sense, for Body itself is robbed of a characteristic attribute. A thing is no longer, as Plato once thought, hot or hard or bright by partaking in abstract heat or hardness or brightness, but by containing within its own substance the material of these qualities, conceived as air-currents in various degrees of tension. We hear, too, of corporeal days and years, corporeal virtues, and actions (like walking) which are bodies (σώματα). Obviously, again, the Stoic quality corresponds to Aristotle’s essential form; in both systems the active principle, “ the cause of all that matter becomes,” is that which accounts for the existence of a given concrete thing (*λόγoς* *της οὐσίας).* Only here, instead of assuming something immaterial (and therefore un- verifiable), we fall back upon a current of air or gas (*πvευμα*); the essential reason of the thing is itself material, standing to it in the relation of a gaseous to a solid body. Here, too, the reason of things—that which accounts for them—is no longer some external end to which they are tending; it is something acting within them, “ a spirit deeply interfused,” germinating and developing as from a seed in the heart of each separate thing that exists (*λόγος* *σπερματικός). By* its prompting the thing grows, develops and decays, while this “ germinal reason,” the element of quality in the thing, remains constant through all its changes, *(c)* What then, we ask, is the relation between the active and the passive principles? Is there, or is there not, an essential distinction between sub­stance or matter and pervading force or cause or quality? Here the Stoa shows signs of a development of doctrine. Zeno began, perhaps, by adopting the formulas of the Peripatetics, though no doubt with a conscious diffe­rence, postulating that form was always attached to matter, no less than matter, as known to us, is everywhere shaped or informed. Whether he ever overcame the dualism which the sources, such as they are, unanimously ascribe to him is not clearly ascertained. It seems probable that he did not. But we can answer authoritatively that to Cleanthes and Chry- sippus, if not to Zeno, there was no real difference between matter and its cause, which is always a corporeal current, and therefore matter, although the finest and subtlest matter; In fact they have reached the final result of unveiled hylozoism, from which the distinction of the active and passive principles is discerned to be a merely formal con­cession to Aristotle, a legacy from his dualistic doctrine. His technical term Form (*ει*δos) they never use, but always Reason or God. This was not the first time 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 (*λεκτόv*). 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 tales 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 world­making powers *(σπepμaτικol* *λόγοι*), which, in virtue of its tension, slumbered 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 (*ὁδὁς* *ἄvω* *κάτω).* 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 every where, 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 for ever.

The doctrine of Pneuma, vital breath or “ spirit,” arose in the medical schools. The simplest reflection 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, but this is not borne out by the concise history found at Herculaneum *(Index herc.,* ed. Comparetti, col. 4 seq.). 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. Laër. 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 Heracliteanîsm. 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