

that approaches had been made to such a doctrine, and Diogenes of Apollonia in particular was led to oppose Anaxagoras, who distinguished Nous or Thought from every other agent within the cosmos which is its work, by postulating as his first principle something which should be at once physical substratum and thinking being. But until dualism had been thought out, as in the Peripatetic school, it was impossible that monism (or at any rate materialistic monism) should be definitely and consciously maintained. One thing is certain: the Stoics provided no loophole of escape by entrenching upon the "purely material" nature of matter; they laid down with rigid accuracy its two chief properties,—extension in three dimensions, and resistance, both being traced back to force. There were, it is true, certain inconsistent conceptions, creations of thought to which nothing real and external corresponded, namely, time, space, void, and the idea expressed in language (*λεκτόν*). But this inconsistency was covered by another: though each of these might be said to be something, they could not be said to exist.

The distinction of force and matter is then something transitory and relative. Its history will serve as a sketch of the cosmogony of the Stoics, for they too, like earlier philosophers, have their "fairy tale of science." Before there was heaven or earth, there was primitive substance or Pneuma, the everlasting presupposition of particular things. This is the totality of all existence; out of it the whole visible universe proceeds, hereafter to be again resolved into it. Not the less is it the creative force, or deity, which develops and shapes this universal order or cosmos. To the question, What is God? Stoicism rejoins, What is God not? In this original state of Pneuma God and the world are absolutely identical. But even then tension, the essential attribute of matter, is at work. Though the force working everywhere is one, there are diversities of its operation, corresponding to various degrees of tension. In this primitive Pneuma there must reside the utmost tension and heat; for it is a fact of observation that most bodies expand when heated, whence we infer that there is a pressure in heat, an expansive and dispersive tendency. The Pneuma cannot long withstand this intense pressure. Motion backwards and forwards once set up goes to cool the glowing mass of fiery vapour and to weaken the tension. Hereupon follows the first differentiation of primitive substance,—the separation of force from matter, the emanation of the world from God. The germinal world-making powers (*σπερματικοί λόγοι*), which, in virtue of its tension, alumbered in Pneuma, now proceed upon their creative task. The primitive substance, be it remembered, is not Heraclitus's fire (though Cleanthes also called it flame of fire, *φλόξ*) any more than it is the air or "breath" of Anaximenes or Diogenes of Apollonia. Chrysippus determined it, following Zeno, to be fiery breath or ether, a spiritualized sublimed intermediate element. The cycle of its transformations and successive condensations constitutes the life of the universe, the mode of existence proper to finite and particular being. For the universe and all its parts are only different embodiments and stages in that metamorphosis of primitive being which Heraclitus had called a progress up and down (*ὁδὸς ἀνακάτω*). Out of it is separated, first, elemental fire, the fire which we know, which burns and destroys; and this, again, condenses into air or aerial vapour; a further step in the downward path derives water and earth from the solidification of air. At every stage the degree of tension requisite for existence is slackened, and the resulting element approaches more and more to "inert" matter. But, just as one element does not wholly pass over into another (*e.g.*, only a part of air is transmuted into water or earth), so the Pneuma itself does not wholly pass over into the elements. The residue that remains in original purity with its tension yet undiminished is the ether in the highest sphere of the visible heavens, encircling the world of which it is lord and head. From the elements the one substance is transformed into the multitude of individual things in the orderly universe, which again is itself a living thing or being, and the Pneuma pervading it, and conditioning life and growth everywhere, is its soul. But this process of differentiation is not eternal; it continues only until the times of the restoration of all things. For the world which has grown up will in turn decay. The tension which has been relaxed will again be tightened; there will be a gradual resolution of things into elements, and of elements into the primary substance, to be consummated in a general conflagration when once more the world will be absorbed in God. Then in due order a new cycle of development begins, reproducing the last in every minutest detail, and so on forever.

The doctrine of Pneuma, vital breath or "spirit," arose in the medical schools. The simplest reflexion among savages and half-

civilized men connects vitality with the air inhaled in respiration; the disciples of Hippocrates, without much modifying this primitive belief, explained the maintenance of vital warmth to be the function of the breath within the organism. In the time of Alexander the Great Praxagoras discovered the distinction between the arteries and the veins. Now in the corpse the former are empty; hence in the light of these preconceptions they were declared to be vessels for conveying Pneuma to the different parts of the body. A generation afterwards Erasistratus made this the basis of a new theory of diseases and their treatment. Vital spirit, inhaled from the outside air, rushes through the arteries till it reaches the various centres, especially the brain and the heart, and there causes thought and organic movement. But long before this the peculiar character of air had been recognized as something intermediate to the corporeal and the incorporeal: when Diogenes of Apollonia revived the old Ionian hylozoism in opposition to the dualism of Anaxagoras, he made this, the typical example of matter in the gaseous state, his one element. In Stoicism, for the moment, the two conceptions are united, soon, however, to diverge,—the medical conception to receive its final development under Galen, while the philosophical conception, passing over to Philo and others, was shaped and modified at Alexandria under the influence of Judaism, whence it played a great part in the developments of Jewish and Christian theology.

The influence upon Stoicism of Heraclitus has been differently conceived. Siebeck would reduce it within very small dimensions, to Heraclitus but this is not borne out by the concise history found at Heraclitus (*Index Herc.*, ed. Compagetti, col. 4 sq.). They substituted primitive Pneuma for his primitive fire, but so far as they are hylozoists at all they stand upon the same ground with him. Moreover, the commentaries of Cleanthes, Aristo, and Sphaerus on Heraclitean writings (*Diog. L.*, vii. 174, ix. 5, 15) point to common study of these writings under Zeno. Others again (*e.g.*, Lassalle) represent the Stoics as merely diluting and distorting Heracliteism. But this is altogether wrong, and the proofs offered, when rightly sifted, are often seen to rest upon the distortion of Heraclitean doctrine in the reports of later writers, to assimilate it to the better known but essentially distinct innovations of the Stoics. In Heraclitus the constant flux is a metaphysical notion replaced by the interchange of material elements which Chrysippus stated as a simple proposition of physics. Heraclitus offers no analogy to the doctrine of four (not three) elements as different grades of tension; to the conception of fire and air as the "form," in Aristotelian terminology, of particulars; nor to the function of organizing fire which works by methodic plan to produce and preserve the world (*πῦρ τεχνικὸν ὁδῶν βαβίλον ἐπὶ γένεσιν κόσμου*). Nor, again, is there any analogy to the peculiar Stoic doctrine of universal intermingling (*κρίσις δι' ἅλου*). The two active elements interpenetrate the two lower or more relaxed, winding through all parts of matter and so pervading the greater masses that there is no mechanical mixture, nor yet a chemical combination, since both "force" and "matter" retain their relative characters as before. Even the distinction between "force" and "matter"—so alien to the spirit of Heraclitus—is seen to be a necessary consequence. Once assume that every character and property of a particular thing is determined solely by the tension in it of a current of Pneuma, and (since that which causes currents in the thing cannot be absolutely the same with the thing itself) Pneuma, though present in all things, must be asserted to vary indefinitely in quantity and intensity. So condensed and coarsened is the indwelling air-current of inorganic bodies that no trace of elasticity or life remains; it cannot even afford them the power of motion; all it can do is to hold them together (*συνεκτικὴ δύναμις*), and, in technical language, Pneuma is present in stone or metal as a retaining principle (*ἔχεις*—hold), explaining the attributes of continuity and numerical identity (*συνεχῆ καὶ ἰσομέτρητα*) which even these natural substances possess. In plants again and all the vegetable kingdom it is manifest as something far purer and possessing greater tension, called a "nature," or principle of growth (*φύσις*). Further, a distinction was drawn between irrational animals, or the brute creation, and the rational, *i.e.*, gods and men, leaving room for a divergence, or rather development, of Stoic opinion. The older authorities conceded a vital principle, but denied a soul, to the brutes: animals, they say, are ζῆα but not ἐμψυχα. Later on much evidence goes to show that (by a divergence from the orthodox standard perhaps due to Platonic influence) it was a Stoic tenet to concede a soul, though not a rational soul, throughout the animal kingdom. To this higher manifestation of Pneuma can be traced back the "esprits animaux" of Descartes and Leibnitz, which continue to play so great a part even in Locke. The universal presence of Pneuma was confirmed by observation. A certain warmth, akin to the vital heat of organic being, seems to be found in inorganic nature: vapours from the earth, hot springs, sparks from the flint, were claimed as the last remnant of Pneuma not yet utterly slackened and cold. They appeared also to the velocity and dilatation of aeriform bodies, to whirlwinds and inflated balloons. The Logos is quick and powerful, and sharper than any two-edged sword, piercing even to the

dividing asunder of the joints and marrow. Tension itself Cleanthes defined as a fiery flash (*πληγὴ πυρός*). Take the fundamental properties of body—extension and resistance. The former results from distance; but distances, or dimensions, are straight lines, *i.e.*, lines of greatest tension (*εἰς ἄκρον τεταμένη*). Tension produces dilatation, or increase in distance. Resistance, again, is explained by cohesion, which implies binding force. Again, the primary substance has rectilinear motion in two directions, backwards and forwards, at once a condensation, which produces cohesion and substance, and a dilatation, the cause of extension and qualities. How near this comes to the scientific truth of attraction and repulsion need hardly be noted. From the astronomers the Stoics borrowed their picture of the universe,—a *plenum* in the form of a series of layers or concentric rings, first the elements, then the planetary and stellar spheres, massed round the earth as centre,—a picture which dominated the imagination of men from the days of Eudoxus down to those of Dante or even Copernicus. As to the physical constitution of bodies, they were content to reproduce the Peripatetic doctrine with slight modifications in detail, of hardly any importance when compared with the change of spirit in the doctrine taught. But they rarely prosecuted researches in physics or astronomy, and the newly created sciences of biology and comparative anatomy received no adequate recognition from them.

If, however, in the science of nature the Stoics can lay claim to no striking originality, the case is different when we come to the science of man. In the rational creatures—man and the gods—Pneuma is manifested in a high degree of purity and intensity as an emanation from the world-soul, itself an emanation from the primary substance of purest ether,—a spark of the celestial fire, or, more accurately, fiery breath, which is a mean between fire and air, characterized by vital warmth more than by dryness. The physical basis of Stoic psychology deserves the closest attention. On the one hand, soul is corporeal, else it would have no real existence, would be incapable of extension in three dimensions (and therefore of equable diffusion all over the body), incapable of holding the body together, as the Stoics contended that it does, herein presenting a sharp contrast to the Epicurean tenet that it is the body which confines and shelters the light vagrant atoms of soul. On the other hand, this corporeal thing is veritably and identically reason, mind, and ruling principle (*λόγος, νοῦς, ἡγεμονικόν*); in virtue of its divine origin Cleanthes can say to Zeus, "We too are thy offspring," and a Seneca can calmly insist that, if man and God are not on perfect equality, the superiority rests rather on our side. What God is for the world that the soul is for man. The Cosmos must be conceived as a single whole, its variety being referred to varying stages of condensation in Pneuma. So, too, the human soul must possess absolute simplicity, its varying functions being conditioned by the degrees or species of its tension. It follows that of "parts" of the soul, as previous thinkers imagined, there can be no question; all that can consistently be maintained is that from the centre of the body—the heart—seven distinct air-currents are discharged to various organs, which are so many modes of the one soul's activity.¹ The ethical consequences of this position will be seen at a later stage. With this psychology is intimately connected the Stoic theory of knowledge. From the unity of soul it follows that all psychical processes,—sensation, assent, impulse,—proceed from reason, the ruling part; that is to say, there is no strife or division: the one rational soul alone has sensations, assents to judgments, is impelled towards objects of desire just as much as it thinks or reasons. Not that all these powers at once reach full maturity. The soul at first is void of content; in the embryo it has not developed beyond the nutritive principle of a plant (*φύσις*): at birth the "ruling part" is a blank tablet,

¹ These derivative powers include the five senses, speech, and the reproductive faculty, and they bear to the soul the relation of qualities to a substance. The ingenious essay of Mr R. D. Archer Hind on the Platonic psychology (*Jour. of Phil.*, vol. x. p. 120) aims at establishing a parallel unification on the spiritualistic side; *comp. Rep.*, x. 612 A.

although ready prepared to receive writing. This excludes all possibility of innate ideas or any faculty akin to intuitive reason. The source of all our knowledge is experience and discursive thought, which manipulates the materials of sense. Our ideas are copied from stored-up sensations. No other theory was possible upon the foundation of the Stoic physics.

Note the parallel between the macrocosm and the microcosm. The soul of the world fills and penetrates it: in like manner, the human soul pervades and breathes through all the body, informing and guiding it, stamping the man with his essential character or rational. There is in both alike a ruling part, though this is situated in the human heart at the centre,—not in the brain, as the analogy of the celestial ether would suggest. Finally, the same cause, a relaxation of tension, accounts for sleep, decay, and death of man and for the dissolution of the world; after death the disembodied soul can only maintain its separate existence, even for a limited time, by mounting to that region of the universe which is akin to its nature. It was a moot point whether all souls so survive, as Cleanthes thought, or the souls of the wise and good alone, which was the opinion of Chrysippus; in any case, sooner or later individual souls are merged in the soul of the universe, from which they proceeded. The relation of the soul of the universe to God is quite clear: it is an inherent property, a mode of His activity, an effluence or emanation from the fiery ether which surrounds the universe, penetrating and permeating it. A Stoic might consistently maintain that World-Soul, Providence, Destiny, and Germinal Reason are not mere synonyms, for they express different aspects of God, different relations of God to things. We find ourselves on the verge of a system of abstractions, or "attributes turned into entities," as barren as any excogitated in mediæval times. In a certain sense, Scholasticism began with Chrysippus. To postulate different substances as underlying the different forces of nature would have been to surrender the fundamental thought of the system. What really is—the Pneuma—neither increases nor diminishes; but its modes of working, its different currents, can be conveniently distinguished and enumerated as evidence of so many distinct attributes.

One inevitable consequence of materialism is that subject and object can no longer be regarded as one in the act of perception, as Plato and Aristotle tended to assume, however imperfectly the assumption was carried out. The presumption of some merely external connexion, as between any other two corporeal things, is alone admissible, and some form of the representative hypothesis is most easily called in to account for perception. The Stoics explained it as a transmission of the perceived quality of the object, by means of the sense organ, into the percipient's mind, the quality transmitted appearing as a disturbance or impression upon the corporeal surface of that "thinking thing," the soul. Sight is taken as the typical sense. A conical pencil of rays diverges from the pupil of the eye, so that its base covers the object seen. In sensation a presentation is conveyed, by an air-current, from the sense organ, here the eye, to the mind, *i.e.*, the soul's "ruling part" in the breast; the presentation, besides attesting its own existence, gives further information of its object,—visible colour or size, or whatever be the quality in the thing seen. That Zeno and Cleanthes crudely compared this presentation to the impression which a seal bears upon wax, with protuberances and indentations, while Chrysippus more prudently determined it vaguely as an occult modification or "mode" of mind, is an interesting but not intrinsically important detail. But the mind is no mere passive recipient of impressions from without, in the view of the Stoics. Their analysis of sensation supposes it to react, by a variation in tension, against the current from the sense-organ; and this is the mind's assent or dissent, which is inseparable from the sense presentation. The contents of experience are not all alike true or valid: hallucination is possible; here the Stoics join issue with Epicurus. It is necessary, therefore, that assent should not be given indiscriminately; we must determine a criterion of truth, a special formal test whereby reason may recognize the merely plausible and hold fast the true. In an earlier age such an inquiry would have seemed superfluous. To Plato and Aristotle the nature and operation of thought and reason constitute a sufficient criterion. Since their day not only had the opposition between sense and reason broken down, but the reasoned scepticism of Pyrrho and Arcesilaus had made the impossibility of attaining truth the primary condition of wellbeing. Yet the standard which ultimately found acceptance in the Stoic school was not put forward, in that form, by its founder. Zeno, we have reason to believe, adopted the Cynic Logos for his guidance to truth as well as to morality. As a disciple of the Cynics he must have started with a theory of knowledge somewhat like that developed in the third part of Plato's *Theætetus* (201 C sq.),—that simple ideas are given by sense, whereas "opinion," which is a complex of simple ideas, only becomes knowledge when joined with Logos. We may

further suppose that the more obvious of Plato's objections had led to the correction of "reason" into "right reason." However that may be, it is certain from Aristotle (*Nic. Eth.*, vi. 13, 1144b, 17) that virtue was defined as a "habit" in accordance with right reason, and (Diog. Laer., vii. 54) from that the earlier Stoics made right reason the standard of truth. The law which regulates our action is thus the ultimate criterion of what we know,—practical knowledge being understood to be of paramount importance. But his criterion was open to the persistent attacks of Epicureans and Academics, who made clear (1) that reason is dependent upon, if not derived from, sense, and (2) that the utterances of reason lack consistency. Chrysippus, therefore, conceded something to his opponents when he substituted for the Logos the new standards of sensation (*αἰσθησις*) and general conception (*πρόληψις*—anticipation, *i.e.*, the generic type formed in the mind unconsciously and spontaneously). At the same time he was more clearly defining and safeguarding his predecessors' position. For reason is consistent in the general conceptions wherein all men agree, because in all alike they are of spontaneous growth. Nor was the term sensation sufficiently definite. The same Chrysippus fixed upon a certain characteristic of true presentations, which he denoted by the much disputed term "apprehensive" (*καταληπτικὴ φαντασία*). Provided the sense organ and the mind be healthy, provided an external object be really seen or heard, the presentation, in virtue of its clearness and distinctness, has the power to extort the assent which it always lies in our power to give or to withhold.

Formerly this technical phrase was explained to mean "the perception which irresistibly compels the subject to assent to it as true." But this, though apparently supported by Sextus Empiricus (*Adv. Math.*, vii. 257), is quite erroneous; for the presentation is called *καταληπτόν*, as well as *καταληπτικὴ φαντασία*, so that beyond all doubt it is something which the perceptive subject grasps, and not that which grasps or "lays hold of" the perceptive. Nor, again, is it wholly satisfactory to explain *καταληπτικὴ* as virtually passive, "apprehensible," like its opposite *ἀκατάληπτος*; for we find *ἀνταληπτικὴ τῶν ὑποκειμένων* used as an alternative phrase (*ib.*, vii. 248). It would seem that the perception intended to constitute the standard of truth is one which, by producing a mental counterpart of a really existent external thing, enables the perceptive, in the very act of sense, to "lay hold of" or apprehend an object in virtue of the presentation or sense impression of it excited in his own mind. The reality of the external object is a necessary condition, to exclude hallucinations of the senses; the exact correspondence between the external object and the internal precept is also necessary, but naturally hard to secure, for how can we compare the two? The external object is known only in perception. However, the younger Stoics endeavoured to meet the assaults of their persistent critic Carneades by suggesting various modes of testing a single presentation, to see whether it were consistent with others, especially such as occurred in groups, &c.; indeed, some went so far as to add to the definition "coming from a real object and exactly corresponding with it" the clause "provided it encounter no obstacle."

The same criterion was available for knowledge derived more directly from the intellect. Like all materialists, the Stoics can only distinguish the sensible from the intelligible as thinking when the external object is present (*αἰσθάνεσθαι*) and thinking when it is absent (*ἐννοεῖν*). The product of the latter kind includes memory (though this is, upon a strict analysis, something intermediate) and conceptions or general notions, under which were confusedly classed the products of the imaginative faculty. The work of the mind is seen first in "assent"; if to a true presentation the result is "simple apprehension" (*κατάληψις*: this stands in close relation to the *καταληπτικὴ φαντασία*, of which it is the necessary complement); if to a false or unapprehensive presentation, the result is "opinion" (*δόξα*), always deprecated as akin to error and ignorance, unworthy of a wise man. These processes are conceivable only as "modes" of mind, changes in the soul's substance, and the same is true of the higher conceptions, the products of generalization. But the Stoics were not slow to exalt the part of reason, which seizes upon the generic qualities, the essential nature of things. Where sense and reason conflict, it is the latter that must decide. One isolated "apprehension," however firm its grasp, does not constitute knowledge or science (*ἐπιστήμη*); it must be of the firmest, such as reason cannot shake, and, further, it must be worked into a system of such apprehensions, which can only be by the mind's exercising the "habit" (*ἔξως*) of attaining truth by continuous tension. Here the work of reason is assimilated to the force which binds together the parts of an inorganic body and resists their separation. There is nothing more in the order of the universe than extended mobile bodies and forces in tension in these bodies. So, too, in the order of knowledge there is nothing but sense and the force of reason maintaining its tension and connecting sensations and ideas in their proper sequence. Zeno compared sensation to the outstretched hand, flat and open; bending the fingers was assent; the clenched fist was "simple apprehension," the mental grasp of

an object; knowledge was the clenched fist tightly held in the other hand. The illustration is valuable for the light it throws on the essential unity of diverse intellectual operations, as well as for enforcing once more the Stoic doctrine that different grades of knowledge are different grades of tension. Good and evil, virtues and vices, remarks Plutarch, are all capable of being "perceived"; sense, this common basis of all mental activity, is a sort of touch by which the ethereal Pneuma which is the soul's substance recognizes and measures tension.

With this exposition we have already invaded the province of logic. To this the Stoics assigned a miscellany of studies—rhetoric, dialectic, including grammar, in addition to formal logic,—to all of which their industry made contributions. Some of their innovations in grammatical terminology have lasted until now: we still speak of oblique cases, genitive, dative, accusative, of verbs active (*ἑρβά*), passive (*ἕρπια*), neuter (*οὐδέτερα*), by the names they gave. Their corrections and fancied improvements of the Aristotelian logic are mostly useless and pedantic. Judgment (*ἀξιωμα*) they defined as a complete idea capable of expression in language (*λεκτὸν αὐτοτέλές*), and to distinguish it from other enunciations, as a wish or a command, they added "which is either true or false." From simple judgments they proceeded to compound judgments, and declared the hypothetical syllogism to be the normal type of reason, of which the categorical syllogism is an abbreviation. Perhaps it is worth while to quote their treatment of the categories. Aristotle made ten, all co-ordinate, to serve as "heads of predication" under which to collect distinct scraps of information respecting a subject, probably a man. For this the Stoics substituted four *summa genera*, all subordinate, so that each in turn is more precisely determined by the next. They are Something, or Being, determined as (1) substance or subject matter, (2) essential quality, *i.e.*, substance qualified, (3) mode or chance attribute, *i.e.*, qualified substance in a certain condition (*πῶς ἔχον*), and, lastly, (4) relation or relative mode (in full *ὑποκειμένων πῶς πρὸς τί πῶς ἔχον*). The zeal with which the school prosecuted logical inquiries had one practical result,—they could use to perfection the unrivalled weapon of analysis. Its chief employment was to lay things bare and sever them from their surroundings, in order that they might be contemplated in their simplicity, with rigid exactness, as objects of thought, apart from the illusion and exaggeration that attends them when presented to sense and imagination. The very perfection and precision of this method constantly tempted the later Stoics to abuse it for the systematic depreciation of the objects analysed.

The practical philosophy of the Stoics stands in the Ethics, closest connexion with their physics and psychology. Holding that man is a being who acts as well as thinks, and that this is the all-important side of his life, they find the link between the two in the mind's assent; for, when impelled towards certain objects by a prompting or "impulse" (*ὄρμη*—movement of the soul seeking to possess itself of certain external things), whether of nature or reason, a man must needs judge the objects to be desirable; the subsequent movement, as it were, translates this judgment into action. Against the sceptical position it was necessary to maintain—(1) that motion, and therefore moral action, cannot follow upon the mere presentment of an idea, unless the idea so suggested receive assent, and (2) that assent alone does not suffice without the motive faculty which is found in all animals.¹ Of our various impulses, some in the mature man are (α) rational; some, as in the child, are (β) non-rational, because anterior to reason; while (γ) the impulse of the man may be contrary to reason, under the influence of the affections or passions. (α) Now reason, as a spring of action, has for its aim harmony or self-consistency, a life proceeding upon a single plan (*τὸ ὁμολογουμένως ζῆν, τοῦτο δ' ἐστὶ καθ' ἓνα λόγον καὶ συμφώνως ζῆν*): in this there is a certain symmetry or beauty, the attraction which excites rational impulse towards it. Clearly this definition of the end of action comes from the Cynics, who pithily expressed it by saying that in order to live man needs either reason or a halter (*δαῦν λόγον ἢ βρόχον*). But during Zeno's early studies another conception had been current, that of agreement with nature. Apparently it had been started by the Old Academy, where probably the technical phrase "first

¹ πᾶσας δὲ τὰς ὄρμεις συγκαταθέσεις εἶναι, τὰς δὲ πρακτικὰς καὶ τὸ κινήτικόν περιέχειν.—Stobæus, *Ecl. Eth.* ii. 164.

objects according to nature," *τὰ πρῶτα κατὰ φύσιν*, had its origin. Now the slightest acquaintance with Stoic physics shows that reason and nature are at one; we may therefore well believe that Zeno himself had explained his harmonious or self-consistent life to mean a life in harmony with nature (Diog. Laer., vii. 87, quoting Zeno, "On the Nature of Man"). At all events that was the orthodox formula adopted and interpreted by Cleanthes and Chrysippus,—the former, as we might have expected from his Heraclitean tendencies, representing it to mean "harmony with the universal nature," the latter emphasizing that not only is it the nature of the universe, but the particular nature of man, that is meant. Cleanthes's interpretation is at once novel and fruitful: reason being the true self or nature of man, and being essentially the same in him with the reason in the All, its procedure in him should correspond to and reproduce its procedure in the All. It is reasonable, therefore, for the individual to submit to and co-operate with the indwelling reason, or law of the universe, and in obedience to this universal law (*κοινὸς νόμος*) imitate the uniform methodic march of the divine creative fire. Here we note the conception of morality as obedience to an objective law, though, as reason attains to consciousness of itself only in man, it is a law of which he himself, *qua* rational, is lawgiver. But Chrysippus, in his reading of the formula, had no intention of relaxing the close dependence of ethics upon physics. A new light is thrown upon the study of external nature by the essential unity of reason in the macrocosm and in the microcosm: what we learn of its operations there is profitable for instruction here, and life should be directed in accordance with the experience we have acquired of the course of nature (*ζῆν κατ' ἐμπειρίαν τῶν φύσει συμβαινόντων*, Chrysippus ap. Stob., *Ecl.* ii. 134). Whether man will comply with the commands of the universal law or not, whether therefore the ethical end is realized in him, must depend upon himself. The whole tendency of the physical theory is towards a system of rigid determinism, nay, almost of fatalism; but, so soon as we reach the ethical region, the problem of indeterminism is forced upon us in all its perplexity.

(β) Having determined the end of rational action, we must now give a glance at the earlier, instinctive activity of beings properly without reason (*i.e.*, of children and the brute creation); this too has its importance, since before reason is developed the agent follows the "uncorrupted impulses" of nature. Here we come upon a controversy which still has an interest for the psychologist, for Epicurus had declared pleasure to be the end of all instinctive activity, while the Stoics combated his position and sought to prove that not pleasure but self-preservation is really sought. According to them, the child or the animal would speedily be crushed out of existence if it did not move at all or if its movements were not governed by some plan; a vague consciousness of itself and a love for its own constitution must be postulated to account for the impulse which, together with sensation, distinguishes animal life from the life of the plant.¹ That all motion is excited by pleasure in prospect, or the hope of cessation from pain, is (they argue) contrary to fact. Efforts to move are made perseveringly even where they occasion pain. The whole life of unreasoning infancy and of the brutes can be satisfactorily explained on the assumption

¹ πρῶτον οὐκ εἶναι παντὶ ζῴῳ τὴν αὐτοῦ σύστασιν καὶ τὴν ταύτης συνείδησιν. The σύστασις of an organic being is an outcome of internal forces, a mutual relation of varying elements,—in man, a relation of the ruling part of the soul, *i.e.*, the rational soul, to the rest. By οὐκ εἶναι is meant that nature inspires this self-love, "for it is improbable that nature should estrange the living thing from itself, or that she should leave the creature she had made without either estrangement from, or affection for, its own constitution."

of sense and impulse acting mechanically, somewhat after the fashion indicated rather than worked out in detail in the Peripatetic application of the practical syllogism to the motion of animals. In their theory of pleasure itself the Stoics approximate very decidedly to Aristotle. It is, as he said, a concomitant (*ἐπιγόννημα*), but not of all activities; on the contrary, the highest are without it, and it is invariably of no significance where it is found. Moreover, while Aristotle had asserted that it adds a certain zest or finish to natural activity, the Stoics declared that it never appears at all except as a mark of the decline or relaxation of vital energy, the bloom which is indeed a mark of ripeness but also the certain precursor of decay.

(γ) To return to impulse,—there remains the case of action against reason under the influence of the passions. Although nature may guide man towards the right objects, she does not control the impetus or velocity of the soul's movement. If this be in excess, the rational soul is hurried into an inflamed disorderly condition, the source of which is an erroneous judgment or false opinion, though its effects are seen in the evident elation or depression, and the stings of excitement, which are the symptoms of mental disorder. Anxious to uphold individual responsibility, the Stoics pronounced the false opinion to be voluntary; that once granted, the subsequent reaction of the mind (*i.e.*, the emotional effects on which Zeno especially dwelt), the compulsion and extravagance which are characteristic of the passions, may be said to follow inevitably, so that under the sway of blind impulses the man is still acting voluntarily. This sets in a striking light the close dependence of ethics upon psychology. The Peripatetics had made the intellectual soul with virtues of its own something altogether distinct from the lower nature, the seat of the emotions and of the moral virtues which consist in their regulation. The Stoic doctrine of the essential unity of soul is a vehement protest against all this: the soul's unity is shown in a unity of activity, whether it be in a healthy or a disordered state. As all virtues are essentially one, though they differ according to the different relations to which the knowledge of good and evil is applied, so, too, emotion is not something antagonistic to reason, but perverted reason. There is no such struggle of vicious inclinations against virtue, a contest waged by two separate powers, as Aristotle had imagined in his account of moral weakness; the proper simile is a mutiny or revolt in one and the same city, Mansoul now in allegiance to the rightful authority and now in open rebellion. The lower animals and children are incapable of emotion; it is only found where reason is fully developed. The analysis and classification of these affections start with the false opinion or judgment or imagination, which may relate to the present or the future, to fancied good or fancied ill. Hence there are four types of the affections: all are grouped around pleasure, an impulse towards present fancied good; desire, an impulse towards future fancied good; grief, an impulse to shun fancied evil in the present; fear, an impulse to shun fancied evil in the future. On the analogy of bodily disease, these disorders of the mind are further divided into (1) chronic ailments (*νοσήματα*), such as avarice, where the belief that money is a good is persistent and deep-seated, leading to a habit of feeling and acting, or ambition, a similar erroneous judgment in respect of public honours, and (2) infirmities (*ἀρρωστήματα*), sudden attacks of error to which the patient momentarily succumbs. This remarkable development of Stoic principles leads to the demand for the entire suppression of the affections (*ἀπάθεια*), in contradistinction to that regulation and governance of them for which Plato and