the words of line 17, οὐδὲ γὰρ δύο σώματα, κ.τ.λ.  
418\textsuperscript{b} 15. οὐδ' ἀπορρῇ σῶματος] This, as Trend. remarks, is directed against Plato's doctrine as expressed in the \textit{Tīnaičus}, 67 C, ἃ σύμπαντα μὲν χρέας ἐκαλέσαμεν, φλόγα τῶν σωμάτων ἐκάστων ἀπορρέουσαν, ἢ ὢσει σύμμετρα μόρια ἔχουσαν πρὸς ἀιδήςαν.  
§ 3. 418\textsuperscript{b} 20. καὶ οὐκ ὀρθῶς 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 \textit{travelling} and existing long before it reached our eyes. Cf. \textit{De Sensu}, 6, 446\textsuperscript{a} 26.  
418\textsuperscript{b} 22. καὶ γιγνομένου ποτὲ μεταξύ τῆς γῆς] E and V here read τεινομένου, perhaps, as Torstrik suggests, a word Empedocles himself had used. It is in favour of this reading that in \textit{De Sensu}, 2, 438\textsuperscript{a} 25, vision is said ἀποτείνεσθαι μέχρι τῶν ἀτομών.  
§ 4. 419\textsuperscript{a} 3. τὸ πυρόθη φαινόμενα] Cf. \textit{De Sensu}, 2, 437\textsuperscript{b} 6: τὸ γὰρ λείων πέφυκεν ἐν τῷ σκότει λάμπειν, οἷον κεφαλαὶ ἱχθύων των καὶ ὁ τῆς σηπίας ἄδολος. Prof. Chandler (\textit{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."  
419\textsuperscript{a} 6. δε' ἦν μὲν οὖν αἰτῶν ταῦτα ὀράτων ἄλλος λόγος] Bonitz thinks the reference is to \textit{De Sensu}, 2, 437\textsuperscript{b} 5.  
§ 9. 419\textsuperscript{b} 32. τὸ δὲ μεταξὺ ψόφων μὲν ἄθρο', ὀσμῆς δ' ἀνώφυμον] Torstrik, from the paraphrase of Themistius, conjectures: τὸ δὲ μεταξὺ ψόφων μὲν καὶ ὀσμῆς ἄθρο' τε καὶ ὑδωρ' τὸ δὲ κοινὸν ἀνώφυμον' κοινὸς γὰρ δὴ τι πάθος, κ.τ.λ. He objects that it is not correct to say τὸ δὲ μεταξὺ ψόφων μὲν ἄθρο', because in line 18 of the next chapter, water is added—ἐτὶ ἀκούστη ἐν ἄθρο καὶ ὑδατὶ. But since Aristotle in the passage in question after καὶ ὑδατὶ adds ἀλλ' ἦτον, 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 ἀνώφυμον, as some animals (421\textsuperscript{a} 8—13) smell in air, others in water—\textit{quaes elementa}, Torstrik adds, \textit{non carent, opinor, nomine}. But the point, of course, is that language provides no one term by which to describe the quality \textit{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 διάσμον to describe the common characteristic of air and water which enables it to act as medium for smell, just as they used the word διάχεις to denote the medium of sound.  
419\textsuperscript{b} 1. ἀλλ' ὁ μὲν ἀνθρωπος—ἀδύνατει ὁσμάσθαι] Torstrik objects that this sentence is without a second corresponding clause, and therefore adds from Themistius, τὰ δὲ ἐνυδρα ὀσμᾶτα καὶ μὴ ἀναπνέωντα.  
419\textsuperscript{b} 3. νῦν δὲ πρῶτον περὶ ψόφου καὶ ἀκοῆς διορίστωμεν] Torstrik, in order to remove the awkwardness of πρῶτον, would here read, μετα δὲ ταύτα λεκτέαν περὶ ἀκοῆς καὶ ὀσμὴς, καὶ πρῶτον μὲν περὶ ψόφου καὶ ἀκοῆς διορίστωμεν.  
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 shown 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 shown (§ 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.


419b 18. ἦτι ἀκούσαι ἐν ἄερι καὶ ὑδάτι, ἀλλ’ ἴττων] This ἄλλ’ ἴττων, 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, ἦτι ἀκούσαι ὁσπερ ἐν τῷ ἄερι οὖτω καὶ ἐν ὑδάτι ἀλλ’ ἴττω. 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 μεταξύ is not κύριον τοῦ ψόφου. Torstrik would accordingly read, ἦτι ἀκούσαι μὲν ἐν ἄερι καὶ ὑδάτι, οὐκ ἔστι δὲ ψόφου κύριος ὁ ἄηρ οὐδὲ τὸ ὑδάρ.

§ 3. 419b 24. ὁσπερ ἐν εἰ σωρῶν ἡ ὁρμάθων ψάμμων τύπτω τις ψερόμενον ταχέ] 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. Cr. Themistius, p. 116, who says that whips thus make a noise by striking the air, κἂν τὰ ταχυτητὶ προλαμβάνουσαι αὐτῶν τὴν θρύσυν, ὁσπερ καὶ εἰ ἀμμοῦ σωρῶν ψερομένου παίσα τις προλαμβάνων 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. 419b 25. ἤχω δὲ γύνεται—420a 19, ωρισμένων τοῖν 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 419b 25 to 420a 2; while the second explains
the character of the congenital air which is confined within the cavity of the tympanum.

419\textsuperscript{b} 25. \( \eta \chi \omega \) δὲ γίνεται...ἀστερ σφαίρα\] Torstrik here objects that the simile of a ball does not correspond with the description which has preceded: \emph{nam ludentium pila non ab acre repercussion 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 that which it illustrates. In confirmation of his view, Torstrik refers to the \emph{Problems} 901\textsuperscript{a} 16 where an echo is described as that \( \gamma \) γίνεται πληγήντος τοῦ τοιοῦτου πρός 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 γάρ τοῦ ἀέρος ἀνακλάται τοῦ ἐν τῷ κοίλῳ, σικ. 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\textsuperscript{b} 27, even although in this latter ‘interpolation’ all the MSS. \emph{consiprunt}. Similarly in 899\textsuperscript{b} 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 ἀστερ σφαίρα applies simply to ἀσωσθη and has nothing to do with the other concomitants of an echo. Themistius explains the passage quite clearly: \( \eta \chi \omega \) δὲ γίνεται ὅπου ὁ πληγείς ἀήρ ὑπὸ τοῦ ψοφήσαντος ἂν φωνήσαντος προσπεσών στερεῷ τε καὶ λείφ καὶ ἐν ὄντι διὰ τὸν τόπον τὸν ἄριστον αὐτῶν καὶ κολλώσατα βρύπτεσθαι εἰς τοῦ πλόον πάλιν ἀσωστάλησαι, ἀστερ καὶ σφαίρα. The compression of the air is not merely, as Torstrik thinks, the \emph{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\textsuperscript{b} 33. Ὑ τὸ φῶς ὀρίζομεν] Torstrik reads ἦ in place of ὅ, on the ground that Aristotle is talking not of things themselves but of their definition— ὀρίζομεν τὸ φῶς τῷ σκιᾷ ποιεῖν.

§ 5. 419\textsuperscript{b} 33. τὸ δὲ κενῶν ὄρθως λέγεται...ποιῶν ἀκούειν] Here, Torstrik thinks, we have got the earlier version of the explanation of which the later version is contained in 420\textsuperscript{a} 18, 19, καὶ διὰ τοῦτο φασιν ἀκούειν τῷ κενῷ καὶ ἥχουσα. He would therefore omit 33 and 34 and after ἦ τὸ φῶς ὀρίζομεν continue οὕτω δὲ καὶ ὁ ψόφος ἀνακλάται μὲν ἔναν ὅταν καὶ μή ἃ συνεχής καὶ εἰς ὁ ἀήρ, ἀλλὰ διὰ τὸ ψαθυρός εἶναι οὐ γεγονεῖ...λείου ἐπίπεδον. κυνηθῆ in line 35 Torstrik it will be noticed alters into καὶ μῆ ὅ.

420\textsuperscript{a} 4. διὰ δὲ τὸ ἐν ἀέρα εἶναι] Pacius while saying ‘\emph{recepistam lectionem mutare sine librorum auctoritate mihi est religio’ conjectures ἐνὰ ἀέρα.

430\textsuperscript{a} 5. κινουμένου τοῦ ἐκὸ τὸ εἰς ὅ κυεῖ] This according to Torstrik has no meaning and he reads accordingly κυεῖται with EUXY. Trend suggests that we should understand ψοφητικὸν as the subject, or out of the genitive
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absolute supply as nominative κινοῦμενος ὁ ἐξο ἀήρ. Torstrik regards 420\textsuperscript{a} 5—9 as made up of two versions, fragments of the earlier of which are preserved in W. See his Commentary, p. 153.

420\textsuperscript{a} 7. μέρος καὶ ἔμψυχον] Torstrik would read ἔμψυχον, because in an animate body it is not only the auricle which is ἔμψυχος.

420\textsuperscript{a} 9. ἐγκατωκοδομήματι πρὸς τὸ ἄκινητος εἰναι] Trendelenburg points out that this line is at first sight inconsistent with 16, δέ γάρ οξίειά των κίνησιν ὁ ἀήρ κινεῖται ὁ ἐν τοῖς ὁσιοῖ; 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 (420\textsuperscript{a} 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 ἄκινητος 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—ἄκινητον οὖν ἂνο ληπτεῖσ τὴν ὑπ' ἄλλου κίνησιν—incorporated in my translation (p. 103).

420\textsuperscript{a} 17. ἀλλ' ὁ ψόφος 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 ἄδος but ἄλλοτριος.

§ 8. 420\textsuperscript{a} 31. οὐ δὴ ταχύ τὸ ὄξυ] This would almost seem to be directed against the less exact account given by Plato in the Timaeus 67 C, διὰ δ' αὐτής ταχεία (κίνησις) ὄξειαν ὅτι δὲ βραβύτερα, βαρυτέραν (θομεν). 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 (συγμαθεῖε) of the quickness and the slowness. The subject is discussed more fully in De Gen. An. v. 7, 787\textsuperscript{a} 11, where the writer distinguishes between strong and weak notes in a way that the character of the notes is a result (συγμαθεῖε) of the quickness and the slowness. The subject is discussed more fully in De Gen. An. v. 7, 787\textsuperscript{a} 11, where the writer distinguishes between strong and weak notes in the one hand, low and high on the other. Strong and weak he explains are used ἀπλῶς, low and high relatively: μεγαλόφωνα μὲν οὖν ἐστιν ἐν τῷ πολύ ἀπλῶς εἰναι τὸ κινοῦμενον, μικρόφωνα δὲ τῷ ἄλλῳ. Barúrfων δὲ καὶ ἀδροῦφον εὐ ἐν τῷ πρὸς ἄλληλα ταῦτα ἔχειν τὴν διαφοράν.

420\textsuperscript{a} 8. ἀπόστασιν ἔχει καὶ μέλος καὶ διάλεκτον] ἀπόστασις would seem to be the same with what is otherwise known as ἐπίτασις, which Aristoxenus (Harmon. Elem. i. 10) defines as follows: η μὲν οὖν ἐπίτασις ἐστὶ κίνησις τῆς φωνῆς συνεχής ἐκ βαρυτέρου τόπου εἰς ἀξίωστορόν. Thus it is the range of notes of which a voice is capable. μέλος Trendelenburg explains as sonorum qui sibi inter se succidunt concentus. In Politics, θ. 7, 1342\textsuperscript{b} 6, Aristotle speaks of τὰ Δώρα μέλη and in 1341\textsuperscript{b} 33 of μέλη ἑβδομα ται ἐπικλικα, 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, 535\textsuperscript{b} 30 as ἡ τῆς φωνῆς ἐπί τῆς γλώττης διάρθρωσις and is said further 536\textsuperscript{b}, to be peculiar to man. 420\textsuperscript{b} 10. ἰχθύς. Cp. Hist. An. iv. 9, 535\textsuperscript{b} 14, and see Lewes, p. 287.

Torstrik thinks the passage from πολλὰ δὲ τῶν ζωφῶν in 9 down to οὐ τῷ
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τυχόντι μορίῳ in 14 cannot have been written by Aristotle. For 1st, The illustration is foreign to the general spirit of the book, summam ac principia in omnibus persequentis: 2ndly, Had Aristotle wished to prove his point that many animals do not have φωνη, he would not have used the instances of fishes—ren naucessimis notam—but would have taken the more obvious instance of the βόμβασ 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 καὶ τῶν ἑαυτῶν ἱχθύες; 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 logice 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 λεγόμενα with which the illustration is introduced points to a phenomenon not naucessimis notam but subject of much talk: and the 3rd would seem to be met by transposing the two sentences in question and reading καὶ τοῦτο ἐνέλγον κ.τ.λ. after ἀλλ’ οἱ λεγόμενοι.

§ 10. 420b 13. φωνη δ’ ἐστὶ ζώου ψόφος, καὶ οὐ τῷ τυχόντι μορίῳ] Torstrik objects that καὶ 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, φωνη δ’ ἐστὶ ζώου ψόφος, οὐ πᾶς δὲ καὶ οὐ τῷ τυχόντι μορίῳ. But the vulgate may be accepted if we regard φωνη δ’ ἐστὶ κ.τ.λ. as itself a limitation of ἀνός κύνης τίς ἐστιν ὁ ψόφος, a limitation continued by καὶ οὐ τῷ τυχόντι μορίῳ.


§ 11. 421a 1. ἀλλὰ τοῦτο τύπτει] X has τοῦτο but both Trend, and Torstrik read τοῦτο. It is not clear what we are to regard as subject of τύπτει. Torstrik takes τὸ ἐμψυχον 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, 781b, De Part. An. ii. 10, 655b, and De Sensu 5, 442b.


421a 23. παρὰ τὸ αἰσθητήριον τούτο εἶναι εὐφνεῖς] Cp. Part. An. ii. 16,
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660* 11 and Physiogn. 3, 807* 12: ἐνυφνοὺς σημεία σάρξ υγροτέρα καὶ ἀπαλωτέρα, οὐκ εὐεκτικὴ συνή τε μυελόδης σφίδρα.

§ 3. 421b 1. ἡ μὲν γὰρ γλυκεία, κρόκος καὶ μέλιτος] So Torstrick 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. δι' ἀδύνατον] 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 ἐτέρων των αὐθανασίων: 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.

§ 7. 422a 1. τοῖς δὲ τῶν ἀέρα δεχομένου ἕχειν ἐπικάλυμμα] Cp. De Sensu, 5; 444b 21, οὗ τῶν αὐτῶν τρόπων ὀσφραίνονται, ἀλλὰ τοῖς μὲν ἀναπνέουσι τὸ πνεῦμα ἀφαιρεῖ τὸ ἐπικείμενον ὁσπερ πώμα τι (ἄν οὖν αισθάνεται μὴ ἀναπνέοντα) τοῖς δὲ μὴ ἀναπνέουσιν ἄφημηται τοῦτο.

§ 8. 422b 6. ἐτοί δ' ἡ ὀμη τοῦ ἔχροον] 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 liquified. 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. 422a 15. οὐδὲ ταῖς ἀπορροϊαῖς] The opinion of Democritus.

§ 3. 422a 20. ὁσπερ δὲ καὶ ἦ δψα] Here, as Bonitz notes, we have the commencement of a complex protasis of which the apodosis follows in line
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29, οὐτώ δὴ καὶ ἡ γενήσει. "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."

422\textsuperscript{a} 27. ἀόρατον δὲ τὸ μὲν ὄλως λέγεται] Cr. \textit{Metaf.}. Δ. 22, 1022\textsuperscript{\textit{b}} 32: καὶ ὠσαχῶς δὲ αἰ ἀπὸ τοῦ α ἀποφάσεις λέγονται, τοσσαταχῶς καὶ αἱ στερήσεις λέγονται: ἀναίων μὲν γὰρ τὰ µῆ ἔχειν ιδότητα πεφυκὸς λέγεται, ἀόρατον δὲ καὶ τῷ ὄλως µῆ ἔχειν χρώμα καὶ ἀπούν καὶ τῷ µῆ ἔχειν ὄλως πόδας καὶ τῷ φαύλου.

§ 4. 422\textsuperscript{\textit{b}} 3. ἀναγκαῖον ἢρα ὑγρανθήσεται τὸ δυνάμενον µὲν ὑγραίνεσθαι σοζό-µενον] Themistius paraphrases: δεί οὖν...ὑγραίνεσθαι οὔτως ὡστε σώζεσθαι αὐτοῦ τὴν οἰκείαν κατασκευὴν καὶ ὅπικα ὑγραίνεσθαι.

§ 5. 422\textsuperscript{\textit{b}} 10. τὰ δ’ εἰδο τῶν χυμῶν] With the list cp. \textit{De Sensu}, 4, 44\textsuperscript{\textit{b}} 15, and for modern classifications see Bain, \textit{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.

§ 2. 422\textsuperscript{\textit{b}} 23. πᾶσα τε γὰρ αἰσθήσεις µᾶς ἐναντιώσεως, κ.τ.λ.] Cr. \textit{De Gen. et Corr.} ii. 2, 329\textsuperscript{\textit{b}} 17, εἰσὶ δ’ ἐναντιώσεις κατὰ τὴν ἀφὴν αἴδε, θερµῶν ὕψηρον, ἔχον úγρον, κ.τ.λ.

§ 4. 423\textsuperscript{\textit{a}} 10. νῦν δὲ διὰ τὸ διαφρίσθαι δὲ οὐ γίνονται αἰ κινήσεις] Simplicius refers this to the media, Themistius to the organ of sensation.

§ 5. 423\textsuperscript{\textit{b}} 20. νῦν δὲ δίο διὰ τὸ µὴ ἀντιστρέφειν] For Aristotle’s conception of ἀντιστρέφειν (conversion), see Categ. 2\textsuperscript{\textit{b}} 20, 14\textsuperscript{\textit{a}} 30: \textit{Anal. Post.} ii. 4, 91\textsuperscript{\textit{a}} 35, and cp. Cope’s exhaustive note on the Rhetoric, i. 1 (ἡ ῥητορικὴ ἐστὶν ἀντίστροφος τῇ διαλεκτικῇ). Originally the term denoted the counter-move ment 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. 423\textsuperscript{\textit{a}} 21. ἀπορήσεις δ’ ἐν τις] Here, as Bonitz has clearly shewn (\textit{Studien}, ii. 62, 63), we have the introduction to a question which is itself only stated in 423\textsuperscript{\textit{b}} 1, πόρευον οὖν πάντων ὁµοίως ἕστιν ἡ ἀνάθησις ἡ ἄλλων ἄλλως. The latter suggestion, that different senses act in different ways, is supported by the opinion current in Aristotle’s day (καθάπερ νῦν δοκεῖ, 423\textsuperscript{\textit{b}} 2), that
touch and taste operate in a different manner from the other senses. This opinion he refuses to accept (τὸ δ’ οὐκ ἐστιν), 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’ ὑγρὸν οὐκ ἐστιν ἀνεν σώματος) it follows that our bodies cannot be in actual contact with tangible objects. And hence the ἀποστείλα which Aristotle raises.

423b 1. εἰ διερόν] These words must be combined with λανθάνει ἡμᾶς. The sentence written at length would be as Trendelenburg remarks: λανθάνει δὲ μᾶλλον ἡμᾶς εἰ διερόν διεροῦ ἀπτεται, ὥσπερ καὶ τὰ ἐν τῷ ὑδάτι ξύλο λανθάνει εἰ υγρὸν υγρὸν. ὑγρὸν, it should be noticed, is the distinctive term to denote the quality of water just as διερόν serves to designate the distinguishing quality of air.

§ 9. 423b 22. δῆλον ὅτι ἐντὸς τὸ τοῦ ἄπτου αἰσθητικῶν] 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, ἡσαρος, 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.
§ 2. 424a 24. αἰσθητήριον δὲ πρῶτον ἐν ὑποκειμένῳ δύναμις] Kirchmann translates: Das eigentliche Sinnesorgan ist das in welchem ein solches Vermögen. Similarly Trendelenburg: ‘tacite mentem spectare videtur, quae proprìa 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. ἢστι μὲν οὖκ ταύτων, τὸ δ' εἶναι ἔτερον] 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 ἡ τε αἴσθησις καὶ τὸ αἰσθητήριον, ὅσπερ καὶ ἀπασα μορφή τῷ δεδεμένῳ, τὸ δὲ εἶναι ἔτερον τοῦ τε ὀργάνον καὶ τῆς δυνάμεως. The meaning of τὸ εἶναι 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 εἶναι or particular application, virtue being the state as such, justice the application of it to another (πρὸς ἄτερον). Cp. Eth. Nic. vi. 8, 1141b 23, ἢστι δὲ καὶ ἡ πολιτική καὶ ἡ φύσις ἡ αὐτὴ μὲν ἔξις, τὸ μέντοι εἶναι οὐ ταύτων αὐτὰς, i.e. the ideal of the statesman and his ideal of individual welfare are fundamentally the same, but realize themselves in different ways.

§ 3. 424b 30. λέγει δ' ὁ λόγος (τούτοι δ' ἦν ἡ αἴσθησις)] So Theophrastus (§ 32) arguing against the opinion of Anaxagoras that αἴσθησις is always μετὰ λυπῆς points out that the existence of ὑπερβολae τῶν αἰσθητῶν does not (as Anaxagoras thinks) prove that the exercise of sense involves pain ἀλλὰ μᾶλλον ὡς ἐν συμμετρίᾳ τινι καὶ κράσιτι πρὸς τὸ αἴσθησιν ἡ αἴσθησις.

§ 6. 424b 17. ἢ τὸ μὲν ὅσμᾶσθαι αἰσθάνεσθαι] Philoponus (quoted by Trendelenburg) comments as follows: οὐ γὰρ ἀρκεῖ πρὸς τὸ αἰσθάνεσθαι τὸ δύνασθαι τὸ εἴδος χωρὶς τῆς ύλης δέχεσθαι ἀλλὰ καὶ δυνάμεως δει ψυχής, ἢτις οὐκ ἐν πάσιν ἐστὶ τοῖς τὰ εἴδη τῶν αἰσθητῶν χωρὶς τῆς ύλης δεχομένης.
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 ἀληθής 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 ἐστὶν ἀληθῆς] The argument of this paragraph is full of difficulties, and both Trend. and Torstrik confess their inability to understand it. Bonitz, however (Aris. Stu. 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 παντεύεσθαι 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 (ἀληθής) beyond the five which we possess. The chief ground he gives for this conclusion is, that we possess all the organs of sense (ἀληθητήρα) 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, πᾶσαι ἄρα αἱ ἀληθής, to be again repeated with the necessary limitations in 425a 11, ὅστ' εἰ μὴ τε ἕτερον ἐστι σῶμα. The words from ἔχει δ’ οὐσία (424b 31), to τού δ' ἀμφοῖν (425a 1), are to be regarded as subordinate to the main argument. This main argument would appear to be as follows:
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1°. 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 εἶπερ ἐκλείπει τις αἰσθήσις καὶ αἰσθητήριον τι ἢ μὲν ἐκλείπει (424b 25)—the absence of any one αἰσθήσις is possible only on the supposition of the absence of any organ of perception. Aristotle therefore seeks to show that we are without no organ of perception: for which conclusion he adduces the following grounds. (α) The perceptive organs must operate either immediately or meditately. 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 (ז'ν τυγχάνομεν ἔχοντες). (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 (ταῦτα δὲ καὶ νῦν ἔχουσιν ἐμα ζωὰ). 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, ὥστ' εἰ μὴ τι ἐπερπόν ἐστι 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 οὐ ἐστιν αἰσθήσις ἀφίγη καὶ νῦν αἰσθησιν ἔχομεν]
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. Λύσεις (Spengel, p. 170) εἰπὼν γὰρ ἐπὶ τῆς ἀφίς κατέλειψεν τὸ καὶ ἐπὶ τῶν...
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ἀλλαὶ άισθητηρίων τε καὶ αἰσθήσεων πρασθείναι, ὅν πάντων ληφθέντων γίνεται καθόλου τὸ εἰ ὅφη ἔχωμεν τὰ αἰσθητήρια, τούτων πάντων καὶ αἰσθήσεως ἔχωμεν. And the words would therefore seem to mean that we possess αἰσθησίς of all those qualities of an object for which we possess an αἰσθητήριον.

§ 2. 424b 30. ἔχει δ' ὄντως] 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. αἰσθησίαν τοῦ δὲ ἄμφοι] 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 ἄμφοι). 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. 425a 13. ἀλλὰ μὴν οὐδὲ τῶν κοινῶν οὐν τ' ἑιναι αἰσθητήριον τί ἰδιον] 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 ἰδιον αἰσθητήριον: 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 (οὐχ ἤ αὐτά ἀλλ' ἤ μία), which makes it impossible to describe the intuition of the common sensibles as the work of the particular organ of sensation.

425a 14. ὅν ἐκάστῃ 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 425a 27, τῶν δὲ κοινῶν ἕδη ἔχομεν αἰσθήσεως κοινὴν ὥστε 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 inadmissible 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 κωνα 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), ἢ ὥσις μεγέθους οὐκ αἰσθάνεται προγνομένως ἀλλ' οὐδὲ σχῆματος οὐδὲ στάσεως οὐδὲ τῶν λοιπῶν, ἀλλ' αἰσθανομένη τοῦ χρώματος καὶ τοῦ μεγέθους αὐτοῦ συναισθάνεται καὶ τοῦ σχῆματος καὶ τοῦ κινεῖται αὐτό ἢ ἡμεῖς καὶ τοῦ εἶναι. This explanation is fully confirmed by III. 3. 12, 143b 22, τρίτον δὲ τῶν κοινῶν καὶ ἐπομένων τοὺς συμβεβηκόντος οἷς ὑπάρχει τὰ ἴδια· λέγοι δ' οἷον κίνησιν καὶ μέγεθος, τὰ συμβεβηκές τοῖς αἰσθητοῖς. If Aristotle can in the third chapter speak of movement and magnitude as 'incidents' or 'concomitants' of qualities of sense, 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. ταύτα γὰρ πάντα κινήσει αἰσθανομένα] Torstrick, following the paraphrase of Simplicius, reads κωνὴ in place of κινήσει. Philoponus, however, has preserved κινήσει 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.

425b 21—25. οὖτω γὰρ ἔσται ὄσσερ νῦν τῇ ὕφει] Torstrick supposes that we have got here a confusion between two recensions, of which the earlier commenced with εἱ δὲ μή, αἰσθαμάτως, and ended with ἀλλ' ἢ ὄσσερ ὄσσερ ἐρημαται, while the later included the sentence, οὖτω γὰρ ἔσται...ἀμα γνωρίζομεν, and then went on to τῶν δὲ κοιμῶν...οὐκ ἀρ' ἐστιν 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, Torstrick 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 (εἱ δὲ μή, 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 ρη σε. 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 κοινά, which we have described as perceived καθ' αὐτό. 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 μάθην, 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 κωνὰ 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 αἰσθητὰ may be described as κατὰ συμβεβληκός—1st, as concomitants of sensation (κωνὰ αἰσθητὰ), 2nd, as associated qualities, 3rd, as qualities referred to objects.

§ 7. 425a 29. ὁσπέρ εἴρηται τῶν Κλέωνος υἱῶν ἡμᾶς ὑρόν] The words which follow εἴρηται have been suspected at once by Trend., Torstrik, Neuhausser, and Kampe, and had better probably be regarded as the gloss of a copyist, who wishing to explain the manner referred to (ὁσπέρ 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.

425a 31. οὐχ ἡ αὐταί, ἀλλ' ἡ μία] Torstrik is evidently right in reading αὐταί simply instead of αἱ αὐταί, as Trendelenburg does. The words mean, of course, as Torstrik says: the senses perceive cognate qualities, not in themselves, i.e. not ὄψις ἡ ὄψις, γεύσις ἡ γεύσις, but so far as they coalesce in one system of perception.

§ 8. 425b 7. καὶ αὐτή λευκῶν] 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 ἔτι.
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, αἰσθήσεις 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 αὐτοῦ ἐστοικα). 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. Λύσεις, Spengel, p. 175), οὗ γὰρ ἐστὶ τὸ ὅραν ἀλλο τῇ ἑνεργείᾳ τῇ ὁφεὶ περὶ τὰ ὀρατὰ, ὥσθ’ τῇ τοῦ ὅραν αἰσθήσεις αἰσθήσεις ἐστὶ τῆς γνωμονείας περὶ τὰ ὀρατὰ ἑνεργείας ὑπὸ τῆς ὀρατικῆς αἰσθήσεως. οὐχ οὖν τε δὲ αἰσθάνομαι τῇ περὶ τἀ τινα ἑνεργεία μη καὶ τἀνδε αἰσθανόμεναι, περὶ ἀ τῇ ἑνεργείᾳ γίνεται. ἀλλ’ εἰ τούτων ἐστοικα τῶν αἰσθητῶν πλείους αἰσθήσεις, αὐταί αἰσθανόμεναι αὐτῶν προηγούμεναι καὶ αἱ τῶν ἑνεργείων τῶν περὶ τἀ αἰσθητά τῶν αἰσθήσεων αἰσθανόμεναι. τοῦτο δ’ ἄροτο πο τα ὑδα αἰσθητά ἐκαστὴ αἰσθήσει πλείους αἰσθήσεων αἰσθητά εἶναι λέγει.)—This is the first argument to shew that the sensation of sensation cannot be a sense different from that whose action it perceives: the second (ἐτι δ’ εἰ καὶ ἑτέρα ἐν ἐν τῆς ὁφειῶς αἰσθήσεως, line 15) argues that the assumption of a sense outside the sense whose action is perceived only repeats ad infinitum the original question (εἰς ἀπειρον εἰσων). 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’ ἐπι τῆς πρώτης τοῦτο ποιητέων, where Torstrik would read θετέον or δοτέον; perhaps αἰτητέον, 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. lxxxi. Cp. De Somnio, 2, 455b 15; ἐστὶ δὲ τις καὶ κοινή δύναμις άκολουθουσα πjąσαι, ἵ καὶ ὅτι ὅρα καὶ ακούει αἰσθάνεται: οὐ γὰρ δὴ τῇ γε δύο ὁφεί ὁρᾷ ὅτι ὅρα.

§ 2. 425b 17. ἐχει δ’ ἀπορίαι] 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 shows first, that the assumptions of the objection are not quite exactly stated—τὸ τῇ ὄψει αἰσθάνεσθαι is not, as the objection assumes, equivalent to ὅφει: “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 ἀποξία 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. 423b 25. ἢ δὲ τοῦ αἰσθήτου ἐνέργεια] 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 αἰσθήσεις and αἰσθητῶν 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 11. 12, 424a 25.

§ 5. 426a 4. ἢ γὰρ τοῦ ποιητικοῦ καὶ κινητικοῦ ἐνέργεια ἐν τῷ πάσχοντι ἐγγίνεται] Aristotle here avails himself of the laws of κινήσεως enunciated in the Physics, in order to explain the fundamental identity between the subject and object of perception. In the Physics, iii. 3, 202a 13, the writer shews that the action (ἐνέργεια) of the κινητὸν and that of the κινητῶν are fundamentally identical, just as is the case with the ἀνάτες, and the κάτατες—καὶ ὁ γὰρ ἐν μὲν ἔστιν, ὁ μέντοι λόγος οὐκ εἰσ. In the present reference, τὸ ποιητικὸν is of course equivalent to τὸ αἰσθητῶν, while τὸ πάσχον τὸ αἰσθητικῶν.—Torstrik regards the lines 426a 4—11, as compounded out of two versions thus—

Earlier Version: ἀστέρερ γὰρ ἡ ποίησις καὶ ἡ πάθησις ἐν τῷ πάσχοντι ἄλλα ὦκ ἐν τῷ ποιοῦτί, οὕτω καὶ ἡ τοῦ αἰσθητικοῦ ἐνέργεια καὶ ἡ τοῦ αἰσθητικοῦ ἐν τῷ αἰσθητικῷ.

Later Version: ἢ γὰρ τοῦ ποιητικοῦ καὶ κινητικοῦ ἐνέργεια ἐν τῷ πάσχοντι ἐγγίνεται. διὸ οὐκ ἀνάγκη τὸ κινοῦ κινεῖσθαι.

§ 8. 426b 20. διὰ τῶν μέτρων ἀνθρώπων] 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 ἀνθρώπως. For further expressions of Aristotle’s views upon this subject, cp. Categories, 7a 30, where Aristotle discussing the view that relative terms (τὰ πρὸς τι) are strictly coexistent, excepts ἐπιστήμη and ἐπιστημῶν, αἰσθήσεις and αἰσθητῶν. τὸ γὰρ αἰσθητῶν πρότερον τῆς αἰσθήσεως δοκεῖ εἶναι τὸ μὲν γὰρ αἰσθητῶν ἀναμεθαίρειν συν- αναρέω τὴν αἰσθήσειν, ἢ δὲ αἰσθήσεις το αἰσθητῶν οὐ συναρέω. Cp. also Metaphys. t. 5, 1010b 36.
§ 9. 426a 27. \(\epsilon i \delta' \eta \varsigma \mu \phi \nu \alpha i \varphi \omega i \tau i s \varepsilon \sigma t i n\) | So I have determined to read this clause, about which already both Plutarch and Simplicius have suggested that \(\epsilon i \delta \eta \varsigma \mu \phi \nu \alpha i \varphi \omega i \) should be read with E (pr.) SX; so that \(\varphi \omega i \) might be subject, and \(\varsigma \mu \phi \nu \alpha i \) the predicate, as the thought would seem at first sight to render necessary. Trendelenburg accordingly suggests \(\epsilon i \delta' \eta \varphi \omega i \varsigma \mu \phi \nu \alpha i \tau i s \varepsilon \sigma t i n\), \(\eta \delta \varepsilon \varphi \omega i \kappa t l\). 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 \(\lambda \dot{o} \rho o\), or proportionate ratio on its side, so hearing must involve a similar ratio on its part.

426b 5. \(\delta \omicron \omicron \nu \tau o \delta' \xi \varsigma \gamma \lambda \nu \kappa \acute{\iota} \acute{\iota} \alpha \mu \mu \rho \alpha \nu\) | That the \(\alpha \mu \mu \rho \alpha \nu\) is the result of a blending or definite combination is expounded at length in Meteorolog. B, 3, 358 and 359: so 358b 34, \(\varepsilon \sigma t i n\ e\n m \mu \iota \xi e i \tau i v t o s \tau o \alpha \mu \mu \rho \alpha \nu\). That the other flavours, both the piquant (\(\delta' \xi \varsigma\)) and the sweet (\(\gamma \lambda \nu \kappa \acute{\iota}\)), involve a similar proportion, seems to be asserted in De Sensu, c. 4, 44a 8, \(\sigma \mu \mu \mu \gamma \rhw o t h\) \(\delta'\) \(\omicron\) \(\alpha l l o i \chi u m o i \) \(\epsilon i s \tau \iota n\) \(\tau r o \phi h \iota n\) \(\tau o n\) \(\alpha u t o n\) \(\tau r o \phi o n\) \(\tau o \alpha \mu \mu \rho \alpha \nu \kappa \) \(\delta' \xi \varsigma\), \(\alpha n t i\) \(\acute{\iota} \dot{\iota} \sigma \mu \sigma\mu a s\). Cp. also De An. 11. 10, 422b 12.

426b 5. \(\delta \omicron \omicron \nu \tau o \mu \alpha \lambda \lambda o n \tau o \mu i k t o n \varsigma \mu \phi \nu \alpha i \varphi \omega i \heta \nu \xi \mu \kappa t o n\) \(\heta \tau o \delta' \xi \varsigma \delta' \varsigma \) \(\beta a r \acute{\iota} \), \(\dot{\alpha} \dot{\phi} \dot{h} \delta \tau o \theta \epsilon \rhom a t o \nu n\) \(\heta \nu \xi \mu \kappa t o n\) | The words can hardly be right as they stand. Torstrik regards \(\varsigma \phi \nu \alpha i \) as simply the gloss of a stupid copyist, who not seeing that \(\heta \dot{\alpha} \dot{\phi} \dot{h} \) \(\varepsilon \sigma t i n\) had to be supplied with \(\delta \omicron \omicron \nu \tau o \mu \alpha \lambda \lambda o n \tau o \mu i k t o n\), inserted \(\varsigma \phi \nu \alpha i \) in the margin: then after this was admitted into the text, another added, \(\heta \tau o \delta' \xi \varsigma \tau o \beta a r \acute{\iota}. \) "Sed etiam latius serpsit corruptela: sic enim pergit miser interpolator: \(\dot{\alpha} \dot{\phi} \dot{h} (v e l \dot{\alpha} \dot{\phi} \dot{h})\) \(\tau o \theta \epsilon \rhom a t o \nu n\) (alit. \(\theta \epsilon \rhom a t o \nu t o k o w\) \(\heta \nu \xi \mu \kappa t o n\) (vel \(\nu \xi \mu \kappa t o k o w\))—quae verba omni sensu carent. Volebat fortasse tale quid: \(\dot{\alpha} \dot{\phi} \dot{h} \tau o \mu i k t o n\) (vel potius temperatum) \(\heta \dot{\alpha} i o n\) \(\tau o \theta \epsilon \rhom o\) \(\kappa \) \(\tau o \nu \psi u h o s\).

§ 10. 426b 8. \(\epsilon k a s t h \mu e n \; \omega \nu \alpha \iota \sigma \theta \iota \mu i o s\) | 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. \(\delta \omicron \omicron \nu \tau o \dot{\eta} \eta \; \dot{\sigma} \dot{a} \dot{r} \dot{e} \; \dot{\omega} \dot{i} \kappa \eta \; \tau o t o \; \dot{\sigma} \dot{x} \dot{a} \alpha t o n\) \(\alpha i \sigma \theta \iota \theta \iota \mu i o s\) | "Ad corum sententiam redit impugnandam, qui quod sensus suscipiunt, a materia non segregant et in ipsis sensuum instrumentis collocant, de vi supra materiam evecta parum solliciti." Trend. Cp. De Part. An. 11. 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: \(\tau o t o n\) \(\delta' \alpha i t o n\) \(o n \; \omega \nu \dot{\epsilon} \sigma t i \) \(\tau o \pi r t o n\) \(\alpha i \sigma \theta \iota \theta \iota \mu i o n\) \(\dot{\sigma} \dot{a} \dot{r} \dot{e} \kappa \) \(\tau o \tau o u t o n\) \(m \acute{\iota} r o n\) \(\alpha l l' \; \epsilon t i t o s.\)

426b 18. \(\alpha l l' \delta e i \; \epsilon i n \; t i n \; \dot{\alpha} \dot{m} \iota \; \dot{\delta} \delta \lambda a \; e i n a i\) | Cp. De Sensu, c. 7, 449b 5, \(\epsilon i \delta \delta \alpha l l' \mu e n \; \gamma \lambda \nu \kappa i o s \; \alpha l l' \; \dot{\delta} \alpha \iota u k o u \; \alpha i \sigma \theta \iota \mu e n t a \; \dot{\psi} \nu h i \; \dot{m} \epsilon r e i\), \(\dot{o} t o i \; \epsilon k\)

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toûτών ἐν τί ἐστιν ἡ ψυχή ἐν. ἀλλ' ἀνάγκη ἐν ἐν γὰρ τι τὸ αἰσθητικόν ἐστι μέρος. τίνος οὖν ἐκείνο ἐνός; οὐδὲν γὰρ ἐκ τούτων ἐν. ἀνάγκη ἄρα ἐν τι ἐπιν τῆς ψυχῆς ὁ ἀπαντα αἰσθάνεται.

426b20—22. δεὶ δὲ τὸ ἐν λέγειν...νοεί καὶ αἰσθάνεται] These two sentences, of which the later was already characterized by Trendelenburg as ‘iners 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 δεὶ δὲ τὸ 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 δεὶ δὲ τὸ 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 ἔτερον γὰρ τὸ γλυκὸ τοῦ λευκοῦ, which look extremely like the gloss of a copister, and repeat (except for the addition of γάρ) verbatim the words in 426b18, two lines before. They can easily be omitted (as I have done in the translation): if retained, they had better be read after ἔτερα ἀλλήλων.

§ 13. 426b29. ἀλλὰ μὲν ἄδιαιρετον] 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.

427a2—5. ἃρ' οὖν ἂμα μὲν καὶ ἀριθμῷ......καὶ ἀριθμῷ ἄδιαιρετον] This passage is regarded by Torstrik as made up of two versions, thus—

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ἐστι δὲ οὖς, ὡς τὸ διαμερτῶν τῶν διαρρημένων αἰσθάνεται, ἐστι δ' ὡς ἄδιαιρετον. τὸ εἶναι μὲν γὰρ διαμερτῶν, τῷφ δὲ καὶ ἀριθμῷ ἄδιαιρετον. | ἃρ' οὖν ἂμα μὲν καὶ ἀριθμῷ ἄδιαιρετον καὶ ἄρθρον τὸ κρίνων, τῷ φ' εἶναι δὲ κεχωρισμένον.

§ 14. 427a6. δυνάμει μὲν γὰρ...τἀναντία, τῷ δ' εἰναι οὐ] Trendelenburg, true to his idea that τὸ εἶναι means notio et ratio, thinks that the addition τὸ 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 ἐνεργείσθαι διαμερτῶν are exegetical of τῷ δ' εἶναι οὐ. 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).

427a6. δυνάμει μὲν γὰρ τὸ αὐτὸ καὶ ἄδιαιρετον] Torstrik would read τὸ αὐτὸ διαμερτῶν καὶ ἄδιαιρετον, τῷ δ' εἶναι οὐ. But this is evidently unnecessary in the face of good MS. authority for τἀναντία. 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. 427b.9. ἀλλ' ὀστερ ἦν καλωσὶ στειμὴν] Brentano (p. 91) thinks that by στειμή is meant a νῦν, or point of time, and refers to De Coelo, III. 1, 300b14, τὸ γὰρ νῦν τὸ ἀτομον ὁνὸν στειμὴ γραμμῆς ἐστιν. But, as Neuhius (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 στειμή is represented afterwards by σημείων, πέρας, and ὁρῶν, it is never represented by νῦν itself? Nor do there seem to be any real grounds for Trend.'s emendation, ἀλλ' ὀστερ ἐν καλωσὶ τινες στειμήν. 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 στειμὴ 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, 220b10, καὶ γὰρ η ἡ στειμή καὶ συνέχει τὸ μῆκος καὶ ὅριζεν. ἔστι γὰρ τού μὲν ἄρχη τού δὲ τελευτή.

427b.11. ἡ μὲν οὖν ἄδαιρετον, ἐν τῷ κρίνον ἐστί] Torstrik detects here again a case of repetition, the words ἡ μὲν οὖν δυσὶ χρῆται τῷ πέρατι, κ.τ.λ. only asserting afresh what has been already stated in ἡ μὲν οὖν ἄδαιρετον. He regards then ἡ 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., ἡ μὲν οὖν δίς or ἢ μὲν οὖν ὡς δυσὶ: though the passage is intelligible as it stands. Cp. Phys. VII. 8, 262a 19, 263a 23, τῷ ἐνι σημείῳ ὡς δυσὶ χρῆται.

427b.13. καὶ κεχωρισμένα ἐστὶν ὡς κεχωρισμένον] The simplest emendation of this passage would be to read with Trendelenburg κεχωρισμένον in place of κεχωρισμένος: and taking κεχωρισμένον as agreeing with a subject τὸ κρίνον, translate: So far then as the discriminating faculty uses the termination 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 ἐστὶν ὡς κεχωρισμένον: 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.
CHAPTER III.

Imagination (phantasia) 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. ἐπεὶ δὲ δύο διαφοράς ἐριζώνται The words are without any direct apodosis, and Torstrik supposes that some words have fallen out before δοκεῖ δὲ καὶ τὸ νοεῖν, and left a lacuna which he proposes to fill up with a Greek version of Argyropoulos’ words, and insert σκέπτων εἰ τι διαφέρει τὸ νοεῖν τῶν αἰσθάνεσθαι. Bonitz, on the other hand (Aris. Studien), thinks that δοκεῖ δὲ καὶ simply continues the protasis introduced by ἐπεὶ δὲ, and that the real apodosis is to be found in the words 427b 6, ὅτι μὲν οὐν οὐ ταύτων ἐστι 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 δοκεί: this at least seems more reasonable than Susemihl’s γάρ which he would substitute for δέ.

427b.22. ὀστερ καὶ Ἐμπεδοκλῆς ἐφήκε πρὸς παρεών] 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. Τ. 5, 1009b.17, καὶ γάρ Ἐμπεδοκλῆς μεταβάλλοντας τὴν ἑξιν μεταβάλλει φησὶ τὴν φρόνησιν.

§ 2. 427b.1. οἰκείωτέρον γάρ τοῖς ζῷοις] 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. δοκεῖ δέ καὶ ἡ ἀπάθη καὶ ἡ ἐπιστήμη τῶν ἐναντίων ἡ αὐτῇ 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 ὅτι καὶ τῶν ἐναντίων μία ἐστὶν ἐπιστήμη καὶ μία ἄγονα, ὁ γὰρ τὸ ἀγαθόν ὡς ἀφέλιμον γενώμενον καὶ τὸ κακὸν ὅτι βλαβηρὸν συμπίσταται, καὶ ὁ περὶ δότερον ἐξαπατόμενον ἐξαπατάται καὶ περὶ δότερον. χρή οὖν ἡ τοῖς ἐναντίοις ἡμᾶς ἁμοιότατα ἢμα ὅτι τάναντι γενώμενον ἡ τοῖς ἐναντίοις ἁμοιούσα τοῖς τάναντι ἐξαπατάσθηκα ἠμμοῖ δέ ὁμοίως 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 ἀπάθη as a βίας τοῦ ἁμοιοῦν, and be translated, “indeed misapprehension is generally thought identical with a knowledge of contraries.”
§ 3. 427b7. τού μὲν γὰρ πᾶσι μέτεστι] This argument had been already advanced by Alcmæon. See Theophrastus, De Sensu, § 25, 'Αλκμαῖον μὲν πρῶτον ἀφορίζει τὴν πρὸς τὰ δεῖα διαφορὰν ἀνθρώπων γάρ φησι τῶν ἄλλων διάφερεν ὅτι μόνον ἑξιστέρη τὸ δ' ἄλλα αἰσθάνεται μὲν οὐ ἑξιστέρη δὲ.

427b9. τὸ μὲν ὀρθῶς φρόνησις καὶ ἐπιστήμη καὶ δόξα ἀληθῆς] It appears from this, as Trendelenburg remarks, that νοεῖν is regarded as the generic word under which φρόνησις, κ.τ.λ. are subdivisions. φρόνησις itself is used in a vaguer sense than in the Ethics, where it is regarded as ἐπιστατική, and is as Alex. Aprod. remarks (περὶ εἰμαρμένην, fol. 47) practically the ἐπιστήμη ποιητῶν τε καὶ οὐ ποιητῶν.

427b14. οὐδενὶ ὑπάρχει φιλή 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 σημαντικὴ, and in Polit. 1. 1, 1253b9, 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 ἔτερον καὶ ἀισθήσεως 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 Paccius 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 Freudental remarks, this explanation is too artificial to be accepted. Freudental 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, Freudental 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), ι δὲ δι’ ἑαυτά καὶ τῶν ἄλλων ἀλών μετέχει φαμέν διανοίας, οὐδὲν πρὸς τὸν λόγον καταχρόμεθα γὰρ ἐπ’ αὐτῶν τῷ τῆς διανοίας ὁνόματι. τὰ δὲ διανοίας μὲν ὀνομασίως κοινωνεῖ, φαντασίας δὲ ἱσού εἴνα ἕπερ ἀμείωτον μὲν δύσαμα τῆς ἀισθήσεως, πολὺ δὲ ὑποβεβευκα τῆς διανοίας, καὶ ἄσπερ ἀρμόθεν ἐν μεθοδίᾳ κείμεναι καὶ ἑπακολουθοῦσα μὲν τῇ ἀισθήσει, προλαμβάνοντα δὲ τῆς ὑπόλυψιν. Even so, however, it must be allowed, the connection is not altogether satisfactory.

427b16. οτι δ’ οὐκ ἔστιν ἡ αὐτή νόησις καὶ ὑπόλυψις, φανερῶν] 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 ὑπόλυψις were not identical; and different devices were made in order to reconcile this with the non-
identity of ὑπόλογις and φαντασία which Aristotle set himself to prove. So Simplicius regarded νόησις as equivalent to φαντασία. Freudenthal, however, has shewn that we must regard νόησις as a predicate to which a subject φαντασία has to be supplied, and translate: It is clear that it (φαντασία) is a different kind of thought from conception. This at least corresponds with 427b 28, where about τὸ νοεῖν we read τοίτου δὲ τὸ μὲν φαντασία δοκεῖ εἶναι τὸ δὲ ὑπόλογις.

§ 5. 427b 26. περὶ δὲ τῆς διαφορᾶς ἐτέρας ἐστω λόγος] This is generally taken to refer to the sixth book of the Ethics.

§ 6. 428a 2. καὶ μὴ εἶ 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 φαντασία λίθοι, and in Acts xxv. 23, we read that Agrippa entered μετὰ πολλῆς φαντασίας.

§ 7. 428a 11. σκόλημα δ' αὐτ] So Torstrik 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. 1, 722a 22, where the σκόλημα 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. 1, 98b 23.

§ 8. 428a 19. ἀλλὰ δόξῃ μὲν ἐπεταὶ πίστις, κ.τ.λ.] Torstrik 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 δόξῃ, the latter in the words ἀλλὰ δόξῃ, thus—

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<td>ἐτι πάση μὲν δόξη ἀκολουθεὶ πίστις, πίστει δὲ τὸ πεπείσθαι, πειθοὶ δὲ λόγος τῶν ἔτι πεπείσθαι, πειθοὶ δὲ λόγος οὐκ ἐνθετετοῦν ὑπὸν φαντασία μὲν ὑπάρχει, λόγος δ᾽ αὐ.</td>
<td>ἀλλὰ δόξῃ μὲν ἐπεται πίστις (οὐκ ἐνθετετοῦν λόγος δοκεῖ μὴ πίστειν), τῶν δὲ υπάρχει πίστις, φαντασία δὲ πολλαῖς.</td>
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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 φαντασία 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 φαντασία, none have πίστις: secondly, δόξα as followed by πίστις involves λόγος, but φαντασία 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. 428a 24. φανερῶν τοίνυν ὅτι οὐδὲ δόξα μετ’ αἰσθήσεως...οὐδὲ συμπλοκή δόξης καὶ αἰσθήσεως φαντασία ἡν εἰς] 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 B, where we are told that the mental state described by φανερᾶται, is a "mixture of sensation and judgment" (σύμμετρες αἰσθήσεως 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 φαντασία.

428a 28. λέγω δ', ἐκ τῆς τοῦ λευκοῦ δόξης καὶ αἰσθήσεως ἡ συμπλοκὴ φαντασία ἐστὶν] Trendelenburg here reads ei with V in place of ek, and suggests also ἔσται in place of ἐστὶν in 428b 1, so as to make it plain that Aristotle is here putting hypothetically the explanation of φαντασία as the combination of δόξα and αἰσθήσις, and refuting it by the conclusion to which the theory tends, τὸ οὖν φαίνεσθαι. 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 ἄλλοι πιστῶ ἐστὶν ἡ δόξα ἀλλ' ἐκεῖνον ἐστὶν οὐ καὶ αἰσθήσις, an interpretation of which the words, λέγω δ' ἐκ τῆς τοῦ λευκοῦ...φαντασία ἐστὶν are an illustration, and for which the only proof adduced, beyond the vague διὰ τὲ ταύτα of 428a 27, is given in the words, οὐ γὰρ δὴ...τῆς τοῦ λευκοῦ. Torstrik regards ἡ συμπλοκὴ as the addition of an interpolator.

§ 10. 428b 8. ἄλλα ψευδής ἐγένετο, ὅτε λάθοι μεταπέσων τὸ πράγμα] 'Vel potius οὐ γὰρ ψευδής 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 τούτο δὲ οὐδέν διαφέρει. Otherwise we might possibly translate ἄλλα, except (cf. 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. 428b 19. 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 ὃ συμβέβηκε καὶ ταύτα, which is certainly simpler, and agrees with the paraphrase of Themistius, δεύτερον δὲ τῶν ὑποκειμένων τοῖς ιδίοις καὶ οἷς ἐκεῖνα συμβέβηκεν. Still τοῦ συμβεβηκέναι ταύτα, the perception of the concomitance of the particular qualities of sense, makes perfectly good sense, notwithstanding Torstrik's remark—τὸ συμβεβηκέναι non est objectum sensus sed intellectus sicut ceterae notiones abstructae.

428b 24. ἀ συμβεβηκέ τοῖς αἰσθητοῖς] Torstrik regards the words as an interpretation and an unhappy one. But see the note on III. 1, 5, 425* 14.

§ 13. 428b 30. εἰ οὖν μήθην μὲν ἄλλο ἐχει τὰ εἰρημένα] Trendelenburg's
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reading, ἦ μὴ φαντασιὰν, 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, ἦ ἡ φαντασία with LSTUVXy. Which- ever reading we accept, the clause is not free from tautology. Torstrik conjectures, εἰ οὖν μιθὲν μὲν ἄλλο ἔχει τὰ εἰρήμενα, τότε δὲ ἔχει, ἢ φαντασία ἢν εἰς κίνησις.


CHAPTER IV.

Thought or Reason (Νοῦς) 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.

§ I. 429b 12. σκέπτεν τίν’ ἔχει διαφορὰν, καὶ πώς ποτὲ 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. 429b 15. ἀπάθεια ἃρα δέ εἶναι] There is here, of course, an apparent non sequitur, and Themistius would seem to have read ἐτέρων ἀπάθεια. 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 (429b 29) that the ἀπάθεια of the faculty of thought is not the same as that of the faculty of sense.

429b 18. ὡσπερ φησὶν Ἀναξαγόρας] Cp. Plato, Cratylus, 413 c, where Anaxagoras' νοῦς is called αὐτοκράτωρ καὶ οὐδὲν μεμηχανός.

429b 18—27. ἀνάγκη ἃρα...τὸ 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 ἃρα καλούμενος τῆς ψυχῆς νοῦς...τὸν δ’ οὐδέν ἐστιν,
the latter extending from ἄνεγκη ἁρα down to ὁτι διώταυν. 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 ὁ ἁρα καλοὺμενος τῆς ψυχῆς νοος 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 unreasona able proceeding for a metaphysical writer to claim the liberty of restating his conclusions.

429b 20. παρεμφαινόμενον γὰρ καλύει τὸ ἀλλότριον καὶ ἀντιφράττει] Trendelenburg interprets this as if τὸ ἀλλότριον were the object and νοος the subject (mens ab Anaxagora aliena, i.e. a sua natura abhorrentia arcere dicitur), and Themistius similarly writes, καλύει γὰρ καὶ ἀντιφράζεται το ἐνυπάρχων εἴδος τὸ ἄλλα ὄσπερ ἀλλότρια. 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 unreasonable 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 (ἄμορφον): 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” (κακὸς ἀν ἀφομοί τήν αὐτοῦ παρεμφαίνων δῆμῳ); but Aristotle’s expression was more likely suggested by some metaphor of Anaxagor of himself. For the use of the word ἀντιφράττει in reference to an eclipse, cp. Post. Anal. II. 2, 90b15, τι ἐστιν ἐκλειψίς; στέρματι φωτός ἀπὸ σέληνης ὕπο γῆς ἀντιφράξεως. See also De Coelo, II. 13, 293b 23.

429b 23. λεγὼ δὲ νοών ὃ διανοεῖται καὶ υπολαμβάνει ἡ ψυχή] διανοεῖται and υπολαμβάνει would seem to be opposed as process and result: διανοεῖται being the logical method through which we go in discovering truth, υπολαμβάνει the product of the mental operation. For a further account of υπόλογης, see Bonitz on Metaphysics, 981a 7; Waitz Organon, 1. 523; Biese, I. 211. The latter remarks that in Aristotle “ὑπολαμβάνειν, and especially υπόλογης, 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. 981a 7, 982b 6, and Anal. Prior. 67b 22, where υπολαμβάνειν is combined with δοζάζειν. So 1073b 17, ἡ περὶ τὰς ἱδεας ὑπόλογης would seem, as Waitz remarks, to imply a certain amount of contempt for the ideal theory.

§ 4. 429b 27. καὶ εἰ δὴ οἱ λέγοντες τῆς ψυχῆς εἰσὶν τίσιν εἴδων] The reference is to Plato and his followers. Against their theory Aristotle maintains that εἴδων are not ready made endowments—innte 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. 429b 9. καὶ αὐτὸς δὲ αὐτῶν τὸτε 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' οὐτὸς τόπος ὁς περιέχειν ἄλλ' ὡς γίνεσθαι ποιεῖ ἢ νοεῖ καὶ ὡς 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. 429b 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 τί ἢν 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: Met. Z. 15, 1039b 24, οὗ γίνεται τὸ οἴκια εἶναι ἄλλα τὸ τῆς τῆς οἰκίας—i.e. we cannot conceive the production (γένεσις) of a house in the abstract but simply in the case of a concrete individual house. Met. Z. 1029b 14, οὗ γὰρ τὸ σοι εἶναι τὸ μονοικό εἶναι οὗ γὰρ κατὰ σαντιν εἰ μονικόν. On the other hand, in essentially abstract conceptions, the addition of τὸ εἶναι makes no difference. So Met. Z. 11, 1037a 34, it is said, ὅτι τὸ τί ἢν εἶναι καὶ ἕκαστον ἐπὶ τινῶν μὲν ταύτων, ὅσπερ ἐπί τῶν πρῶτων οὐκείουν τὸν καμπύλητας καὶ καμπυλότητα εἶναι, εἰ πρῶτῃ ἢ ἔστι (λέγει δ' ἐπὶ πρῶτην ἢ μὴ λέγεται τῷ ἄλλῳ εἰναι καὶ ὑποκειμένῳ ὡς ὑλῇ) δοσά καὶ ὡς ὑλή ἢ ὡς συνειλημμένα τῇ ὑλῇ οὐ ταύτῳ,
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οῦ δ' ὁσα κατὰ συμβεβηκὸς ἐν, οἷον ὁ Σωκράτης καὶ τὸ μουσικὸν ταύτα γὰρ ταύτα κατὰ συμβεβηκὸς. Cp. also Meta. Z. 6, where there is said to be a difference between ἐκαστὸν and its τὸ τί ἐναι in the case of λεγόμενα κατὰ συμβεβηκὸς (incidentally one common notion) οἷον λευκὸν ἀνθρώπως ἔτερον καὶ τὸ λευκὸ ἀνθρώπος ἐναι: because, he adds, if they were the same, τὸ ἀνθρώπος ἐναι and τὸ λευκὸ ἀνθρώπος ἐναι would be one and the same. ἐπὶ δὲ τῶν καθ' αὐτὰ λεγομένων ἂν ἀνάγκη ταύτον ἐναι......ἀνάγκη ἄρα ἐν ἐναι τὸ ἀγαθὸν καὶ ἀγαθὸν ἐναι καὶ καλὸν καὶ καλὸν ἐναι ὅσα μὴ κατ' ἄλλο λέγεται ἀλλὰ καθ' αὐτὰ καὶ πρῶτα. Compare with this Phys. III. 5, τὸ γὰρ ἀπειρὸν ἐναι καὶ ἀπειρὸν τὸ αὐτὸ—a remark repeated in Meta. K. 10, 106δ13. See also Metaphys. H. 3, 1043b1, and De Coele, I. 9.

429b12. ἐπ' ἐνοῦ γὰρ ταύτον ἐστι] The right punctuation of this clause, which, though Themistius had seen its true meaning, was generally connected with τὸ σαρκι ἐναι 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 καμπυλότης καὶ καμπυλότητη ἐναι.

429b16. ἄλλον δὲ ἦτοι χωριστῇ, ἢ 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), συνεκφοινετὰ γὰρ (ὁ νοος) τοῖς πράγμασι ἁθεωρεί καὶ ποτὲ μὲν ἄσπερ συνάκες γίνεται ὅταν τὸ συνάκες νοὴ ποτὲ δὲ ὡς ἀπλὸς ὅταν τὸ εἴδος ἐκλαμβάνη μόνον. 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 ἀνθ' ἐνος ἄσπερ διπλῶς πτώκαντα ὅταν τὴν ἄλην συμπαρασκοπὴ 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 μέθεξις through which the concrete object (τὸ εἰδοποιημένον) participates in its ideal form: so that
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§ 8.  429b 18.  πάλιν δ' ἐπὶ τῶν ἐν ψυχεῖσιν ὅντων] For Aristotle's view of abstract (and particularly mathematical) ideas, see the Metaphys. K. 3, 1061a 28 : Phys. II. 2, 194a 10 : Post. Anal. 79b 7.  In the present passage the straight line is regarded as actually expressed, and is therefore compared with the σύμων which is Aristotle's typical illustration of the concrete.  See Meta. E. 1, 1025b 30, τὸ μὲν σύμων συνειλημένον ἐστὶ μετὰ τῆς ἱλής· ἐστὶ γὰρ τὸ μὲν σύμων κοιλή μία, ἢ δὲ κυλότης ἄνευ ἱλῆς αἰσθητής.

§ 8.  429b 19.  μετὰ συνεχοῦς γάρ] These words of course simply explain why it is that the εὐθεία can be identified with τὸ σύμων, viz. because it occupies space and is continuous.

§ 8.  429b 20.  ἐστὸ γὰρ διάσ] 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 σάρξ, 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 δόλως ἄρα ὡς χαριστά τὰ πράγματα τῆς ὀλης, 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. ἀπορήσεως ὃ ἐν τις, εἰ ὁ νοῦς ἀπλοὺν εἰστὶ...πῶς νοσεῖι] 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 πάχων 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. ἦ τὸ μὲν πάχων κατὰ κοινῶν τι] 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 διήρητα has been read: but the Aldine reading, διὸ εἰρήτα seems to give a simpler meaning. Torstrik would read: ἦ τὸ μὲν πάχων καὶ ποιεῖν κατὰ κοινῶν τι γίγνεται, ὁ δὲ νοῦς, ὅσπερ εἰρήτα πρότερον, ἰδιψίμει, κ.τ.λ.


430a 5. τοῦ δὲ μὴ ἄτιν τὸ αἰτίον ἐπισκεπτόμεθα] 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, 430a 22, where it is shewn that
νοῦς 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

§ I. 430a 13. ἀνάγκη καὶ ἐν τῇ ψυχῇ ὑπάρχειν] It is obvious from this
that Aristotle's conception does not, immediately at least, refer to anything
impersonal or transcendental.

430a 15. τῷ πάντα ποιεῖν...οἷον τὸ φῶς] Cp. Plato's comparison of the
action of the ἴδια τοῦ άγαθοῦ in the intellectual world to that of the sun in the
visible world—Republic, 509 B, τὸν ἢλιον τοῖς ὁρωμένοις οὐ μόνον, οἴμαι, τὴν τοῦ
ἀράσθαι δύναμιν παρέχειν φόσσεις, ἀλλὰ καὶ τὴν γένεσιν καὶ αὐξήσην καὶ τροφήν, οὐ
γένεσιν αὐτῶν ἄντα. πῶς γάρ; καὶ τοῖς γιγνωσκομένοις τοῖνυν μὴ μόνον τὸ γιγνώ-
σκεθαι φάναι ὑπὸ τοῦ ἀγαθοῦ παρεῖναι, ἀλλὰ καὶ τὸ εὑρίσκει τε καὶ τὴν οὐσίαν ὑπ'
ἐκεῖνον αὐτοῖς προσεύχειν, οὐκ οὐσίας ὡς τοῦ ἀγαθοῦ, ἀλλ' ἐτι ἐπέκεινα τῆς
οὐσίας προσβείει καὶ δυνάμει ὑπέρέχουσι.

430a 18. τῇ οὐσίᾳ ὑπ' ἐνέργεια] 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 ἐνέργεια only under the action of the νοῦς ποιητικός.

§ 2. 430a 19. τῷ δ' αὐτῷ ἐστὶν ἢ κατ' ἐνέργειαν ἐπιστήμη τῷ πράγματι...όλως
δὲ οὐδὲ χρώματι] These same words are repeated at the beginning of chapter 7,
431a 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 intro-
ductive to chapter 7. The passage in its present context would seem to
mean that in the individual (ἐν τῷ ἐνί) the power of thinking precedes a
conscious knowledge of the ultimate categories on which all thought depends.
Yet what is last in this order of knowledge, is first in the order of nature; and
so far as this is the case, the νοῦς ποιητικός, as the thought which makes
the world thinkable, is always previously present.
Philoponus notes, τινά τῶν βιβλίων ἔχουσιν ὁλος, τινά δὲ ἀπλῶς. There would seem, however, to be no variations in the reading: but at the same time, ὁλος must be taken as antithetic to ἐν τῷ ἑνί, and, therefore, practically equivalent to ἀπλῶς. Ὁ Philoponus: εἰπὼν ὅτι ὁλος δ' οὐ χρώμω ἀντὶ τοῦ ὁλο κόσμου καὶ ὁλος ἀντί τοῦ ὁλικῶς καὶ κοσμικῶς.

430λ. 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 430λ. 5, Aristotle has said we must investigate the reason, τοῦ μὴ ἀεὶ νοεῖν, secondly, that common sense requires it ("quis 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 metaphorical 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 430λ. 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 μνημονεύομεν—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. Ὁ Philoponus: οὐ γὰρ τῶν ἑνα τῷ ἀριθμῷ νοεῖν λέγομεν ἀεὶ νοεῖν ἀλλ' ὅτι ἐν ὁλῷ τῷ κόσμῳ ἀνθρώπινος νοεῖ ἀεὶ νοεῖ. And no doubt the passage contains by implication, a criticism of Plato's theory of ἀνάμνησις, 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.

430λ. 25. καὶ ἂνεν τούτου οὐδὲν νοεῖ] It is a question whether the nominative to νοεῖ is the νοῦς παθ., or the νοῦς πνευματικός. Taking it as νοῦς πνευματικός, and understanding ἂνεν τούτου, as equivalent to νοῦς παθητικός, 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 νοῦς παθ. as the subject: and to understand the meaning to be that the νοῦς παθ. cannot give this sense of eternity and immortality, because it is limited to the lifetime of the individual (φθαρτός), 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 τοῦτον as equivalent to ἀνευ τοῦ φθαρτοῦ, 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. 198). He raises the question in what sense the νοῦς is ἔξωθεν while yet συμφυῖς, and answers: ἀλλὰ τὸ ἔξωθεν ἄρα οὐχ ὡς ἐπίδετον ἀλλ' ὡς ἐν τῇ πρῶτῃ γενέσει συμπεριλαμβανόμενον θετέων. He regards the two forms of reason as united together in human reason (μυκτὸν γὰρ ποις ὁ νοῦς ἐκ τοῦ ποιητικοῦ καὶ τοῦ δυνάμει), and explains delusion and forgetfulness as arising from the union of the two. (Cp. Brandis, Geschichte d. Philosophie, III. i. p. 288.)

Eudemus, on the other hand, seems to regard the creative reason as something supernatural and godlike. H. 14, 1248b.25: τὸ δὲ ἔκτομέναν τούτον ἐστὶ, τὸ ἃ τῆς κινήσεως ἄρχῃ ἐν τῇ ψυχῇ. δῆλον δὴ, ὡσπερ ἐν τῷ ὅλῳ θεῷ, καὶ ἐν ἐκείνῳ. κινεῖ γὰρ ποις πάσα το ἐν ἡμῖν θείον.

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 νοητόν τε τῇ αὐτοῦ φύσει καὶ κατ' ἐνέργειαν νοεῖ, αἰτον γνώμενον τῷ ὕλῳ ψυ τοῦ κατὰ τὴν πρὸς τὸ τοιούτου εἴδος ἀναιεροὶ χωρίζειν τε καὶ μειῶσαι καὶ νοεῖν καὶ τῶν ἐνος εἰδῶν ἐκαστὸν καὶ ποιεῖν νοητὸν αὐτό, δύηθεν ἐκείνῃ λεγόμενον νοέ ὁ ποιητικός, οὐκ ὅν μέρον καὶ δυνάμεις τῆς ἡμετέρας ψυχῆς, ἀλλ' ἔξωθεν γνώμενος ἐν ἡμῖν, ὅταν αὐτὸ νοώμεν...χωριστός δὲ ἐστιν ἡμῶν τοιούτου ὁ ἔκτος.

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

W. AR.
creative reason as not combining notions but supplying notions to be combined is always true, the recipient 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 νοημα 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:

ἡ μὲν οὖν τῶν ἀδιαιρέτων νόησες ἐν τούτοις περὶ ἃ οὐκ ἔστι τὸ ψεῦδος.

Earlier Version.

τὸ γὰρ ψεῦδος ἐν συνθέσει ἀεὶ καὶ γὰρ ἄν τὸ λευκὸν μὴ λευκῶν τὸ μὴ λευκῶν συνεθήκεν. ἐνθέκετα δὲ καὶ διάφορον φάναι πάντα. ἀλλ’ οὖν ἔστι γε οὗ μόνον τὸ ψεῦδος ἢ ἀληθὲς, ὅτι λευκὸς Κλέων ἔστιν, ἀλλὰ καὶ ὅτι ἥν ἢ ἐσται.

Later Version.

ἐν οἷς δὲ καὶ τὸ ψεῦδος καὶ τὸ ἀληθὲς, σύνθεσις τις ἡδή νοημάτων ὥσπερ ἐν ὁστοις, καθάπερ Ἐμπεδοκλῆς ἔφη “ἡ τοῦ πολλῶν μὲν κύριαι ἀναίχειν ἐβλάστησαι” ἑπετα συντιθέσεται τῇ φύλα ὁστῶ καὶ ταῦτα κεχωρισμένα συντιθέται, οὖν τὸ ἀνόμμετρον καὶ ἡ διάμετρος. ἃν δὲ γενομένων ἢ ἐγερμένων, τὸν χρόνον προσ- ενωοῦ καὶ συντιθεῖσιν.

Vahlen, however (Aristot. Aeusätze, 1.), 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 ἀδιαιρέτων—οὐκ ἔστι τὸ ψεῦδος to τὸ γὰρ ψεῦδος ἐν συνθέσει 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 οὗ μόνον τὸ ψεῦδος η ἀληθές, ὅτι λευκὸς Κλέων ἔστιν, ἀλλὰ καὶ ὅτι ἥν ή ἐσται (in the earlier version) would come upon us with surprise without the suggestions of the 'later version, ἃν δὲ γενομένων κ.τ.λ. Fourthly, the first section (Torstrik's later version) gives an explanation only of the σύνθεσις νοημάτων, the second passage (Torstrik's earlier version) gives a proof of the proposition τὸ ψεῦδος ἐν συνθέσει ἀεὶ—"two things which nowise overlap but reciprocally involve and supplement one another."

430b 28. σύνθεσις τις ἡδή] For this use of ἡδή in Aristotle see Cope's Rhetoric, i, 1, 7, with the parallel passages there quoted: "ἡδή and its analogues, ἢτη, εὐκετή, εὐπω, 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. οἷον τὸ ἀσύμμετρον καὶ ἡ διάμετρος] Torstrik here adds η τὸ σύμμετρον καὶ η διάμετρος. But, as Vahlen shews, Aristotle's object here is not to shew, as in 430b 2, how σύνθεσις 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 προσεννοῦν καὶ συντιθέις] Torstrick has struck
out καὶ συντιθέις on the ground that it is an unnecessary addition to προσεν
νοῦν. “Nam Cleonem et album συντιθέμεν si dicimus Κλέων λευκός ἔστων:
sin Κλέων λευκός ἦν vel etsai, προσεννοῦμεν quidem tempus atque etiam προσ-
σημαίνομεν sed non componimus tempus cum Cleone.” But, as Vahlen has
noted, συντιθέις is to be taken absolutely as equivalent to making a σύνθεσις
just as προστιθέναι without any definite object means making a πρόσθεσις.

430b 2. τὸ γὰρ ψεῦδος ἐν συνθέσιν ἔι[ This, as Vahlen has pointed
out, refers not to the words immediately preceding but to the leading propo-
sition of the section: ἐν οἷς καὶ τὸ ψεῦδος καὶ τὸ ἀληθὲς σύνθεσις τινὶ ὃδε νομά
των; cp. De Intérprét. 1, 16² 12: περὶ γὰρ σύνθεσιν καὶ διαίρεσιν ἐστὶ τὸ ψεῦδος
καὶ τὸ ἀληθὲς.

430b 2. καὶ γὰρ ἂν τὸ λευκὸν μὴ λευκόν, τὸ μὴ λευκόν συνθέθηκεν] Such is the
reading commonly accepted, and I have seen no reason to alter it. Tren-
delenburg 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. Torstrick thinks that Aristotle
must have written καὶ γὰρ ἂν τὸ λευκὸν οὐ λευκὸν καὶ τὸ μὴ λευκόν λευκῶν
But the vulgate would seem to make perfectly good sense if we supply λέγη
or νόμη before τὸ μὴ λευκόν, and regard συνθέθηκεν 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] Torstrick finds considerable
difficulty in this πάντα and its meaning. “Quod enim? omnia sunt διαίρεσις;
ὁ ἀνθρώπος ἐστι διαίρεσις? τὸ λευκὸν διαίρεσις? ἡ σύνθεσις διαίρεσις et sic in
infinitum?” He would accordingly read τὰ τὰ 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 ἄνω διαίρεσιν ἐστι σύνθεσις. Cp. Themistius, p. 202,
diāirεσει γὰρ ἔοικεν ἡ ἀπόφασις, συνθέθεται δὲ ἡ κατάφασις' τὰχα δὲ καὶ πάντα
diāirεσες: ἣ γὰρ ἡ φαντασία συγκεκριμένως παρὰ τῆς αὐθήςεως ὑπεδέξατο, ὡς νοῦς
diāirει.

430b 4. ἄλλα οὖν ἔτσι γε οὐ μίνων τὸ ψεῦδος] Torstrick 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’ ἀδιαίρετον ἐπεὶ διχός κτ.λ.] The object of this section
would seem to be 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 Anschauung seiner Möglichkeit und in Anschauung seiner Wirksamkeit, so hindert nichts dass der Verstand zugleich das Untheilbare (die Formen) denkt, wenn er die Länge (iussere 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. ἀδιάφορα καλεῖται νοεῖν τὸ ἀδιαίρετον] Torstrick reads here τὸ διαίρετον ἢ ἀδιαίρετον. And this no doubt does somewhat simplify the passage: but the ordinary text is easy enough to interpret. Aristotle's point is that μήκος, which naturally implies parts and is thus διαίρετον, can still at the moment of thought (ὅταν νοήσῃ, as Trend. says, to be emphasized) be regarded as ἀδιαίρετον. There would thus seem to be no need to insert with Torstrick οἷον before ὅταν. Lastly, ἀδιαίρετον γὰρ ἐνεργείᾳ must be taken as parenthetical, and καὶ ἐν χρόνῳ ἀδιαϊρετῶ as coordinate with νοεῖν τὸ ἀδιαίρετον.

430b 9. ὁμοίως γὰρ ὁ χρόνος διαίρετος καὶ ἀδιαίρετος τῷ μήκει] Torstrick thinks that we have got here the editio posterior of that of which the editio prior is contained in 430b 17, ἔστεί γὰρ καὶ τούτοις τὸ ἀδιαίρετον...καὶ χρόνον καὶ μήκει, 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 κ.τ.λ. explain why thought does not only apply to an ἀδιαίρετον, but takes place
also ἐν χρόνῳ ἀδιαίρετο, whereas the words ἐνεστὶ γὰρ κἂν τούτως explain why this ‘undivided’ thought applies also to what is εἶδει ἀδιαίρετον. 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 συμβεβηκός δὲ, καὶ οὐχ ἦ ἔκεινα διαίρετα] 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. ἀδιαίρετον τῷ εἴδει] Themistius illustrates by ἀνθρώπος or Ἑως-κράτης. Such notions are thought ἀδιαίρετως. For, he explains, the one half of Socrates is not thought in one part, the other half in another part of time, οὐδὲ παρατείνεται τῇ διεξόδῳ τῆς λέξεως, δὲ ἐὰν προφερόμεθα τὸ ἀνθρώπος, ἡ σύνθεσις τοῦ νοηματος.

430b 17. ἐνεστὶ γὰρ κἂν τούτως τι ἀδιαίρετον] Themistius comments: οὗτος δὲ ὅτι εἶν’ πάσι τοῖς διαφορωμένοις ἐνεστὶ τι καὶ ἀδιαίρετον καὶ ἐν πάσι τοῖς συνθετοῖς αὐτοῖς.

430b 21. διὰ διούσιν ὁσπερ 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, εἶναι, but there is in that case a difficulty about the subject of the verb, Kirchmann, for instance, translating die Gegentheile 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 νοῦς to be ὁ ταυτόν κυκλος. But for the introduction of μὴ there is no M.S. authority whatever.

One alteration seems, however, desirable in the text of the chapter—to read μὴ κατὰ ποσοῦ διαίρεσιν instead of ἀδιαίρετον 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 (διαίρεσις), 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 ἄνωπερον.

Reading then in this way, τὸ μὴ κατὰ ποσῶν διαμετῶν, 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 τινι μὴ ἔστιν ἐναντίον τῶν αἰτίων] 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 νοῆσεως.

§ 7. 430b 26. ἐστι δ' ἢ μὲν φάσις τι κατὰ τινος, ὀστερ ἢ κατάφασις] Torstrik argues that φάσις here cannot be received, because (1) if it is = ἀπόφασις, Aristotle would have said, not ὀστερ, but οἷον ἢ κατάφασις; (2) if φάσις = κατάφασις, the word would not be repeated, and (3) if it is = simple ὄνομα or ῥῆμα, it would be incorrect to speak of a φάσις κατὰ τινος. He, therefore, writes ἐστι δ' ἢ μὲν κατάφασις τι κατὰ τινος, ὀστερ καὶ ἢ 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. ὃ τοῦ τι ἐστιν κατὰ τὸ τι ἢ ἐμὲ νὰ 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 ἰδια αἰσθητά, and that falsehood only comes in when we assert one to be another. SoThemistius, p. 206: καὶ ὁ νοῦς, ἐστιν μὲν ἴσης ἐντὸς τῆς ἐννοιας τοῦ τι ἢ ἐμὲ, ἀπὸ τοῦ ἀγαθοῦ τοῦ καλοῦ ὡς τὰ πολλὰ ἀναμάρτητος καὶ ἀληθῆς: ὅταν δὲ ἄγαθον τούτο λέγη καὶ τούτο καλὸν ἀληθινομεῖ πολλάκις. 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 pre-supposes 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 I. τὸ δ’ αὐτὸ ἐστὶν ἢ καὶ ἐνέγγειαν ἐπιστήμη τῷ πρᾶγματι 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 γνώσεις—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 νοητό 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, ἀπλως and ἀλως—apart from individuals—everything depends on 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.


431ª 17. ὡσπερ δὲ ὁ ἄρη τῆν κόρην τοιαύτῃ ἐποίησε] 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 ἐσχάτον 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 along side of this cognitive elaboration comes into something intelligible. Thus the words τὸ δὲ ἐσχάτον 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 along side of this cognitive elaboration comes into something intelligible. Thus the words τὸ δὲ ἐσχάτον 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 along side of this cognitive elaboration comes into something intelligible. Thus the words τὸ δὲ ἐσχάτον 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 along side of this cognitive elaboration comes into something intelligible. Thus the words τὸ δὲ ἐσχάτον 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 along side of this cognitive elaboration comes into something intelligible. Thus the words τὸ δὲ ἐσχάτον 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 along side of this cognitive elaboration comes into something intelligible. Thus the words τὸ δὲ ἐσχάτον 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 along side of this cognitive elaboration comes into something intelligible. Thus the words τὸ δὲ ἐσχάτον 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 along side of this cognitive elaboration comes into something intelligible.
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. 431b 20. τίνι δ' ἐπικρίνει τί διαφέρει γλυκό καὶ βέρμον] 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 μὲν οὖν εἴδη τοῦ ποιητικοῦ νοεί.

§ 4. 431b 21. έστι γάρ ἐν τι' οὔτω δὲ καὶ ὡς ὄρος καὶ ταύτα ἐν, κ.τ.λ.] 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: ἐστι γὰρ ἐν τι—i.e. the μεσότης αἰσθητικῆ previously mentioned: οὔτω δὲ (as in the mind) καὶ ἡ στιγμή καὶ ὁ λόγος ὃ ὄρος (numerically one while differing in operation) καὶ ταύτα (i.e. the γλυκό καὶ βερμόν) ἐν τῷ ἀνάλογων (each being the habitual extreme of its own ἐναντίωσις to which the privative extreme, i.e. bitter and cold, is contrary) καὶ τῷ ἀριθμῷ ὃν ἔχει πρὸς ἐκάτερον ἐναντίον. (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 τὰ μὴ ὄμογην κρίνει ή τάναται οἷν 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.) ἐστω δὴ ὡς τὸ Α τὸ λευκὸν πρὸς τὸ Β τὸ μέλαν, τὸ Γ (sweet, hot, &c.) πρὸς τὸ Δ (bitter, cold, &c.) ὡς ἐκείνα πρὸς ἀλλήλα (as white to black). ὥστε καὶ ἐναλλάξ (Α : Γ = Β : Δ, i.e. white : sweet, hot, &c. = black : bitter, cold, &c.) εἶ δὴ τὰ ΓΔ εἰν εἰ ἐπιμέχρια (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) οὔτως ἔγει (the sensitive mean τὸ ἐν will hold itself in the same fashion) ὡσπερ κἂν εἰ τὸ ΑΒ (supply in thought, τούτω τῷ ἐν ὑπήρχε, 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 δὲ εἴναι οὐ τὸ αὐτὸ (but different in aspect). καὶκεῖνα ὁμοίως. (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 ὁμογενή κρίνει ἡ τάναυσις, cp. 44β 18) ὁ δὲ αὐτὸς λόγος καὶ εἰ τὸ μὲν Δ τὸ γλυκὸν εἶν, τὸ δὲ B τὸ λευκὸν.) Thus far we have supposed that the μεσότης αἰσθητική 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, κενολογεῖν ἐστὶ καὶ μεταφοράς λέγειν μαθηματικάς.

Philoponus takes Γ and Δ to refer to the ideas of which A and B are the objective counterparts. τὸ δὲ τρίτον καὶ τέταρτον ἀντὶ νοητῶν λαμβάνει, ὥστε ἃ 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, αὐτῷ καὶ ὁ νοῦς αὐδὲ τὸ τρίτον καὶ τὸ τέταρτον, τουτέστι 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, λόγοι καὶ κατ’ ἄριθμοὺς, according to De Sensu 3, 439b 19, and the pleasant flavours are combinations of sweet and bitter, κατὰ λόγου καὶ κατ’ ἄριθμοὺς, 442a 12.) Now it makes no difference relatively to this distinction, whether objects which are not homogeneous (τὰ μὴ ὁμογενή), 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 \( \Gamma \) and \( \Delta \) 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: ἵνα δὲ πέρι τῶν προγράμτων αὐτῶν ἐνδέχεται, οὕτω καὶ ἐπὶ τῆς ψυχῆς. τὸ γὰρ αὐτὸ καὶ ἐν ἀριθμῷ λευκὸν καὶ γλυκό ἐστι, καὶ ἄλλα πολλά, εἰ μὴ χωρὶστά τὰ πάθη ἀλλήλων, ἄλλα τὸ εἶναι ἐτέρων ἑκάστω. ὁμοίως τούτων θετοῦν καὶ ἐπὶ τῆς ψυχῆς τὸ αὐτὸ καὶ ἐν ἐναὶ ἀριθμῷ τὸ ἀισθητικά πάντων, τὸ μέντοι εἶναι ἐτέρων καὶ ἐτέρων τῶν μὲν γίνετο τῶν δὲ εἶδε.

431b 24. τὰς τὰ μὴ ὀμογενεῖς [So in LSUX. μὴ is omitted in TVWY, and by Simplicius, Trend., and Bekker. If μὴ be left out, ὀμογενεῖ must be regarded as explanatory of ἑνάρτη, 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 εἴδη τὸ νοητικὸν νοεῖ] This would appear to go back to the statement in 431b 15—20, and to mean that while, as stated in 15, φαινάμαστα 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. αἰσθανόμενος τῶν φρυκτῶν ὅτι πῦρ τῇ κοῦνῃ γνωρίζει] Torstrik would omit ὅτι πῦρ: but I agree with his "unintelligent interpolator" in thinking that the clause is intended to bring out the opposition between the perception of the ἴδια αἰσθήσεις to which the φρυκτὸς is merely πῦρ (or more strictly a coloured surface), and τὴν κοῦνῃ αἰσθήσεις 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 κινήσει instead of κοῦνῃ. 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 _συμόν_ 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’ ὃς ἐν ὑλῇ_: and therefore mathematical thought of _κεχωρισμένα ὃς 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-sensuous 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 _ὑλή_ and _εἶδος_ 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. Βασιλεύει μὲν καὶ νῦν ὁ _σύμφωνος_ προείσει τε καὶ _αιτίς_ ἑρεί ὑπομνήσαι, ὅτι πᾶς νοῦς ὅταν ἐνεργῇ ὁ _αὐτός_ ἐστιν, τοῖς νοομένοις καὶ ἐστὶν ἀπερ τὰ νοομένα.

**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. _τέμνεται_ οὐ_ν ἡ _ἐπιστήμη_ καὶ _ἡ_ _αιτίας_ εἰς τὰ _πράγματα_]
Torstrik, unable to explain the ‘monstrosity’ of _εἰς_ τὰ _πράγματα_, reads _ὁσπερ_ τὰ _πράγματα_ on the suggestion of Themistius’ interpretation (_τὰ_ ὁντα _τοίνυν_ τὰ _μὲν_ _δυνάμει_ τὰ _δὲ_ _ἐνεργεία_ οὕτω _δὲ_ καὶ _ἡ_ _ψυχή_ τὰ _μὲν_ _δυνάμει_ ἐιδῆ _ἐστι_, τὰ _δὲ_ _ἐνεργεία_), and further alters _εἰς_ τὰ _δυνάμει_ _εἰς_ _δυνάμεις_ and _εἰς_ τὰ _ἐντελε_ _χεία_ _εἰς_ _ἐντελεχείας_. But this alteration seems unnecessary.

431b 27. _δυνάμει ταύτα_ _ἐστι_] So the greater number of MSS. If ταυτῶν be read, it would seem better, with Prof. Chandler, to continue—τὸ _μὲν_ _ἐπιστῆμον_, τὸ _δὲ_ _αἰτίας_.

432a 1. _ἡ_ _ψυχῆ_ _ὁσπερ_ _ἡ_ _χείρ_ _ἐστιν_] For the superiority of the hand over all other instruments, see _De Part. Anim._ iv. 10, 687a 20: _ἡ_ _δὲ_ _χεῖρ_ _ἔσοκεν_ εἰσα _οὖς_ ἐν _ὄργανον_ ἀλλὰ _πολλά_ _ἐστι_, γὰρ _ὁσπερ_ _ὄργανον_ πρὸ _ὄργανον_. The metaphor implies, as Trcnndelenburg 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 εἴδος εἴδων, is πρῶτον τῇ φύσει. Cp. Themistius, who says: μήποτε δὲ οὗ τῷ λαμβάνειν μόνον τὰ εἰδή πάντα λέγεται κυλώς εἶναι τὰ άντα ή ψυχή ἄλλα καὶ τῷ ἑπτήνα τὰ εἰδή τῇ θλή.

432a 12. τὰ δὲ πρῶτα νοηματα τίνι διώσει:] Trend. understands these νοηματα to be the highest conceptions, a quibus reliquae veritatem repentunt, and views the clause generally as a vindication of the non-sensuous character of the conceptions of the creative intellect. But, as Freudenthal (p. 13) says, Aristotle would not even systematically identify our highest ideas with φαντάσματα. At the same time the πρῶτα νοηματα are scarcely only unconnected ideas, like the ἄπλα of Mel. 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. ή οὐδὲ τάλλα φαντάσματα] Torstrik would here read ταύτα, and so get the meaning—not even these—not even our earliest and least generalized ideas are to be regarded as directly resulting from mere sensuous impressions. 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 πρῶτα νοηματα 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. τῷ τε κριτικῷ, ὁ διανοιάς ἐφριν ἐστὶ καὶ αἰσθήσεως] Cp. De Motu Anim. 9, 706b 17, ὁρῶμεν δὲ τὰ κινοῦτα τὸ χρόνον διάνοιαν καὶ φαντασίαν καὶ προαίρεσιν καὶ βουλήσιν καὶ ἐπιθυμίαν. ταύτα δὲ πάντα ἀνάγεται εἰς νοῦν καὶ ἰδέαν. καὶ γὰρ ἡ φαντασία καὶ ἡ αἰσθήσεις τὴν αὐτὴν τῷ νῷ χώραν ἔχουσιν κριτικὰ γὰρ πάντα.

§ 2. 432a 25. ἀ τινές λέγουσι διορίζοντες] The reference is, of course, to Plato.


432a 30. καὶ τῷ αἰσθητικῷ ὃ οὗτε ὃς ἄλογον οὗτε ὃς λόγον ἔχον θεία ἡν τῆς ῥεδίας] This criticism would seem to make it probable that the popular psychology of Eth. Níc. 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.


§ 2. 433a 15. Torstrik discovers here a duplication of the text which he arranges as follows:

ἀμφότερα ταύτα κινητικὰ κατὰ τόσον, νοῦς καὶ ὁρέξις, νοῦς δὲ ὁ ἔνεκά του λογιζομένου καὶ ὁ πρακτικὸς διαφέρει δὲ τοῦ θεαρτικοῦ τῷ τέλει. καὶ ἡ ὁρέξις ἔνεκά του πάσα. ὡστε εὐλόγως ταύτα δύο φαίνεται τὰ κινητα, ὁρέξις καὶ διάνοια πρακτικῆ.

Earlier Version: το ὀρεκτών γὰρ

Later Version: ὦ γὰρ ἡ ὁρέξις, κινεῖ, καὶ διὰ τούτου ἡ διάνοια κινεῖ ὡς

ἀρχὴ αὐτής ἐστὶ τῶ ὀρεκτών.

τὸ δ' ἐσχάτον ἀρχὴ τῆς πράξεως. καὶ ἡ φαντασία δὲ ἦσαν κινητά, οὐ κινεῖ ἄνευ ὁρέξεως. ἐν δὴ τί το κινοῦν, τὸ ὀρεκτικόν. 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, shews 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 ὁρέξις, 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 ὁρέξις αὐτή ἀρχή 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 ὀρεξεῖων, which is read by the majority of MSS., would seem to be more correct than ὀρεξῶν (read by Trend. and Torstrik), as shewing that both ὀρεξίς and διάνοια enter into action; and a word denoting the faculty seems more appropriate than one which denotes the object.

§ 3. 433a 22. κατὰ κοινῶν ἂν τι ἐκίνουν εἴδος] Themistius paraphrases: ἀλλὰ ἂν τις δύναμις ὑπήρχει ἀμφότεροι κοινῆ, ὣς ἀμφότερα κοινωνοῦντα ἐκεῖν τὸ ἱκὼν ὡς τῷ διστοί καὶ τῷ τεταρτόδι τὸ πόδας ἔχειν. And Aristotle’s argument would seem to be to the following effect: νοῦς and ὀρεξίς are not ἔτοι separate faculties in producing action, because, if so, they would have to involve 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 ὀρεξίς, or at least ἐπιθυμία, shews no community of action with λόγιμος—in fact, the two are frequently in conflict.

433b 25. ἥ γὰρ ἐπιθυμία ὀρεξίς τις ἐστίν] Cp. Topics, vi. 3, 140b 27, ἥ ἐπιθυμία ὀρεξίς τοῦ ἱκὸν, and De Motu Anim. 700b 22, ὑπάρχει δὲ καὶ θυμὸς καὶ ἐπιθυμία πάντα ὀρεξίς· ἥ δὲ προαίρεσις κοινῶν διανοίας καὶ ὀρεξίως· ὅστε καὶ πρῶτὸν τὸ ὀρεκτὸν καὶ τὰ διανοητῶν.

§ 4. 433a 28. τὸ ἄγαθον ἢ τὸ φαινόμενον ἄγαθον] Cp. 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 ἄγαθον which excites νοῦς, the φαινόμενον that influences ἐπιθυμία and θυμός: and adds, καὶ γὰρ τὸ ἥδυ τηρικά τοῦτο γίνεται ἄγαθον, ὅταν κυῖν τὴν ἐπιθυμίαν ἢ τὸν θυμὸν.


433b 8. ἢ δ’ ἐπιθυμία διὰ τὸ ἥδη] As Trendelenburg remarks, there is a distinct significance in using ἥδη instead of νῦν. ‘Cupido enim non temporis punctum quod adest, sed quod instat intuetur.’ ἥδη, 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. ἐπειδὴ δ’ ἐστὶ τρία ἐν μὲν τὸ κινοῦν] The same analysis of movement is to be found in Phys. viii. 5, 256b 14.


433b 16. κινεῖται γὰρ τὸ ὀρεγόμενον ἢ ὀρέγεται] κινοῦμεν is read by ELSUVV Bekk., but ὀρεγόμενον, the reading of TX, seems required and is accepted by Trendelenburg.

433b 20. διὸ ἐν τοῖς κοινῶσι σώματος καὶ ψυχῆς ἐργοὶ θεωρητέων περὶ αὐτῶν] This refers most probably to the treatise De Motu Animalium. Rose, however (De Arist. Libr. Ord. p. 163), thinks the allusion is to the Parva Naturalia.
§ 8. 433b 22. ὅπων ἄρχῃ καὶ τελευτῇ τὸ αὐτὸ, ὅπων ὁ γιγγυλός] By the γιγγυλός 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, 1, 698a 14, φανερῶν γὰρ καὶ ἐπὶ τούτων ὅτι ἀδύνατον κινεῖσθαι μηδενὸς ἥρμοιντος, πρῶτον μὲν ἐν αὐτοὶς τοῖς ζῴοις. δεὶ γὰρ ἂν κινῆται τι τῶν μαρίων, ἡμεῖς τι. καὶ διὰ τούτο αἱ καμπάι τοῖς ζῴοις εἰσὶν. ἀνέπερ γὰρ κέντρῳ χρωνται ταῖς καμπάῖς, καὶ γίνεται τὸ ὅλον μέρος, ἐν ὧ ἐς καμπή, καὶ ἐν καὶ δύο, καὶ εὐθὺ καὶ κεκαμμένον, μεταβάλλων δυνάμει καὶ ἐνεργεία, διά τὴν καμπήν.


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. 434a 4. ἡ όστερ καὶ κινεῖται ἀδόριστος] Philoponus explains: ἀδόριστον δὲ καλεῖ τῶν ἰοσφυτῶν τῆς κίνησιν, διὰ τὸ μὴ ὁμοίως συστέλλεσθαι τε καὶ διαστέλλεσθαι.

§ 2. 434a 9. ὥστε δύνασθαι ἐν ἐκ πλειόνων 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.

434a 10. καὶ αὕτων τούτω τοῦ δόξαν μὴ δοκεῖν ἔχειν, ὅτι τὴν ἐκ συλλογισμοῦ οὐκ ἤχει, αὕτη δὲ ἐκείνη] Torstrik thinks the words 'omni cum reliquis nexu carent.' This, however, is not really the case. Aristotle is shewing that the formation of an ἔρξει as opposed to an ἐπίθυμια 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.

434b 12. μικά δ’ είνος καί κυνεί τήν βούλησιν] This passage, which is very obscure, is amended by Torstrik as follows—μικά δ’ είνος καί κυνεί τήν βούλησιν, οταν ἀκρασία γένηται. οτε δ’ ἐκείνη ταύτην οτε δ’ ὀσπερ σφαιραν σφαῖρα, ή ὀρεξίς τήν ὀρεξίν. The passage can, however, I think, be translated as it stands, and the τρεῖς φοραὶ made out without any alteration of the text. The nominative to μικά must be αἰσθητική φαντασία: ἐκείνη ταύτην must be used quite generally and explained by ὀρεξίς ὀρεξίν, while the third φορά must be that of φύσει δ’ αἰε ἡ ἀνω. 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 inconsistence describe the state of unsatisfied desire under the general name ἀκρασία.

434b 13. ότε δ’ ἐκείνη ταύτην ὀσπερ σφαιρα] 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: μικά δ’ ἐν ἀνθρώποις ποτὲ μὲν ἡ ἄλογος τήν λογικήν, ποτὲ δὲ τοῦμ-παλιν, κυνεί δὲ δὲ ἡ κρατοῦσα τήν κρατουμένη, οὐ παύοντα τής ὀρμής ἀλλὰ συμπεράν-γουσα ἐαυτή ὀσπερ ἐπὶ τῆς σφαιρας τῆς οὐρανίας ἢ τῶν ἀπλανῶν τῆν τῶν πλανῶν οὐχ ἱστησαν ἀλλὰ κωσμημένη ἴδιαν κίνησιν ὁμοίαν ἐαυτῆ συμπεράνοιει. Trendel-burg understands the passage in the same manner. According, then, to this explanation, Aristotle means that βούλησις or βούλευσις overcomes and regulates ὀρεξίς 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 obscure. Even Aristotle’s brevity could hardly have expected so much to be made out of a single word: and if the phrase is to be bear Trendelenburg’s meaning, we must at least read with Torstrik ὀσπερ σφαιραν σφαῖρα.

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 plaything 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 ἡ ἀνω ἀρχικοστείρα which follows.

3. The explanation of σφαῖρα as=heavenly orbit is not consistent with Aristotle’s use of the same expression in another chapter of the Psychology. In 11. 8, 419b 27, Aristotle writes, ἢ χαλ γίνεται οταν πάλιν ὁ ἄθρο ἀποστὶ ὀσπερ σφαῖρα. 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 *Euthydemus, 277 b*, speaks of ἀσπερ σφαίραν ἐκδεχόμενο 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. 434a 32. εἰ οὖν πᾶν σώμα πορευτικὸν µὴ ἔχειν αὐτθησιν] Trendelenburg suggests that we should here read ἔχειν, 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 πορευτικὸν can be without sense, but that any animals without sense are πορευτικά. He thinks accordingly that for πᾶν, εἰς or γένοστο should be substituted.

§ 4. 434b 4. ἀλλὰ µὲν οὖδὲ ἄγεννητον' διὰ τί γὰρ οὐχ ἔχει;] 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 γέννητον, possessed of a beginning in time: but it is instantly suggested that the remark may be extended to the ἄγεννητον—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 οὖδὲ as accommodated more to the sense than to the laws of grammar, and so equivalent to ἀλλὰ µὲν οὖδὲ ἄγεννητον αὐτθησιν ἔχει. He translates the sentence accordingly: Nullum corpus, quod movetur, si anima gaudet et W. AR.
mente, senso 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, φαίνεται δὲ ο’ Αριστοτέλης μηδαμοῦ τὴν αἴσθησιν ἐπὶ τῶν οὐρανίων προσείμενος, goes on to accept the explanation of Alexander that with ἀγέννητον we should supply αἰσθήσιαν: κάλλιον οἶμαι, ὁ’ Ἀλέξανδρος ἑξηγεῖται, τό, ἀλλὰ μὴν οὐδὲ ἀγέννητον, ἄξιον ἀκούειν πρὸς τὸ αίσθησιν ἔχειν—ἀλλὰ μὴν οὐδὲ ἀγέννητον ἀναγκαῖον αἰσθήσιαν ἔχειν.

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 ἀντιγράφοις πρόσκειται τὸ ἀλλὰ μὴν οὐδὲ ἀγέννητον—points to MSS. in his day in which they were absent. It would seem, therefore, that Torstrik is not improbably 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 τὶ γὰρ οὐχ ἔξει as in TUVWγ. 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 parenthesis, the words διὰ τὶ still ask, why should the γέννητον not possess αἰσθήσια in the way the previous sentence has maintained. Torstrik in supplying νοὺς κριτικῶν to διὰ τὶ γὰρ ἔξει would seem to miss the drift of Aristotle’s reasoning.

§ 9. 434b 31. καὶ τὸ ὀσών ἔτερον ποιεῖ ὁστε ὁδεῖν] Torstrik here conjectures τὸ ὁδιέν, and adds—ridicule profecto τὸ ὀσων: nam postquam pepulit, non jam pellit. The alteration somewhat simplifies the passage, but the vulgate can be defended if we regard ἔτερον as the accusative of ὀσων, and then repeat ἔτερον after ποιεῖ.

435a 1. πλὴν ὅτι μενοῦτα ἐν τῷ αὐτῷ τῷ οῖκῳ ἀλλοιοί] Bekker and Torstrik here read μενοῦτα. If μενοῦτα be accepted, we must supply τοῦ μέσου: μενοῦτα should be taken as accusative (with μέσα supplied) after ἀλλοιοί (scil. της).

435a 5. διὸ καὶ περὶ ἀνακλάσεως βελτίων ἢ τὴν ὀψιν ἐξιῶσαν ἀνακλάσθαι] The opinion in question is that of Empedocles and Plato. They, as we learn further from De Sensibus, 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 ἀνάκλασις—the fire of the eye was after contact with the fire of things thrown back again upon the organ of perception. 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
NOTES. III. 13. 291

second instance to the eye, which is fitted to receive it (αἰσθητικῶν εἰ ἡ τῷ ἐκέινῳ μὲν ὑπὸ τοῦ αἰσθητοῦ πάσχειν καὶ κινεῖσθαι αὐτῷ δ᾿ ὑπ᾿ ἐκείνου). 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 ἐπὶ πλείστων κινεῖται. 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 (ὡσπερ ἂν ἐὰν τῷ ἐν τῷ κηρῷ σημεῖον διεδίδοτο μέχρι τοῦ πέρατος).

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 (§ 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.

§ 1. 435a 11. διὰ δ᾿ οὐχ οἶνον τε ἀπλοῦν εἶναι τὸ τοῦ ζῆσθαι σώμα, κ.τ.λ.] 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.

19—2
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.

412b 3—12.

Τὰ μὲν δὴ ύπό τῶν πρότερον παραδεδομένα περὶ ψυχῆς εἰρήσθω: πάλιν δ΄ ὠσπέρ ἐξ ὑπαρχῆς ἐπανώμεν, πει-5 τομένοι διωρίσαι τί ἔστι ψυχή καὶ τίς ἂν εἴη κοινότατος λόγος αὐτῆς. λέγομεν δὴ γένος ἐν τι τῶν ὀντῶν τὴν οὐσίαν, ταύτῃς δὲ τὸ μὲν ὡς ὑλήν, δ καθ’ αὐτὸ μὲν οὐκ ἔστι τόδε τι, ἐπερον δὲ μορφήν καὶ εἴδος, καθ’ ἡν ἡδὴ λέγεται τόδε τι, καὶ τρίτον τὸ ἐκ τούτων. ἔστι δ’ ἡ μὲν ὑλὴ δύναμις, τὸ 10 δ’ εἴδος ἐντελέχεια, καὶ τούτο διχώς, τὸ μὲν ὡς ἐπιστήμη, τὸ δ’ ὡς τὸ θεωρεῖν. οὐσίαι δὲ μάλιστ’ εἶναι δοκοῦσι τὰ σώματα, καὶ τούτων τὰ φυσικά: ταῦτα γὰρ τῶν ἄλλων ἀρχαι.

II.

414b 13—416a 8.

ὁ δὲ χυμὸς οἶνον ἰδουμαὶ τι τούτων ἐστίν. διαςαφητέων δὲ περὶ αὐτῶν ὅστερον, νῦν δ’ ἐπὶ τοσοῦτον 15 εἰρήσθω, ὅτι τῶν ξών τοῖς ἐχούσιν ἀφίη καὶ ὀρέξεις ὑπάρ-χει. περὶ δὲ φαντασίας ἄδηλον, ὅστερον δ’ ἐπισκεπτέον. ἐνι-οις δὲ πρὸς τούτων ὑπάρχει καὶ τὸ κατὰ τόπουν κινητικόν, ἐτέρους δὲ καὶ τὸ διανοητικόν τε καὶ νοῦς, οἶνον ἀνθρώπους καὶ εἰ τι τοιοῦτον ἐπερον ἕστιν ἡ καὶ τιμιότερον. δὴ τοιοῦτον όντι τὸν 20 αὐτῶν τρόπον εἰς ἂν εἴη λόγος ψυχῆς τε καὶ σχήματος. οὔτε γὰρ ἐκεῖ σχήμα παρὰ τὸ τρόγων ἐστὶ καὶ τὰ ἐφεξῆς, οὔτ’ ἐνταῦθα ψυχῆ παρὰ τὰς εἰρημένας. ἡνένοιτο δ’ ἂν καὶ
THE ADDITIONAL VERSION.

I.

B, I. § 1—3.

Επει δὲ τὰ παραδεδομένα περὶ ψυχῆς παρὰ τῶν ἄλλων, ἐφ’ ὅσον ἔκαστος ἀπεφήρατο τῶν πρῶτον, εἴρηται σχεδὸν, νῦν ὁσπερ εἴ ἄρχης πάλιν ἐπανίσκει πειρώμενο διορίσαι τί ἐστιν ἡ ψυχὴ καὶ τίς ἂν εἴη λόγος αὐτῆς κοινότατος (sic) χωρίζομεν δὴ τάς μὲν οὕσιας ἀπὸ τῶν ὄντων τῶν ἄλλων· 5 τῆς δὲ οὕσια τὸ μὲν ὡς ὕλη λέγεσθαι τίθεμεν, ὦ καθ’ αὐτὸ [The MS. is defective; Torstrik conjectures: μὲν οὐκ ἔστι τόδε τι, τό] δὲ ἡ μορφὴ, τὸ δ’ ἐκ τούτων. ἐστὶ δ’ ἡ μὲν ὕλη δυνάμει, τὸ δ’ εἴδως εὐτελέχεια, αὕτη δ’ ὑπάρχει δύος, ἡ γὰρ ὡς ἡ ἐπιστήμη, ἡ ὡς τὸ θεωρεῖν. οὕσια δὲ μάλιστα δοκοῦσιν 10 εἶναι τὰ σώματα καὶ τούτων τὰ φυσικὰ’ ἄρχαὶ γὰρ . . . 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.

δὲ χυμὸς ὁσπερ ἡδύσμα τούτως ἐστίν’

διώπερ ὅσα ἔχει τῶν ξύλων ἄφην, πᾶσιν ὑπάρχει καὶ δρεῖς. περὶ δὲ φαντασίας ἄδηλον καὶ ὕστερον ἐπισκεπτεῖν. ἐνίοτε δὲ ταῦτα τὲ ὑπάρχει καὶ τὸ κατὰ τόπον κινητῶν, τοῖς δ’ ἐπι (sic) πρὸς τούτων διάνοια καὶ νοῦς, ὅλον ἀνθρώπῳ καὶ 5 εἴ τι ἄλλο ξύλου ἐτερόν ἐστὶ τοιοῦτον ἢ καὶ τιμιώτερον. δὴλον οὖν ὡς ὁμοίως σχῆματος καὶ ψυχῆς εἰς ἢν εἴη λόγος.

οὔτε γὰρ ἐκεῖ σχῆμα παρὰ τρίγωνῶν ἐστὶ καὶ τὰ ἐπεξῆς, οὔτε ἐνταῦθα ψυχῆς παρὰ τὰς εἰρημένας. γένοιτο δ’ ἂν καὶ
The Ordinary Text.

ἐπὶ τῶν σχημάτων λόγος κοινός, ὅς ἐφαρμόσει μὲν τᾶς ἰδιὸς δὲ οὐδενὸς ἔσται σχήματος. ὁμοίως δὲ καὶ ἐπὶ ταῖς εἰρημέναις ψυχαῖς. διὸ γελοίου ζητεῖν τῷ κοινῷ λόγῳ καὶ ἐπὶ τούτων καὶ ἔφῃ ἐτέρων, ὅς οὐδενὸς ἔσται τῶν ὄντων ἰδιὸς λόγος, οὐδὲ κατὰ τὸ οἰκεῖον καὶ ἀτομον εἰδος, ἀφέντας τὸν τοιούτων. παραπλησίως δ’ ἐξεῖ περὶ τῶν σχημάτων καὶ τὰ κατὰ ψυχὴν’ ἀεὶ γὰρ ἐν τῷ ἐφεξῆς υπάρχει δυνάμει τὸ πρότερον ἐπὶ τε τῶν σχημάτων καὶ ἐπὶ τῶν ἐμφύσων, οἰον ἐν τετραγώνῳ μὲν τρύγωνον, ἐν αἰσθητικῷ δὲ τὸ θερητικόν. ἀστε ταῦτα ἔκαστον ζητήτευς, τίς ἐκάστος ψυχή, οἰον τίς φυτοῦ καὶ τίς άνθρώπων ή θηρίου. διὰ τίνα δ’ αἰτίαν τῷ ἐφε- ξείς οὕτως ἔχουσι, σκεπτέον. ἀνεύ μὲν γὰρ τοῦ θερητικοῦ τὸ αἰσθητικὸν οὐκ ἔστιν’ τοῦ δ’ αἰσθητικοῦ χωρίζεται τὸ θερητικὸν ἐν τοῖς φυτῖς. πάλιν δ’ ἀνεύ μὲν τοῦ ἀτυκτοῦ τῶν ἄλλων αἰσθήσεως οὐδεμία ἰπάρχει, ἀφ’ δ’ ἀνεύ τῶν ἄλλων υπάρ- χει πολλὰ γὰρ τῶν ζωῶν οὕτ’ ὅψιν οὕτ’ ἀκοὴν ἔχουσιν οὐτ’ ὀσμὴν αἰσθησιν. καὶ τῶν αἰσθητικῶν δὲ τὰ μὲν ἔχει τὸ κατὰ τόπον κινητικόν, τὰ δ’ οὐκ ἔχει. τελευταίον δ’ καὶ ἐλάχιστα λογισμὸν καὶ διάνοιαν’ οἷς μὲν γὰρ υπάρχει λογισμὸς τῶν φθαρτῶν, τούτως καὶ τὰ λοιπὰ πάντα, 10 οἷς δ’ ἐκείνων ἔκαστον, οὐ πάσι λογισμὸς, ἄλλα τοῖς μὲν οὐδὲ φαντασία, τὰ δὲ ταύτῃ μόνῃ ζώσιν. περὶ δὲ τοῦ θερητικοῦ νοῦ ἔτερος λόγος. ὅτι μὲν οὖν ὁ περὶ τούτων ἔκαστου λόγου οὕτος οἰκεῖοτάτος καὶ περὶ ψυχῆς, δῆλον.

IV. Ἀναγκαῖον δὲ τὸν μέλλοντα περὶ τούτων σκέψιν ποιεῖ—

σθαὶ λαβένων ἔκαστον αὐτῶν τῷ ἔστιν, εἰθ’ οὕτως περὶ τῶν ἐνα- 

μένων ή καὶ περὶ τῶν ἄλλων ἐπίτηδεν. εἰ δὲ χρή λέγειν τῷ ἔκα- 

στον αὐτῶν, οἰον τι τὸ νοητικὸν ή τὸ αἰσθητικὸν ή τὸ θερη- 

τικὸν, πρότερον ἔτει λεκτέον τί το νοεῖν καὶ τί τὸ αἰσθάνεσθαι: 

πρότεραι γὰρ εἰς τῶν δυνάμεων αἱ ἐνέργειαι καὶ αἱ πρᾶξεις κατὰ 

τὸν λόγον. εἰ δὲ, τοῦτων δ’ ἐτί πρότερα τα ἀντικείμενα 

δεῖ τεθεωρηκέναι, περὶ ἐκείνων πρῶτον ἄν δεῖο διορίσσαι διὰ τὴν 

αὐτὴν αἰτίαν, οἰον περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ. ἠστε 

πρῶτον περὶ τροφῆς καὶ γεννήσεως λεκτέον’ ἡ γὰρ θερητικὴ 

ψυχῆ καὶ τοῖς ἄλλοις ὑπάρχει, καὶ πρώτη καὶ κοινοτάτη
The Additional Version.

ἐπὶ τῶν σχημάτων λόγος, ὃς ἐφαρμόσει μὲν πᾶσιν, 10 οὐκ ἔσται μέντοι τοιοῦτος (sic) οὐθένιος σχήματος. ὁμοίως δὲ καὶ ἐπὶ ταῖς εἰρημέναις ψυχαῖς. διὸ γελοῖον ζητεῖν τὸν κοινὸν λόγον καὶ ἐπὶ ἄλλων καὶ ἐπὶ τούτων, ὃς οὐκ ἔσται οὐθένιος τῶν ὄντων ἔδως, οὐδὲ κατὰ τὸ οἰκεῖον καὶ ἀτομον εἴδος, τὸν τοιοῦτον ἀφέντας. παραπλησίως δὲ ὁσπερ καὶ ἐπὶ τῶν σχημάτων, ἔχει καὶ τὰ 15 περὶ τὴν ψυχήν· ἀεὶ γὰρ ἐν τῷ ἐφέξης ὑπάρχει δυνάμει τὸ πρότερον ἐπὶ τε τῶν σχημάτων καὶ ἐπὶ τῶν ἐμψύχων, λόγω δὲ ὁσπερ ἐντεταγμένως μετρώνον. ἐν αἰσθητικῷ δὲ τὸ θερτικὸν (sic). ὡστε καὶ καθ’ ἐκαστὸν δεῖ ζητεῖν τίς η ἐκάστου ψυχή, οίον τὰς φύσεις καὶ τὰς ἀνθρώπους καὶ τῆς (sic) θηρίου. διὰ τίνα δ’ αἰτίαν τῷ 20 ἐφέξης οὕτως ἔχουσιν, σκεπτέον. ἀνευ μὲν γὰρ τοῦ θερτικοῦ οὐθέν ἐστιν αἰσθητικὸν· τοῦ δ’ αἰσθητικοῦ χωρίζεται τὸ θερτικόν, οίον ἐν τοῖς φυσικοῖς. πάλιν δ’ ἀνευ τοῦ ἀπτικοῦ οὐδεμία τῶν ἄλλων αἰσθήσεων, ἀφ’ δ’ ἀνευ τῶν ἄλλων ὑπάρχει· πολλὰ ἐγάματά τοῦ ζητῶν, ἂ οὐτ’ ὄψιν ἔχει οὐθ’ ἀκοὴν. 25 καὶ τῶν αἰσθητικῶν δὲ κίνησις τοῖς μὲν ὑπάρχει τοῖς δ’ οὐ(sic) ὑπάρχει· τελευταῖον δεδιάκα (sic) λογισμὸς· οίς μὲν γὰρ ὑπ- ἀρχεῖ λογισμός, καὶ τῶν ἄλλων ἐκαστον τῶν εἰρημένων, οί; δ’ ἐκείνων ἐκαστον, οὐ πᾶσων ὑπάρχει λογισμὸς. ἀλλὰ τὰ 30 μὲν οὐδὲ φαντασίαν ἔχει μόνον. ὡτέ μὲν οὖν ὁ περὶ τούτων ἐκάστου λόγος οἰκείοτατος περὶ ψυχῆς ἐστι, δήλουν.

IV. Ἀνάγκη δὲ τὸν περὶ τούτων μέλλοντα πραγματεύεσθαι λαβεῖν τί ἐκαστον αὐτῶν ἐστιν, εἰδ’ οὕτω περὶ τῶν ἐχο- 35 μένον καὶ τῶν ἄλλων ποιεῖσθαι τὴν ἐπίσκεψιν. εἰ δὲ δει λέγειν τί ἐκαστον, οἴον τὸ το νοητικόν ἢ τί τὸ αἰσθητικόν ἢ θερτικόν, πρότερον λεκτέον τί τὸ νοεῖν καὶ τί τὸ αἰσθάνεσθαι· αἱ γὰρ πράξεις καὶ αἱ ἐνέργειαι πρότεραι κατὰ τὸν λόγον εἰσὶ τῶν δυνάμεων. ἀλλὰ μην εἰ γε πάτα, πρότερον ἐτὶ τούτων διοριστέον τὰ ἀντικεῖμενα, οἶον περὶ τροφῆς καὶ αἰσθητοῦ καὶ νοητοῦ διὰ τὴν αὐτήν αἰτίαν. ὡστε πρῶτον περὶ τροφῆς καὶ γεννήσεως λεκτέον· αὐτὴ γὰρ ἡ ψυχή καὶ τοῖς ἄλλοις ὑπάρχει, πρώτη δὲ καὶ κοινοτάτη
The Ordinary Text.

25 δύναμις ἐστὶ ψυχῆς, καθ’ ἐνυπάρχει τὸ ζῆν ἀπασιν. ἂς ἐστὶν ἔργα γεννησάσθαι καὶ τροφῆς χρῆσασθαι: ψυσικῶτατον γὰρ τῶν ἐργῶν τοῖς ζωσιν, ὥσα τέλεια καὶ μὴ πηρώματα, ἤ τὴν γένεσιν αὐτομάτην ἔχει, τὸ ποιῆσαι ἐπερον οἶνον αὐτὸ, ζῶον μὲν ζῶον, φυτὸν δὲ φυτὸν, ἦν τοῦ ἀεὶ καὶ τοῦ θείου μετέχοσιν ἢ 415

δύνασαι πάντα γὰρ ἐκεῖνον ὅργησαι, καθένευν ἕνεκα πράττει ὁσα πράττει κατὰ φύσιν. [τὸ δ’ οὐ ἔνεκα διττὸν, τὸ μὲν οὐ, τὸ δὲ φ.] ἔπει οὐν κοινωεῖν ἀδύνατει τοῦ ἀεὶ καὶ τοῦ θείου τῇ συνεχείᾳ, διὰ τὸ μὴ δεν ἑυδέχεσθαι τῶν φθαρτῶν ταύτα καὶ ἐν ἀριθμῷ διαμένειν, ἡ δύνασαι μετέχειν ἐκεῖστο, κοινωεῖν ταύτην, τὸ μὲν μᾶλλον τὸ δ’ ἤπτον. καὶ διαμένειν οὐκ αὐτὸ ἄλλ’ οἶνον αὐτὸ, ἀριθμῷ μὲν οὐν ἑν, εἰδε δὲ ἐν. ἔστι δὲ ἡ ψυχή τοῦ ζώους σώματος αἰτία καὶ ἀρχή. ταύτα δὲ πολεμάχως λέγεται. ὁμολογὸς δ’ ἡ ψυχή κατὰ τοὺς διωρισμένους τρόπους τρεῖς αἰτία. καὶ γὰρ ὅθεν ἡ κίνησις αὐτῇ, καὶ οὐ ἔνεκα, καὶ ὡς ἡ οὐσία τῶν ἐμψυχίων σωμάτων ἡ ψυχή αἰτία. ὅτι μὲν οὖν ὡς οὐσία, δῆλον τὸ γὰρ αἰτίον τοῦ εἶναι πάσιν ἡ οὐσία, τὸ δὲ ζῆν τοῖς ζώσι τὸ εἶναι ἄστιν, αἰτία δὲ καὶ ἁρχή τούτων ἡ ψυχή. ἐτι τοῦ δυναμεῖ δυστος λόγος ἡ 15 ἐντελέχεια. φανερὸν δ’ ὡς καὶ οὐ ἔνεκεν ἡ ψυχή αἰτία, ἀπερ γὰρ ο νδὲς ἔνεκα τοῦ ποιεῖ, τὸν αὐτὸν τρόπον καὶ ἡ φύσις, καὶ τούτ’ ἐστιν αὐτῇ τέλος. τοιοῦτον δ’ ἐν τοῖς ζωσὶ ἡ ψυχὴ κατὰ φύσιν πάντα γὰρ τὰ φυσικὰ σώματα τῆς ψυχῆς ὄργανα, καὶ καθάπερ τὰ τῶν ζώων, οὕτω καὶ ἐν 20 τῶν φυτῶν, ὡς ἔνεκα τῆς ψυχῆς ὄντα. διατοῦ δὲ τὸ οὗ ἔνεκα, τὸ τε οὗ καὶ τὸ θ. ἀλλὰ μὴν καὶ ὅθεν πρῶτον ἡ κατὰ τόπον κίνησις, ψυχή’ οὐ πᾶσι δ’ ὑπάρχει τοῖς ζώσιν ἡ δύναμις αὐτῇ. ἐστι δὲ καὶ ἀλλοίωσι καὶ αὐξήσεις κατὰ ψυχὴν. ἡ μὲν γὰρ αἰσθησίς ἀλλοίωσι τις εἰναι δοκεῖ. Αἰ- 25 σβάνεται δ’ οὐθὲν ἡ μὴ ἔχει ψυχήν. ὁμολογὸς δὲ καὶ περὶ αὐξήσεως τε καὶ φθίσεως ἔχει οὐδὲν γὰρ φθίνει οὐδ’ αὐξεῖται φυσικῶσ μὴ τρεφόμενοι, τρέφεται δ’ οὐθὲν δ’ μὴ κοινωνεῖ ζωῆς. Ἐμπεδοκλῆς δ’ οὐ καλὸς εἰρήκε τοῦτο, προστιθείς τὴν αὐξήσις συμβαίνει τοῖς φυτοῖς κατ’ ἐν καὶ οὐ της συμβαίνει τοῖς φυτοῖς κατ’ ἐν 416διὰ τὸ τὴν ζωὴν οὕτω φέρεσθαι κατὰ φύσιν, ἅνω δὲ διὰ τὸ
The Additional Version.

ψυχῆς ἐστὶ δύναμις, καθ’ ἣν ὑπάρχει τὸ ζῆν πᾶσιν (sic). ἦς ἔργον 45 ἐστὶ γέννησις καὶ τὸ χρήσθαι τροφὴ τοῦτο γὰρ ἔργον μάλιστα φως (sic) πᾶσι τοῖς ζῷοις, ὡσα μὴ ἀτελὴ ἦ πνεύματα ἐστὶν, ἢ αὐτόματον ἔχει τὴν γέννησιν, τὸ ποιῆσαι οὖν αὐτὸ ἔτερον, ζωοῦ μὲν ζωα, φυτῶν δὲ φυτά, ῥα τού ἀεὶ καὶ τοῦ θείου μετέχῃ ἐκαστὸν ὦν δύναται τρόπον πάντα γὰρ ἑκείνου ὄφεγεται, κακεῖνου 50 ἕνεκα πράττει ὡσα πράττει κατὰ φύσιν. τὸ γὰρ οὐ ἔγεικα δυστό, τὸ μὲν οὐ, τὸ δὲ ζ’ ἐπεὶ οὖν οὐ τῇ συνεχείᾳ τοῦ ἀεὶ καὶ τοῦ θείου δύναται κοινωνεῖν, οὐ γὰρ ἐνδέχεται τὸ αὐτὸ ἀεὶ ἄριθμὸ εἰσὶ οὐθεὶ τῶν φθαρτῶν ὦν τρόπον ἐπιβάλλει, τούτον ἐκαστὸν οὐγγανει (sic). τὸ μὲν μάλλον, τὸ δὲ ἡττον καὶ διαμένει οὐκ αὐτό, 55 ἀλλ’ οἶον αὐτό, ἄριθμῷ μὲν οὐχ ἐν, εἴδει δ’ ἐν. ἐστ’ δ’ ἡ ψυχή ἀρχὴ τοῦ ἔωςτος σώματος, ἀλλ’ ἡ ἀρχὴ καὶ τὸ αἰῶνιον λέγεται πολλαχῶς. ὁμοίως δ’ ἡ ψυχὴ τοὺς τρεῖς τρόπους αὐτίκα τοὺς διωρισμένους καὶ γὰρ ὅθεν ἡ κάνησις καὶ οὐ ἔνεκα καὶ οὐ οὐσία τῶν ἐμφάνισον σωμάτων ἐστὶν ἡ ψυχή. 60 ὅτι μὲν οὖν ὡς οὐσία δηλοῦν τὸ γὰρ εἰναι ἡ οὐσία αἰῶνιον πάσιν, τὸ δὲ ἔκτι τοῖς ὡχά τοῦ εἰναι ἐστιν, αἰῶνιον δὲ καὶ ἀρχῇ ἡ ψυχὴ τούτου ἑστιν. φανερὸν δὲ καὶ οὐ τὸ οὐ ἔνεκα ἡ ψυχὴ: καὶ γὰρ ἡ φύσις ἐνεκά του ποιεῖ ὡσπερ ὁ νοοὶ, 65 καὶ τούτ’ ἐστιν αὐτής τὸ τέλος. καὶ ἡ ψυχὴ τοιοῦτον ἐν τοῖς κατὰ φύσιν, καὶ πάν τὸ σώμα ὀργανοῦ τῇ ψυχῇ ὡσπερ δὲ τὸ τῶν ὥθων, καὶ τὸ τῶν φυτῶν.

ἀλλὰ μὴ καὶ ὅθεν ε (sic) κάνησις πρῶτον ἦ 70 κατὰ τότον, τοῦτο ἐστὶ ψυχῆ: ἀλλ’ οὐ πᾶσι τοῖς ζῷοις ἡ τοιαύτη ὑπάρχει δύναμις. ἐτὶ δ’ ἀλλοίωσις καὶ αὐξήσις κατὰ ψυχῆν: ἡ μὲν γὰρ αἰσθησις δοκεῖ τὰς ἀλλοίωσις εἶναι, μὴ ἔχουν δὲ ψυχῆν οὐθέν ἅν αἰωτοῦ (sic). ὁμοίως δὲ καὶ περὶ αὐξήσεως καὶ φθίσεως ἔχεις οὐθέν γὰρ αὐξάνεται οὐδὲ φθίνει 75 φυσικῶς μὴ τρεφόμενον, οὐδὲ τρέφεται μὴ ζωῆς μετέχον. ἀλλὰ τοῦτο Ἰμπεδοκλῆς οὐκ εἰρήκειν ὀρθῶς, προστίθεις τὴν αὐξήσιν συμβαίνειν τῶν φυτῶν κατ’ ἄνη διὰ τὸ τῆς γῆς φύτει οὕτω φέρεσθαι, ἄνοι δὲ διὰ τὸ πῦρ.
The Ordinary Text.

πῦρ ὡσαύτως. οὐτε ἡμὴ τὸ ἀνώ καὶ κάτω καλῶς λαμβάνει οὐ γὰρ ταύτα πίσω τὸ ἀνώ καὶ κάτω καὶ τὸ παντί, ἀλλ’ ὡς ἡ κεφαλὴ τῶν ζῴων, οὕτως οἱ μίξαι τῶν φυτῶν, 5 εἰ χρὴ τὰ ὄργανα λέγειν ἑτέρα καὶ ταυτά τοῖς ἑργοῖς. πρὸς δὲ τούτοις τί τὸ συνέχον εἰς τάνατὼν φερόμενα τὸ πῦρ καὶ τὴν γῆν; διασπασθήσεται γὰρ, εἰ μή τι ἔσται τὸ κω-
λύσσων εἰ δ’ ἔσται, τούτ’ ἐστὶν ἡ ψυχή καὶ τὸ αὑτὸν τοῦ αἰζάνεσθαι καὶ τρέφεσθαι.

III.


5 ὃτι οὐ δέχονται τὸν ἀέρα οὐδ’ ἀνα-
περάουσιν. δε’ ἦν μὲν οὖν αἰτίαν, ἔτερος ἔστι λόγος.

IX. Περὶ δὲ ὁσμῆς καὶ ὀσφραντοῦ ἢττων εὐδιάριστον ἐστὶ τῶν εὐρημέων’ οὐ γὰρ δὴλον ποιῶν τί ἐστιν ἡ ὁσμή, οὕτως ὡς δ’ ψόφος ἢ τὸ χρῶμα. αἰτίων δ’ ὃτι τὴν αἰσθήσειν ταύτην οὐκ 10 ἔχομεν ἀκριβῆ, ἀλλὰ χεῖρω πολλῶν ζῴων φαίλοις γὰρ ἀν-
θρώπως ὁσμᾶτι, καὶ οὐδενὸς αἰσθάνεται τῶν ὀσφραντῶν ἄνευ τοῦ λυπηροῦ ἢ τοῦ ἵδεος, ὡς οὐκ ἦντος ἀκριβοῦς τοῦ αἰσθη-
τηρίου. εὐλογοῦν δ’ οὕτω καὶ τὰ σκληρόφθαλμα τῶν χρωμά-
tων αἰσθάνεσθαι, καὶ μὴ διαδήλους αὐτοῖς εἶναι τὰς δια-
15 φορὰς τῶν χρωμάτων πλῆν τῷ φοβερῷ καὶ ἀφόβῳ. οὕτω δὲ καὶ τὰς ὁσμὰς τὸ τῶν ἀνθρώπων γένεσιν’ ἐοικε μὲν γὰρ ἀνάλογον ἔχειν πρὸς τὴν γεύσιν καὶ ὁμοίως τὰ εἴδη τῶν χυμῶν τοῖς τῆς ὁσμῆς, ἀλλ’ ἀκριβεστέραν ἔχομεν τὴν γεύ-
sιν διὰ τὸ εἶναι αὐτὴν ἀφήν τινα, ταύτην δ’ ἔχειν τὴν αἰ-
20 σθέσιν τῶν ἀνθρώπων ἀκριβεστάτην’ ἐν μὲν γὰρ ταῖς ἄλλαις λείπεται πολλῶν τῶν ζῴων, κατὰ δὲ τὴν ἀφήν πολλῷ τῶν ἄλλων διαφερόμενως ἀκριβοῦ. διὸ καὶ φρονιμώτατον ἐστὶ τῶν ζῴων. σημείον δὲ τὸ καὶ ἐν τῷ γένει τῶν ἀνθρώπων παρὰ
The Additional Version.

οὔτε γὰρ τὸ κάτω καὶ ἄνω λαμβάνει ὀρθῶς:
οὐ γὰρ τὸ αὐτὸ ἐκάστου τὸ ἄνω καὶ τὸ κάτω καὶ τοῦ παντός;
ἀλλ' ὡς ἡ κεφαλὴ τῶν ζῴων, οὕτως ἡ ῥίζα τῶν φυτῶν ἐστὶν
τὸ δὲ αὐτὸ δὲι λέγειν ὄργανον, ὅν ἂν ἦ τὸ αὐτὸ ἔργον.
ἐτὶ δὲ τὶ τὸ συνέχον εἰς τὰναντία φερομένων;

tούτῳ γὰρ αὐτίον τὸ τῆς αὐξήσεως καὶ τροφῆς· εἰ δὲ μη,
ουθὲν καλύπει δι — —

III.

B, VIII. § 12—X. § 3. E. fol. II rō

ὅτι οὐ δέχονται τῶν ἀέρα οὐδ' ἀνα-
πνέουσιν. δι' ἣν δ' αἰτίαν ἐτεροῖς ἐσται περὶ αὐτῶν λόγοις.
Περὶ δὲ ὁσμῆς καὶ τοῦ ὀσφραυτοῦ οὐκ ἔστιν ῥάδιον διορίζαι ὁμοίως
τῶν εἰρημένων αἰσθητοῖς, τί ἐστιν ἡ ὁσμὴ ὀσφρωτού ὁ ψόφος καὶ τὸ
φῶς, αἰτίον δ' ὅτι οὐκ ἔχομεν ἀκριβῆ ταύτην τήν
αἰσθησιν, ἀλλὰ χείριστα ὁσμάται ἀνθρώπως τῶν ζῴων,
καὶ οὐδεμίαν ἀνευ

τοῦ λυπηροῦ καὶ ἥδεος δύναται αἰσθάσθαι ὁσμήν, ὡς τοῦ ἀειθη-
τηρίου ὄντος οὐκ ἀκριβοῦς. ὄσπερ οὖν τοῖς σκληροθαλάμοις
ἀδήλους εἰκός εἶναι τὰς διαφοράς τῶν χρωμάτων καὶ

συγκεχυμένας, ἀλλ' τῷ φοβερῷ καὶ τῷ ἀφόβῳ διορίζειν μόνον,

οὕτω καὶ τὰ περὶ τᾶς ὁσμὰς τοῖς ἀνθρώπωσι, ἐπεὶ ἐσκε

τε ἀνάλογον ἐξει πρὸς γεύσιν καὶ ὀρμοὶ τὰ εἶδη τῶν
χυμῶν τοῖς τῆς ὁσμῆς, ἀλλὰ τῆς γεύσιν ἔχομεν ἀκριβεστέραν

διὰ τὸ εἶναι ἀφήν τινα, αὐτὴν δ' ἐξει τὴν αἰ-

σθησιν ἀκριβεστάτην ἀνθρώπως· ἐν μὲν γὰρ τὰς ἄλλας

λειπτεί πολλῶν ζῴων, τῶν δ' ἀπτῶν αἰσθάνεται

μάλατα ἀκριβοῦς. διὸ καὶ φρονιμόται τῶν ζῴων

ἐστίν. σημείον δέ καὶ γὰρ αὐτῶν τῶν ἀνθρώπων.
The Ordinary Text.

tὸ αἰσθητήριον τούτο ἐίναι αὐφυεῖς καὶ ἀφυεῖς, παρ' ἄλλο
25 δὲ μηδὲν οἱ μὲν γὰρ σκληροσάρκως ἀφυεῖς τὴν διάνοιαν,
οἱ δὲ μαλακοσάρκως ἀφυεῖς. ἐστὶ δ', ὡσπερ χύμος ὁ μὲν
γλυκὸς ὁ δὲ πικρός, οὕτω καὶ ὁσμαί. ἀλλὰ τὰ μὲν ἔχουσι
τὴν ἀνάλογον ὁσμήν καὶ χυμόν, λέγω δὲ οἶον γλυκείαν
ὁσμήν καὶ γλυκὸν χυμόν, τὰ δὲ τούχαντων. ὁμοίως δὲ καὶ
30 δρυμεία καὶ αὐστηρὰ καὶ οξεία καὶ λιπαρὰ ἔστιν ὁσμή.
ἀλλ' ὡσπερ εἴπομεν, διὰ τὸ μή σφόδρα διαδηλῶσιν ἐναι
τὰς ὁσμὰς ὡσπερ τοὺς χυμοὺς, ἀπὸ τούτων εἰκῆ ψήν ὁνύ-

421 ματα καὶ ὁμοίωτητα τῶν πραγμάτων· ἡ μὲν γὰρ γλυκεία
ἀπὸ τοῦ κρόκου καὶ τοῦ μέλιτος, ἢ δὲ δρυμεία θύμου καὶ τῶν
tοιοῦτων τῶν αὐτῶν δὲ τρόπου καὶ ἐπὶ τῶν ἄλλων. ἐστὶ δ'
ὡσπερ ἡ ἀκοή καὶ ἐκάστη τῶν αἰσθήσεων, ἡ μὲν τοῦ ἀκούστων
5 καὶ ἀνηκούστον, ἡ δὲ τοῦ ὀρατοῦ καὶ ἀοράτου, καὶ ἡ ὁσφρη-
sις τοῦ ὀφθαλμοῦ καὶ ἀνουφράντου. ἀνοφράντων δὲ τὸ μὲν
παρά τὸ ὅλως ἀδύνατον ἔχειν ὁσμήν, τὸ δὲ μικρὰν ἔχου
καὶ φαύλην. ὁμοίως δὲ καὶ τὸ ἀνευστὸν λέγεται. ἐστὶ δὲ
καὶ ἡ ὁσφρησις διὰ τοῦ μεταξύ, οἷον ἄρος ἢ ψυγόν καὶ
10 γὰρ τὰ ἐνυδρά δοκοῦσιν ὁσμῆς αἰσθάνεσθαι. ὁμοίως δὲ καὶ
τὰ ἐναιμα καὶ τὰ ἁναιμα, ὡσπερ καὶ τὰ ἐν τῷ ἄνεφ καὶ
tὰ τούτων ἔνα τὸ πόρρωθεν ἀπαντά πρὸς τὴν τροφὴν ὑπόμα

γωμάμενα. διὸ καὶ ἄπορον φαίνεται, εἰ πάντα μὲν ὁμοίως
ὁσμαί, ὁ δ' ἀνθρώπος ἀναπνεύς μὲν, μη ἀναπνεύς δὲ

15 ἀλλ' ἐκτένες ἡ κατέχον τὸ πνεῦμα ὁμοίως, εἰ τούτῳ καὶ ναῦται, οὔτε τούτῳ οὕτω ἐγγύθεν, οὕτω ἄν ἐπὶ τοῦ μυκτήρος ἐντὸς τεθή·
kαὶ τὸ μὲν ἐπὶ αὐτῷ τιθεμένον τῷ αἰσθητηρίῳ ἀναισθητόν
eἰναι κοινῶν πάντων· ἀλλὰ τὰ ἄνευ τῶν ἀναπνεύς μη αἰσθά-
nεσθαί ἰδίον ὑπὶ τῶν ἀνθρώπων ἐρυθοῦ δὲ πειρομένων. ὡστὲ
20 τὰ ἄναιμα, ἐπειδὴ οὐκ ἀναπνεύσων, ἐτέραν ἀν τῶν αἰσθησιῶν
ἔχοι παρὰ τὰς λεγομένας. ἀλλ' ἀδύνατον, εἴπερ τῆς ὁσ-
μῆς αἰσθάνεται· ἡ γὰρ τοῦ ὁσφραντοῦ αἰσθήσεις καὶ δυσώδες
cαὶ εὐώδους ὁσφρήσεις ἐστίν. ὡτε καὶ φθειρόμενα φαίνεται
ὑπὸ τῶν ἱσχυρῶν ὁσμῶν ύπ' ὁπερ ἀνθρώπος, οἶον ἀσφάλ-

25 τοῦ καὶ θείου καὶ τῶν τοιούτων. ὁσφραίνεσθαι μὲν οὖν ἀνα-

καίων, ἀλλ' οὐκ ἀναπνέωντα. ἐσκε δὲ τοῖς ἀνθρώπως διαφέ-
The Additional Version.

eὑφυεῖς, οἴ δὲ ἀφυεῖς εἰσὶ παρ᾽ οὐδὲν αἰσθητήριον ἔτερον ἀλλὰ παρά τοῦτο. ὅπως μὲν γὰρ ἡ σάρξ μαλακή, εὑφυεῖς, οἴ δὲ σκληρόσαρκοι ἀφυεῖς τὴν διεύθυναν. ἐστὶ δὲ ὀσπερ χυμὸς ὁ μὲν γλυκὸς ὁ δὲ πικρός, καὶ ὁσμαί τὸν αὐτὸν ἔχουσα τρόπον. ἀλλὰ τὰ μὲν ἔχει τὴν ἁνάλογον ὁσμὴν καὶ χυμὸν, τὰ δὲ τούπαντι. ὁμοίος δὲ καὶ δρυμεῖα καὶ αὐστηρὰ καὶ ὑζεύα καὶ λεπαρὰ ἐστὶν ὁσμῆς. ἀλλ᾽ ὀσπερ εἰρηται διὰ τὸ μὴ σφόδρα διαδήλους εἶναι τὰς ὁσμὰς ὀσπερ τοὺς χυμοὺς, ἀπὸ τούτων ἐλήφη τὰ ὁνόματα καθ᾽ ὁμοιότητα τῶν πραγμάτων ἡ μὲν γλυκεία κρόκου καὶ μέλιτος, ἡ δὲ δρυμεῖα θύμου καὶ τῶν τοιούτων τὸν αὐτὸν δὲ τρόπον καὶ ἔπὶ τῶν ἄλλων. ἐστὶ δὲ ὀσπερ καὶ ἡ ἀκοή καὶ ἐκάστη τῶν αἰσθήσεων τοῦ τε ἀκουστοῦ καὶ ἀνηκούστον καὶ ὅρατον καὶ ἀοράτου, καὶ ἡ ὁσφρησις τοῦ ὀσφραντοῦ καὶ ἀνοσφραντοῦ. ἀνοσφραντον δὲ τὸ μὲν παρὰ τὸ ὅλως ἀδύνατον ἔχειν ὁσμῆν, τὸ δὲ μικρὰν ἔχου καὶ τὸ φαινή, ὀσπερ τὸ ἀγενοῦσα ὁσαύτως λέγεται. ἐστὶ δὲ καὶ ἡ ὁσφρησις διὰ τοῦ μεταξὺ, ὁτέν ὑδατος καὶ ἀέρος καὶ ὡς τὰ ἐνυδρα φαίνεται αἰσθανόμενα ὁσμῆς, καὶ τὰ ἐναίμα καὶ ἀναιμα ὁμοίως, ὀσπερ καὶ τὰ ἐν τῷ ἀέρι καὶ γὰρ τούτων ἐναι πόρρῳ μείγματα πρὸς τὴν τροφὴν αἰσθανόμεναι τὴν ὁσμῆν διὸ καὶ ἔχει ἀπορίαι εἰ πάντα μὲν ὀσαύτως ὁσμάται, ὁ δὲ ἀνθρωπός ἀναπνεύσεως μέν, μὴ ἀναπνεύσεως δὲ ἀλλ᾽ ἢ κατέχουν τὸ πνεῦμα ἢ ἐκπνεύων οὐκ ὁσμάται, οὔτε πόρρῳ οὔτ᾽ ἐγχύος, οὔδ᾽ ἃν ἐπιθή τις εἰς τὸν μυκτήρα ἑντὸς. καὶ τὸ μὲν ἐπὶ αὐτῷ τῷ αἰσθητηρίῳ τιθέμενον ἀναισθητον εἶναι κοινὸν πάντων ἀλλὰ τὸ ἀνεύ τοῦ ἀναπνεύσεως μὴ αἰσθάνεται ὁδίον ἐπὶ τῶν ἀνθρώπων ἐστὶν τοῦτο δὲ πειρομένῳ ὁδήλω. εἰ οὖν τὰ ἀναιμα μὴ ἀναπνεύσει, ἐτέραν ἂν τῶν ἔχοι αἰσθάνεται παρὰ τὰς λειγομένας. ἀλλὰ εἰσέπερ τῆς ὁσμῆς αἰσθάνεται ἀδύνατον ἡ γὰρ τοῦ ὀσφραντοῦ καὶ εὐάσιως καὶ δυσάσιως αἱ 50 σθήσεις ὁσφρησις ἐστὶν. φαίνεται δὲ καὶ φθειρόμενα ὑπὸ τῶν ἵππων ὁσμῶν ὡς ὀσπερ καὶ ἀνθρωποὶ, ὁτόν ἀσφάλτον καὶ θέλει καὶ τῶν τοιούτων ὁσφρησθαι μέντοι νῦν ἀναγκαῖον, ἀλλ᾽ οὐκ ἀναπνεύσειν. ἀλλ᾽ οὐκ ἐοικε διαφέρει τὸ αἰσθητηρίου
The Ordinary Text.

ρειν τὸ αἰσθητήριον τούτο πρὸς τὸ τῶν ἄλλων ἥρων, ὥσπερ
tὰ ὀμματα πρὸς τὰ τῶν σκληροφθάλμων τὰ μὲν γὰρ
ἐχει φράγμα καὶ ὥσπερ ἐλιπτον τὰ βλέφαρα, ἢ μὴ κινή-
3ος σος μὴν ἀναστάσας ὅχῳ ὁρᾷ τὰ δὲ σκληρόφθαλμα οὐδὲν
ἐχει τοιοῦτον, ἀλλ' εὐθέως ὁρᾷ τὰ γινόμενα ἐν τῷ δια-
φανεί. ὅτως οὖν καὶ τὸ ὀσφραντικὸν αἰσθητήριον τοῖς μὲν
422ον ἀκάλυφες εἶναι, ὥσπερ τὸ ὄμμα, τοὺς δὲ τῶν ἀέρα δεχο-
μένους ἔχειν ἐπικάλυμμα, ὁ ἀναπνεύστων ἀποκαλύπτεσθαι,
dευνυμομένων τῶν φλεβῶν καὶ τῶν πόρων. καὶ διὰ τοῦτο
tὰ ἀναπνέοντα οὐκ ὀσμᾶτα ἐν τῷ ύγρῷ ἀναγκαῖον γὰρ
5 ὀσφρανθῆναι ἀναπνεύσαντα, τοῦτο δὲ ποιεῖν ἐν τῷ ύγρῷ
ἀδύνατον. ἔστι δ' ἡ ὀσμὴ τοῦ ἕρωτα, ὥσπερ ὁ χυμὸς τοῦ
ὕγροι τὸ δὲ ὀσφραντικὸν αἰσθητήριον δυνάμει τοιοῦτον.

X. Τὸ δὲ γενετῶν ἐστιν ἀπτὸν τι' καὶ τοῦτ' αἰτίων τοῦ
μὴ εἶναι αἰσθητοῦ διὰ τοῦ μεταξὺ ἀλλοτρίου ὦτος σώματος,
10 οὐδὲ γὰρ ἡ ἄφη. καὶ τὸ σῶμα δὲ ἐν ὡς ὁ χυμός, τὸ γεν-
ετὸν, ἐν ύγρῷ ὡς ύλη τούτο δ' ἀπτόν τι. διὸ καὶ εἰ ἐν
ὑδατὶ ἦμεν, ἦςθανόμεθ' ἀν ἐμβληθέντος τοῦ γιγκέος,
οὐκ ἢν δ' ἢ ἡ αἰσθήσεως ἢμιν διὰ τοῦ μεταξὺ, ἀλλὰ τῷ
μικθῆναι τῷ ύγρῷ, καθάπερ ἐπὶ τοῦ ποτοῦ. τὸ δὲ χράμα
15 οὖχ οὖτως ὀρᾶται τῷ μίγνυσθαι, οὐδὲ ταῖς ἀπορροίαις. ὡς
μὲν οὖν τὸ μεταξὺ οὐθέν ἑστιν' ὡς δὲ χρόμα τὸ ὄρατον, οὐτῶς
tὸ γενετὸν ὁ χυμός. οὐθὲν δὲ ποιεῖ χυμὸν αἰσθήσειν ἀνεῖ
ὑγρότητος, ἀλλ' ἔχει ἐνεργεία ἢ δύναμει ύγρότητα, ὅσον τὸ
ἀλμυρόν εὐτηκτὸν τε γὰρ αὐτὸ καὶ συνηθιστικὸν γηλώτητα.
20 ὥσπερ δὲ καὶ ἡ ὄψις ἐστὶ τοῦ τε ὄρατος καὶ τοῦ ἀόρατου (τὸ
γὰρ σκότος ἀόρατον, κρίνει δὲ καὶ τούτο ἡ ὄψις), ἐτὶ τοῦ
λαμπροῦ (καὶ γὰρ τοῦτο ἀόρατον, ἄλλον δὲ τρόπον τοῦ
σκότους), ὁμοίως δὲ καὶ ἡ ἀκοή ὕφος τε καὶ συνῆς, ὅτι
The Additional Version.

τούτο τοὺς ἀνθρώπους πρὸς τὸ τῶν ἄλλων ξύλων, ὁσπερ καὶ τὰ ὄμματα πρὸς τὰ τῶν σκληροφθαλμῶν τὰ μὲν γὰρ ἔχει πώμα καὶ ὁσπερ ἐλυτρον ταῖς βλεφαρίδας, ὃς ἂν μὴ ἀναστάσῃ καὶ κινήσῃ οὐχ ὅρα: τὰ δὲ σκληροφθαλμα οὐκ ἔχει, ἀλλ' εὐθὺς ὅρα, ὅτι ἂν τεθῆ ἐν τῷ διαφανεὶ οὐκ καὶ τὸ ὀσφραντικὸν αἰσθητήριον τοῖς μὲν ἀκάλυφοι εἶναι, ὁσπερ τὸ ὀμμα, τοῖς δὲ δεχομένοις τὸν ἀέρα ἐχειν ἐπικάλυμμα, δὲ ἀναπνεόμενον ἀποκαλύπτεσθαι, διευρυνομένον τῶν φλεβῶν καὶ τῶν πόρων. καὶ διὰ τοῦτο τὰ ἀναπνέοντα ἐν τῷ υγρῷ οὐκ ὁσμάται, ὅτι ἀνάγχη ἀναπνεύσαντα ὀσφραυθήναι, ἐν δὲ τῷ υγρῷ ἀδύνατον τοῦτο ποιεῖν. ἐστι δ' ἤ ὁσμή τοῦ ἔρημον ὁσπερ ὁ χυμὸς τοῦ υγροῦ τὸ δ' ὀσφραντικὸν αἰσθητήριον δυνάμει τοιούτων.

Τὸ δὲ γενοτὸν ἔστω ἄπτον τι καὶ τοῦτο ἄιτον τοῦ μῆ εἶναι αἰσθητὸν διὰ τοῦ μεταξὺ ἀλλοτρίου ὄντος σώματος· οὐδὲ γὰρ ἡ ἀφὴ. καὶ τὸ σῶμα, ἐν ό ὁ χυμὸς, τὸ γενοτὸν, ἐν υγρῷ ὡς ὑλή τοῦτο δ' ἄπτον τι. διὸ κἂν εἰ ἐν ὑδατι εἴημεν, αἰσθανόμεθα ἐμβληθέντος ἑλικοῦσι, οὐ διὰ τοῦ μεταξὺ δὲ ἡμῶν ἡ αἰσθήσις, ἀλλὰ τῷ μικρόνι τῷ υγρῷ, ὁσπερ ποτώ δὲ χρώμα οὐχ ὄντως ὀράται τὸ μίγνυσθαι οὐδὲ ταῖς ἀπορρολίασι. ὡς μὲν οὖν τὸ μεταξὺ οὔθεν ἔστω ὡς δὲ χρώμα τὸ ὀράτων, ὡς ἦντων γενοτὸν χυμὸς· οὔθεν δὲ ποιεῖ αἰσθησίαν χυμοῦ ἀνευ ὑγρότητος, ἀλλ' ἔχει ἐνεργεία ὡς δυνάμει ὑγρότητα, οἷον τὸ ἀμυρῶν τεχνόν τε γὰρ αὐτὸ καὶ συντηκτικὸν τῆς ἀνοίγουσαν ὁσπερ δὲ καὶ ἡ ψυχή ἔστι τοῦ τε ἐρατῶν καὶ του ἀράτων (ὅ τοι γὰρ σκότος ἄρατος, κρίνει δὲ καὶ τοῦτον ἡ ψυχῆ), ἐτὶ τοῦ λιαν λαμπροῦ (καὶ ἂν τοῦτο πως ἀράτων, ἀλλ' τρόπω καὶ δ' σκότος), ὀμοίως δὲ καὶ ἡ ἀκοή ψύφου τε καὶ συγῆς, ὡς τὸ

W. AR.
The Ordinary Text.

IV.

423\textsuperscript{b} 8—424\textsuperscript{b} 18.  

καίτοι καθάπερ εἴσαμεν καὶ πρότερον,  
καὶ εἰ δι’ ὑμένοις αἰσθανομέθα τῶν ἀπτῶν ἀπάντων λαθά—
τοῦν ὅτι διείρχει, ὁμοίως ἂν ἔχοιμεν ὁσπερ καὶ νῦν ἐν  
tῷ ὑδατὶ καὶ ἐν τῷ ἀέρι δοκοῦμεν γὰρ αὐτῶν ἀπτεσθαί  
καὶ οὐδεν εἶναι διὰ μέσου. ἀλλὰ διαφέρει τὸ ἀπὸ τῶν ὀρα—
tῶν καὶ τῶν ψυχητικῶν, ὅτι ἐκείνων μὲν αἰσθανόμεθα τῷ  
tῷ μεταξὺ ποιεῖν τῇ ἴμας, τῶν δὲ ἀπόλεος οὐχ ὑπὸ τοῦ με—
15ταξὶ ἀλλὰ ἀμα τῷ μεταξὺ, ὡσπερ ὁ δὲ ἀστιδὸς πλη—
γεῖσι· οὐ γὰρ ἡ ἀστις πληγεῖσα ἐπάταξεν, ἀλλ’ ἁμφω  
συνέβη πληγήμα. ὅλως δ’ ἐσκὼν ἡ ἁρξεῖ καὶ ἡ ἱλώττα, ῥὸς  
ὁ ἄηρ καὶ τὸ ὑδωρ πρὸς τὴν ὄρει καὶ τὴν άκοήν καὶ τὴν  
ὁσφρῆσιν ἔχουσιν, οὕτως ἔχειν πρὸς τὸ αἰσθητήριον ὡς—
20περ ἐκείνων ἔκαστον. αὐτοῦ δὲ τοῦ αἰσθητήριον ἀπτομένου  
οὕτ’ ἔκει οὕτ’ ἐνυαῦθα γένοιτ’ ἄν αἰσθησις, οἷον εἰ τις σῶμα  
tὸ λευκὸν ἐπὶ τοῦ ὄμματος θεία τὸ ἔσχατον. ἢ καὶ δῆλον  
ὅτι ἐνυότι τὸ τοῦ ἀπόλου αἰσθητικών. οὗτο γὰρ ἂν συμβαίνοι  
ὀσπερ καὶ ἐπὶ τῶν ἄλλων ἐπιτυθήμενον γὰρ ἔπι τοῖς αἰσθητή—
25ριοις οὐκ αἰσθάνεται, ἐπὶ δὲ τὴν σάρκα ἐπιτυθήμενον αἰσθά—
νεται· ὥστε τὸ μεταξὺ τοῦ ἀπτικοῦ ἡ σάρξ. ἀπαλί μὲν οὖν  
eἰσίν αἱ διαφοραὶ τοῦ σώματος ἡ σῶμα: λέγω δὲ διαφορὰς  
aὶ τὰ στοιχεῖα διορίζουσι, θερμόν ψυχρὸν, ἐξερόν ύπόρον, περὶ  
ἀν εἰρήκαμεν πρότερον ἐν τοῖς περὶ στοιχείων. τὸ δὲ αἰσθη—
30τιον αὐτοῦ τὸ ἀπτικόν, καὶ ἐν ὧ ἡ καλομεμενὴ ἀφή ὑπάρ—
χεῖ πρῶτο, τὸ δυνάμει τοιοῦτον ἐστὶ μόριον τὸ γὰρ αἰσθὰ—
424\textsuperscript{b} νεσθαί πάσχειν τι ἐστὶν ὡστε τὸ ποιοῦν οἶον αὐτὸ ἐνεργεία,  
τοιοῦτον ἐκεῖνον ποιεῖ δυνάμει ὅν. διὸ τοῦ ὄμοιος θερμὸν καὶ  
ψυχρὸν ἡ σκληροῦ καὶ μαλακοῦ οὐκ αἰσθανόμεθα, ἀλλὰ  
tῶν ύπερβολῶν, ὡς τῆς αἰσθήσεως οἷον μεσοτοῦς τινος οὖσης  
5τῆς ἐν τοῖς αἰσθητοῖς ἐναντιώσεως. καὶ διὰ τοῦτο κρίνει τὰ  
αἰσθήτα. τὸ γὰρ μέσον κριτικῶν γίνεται γὰρ πρὸς ἐκάστουν  
αὐτῶν θάτερον τῶν ἄκρων καὶ δει ὡσπερ τὸ μέλλον αἰσθή—
σεσθαι λευκοῦ καὶ μέλανος μηδέτερον αὐτῶν εἶναι ἐνεργεία,
The Additional Version.

IV.

B, XI. § 7—XII. § 6. E. fol. 196 r\(^{9}\).

ἐὑρηται πρότερον ὅτι καὶ δι’ ὑμένος ἀν πάντων αἰσθανοίμεθα τῶν ἀπτῶν, κἂν εἰ λανθάνοι διείργον, ὁμοίως ἂν ἔχοιμεν ὡσπερ νῦν ἐν τῷ ὑδατὶ καὶ ἐν τῷ ἀέρι· δοκούμεν γὰρ αὐτῶν θυγάνειν καὶ οὐθὲν εἶναι διὰ μέσου. ἂλλα διαφέρει τούτῳ τὰ ἀπτὰ τῶν ὀρα-Υ τῶν καὶ ψυχητικῶν, ὅτι ἐκείνων αἰσθανοίμεθα τῷ τὸ μεταξὺ ποιεῖν τι ἡμᾶς, τῶν δ’ ἀπτῶν οὐχ’ ὑπὸ τοῦ με- ταξὺ ἀλλ’ ἀμα τὸ μεταξὺ, ὡσπερ οἱ διὰ τῆς ἀπόδος πλη- γέντες· οὐδὲ γὰρ ἡ ἀστίς πληγείσα ἐπάταξεν, ἀλλ’ ἀμα ἀμ- φοῖν αὐνεῖβη πληγήναι. ὅλως δ’ έοικε καὶ ἡ σάρξ καὶ ἡ γλώσσα, 10 ὡς ο’ αἱρ καὶ τὸ ὑδρ πρὸς τὴν ὕψιν καὶ τὴν ἀκοήν καὶ ὅσφρησιν ἔχουσιν, οὔτως ἐσχεν πρὸς τὸ αἰσθητήριον ὡσ- περ ἐκείνου ἑκαστον. αὐτοῦ δὲ τοῦ αἰσθητήριον ἀποτελοῦσθαι οὔτ’ ἔκειν οὔτ’ ἐνπάθεα γένοστ’ (sic) ἀν αἰσθήσις. οἶνον εἰ τιτοσώμα- το λευκῶν ἐπὶ τοῦ οἴματος θεία τὸ ἐσχατον. ἦ καὶ ἐδῆν 15 ὅτι ἐντός τοῦ τοῦ ἀπτοῦ αἰσθητικοῦ. οὔτως ἂρ ἀν συμβαίνοι ὡσπερ ἐπὶ τῶν ἀλλῶν ἐπιτιθεμένου γὰρ ἐπὶ τὸ αἰσθητή- ριον οὐκ εσθάνεται (sic), ἐπὶ δὲ τὴν σάρκα ἐπιτιθεμένου αἰσθάνα- νεται’ ὡστε μεταξὺ ἀρα τοῦ ἀπτικοῦ ή σάρξ. ἀπαι μὲν οὖν εἴσιν αἴ διαφοραν τοῦ σώματος ἡ σώμα λέγω δε διαφοράν 20 αἱ τα στοιχεία διορίζουσι’ θερμὸν καὶ ψυχρὸν καὶ ξηρὸν καὶ υγρὸν, περὶ δὲ ἐὑρητα πρότερον ἐν τοῖς περὶ τῶν στοιχείων. τὸ δ’ αἰσθητήριον αὐτῶν τὸ ἀπτικον, καὶ εὖ ἢ καλουμένη ἀφ’ ὑπάρ- χει πρῶτον, τὸ δύναται τοιοῦτον ἐστὶ μόριον’ τὸ γὰρ αἰσθάνε- νεθαι πάσχειν τι ἐτείν’ ὡστε τὸ ποιοῦν οἶνον αὐτὸ ἐνεργεῖα, 25 τοιοῦτον ποιεὶ ἑκείνο τὸ δύναμεν ὅν. διὸ τοῦ ὁμοίου θερμοῦ ἡ ψυχρὴ ἡ σκληρὴ ἡ μαλακοὶ οὐκ αἰσθανοίμεθα, ἂλλα τῶν ὑπερβολῶν, ὡς ἀν τῆς αἰσθήσιως οἶνον μεσοτήτος τινος οὕτως ἐν τοῖς αἰσθητοῖς ἐναρτώσωσι. καὶ διὰ τούτο κρίνει τὰ αἰσθητά. τὸ γὰρ μέσον κριτικῶν γίνεται γὰρ πρὸς ὅ-30 πτερονοῦν αὐτῶν θάτερον τῶν ἄκρων’ καὶ δει πρὸ νῦν τὸ μέλλον λευκοῦ αἰσθάνεσθαι ἡ μέλανος μυθέτερον εἶναι ἐνεργεῖα,
The Ordinary Text.

δυνάμει δ’ ἀμφω, οὐτω δὴ καὶ ἐπὶ τῶν ἄλλων καὶ ἐπὶ τῆς
10 ἀφῆς μῆτε θερμῶν μῆτε ψυχρῶν. ἔτι δ’ ὀσπερ ὀρατοῦ καὶ
ἀοράτου ἦν πασῶς ἡ ὄψις, ὁμοίως δὲ καὶ αἱ λοιπαὶ τῶν ἀντι-
κειμένων, οὐτω καὶ ἡ ἁφή τοῦ ἀπτοῦ καὶ ἀνάπτου ἀναπτοῦ
δ’ ἔστι τὸ μικρῶν ἐχον πάμπαν διαφορῶν τῶν ἀπτῶν, οἴον πέποιναν ὁ ἄρη, καὶ τῶν ἀπτῶν αἱ ὑπερβολαί, ὀσπερ
15 τὰ φθαρτικά. καθ’ ἐκάστην μὲν οὖν τῶν αἰσθήσεων εἶρηται
tύπῳ.

XII. Καθόλου δὲ περὶ πάσης αἰσθήσεως δεῖ λαβεῖν ὅτι ἡ
μὲν αἰσθήσεις ἐστὶ τὸ δεκτικὸν τῶν αἰσθητῶν εἰδῶν ἄνευ τῆς
ύλης, οἷον ὁ κηρὸς τοῦ δακτυλίου ἄνευ τοῦ σιδηροῦ καὶ τοῦ
20 χρυσοῦ δέχεται τὸ σημεῖον, λαμβάνει δὲ τὸ χρυσὸν ἢ τὸ
χαλκοῦν σημεῖον, ἀλλ’ ὁ χρυσὸς ἢ χαλκὸς. ὁμοίως δὲ
καὶ ἡ αἰσθήσεις ἐκάστου ὑπὸ τοῦ ἑχοντος χρώμα ἢ χρώμον
ὁ ψόφον πάσχει, ἀλλ’ ὁ χρώμον ἐκείνον λέγεται, ἀλλ’
ἡ τοιοῦτον, καὶ κατὰ τῶν λόγων. αἰσθητήριον δὲ πρῶτον ἐν
25 ὧ τοῖς αἰσθήσεωσις ἐστὶ μὲν οὖν ταῦτον, τὸ δὲ εἶναι ἔτε-
ρον μέγεθος μὲν γὰρ ἢν τι εἶν τὸ αἰσθανόμενον οὐ μὴν τὸ
γε αἰσθητικὸ εἶναι, οὐδ’ ἡ αἰσθήσις μέγεθος ἐστίν, ἀλλὰ λό-
γος τις καὶ δύναμις ἐκείνου. φανερὸν δ’ ἐκ τούτων καὶ διὰ
tὶ ποτὲ τῶν αἰσθητῶν αἱ ὑπερβολαί φθείρουσι τὰ αἰσθητή-
30 ριαί: ἐὰν γὰρ ἡ ἱσχυροτέρα τοῦ αἰσθητηρίου ἡ κίνησις, λέι-
tαι ὁ λόγος, τούτο δ’ ἢν ἡ αἰσθήσις, ὀσπερ καὶ ἡ συμ-
φωνία καὶ τὸ τόνον κρουμένων σφόδρα τῶν χορδῶν. καὶ διὰ
tὶ ποτὲ τὰ φυτὰ οὐκ αἰσθάνεται, ἔχοντα τι μόριον ψυχικὸ-
κὸν καὶ πάσχοντα τι ὑπὸ τῶν ἀπτῶν καὶ γὰρ ψύχεται
424 οὐκ θερμαίνεται αἰτίου γὰρ τὸ μὴ ἔχειν μεσοτήτα, μηδὲ
τοιαύτην ἀρχὴν οἶαν τὰ εἶδον δέχεσθαι τῶν αἰσθητῶν, ἀλλὰ
πάσχεις μετὰ τῆς ύλης. ἀπορῆσει δ’ ἢν τις εἰ πάθων ἢ
τι ὑπὸ ὀμηρὴς τὸ ἀδύνατον ὀσφυραθήμεναι, ἢ ύπὸ χρώματος τὸ
5 μὴ δυνάμενον ἱδεῖν οὕμοιος δὲ καὶ ἐπὶ τῶν ἄλλων. εἰ δὲ
tὸ ὀσφυραθῶν ὀμηρὴ, εἰ τοιοῦτοι, τῇ ὀσφυρησθήν ὡσμῆν τοιεῖ.
ὥστε τῶν ἀδυνάτων ὀσφυραθήμεναι οὐθὲν ὁμοί οἴον τὰ πάσχειν ὑπ’
ὁμηρος’ δ’ αὐτὸς λόγος καὶ ἐπὶ τῶν ἄλλων’ οὐδὲ τῶν δυ-
νατῶν, ἀλλ’ ἡ αἰσθητικὸν ἐκάστου. ἕμα δὲ ἔτηλ οἷον ὁμῶς
The Additional Version.

ántà dýnaméi, óútoi dé kai éptò tòn álloun kai épti tìs áphiès múte thérmoú múte psýxhóu. éti dé ósster toú tò oratòu kai tòu àoratòu òn pòw ò éphí, ómoua dé kai ái állai tòn ánti-35 keiménon, óútoú kai ò áphi tòu áptou kai ánástpouv ánaptòv dé tò te miyaro pámpav échon diaphóran tòn áptov, óou pésoivev o aíúr, kai ái ýperbolai tòn áptov, ósster tò phartrikà. kath' ekásthnu mèn óun aísthentí eúrntai ós én túto éipiein.

Kathódou dé perí pása ò aísthentí déi labhèin òti ò mév aísthentí étstò te dekíkou tòn aísthentów ánnev tìs òlías, òou o khró tòu òakutóu (sic) ánnev tòu sýdhróu kai tòu chrwsou déketai tò sýmeion, lámbróne dé te tò chalhó ò chrw-30 soun sýmion (sic), ál' oúch òtì chrhós ò chrwós. ómías dé 45 kai ò aísthentí ekásth upo tòu échontos chróma ò psófora ò chrwón pása, ál' ouch òtì ékastou ékeínon légetai, ál' òtì toýbde kai káta tòn lógoun. aísthentíriou dé píróton, én ò ò toiaútè dúnamis. étstí mév ouin tò autò, tò dé éinai éte-60 ron múgeboi múev nìr èn tì eútò tò aísthantaménon ou múentoi 50 tò ne aísthentikò einai ò aísthentí megebi óestein évvn einai, ál' ló-55 gys tí kai dúnamis ékeínon. fanevón dé èk touvtou kai dià tì pote tòv aísthentów ál' ýperbolaiýbíroui (sic) tòv aísthentów' èn nìr èk kínousis lêxhrodéra tou aísthentíriou, ùn-85 tei tò lógous, toutò dé èn aísthentís, óstheroai ò sýmfo-60 nía kai ó tòvou sýfódrá kroumémonou tòn chlydów. kai dià tì pote tò phutá ouk aísthántai, échontá tì mórion psýxhi-kón kai pása ùnta úptò tòn áptów kai gàv psýxetai kai thérmeretai (sic) ètov (sic) dé tò mh éxein mesóstíta, mh dé toisiuntí chríhn, ouin tò èidh tòv aísthentów dékésba, ál' ál' dévelop tòs òlías pása. òtopériá dé èn tis, ðra pádoí èn úp' ósmhí tò mh dúnaménon ósphrnthímí, òvúchrwmatos tò mh dúnaménon ìdein' ómoua dé kai èptò tòv állon, eì dé èì ósmhí tò ósphrnthní, eì tì poiex, tìn ósphrēse uoieì ósmh. óste ouèn pása ùnta tòv àdunatów ósphrnthímí. 65

ò dé autòs lógos kai èptò tòn állon ouèn ouè tòn dý-50 vatów, ál' è aísthentikò òkastò. áma dé dèloun kai ou'tòs.
The Ordinary Text.

10 οὔτε γὰρ φῶς καὶ σκότος οὔτε ψόφος οὔτε ὁσμὴ οὐδὲν ποιεῖ τὰ σώματα, ἀλλ’ ἐν οἷς ἐστίν, οἷον ἂν ὁ μετὰ βροντῆς διάστημα τὸ ξύλου. ἀλλὰ τὰ ἀπτὰ καὶ οἱ χυμοὶ ποιοῦσιν οἱ γὰρ μή, ὡς τίνος ἂν πάσχοι τὰ ἄφυχα καὶ ἄλλοστέρος; ἂν οὖν κακείνα ποιήσει; ἡ οὐ πάν σώμα παθητικῶν ὑπ’ ὠσμῆς καὶ ψόφου καὶ τὰ πάσχοντα ἀόριστα, καὶ οὐ μένει, οἷον ἂν οἱ γὰρ ὦσπερ παθῶν τι. τί οὖν ἐστὶ τὸ ὀσμάσθαι παρὰ τὸ πάσχειν τι; ἢ τὸ μὲν ὀσμάσθαι αἰσθάνεσθαι, ὃ δ’ ἂν παθῶν ταχέως αἰσθητὸς γίνεται.
The Additional Version.

οὔτε γὰρ ψόφος οὔτε τὸ φῶς καὶ σκότος οὔτε ἡ ὁσμὴ οὐθέν ποιεῖ
tὰ σώματα, ἀλλ' ἐν οἷς ἔστιν, οἶον ἄηρ ὁ μετὰ τῆς βροτῆς
dιέστησε τὸ ξύλον. ἀλλὰ δὴ τὰ ὕπτα καὶ οἱ χυμοί ποιοῦσιν ἐκ τοῦ
gὰρ μῆ, ὅπω τινός ἄν πάσχω τὰ ἄψυχα ἡ ἀλλοιοῖτο;
ἄρ' οὖν κάκεινα ποιεῖ; ἥ δὲ πάν σῶμα παθητικῶν ὑπ' ὁσμῆς
cαὶ ψόφου καὶ τὰ πάσχοντα ἀόριστα, καὶ οὐ μένει, οἶον
ἄηρ' ὅξει γὰρ ὡς παθῶν τι. τὰ οὖν ἐστὶ τὸ ὀσμᾶσθαι
παρὰ τὸ πάσχειν τι; ἥ τὸ μὲν ὀσμᾶσθαι καὶ αἰσθάνεσθαι, ὅ ἦ
ἄρ' παθῶν τούτο ταχὺ αἰσθητὸς γάρ νεσται.

'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. 24b 10: τῶν δὲ συνταγματικῶν τὰ μὲν εἰσιν αὐτοπρόσωπα ἡ καὶ ἀκροαματικά λέγονται, τὰ δὲ διαλογικά, ἡ καὶ εξωτερικά λέγονται...ἐγραψε δὲ καὶ πρὸς
Διαποικισμός πρὸς φιλοσοφικά τά διαλογικά...κατασκευάζοντά τιν τίν ἄθανασίαν τῆς ψυχῆς καί τοῖς ἀκροαματικοῖς δό ἀναγκαι- 
σικῶν λόγων κατασκεύης, εἴ δέ τοῖς διαλογικοῖς διὰ πιθανοῦ εἰκότως. φησί γὰρ εἰ τοῖς περὶ ψυχῆς ἀκροαματικοῖς ὅτι ἡ ψυχὴ άφθαρτος· εἴ γὰρ ἦν φθαρτή, ἦδει μάλιστα αὐτὴν φθείρεσθαι ὑπὸ τοῦ εἰ τῷ γῇρα ἁμαρτοῦσαι, τότε δέ ἀκράμιζε τοῦ σώματος παρακ- 
μάσαντος· ὅσπερ οὖν παρακμάζει ὅτε τὸ σῶμα ἀκράμιζε· τὸ δέ ὅτε 
δὲ φθείρεσθαι ἀκράμιζον ἀφθαρτον· ἡ ψυχὴ ἄρα ἀφθαρτὸς ἦστι. καὶ οὕτως μὲν εἰ τοῖς ἀκροαματικοῖς· εἴ δὲ τοῖς διαλογικοῖς φησίν 
οὕτως, ὅτι ἡ ψυχὴ ἄθανατος, ἐπειδὴ αὐτοφυὸς πάντες οἱ ἀνθρώποι 
καὶ σπένδομεν χρόνος τοῖς κατοχορέισι καὶ ἁμηνύμεν κατά αὐτῶν, 
οὐδεὶς δὲ τῷ μηδαμῷ μηδαμώς οὕτως σπένδει τοτε ἡ ὅμωςι κατ' 
αὐτοῦ· ὁ δὲ Ἀλεξανδρὸς ἀλλην διαφοράν λέγει τῶν ἀκροαματικῶν 
πρὸς τὰ διαλογικά, ὅτι εἰ μὲν τοῖς ἀκροαματικοῖς τὰ δοκοῦντα 
αὐτῷ λέγει καὶ τὰ ἁληθῆ, εἰ δὲ τοῖς διαλογικοῖς τὰ ἄλλοις 
δοκοῦντα τὰ ψευδα...τούτο δὲ εἶπεν Ἀλεξανδρὸς ἐπειδή τῆς λο- 
γικῆς ψυχῆς βουλεύεται φθαρτῆν εἶναι, ὁ δὲ Ἀριστοτέλης ἐν τοῖς 
διαλογικοῖς μάλιστα δοκεῖ κηρύττει τῆς ἄθανασίας τῆς ψυχῆς. 
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...ύπνων μὴ σχέτων ἄνακοντα τὸν Ἀριστοτέλην, διὰ τούτου εἶπὲ 
τοιαύτην διαφοράν.

Themist. de Anima (Opp. ed. Venet. 1534, f. 90, t. II. p. 196, 
21, Spengel): καὶ οἱ λόγοι δὲ οὗ ἡρώτησε (Plato in the Phaedo) 
περὶ ψυχῆς ἄθανασίας εἰς τὸν νοῦν ἀνάγονται σχεδὸν τι οἱ πλει- 
στοι καὶ ἐμβριθέατοι, ὁ τε ἐκ τῆς αὐτοκρισίας· εἶχεβάθη γὰρ ὃς 
αὐτοκίνητος μόνος οἱ οὐ, εἰ τὴν κίνησιν αὐτὶ τῆς ἑνεργείας νοσ- 
ημεν· καὶ ὁ τός μαθησης αὖ νομίσης εἶναι λαμβάνων καὶ ὃ τὴν 
πρὸς τὸν θεὸν ἀρμυστῆτα. καὶ τῶν ἄλλων δὲ τούς ἀξιοπιστοτέρους 
δοκοῦντας οὐ χαλέπως ἀν τῆς νον προσβιβάσειιν. ὅσπερ γε 
καὶ τῶν υπ’ Ἀριστοτέλους ἐξεργασμένων εἰς τὴν Εὐδομήρ. εἰ 
ἂν ὃς ἄν διόλον ὁτι καὶ Πλάτων τον νοον ἄθανατον μονον υπολαμβάνει. 

3. Proclus in Plat. Tim. v. p. 338d (p. 823 Schn.): τὴν 
ψυχὴν τῷ σώματι συνῆψεν ἀμέσως πάντα τὰ περὶ καθόδου ψυχῆς 
ὑπεκτείνων προβλήματα...ἀλλ’ οὐδὲ τὰ μετὰ τὴν ἔξοδον αὐτῆς ἐν 
τούτοις παραδώσει· ὅτι φήσω τὸ πρέπον διασώζει τῇ τοῦ δια- 
λόγου προβάλει καὶ τῆς περὶ ψυχῆς θεωρίας ὅσον φυσικῶν ἐν 
τούτοις παραλαμβάνει τὴν πρός τὸ σώμα τῆς ψυχῆς ὁμίλιαν 
παραδόουν. ὃ δὲ καὶ Ἀριστοτέλης ξηλώσας ἐν τῇ περὶ ψυχῆς 
πραγματεία φυσικῶς αὐτὴν μεταχειρίζομενος οὖν περὶ καθόδου
ARISTOTLE'S DIALOGUE EUDEMUS.

ψυχῆς οὕτε περὶ λήξεων ἐμυημόνευσεν, ἀλλ’ ἐν τοῖς διαλόγοις χωρὶς ἐπραγματεύσατο περὶ αὐτῶν καὶ τὸν προηγούμενον κατεβάλλετο λόγον.


5. Augustinus contra Julianum Pelag. 4 (15) 78: Quanto ergo te melius veritatique viciniius 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 aerumnis fit ut interdum veteres illi sive vates sive in sacris initiisque tradendis divinæ mentis interpretes, qui nos ob aliquia sclera suscepta in vita superiore poenarum luendarum causa natos esse dixerunt, aliqud vidisse videantur verumque sit illud quod est apud Aristotelem, simili nos affectos esse supplicio atque eos qui quondam cum in praedonum Etruscorum manus incidunt, 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 eiusdem locum, p. 203: εἰ ἐνετάδα ἱστορήσει Ἀριστοτέλης ἀνθρώπων αὐτῶν καὶ μόνῳ τῷ ἡλικιαῖὲν τρεφόμενον ἀέρι, τὶ χρῆ περὶ τῶν ἐκεί οἷσθαι;

7. Plutarch. qu. conv. 8, 9, 3: τὴν δὲ Τίμωνος ἐν Κιλικία
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βαζάσθη τά λέγειν ὃ ὑμῖν ἢρειν μὴ γνώναι; μετ' ἀγνοίας γὰρ τῶν οἰκείων κακῶν ἀλυσότατος ὁ βίος. ἀνθρώπως δὲ πάμηταν οὐκ ἐστὶ γενέσθαι τὸ πάντων ἢριστῶν οὐδὲ μετασχεῖν τὴς τοῦ βελτίστου φόσεως· ἢριστὸν ἢρὰ πᾶσι καὶ πάσαι τῷ μὴ γενέσθαι· τὸ μέντοι μετὰ τοῦτο καὶ τὸ πρῶτον τῶν ἀλλῶν ἀνυστίν, δεύτερον δὲ, τὸ γενομένους ἀποθανεῖν ὡς τάχιστα. δὴ λόγον οὐν ὡς οὕσης κρείττονος τῆς ἐν τῷ τεθνάναι διαγωγῆς τῇ ὧν οὕτως ἀπεφήνατο.

10. Io. Philoponus in Ar. de An. 1 (c. 4 in.) ed. Ven. 1535, f. E. 1° sup.: μεμψάμενος ὁ Ἀριστοτέλης κοινὸς τοὺς περὶ ψυχῆς ἀπαντᾶς εἰσόντας ὃτι μηδὲν περὶ τοῦ δεξιομένου αὐτὴν σώματος διελέχθησαν...οἰκεῖοι ἀκόλουθοι τούτοις περὶ ψυχῆς δοῦσιν συν-ἀπτει. εἰς ταῦτα γὰρ τινος ἀποβλέψαντες ὃτι οὐχ ὃς ἐτυχε τὸ σῶμα ψυχῆς μετέχει, ἀλλὰ δεὶ τοιαῦτα κράσεως, ὥσπερ καὶ ἡ ἀρμονία οὐχ ὃς ἐτυχε τῶν χορδῶν ἡχοῦσιν γίνεται, ἀλλὰ δεὶ τοσοῦτον τάσεως, ἐνδυμασάν καὶ τὴν ψυχὴν ἀρµονίαν εἶναι τὸ σῶματος καὶ πρῶς τοὺς διαφόρους τοῦ σώματος ἀρµονίας τὰ διάφορα εἰδή τῶν ψυχῶν εἶναι. ταύτην οὖν ἐκτίθεται τῇ δόξαι καὶ διελέχχει. καὶ τέως μὲν αὐτὴν τὴν δόξαι μόνην εἰς τοὺς Ἰστορεῖ, μετ' ὀλγά δὲ καὶ τῶς λέγους δὲ όν εἰς ταύτης ἐκεῖνοι τῷ δόξαι ὑπήχθησαν τίθην. ἦδη δὲ καὶ ἐν ἄλλοις πρὸς ταύτην ἀντεπεν ἔν δόξαι, λέγω δη ἐν τῷ Ἐυδήμῳ διαλόγῳ, καὶ πρὸ αὐτοῦ τὸ Πλάτων ἐν τῷ Φαιδρῷ πέντε τιαν κέχρηται ἐπιχειρήσει πρὸς ταύτην ἐπιστάμενος τὴν δόξαι...(f. E. 1°) αὐτὰ μὲν οὖν αἱ πέντε ἐπιχειρήσεις αἱ Πλάτωνοι. κέχρηται δὲ καὶ αὐτοῖς ὁ Ἀριστο- τέλης ὡς ἦδη ἐπον ἐν τῷ Ἐυδήμῳ τῷ διαλόγῳ δύο ἐπιχειρή- σεις ταύταις, μὲν μὲν οὕσος τῇ ἀρµονίᾳ, φησὶν, ἔστι τῷ ἐναντίῳ ἡ ἀναρμοστία· τῇ δὲ ψυχῇ οὐδὲν ἐναντίον. οὐκ ἢρὰ ἡ ψυχὴ ἀρµονία εἶναι. εἶτο δὲ ν τῷ πρὸς τοῦτο (aít Alexander) ὅτι τῇ ἀρµονίᾳ ἐναντίῳ οὐκ ἐστὶ κυρίως ἐναντίῳ ἀλλὰ στέ- ρησις ἀόριστος· καὶ τῇ ψυχῇ δ' ὡς εἶδε τοιαὶ οὕση ἔστι ταῖς ἀντί- κείμενοι ἀριστῶν, καὶ ὥσπερ ἐκεῖ φαμέν τὴν τοιαῦτα ἀρµονίαι μεταβάλλειν εἰς τὴν ἀναρμοστίαν, οὔτω καὶ τῇ τοιαῦτα στέρησις μεταβάλλειν εἰς ψυχὴν· δευτέρα δὲ τῇ ἀρµονίᾳ, φησὶ, τοῦ σώ- ματος ἐναντίον ἐστὶν ἡ ἀναρμοστία του σώματος, ἀναρμοστία δὲ τοῦ ἑμψύχου σώματος νόσος καὶ ἀσθένεια καὶ αἴσχος· ὧν τὸ μὲν ἀνυμετρία τῶν στοιχείων ἡ νόσος, τὸ δὲ τῶν ῥυμομερῶν ἡ ἀσθένεια, τὸ δὲ τῶν ῥυγακῶν τὸ αἴσχος. εἰ τοῖς ἡ ἀναρμοστία νόσος καὶ ἀσθένεια, καὶ αἴσχος, ἡ ἀρµονία ἢρα ὑγίεια καὶ ἰσχύς καὶ
κάλλος. ψυχή δὲ οὐδέν ἐστὶ τούτων οὐτὲ ὑγεία φημὶ οὐτὲ ἰσχύς οὐτὲ κάλλος· ψυχήν γὰρ εἴχε καὶ οἱ Θερσίτης αἰχμαλωτὸς ὄν· οὐκ ἁρὰ ἐστὶν ἡ ψυχή ἀρμονία. καὶ ταῦτα μὲν ἐν ἐκείνοις. ἐνταῦθα δὲ τέσσαρες κέχρηται ἐπιχειρήσεωι ἀνασκευαστικαί τῆς δόξης ταύτης, ὅπο τὸ πρῶτον ἐστὶ τὸ εἰρημένον ἐν τῷ Ἑυδήμῳ δεύτερον... (f. E. 2o), "ἀρμόζει δὲ μᾶλλον καθ' ὑγείας λέγειν ἀρμονίαν καὶ ὅλος τῶν σωματικῶν ὅρετῶν ἡ κατὰ ψυχῆς": τούτῳ τρίτον ἐπιχειρήσεωι ἐστὶ δὲ τὸ δεύτερον τῶν ἐν τῷ Ἑυδήμῳ. ὁτι δὲ ἀρμονία ἡ ὑγεία ἐδειχθὲν ἐν ἐκείνοις ἐκ τοῦ ἑναντίου τῆς νόσου. εἴπομεν δὲ ἀνωτέρω τῆν ἀγωγὴν τοῦ συλλογισμοῦ.


Themistius de An. f. 70ο (t. II. p. 54, 3 Speng.): καὶ ἀλλὰ δὲ τις δόξα παραδέδοται πρὶς ψυχῆς πιθανῇ μὲν οὐδεμιᾶς ἱσοῦν τῶν λεγομένων, δεδωκέντα δὲ εὐθύνας καὶ ἐξητασμένη καὶ ἐν τοῖς κοινοῖς λόγοις καὶ ἐν τοῖς ἱδίοις. λέγον τις τινες αὐτὴν ἀρμονίαν· καὶ γαρ τὴν ἀρμονίαν κράσιν καὶ σύνθεσιν τῶν ἑναντίων εἶναι καὶ τὸ σώμα συγκείσθαι εὐ ἑναντίων. τὸν οὖν τάναντια ταῦτα εἰς συμφωνίαν ἀγονισταν καὶ ἀρμόζονταν, θερμὰ λέγοι καὶ ψυχραὶ καὶ ὑγρὰ καὶ ἕρατα καὶ σκληρὰ καὶ μαλακά καὶ ὁσαι ἀλλαὶ ἑναντίωσεις τῶν πρῶτων συμμάτων, οὐδὲν ἄλλο εἶναι ἡ τῆς ψυχῆς, ὄστηρ καὶ ἡ τῶν φθόγγον ἀρμονία τὸ βαρὺ καὶ τὸ ἐξ συναρμολογεῖ. πιθανότητα μὲν οὖν ὁ λόγος ἔχει, διελθεῖγκαται δὲ πολλαχῇ καὶ ὑπ' ᾽Αριστοτέλεος καὶ ὑπὸ Πλάτωνος. καὶ γὰρ ὅτι τὸ μὲν πρῶτον τοῦ σώματος, τούτεστιν ἡ ψυχή, ἀρμονία δὲ Ͻστερον· καὶ ὅτι τὸ μὲν ἄρχει καὶ ἐπιστατεῖ τὸ σώματι καὶ μάχεται πολλάκις, ἀρμονία δὲ οὖ καὶ οὐ χεται τοῖς ἱμμοσμένοις· καὶ ὅτι τὸ μᾶλλον καὶ ἧττον ἀρμονίαν μὲν δέχεται, ψυχή δὲ οὖ. καὶ ὁ ἀρμονία μὲν σωζομένη οὐ προσίεται ἀναρμοστίαν, ψυχή δὲ κακοὶ προσίεται· καὶ ὅτι εἰτερ τοῦ σώματος ἡ ἀναρμοστία νόσως ἐστίν ἡ αἰσχος ἡ ἀπάθεια, ἡ ἀρμονία τοῦ σώματος κάλλος ἀν εἰς καὶ ὑγεία καὶ δύναμις ἄλλα οὐ ψυχή, ταῦτα μὲν ἂν πάντα εἰρήτατι ὑπὸ τῶν φιλοσόφων ἐν ἄλλοις· ὃ δὲ τῶν ᾽Αριστοτέλης φησὶ τοιαύτα ἐστιν... ὅτι μὲν οὖν οἱ λέγουτες ἀρμονίαν τὴν ψυχὴν οὐτὲ ἐνεχῦς ἀγαν οὐτε πόροι τῆς ἀληθείας βάλλειν ἀν δόξειαν, καὶ ἐκ τῶν νῦν εἰρημένων καὶ ἐκ τῶν ἐν ἄλλοις δηλόν ἐστιν.

11. Simplic. in Ar. de An. I. III. f. 62<sup>α</sup> inf. Hayduck, p. 221: ὁ μὲν οὖν Πλάτων καὶ ἐπὶ πάντων εἰσεβεν ὄρμωνύμως τὰ τε εἰδὴ καὶ τὰ κατ' αὐτὰ εἰδοποιοῦμενα προσαγορεῖν. ὁ δὲ Ἀριστοτέλης ὅταν μὲν μεριστὸν τὸ εἰδοποιούμενον ἐκ, φυλάττεται τὴν ὄρμωνύμαν διὰ τὴν πολλὴν τοῦ μεριστοῦ πρὸς τὸ εἶδος ἀμέριστον ἂν ἀπόστασις τὴν δὲ λογικὴν ψυχὴν ὡς μὴ μόνον ὑρίζομενη ἀλλὰ καὶ ὅνον ὀσῶν ἐντὸς ἀλλ᾽ ἀμφότερον ἐμφαίνουσα, τὸ μὲν ὡς ἀνελπτόμενη, τὸ δὲ διὰ τὴν αἰὲ κατὰ ὅρους μετάβασιν καὶ διὰ τὴν τῶν ἀνελπτόμενων πάντων εἰς ἐν συναγωγὴν ὡς παρασυναγωγή τοῦ ὄριζοντι νῦ. καὶ διὰ τούτου καὶ ἐν τῷ Εὐδήμῳ τὸ περὶ ψυχῆς αὐτοῦ γεγραμμένῳ διαλόγῳ εἴδος τι ἀποφαίνεται τὴν ψυχὴν εἶναι, καὶ ἐν τούτῳ ἔπαινε τοὺς τῶν εἰδῶν δεικτικῶν λέγοντας τὴν ψυχὴν, οὐχ ὢν ἀλλὰ τὴν νοητικὴν ὡς τῶν ἀληθῶν δευτέρως εἰδῶν γνωστικῆν τῷ γὰρ τῆς ψυχῆς κρείττουν νῦ τὸ ἀληθῆ εἰδὴ σύστοιχα.

12. Plutarchus de Musica, c. 22: δεδειγμένου δὲ ὁ ὁΠλάτων οὗτ' ἀγροία οὗτ' ἀπειρία τὰ ἄλλα παρηθήσατο ἄλλ' ὡς οἱ πρέποντα τοιαύτη ποιοτεία δείξομεν ἐξῆς ὧτι ἔμπειροι ἀρμονίας ἤν, ἐν γοῦν τῇ ψυχογονίᾳ τῇ ἐν τῷ Τιμαιῷ... (c. 23) ὥστι δὲ σειμὴ ἡ ἀρμονία καὶ θείου τι καὶ μέγα, Ἀριστοτέλης ὁ Πλάτωνος ταύτι λέγει "(CG) δὲ ἀρμονία ἐστὶν οὐρανία τὴν φύσιν ἔχουσα θείας καὶ καλῆς καὶ δαιμονίας τετραμερῆς δὲ τῇ δυνάμει πεθυματικῶν δύο μεσοτήτας ἔχει ἀρμοδικήν τε καὶ ἀρμονίκην, φαίνεται τὰς τὸ μέρος αὐτῆς καὶ τὰ μεγέθη καὶ αἱ ὑπεροχαὶ κατ' ἀριθμὸν καὶ ἰσομετρικὰ ἐν γὰρ δυσὶ 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.]

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