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# **Cosmology and Psychology in Stoicism**

## **The Unifying Role of Mind in the Stoic System**

Cesare Sinatti

Submitted in accordance with the requirements for the degree of PhD

Classics Department

Durham University

[February 2022]

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## Abstract

The Stoics commit to a view of the universe as a unified living being endowed with a mind. But what is the explanatory value of this cosmological model? Generally speaking, most scholars believe Stoic cosmic psychology to work either as a metaphor for the unification produced by natural processes, or to be a consequence of the fact that mind is a primitive component of the Stoic system, given that one of the Stoic first principles is usually considered to be endowed with intelligence. In this thesis, I will argue against both views by claiming that the Stoics developed a highly sophisticated cosmic psychology in order to articulate an original theory of the unity of the cosmos. In doing so, I will first show how the Stoics introduce a new use of the notion of sympathy or co-affection (συμπάθεια) in order to produce an emergentist account of cosmic mental faculties. Then, I will then examine the unifying functions performed by the two main faculties of the cosmic mind: perception (αἴσθησις), which unifies the cosmos by endowing it with the ability of representing itself as a subject, and therefore, as an agent; and will (βούλησις), which unifies the cosmos by granting its activity a unified teleological orientation. I will thus make a strong claim regarding the relation between mental faculties and corporealism in the Stoics, showing how they are neither a metaphor for natural processes, but instead develop naturally from the principles on which Stoic philosophy is based, with the aim of articulating and unifying the complexity of the cosmos into a coherent whole.

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The story of how a book is written is itself a book. I do not exaggerate, therefore, when I say that I could write at least as many words as are contained in this work to describe in detail all the people who, directly or indirectly, have made it possible, and how they did so. Sadly enough, in order not to redouble the length of the text each time I approach its supposedly last full stop, I will limit myself to mentioning a few names, and to linking them through a thread of anecdotes at best, instead of unfolding patiently the shape of the infinitely complex, infinitely valuable experience that in my mind is forever inseparable from those names. Should one find himself or herself not named, mis-mentioned, or reduced in size in the few things that I will say: please rest assured that I do remember more than I am writing.

Thanks, then, to the two complementary forces who have shared the task of supervising this thesis, namely, George Boys-Stones and Phillip Horkey. If there is value or quality in this research, it is because of the meticulous work and the patience you put in giving me constant feedback. Many thanks also to my secondary supervisor Alberto Rigoglio for the precious suggestions given to me during our reviews, which have opened to me different and often unexpected perspectives. Most of all, thanks to all of you for those seemingly peripheral fragments of advice dropped between lines about Hierocles and Chrysippus, impossible to list in a page of acknowledgements, but which constituted the fundamental, human side of this supervision.

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## Introduction

### 1. *From Pantheism to Mind*

For as much as one may try to identify the moment marking the birth of western philosophy, few passages match in intensity and beauty the descriptions of the wonder felt by ancient thinkers in contemplating the order of the ring-shaped racing of fixed-stars and of the repeated revolutions of wandering planets. Indeed, it was common among them to refer to this sense of awe as the original drive towards the belief that the universe itself is ordered and, insofar as it is ordered, at least potentially intelligible, and thus worthy of being investigated.<sup>1</sup> The anecdote of the observation of the regularity of astronomical phenomena shows something fundamental about the mental attitude at the origin of philosophy, namely, that philosophy began with the recognition of patterns in observing processes of change, and with the acknowledgement of a possible compatibility between such patterns and those with which human reason catalogues and orders all phenomena within the mind. If this can be considered the fundamental experience that drives one towards philosophy, then it is only natural that a great deal of so-called “anthropomorphizing” has been employed throughout the centuries when thinking about the causes and ends of the order of the universe. This tendency can be identified already in the early stages of western philosophy, where we find attributions of soul, divinity and intellect to elements of the world which we now (mostly) regard as inanimate and unintelligent – claims which have been particularly debated throughout the history of philosophy.

Regardless of the feeling motivating these claims, one may also inquire whether there is any truth in them and whether the attribution of typically anthropomorphic or zoomorphic features bears any weight in our understanding of the universe. The philosophy of the Stoics was particularly fertile when it comes to this subject, as it famously portrayed the universe as a living being. Therefore, it is more than fitting to explore whether the attribution of these features to the world can elucidate something about it. Historically speaking, the cluster of Stoics cosmological theories where the cosmos is described as endowed with zoomorphic features such as life or thought has been interpreted as a form of pantheism, often by retrospectively associating them with the most well-known modern

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<sup>1</sup> See, for instance, Pl. *Phlb.* 28e; Arist *Metaph.* 982b12-13, Arist. *Protrepticus* (Iamblichus, *DCMS*, ch. xxiii, 70.7-71.24), where the famous quote that human beings are born to observe the heavens is also attributed to Pythagoras (this time in Iamblichus, *Protrepticus*, ch. IX, 49.26-51.6); Cic. *ND* 2.96-7. Most translations in this thesis will be taken from the editions mentioned in bibliography, unless specified differently. Where indicated, the LS acronym will indicate that the translation is taken by Long & Sedley 1987. All modifications will be reported in the footnotes. In particular, I have consulted Barnes 1984 for Aristotle, Bett 2012 for Sextus Empiricus, Gerson 2018 for Plotinus, Long & Sedley 1987 for Epicurus and some of the quoted Stoic fragments, Ramelli 2009 for Hierocles.

advocate of pantheism (with several differences)<sup>2</sup>, namely Spinoza.<sup>3</sup> It may be productive, therefore, to first open perspective on the topic and central question on this work by first approaching it through a brief discussion of pantheism and its main objections, since this will help us frame, more in detail, what zoomorphic or anthropomorphic features are relevant for an encompassing explanation of the cosmos.

Pantheism, that is, the idea that the world is a unified whole to which it is possible to attribute some form of divinity, is a doctrine whose origin is difficult if not impossible to identify, but some pantheistic tendencies can be found already in early Greek philosophy, more precisely in ideas such as Thales', when he claimed that everything is full of gods and that things one may at first consider inanimate, such as magnets and water, are instead ensouled;<sup>4</sup> or in the Pythagorean doctrine of the universe as a breathing,<sup>5</sup> living being; or again in the idea that a divine intellect steers and directs the order of the world as found, for instance, in Anaxagoras.<sup>6</sup> Alongside the well-known polytheistic Greek religion, and often in combination with it, these pantheistic tendencies were already present at the very roots of Greek thought. Nonetheless, even in these early stages of the development of Greek philosophy, pantheism was perceived as suspicious, and those who were associated with pantheistic views were often considered atheists.<sup>7</sup> This view survived into modern times, where it was revived mostly in response to Spinozism, and it can be synthesised by quoting two famous passages by Schopenhauer: "to call the world God is not to explain it; it is only to enrich our language with a superfluous synonym for the word 'world'"<sup>8</sup> and: "Pantheism is just a euphemism for atheism".<sup>9</sup>

But is this really the case? And what are the implications of identifying the world with god? If we want to be charitable towards pantheism, we must assume that the identification between world and god yields something that other explanations, devoid of the notion of god, do not. Generally speaking, pantheism seems to be conflating several notions into one unified system, its main claims revolving

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<sup>2</sup> On the question of the similarities between the Stoics and Spinoza, see Long 2003. There seem to have been no direct influences between Stoic and Spinozian pantheism, but there are several similarities, such as the identification between the cosmos and god (pp.372-3) which would justify the claim that they shared similar views on pantheism. The Stoics, nonetheless, adhered to a two-principle theory of the world to which Spinoza would not have subscribed to (p.371).

<sup>3</sup> Christopher Brooke has proven this in his article on the matter (Brooke 2006). Before the appearance of Spinoza's philosophy the Stoics were not only accepted, but considered compatible with Christian philosophy for their ethics and for their doctrine of providence ( p.388-9). After Spinoza, instead, they will be dismissed as "sottish corporealists" by several thinkers concerned about disputing general pantheistic points of view (p.391 ff.).

<sup>4</sup> Aristotle claims that Thales believed that the cosmos (as water) was ensouled, and he seems to think that he may have derived the claim that everything is full of gods from it. See Arist. *De An.* 1.5 411a7-8 (DK A11.22). Thales, however, was not the only one who seems to have held such ideas: both Anaximenes (DK A13.10) and Anaximander (DK A12.15) seem to believe that the world was ensouled.

<sup>5</sup> On the topic, see Horky 2019.

<sup>6</sup> "Anaxagoras claims that the cosmos, after being produced by mixture, maintains itself still for time left sustained by Intelligence, administered by it and distinguished [in different parts] from it." (DKA64).

<sup>7</sup> Babut 1974, p.6 ff.

<sup>8</sup> Schopenhauer A., *Parerga and Paralipomena*, Clarendon Press 1974, 1851, I:114.

<sup>9</sup> Ibid. II:99.

often around a supposed monism combined with the idea that the universe, insofar as it is self-ordering, can be called divine. Now, if one looks at one of the most common definitions of pantheism, and the problems it entails, it becomes clear that there is indeed a basis for objections such as Schopenhauer's. In his article about Stoic Pantheism, Baltzly makes use of a rather common, although very broad, definition of it,<sup>10</sup> according to which two main criteria can be established in order to define a system as pantheistic:

- (1) **The Unity Thesis:** according to which the world must be perceived as a unitary whole.
- (2) **The Ideological Thesis:** according to which the unity which composes the world can, in some sense, be called divine.

In this respect, another scholar, Levine, has argued that the two problems are often not separable, as in many versions of pantheism the account of the unity of the world is strictly related to that of the divinity of the world.<sup>11</sup> Even without having reached a final opinion on which of the two notions is the most fundamental, it seems nonetheless evident that the main problem lies in the Ideological Thesis. Indeed, it is immediately clear from its formulation that the idea that the world is “in some sense” divine begs for further inquiry. In what “sense” can the world be considered divine? And what does it mean to attribute something like divinity to the world in the first place? One may indeed claim that the world is divine in the same sense in which we say of a human being that he or she possesses “divine” beauty, namely, as a way to embellish a certain attribute by claiming that it possesses extraordinary intensity – but this is exactly what would happen if we were using divinity as a euphemism, for Schopenhauer: we would not be adding anything to our explanation of the world but our own sense of wonder.

What does it mean, then, to say that the world is divine? Stoic pantheism, in my opinion, offers a greatly original answer to this question, as it is essentially articulated in the statement that the cosmos is a living and thinking divine being. The old Stoa, and in particular Chrysippus, brought this general statement to high levels of sophistication by building what I will call, throughout my thesis, a “cosmic psychology”, by which I mean the array of mental faculties possessed by the cosmos and their specific functions. The divinity of the world, for the Stoics, seems to be interesting insofar as it implies some mental activity ordering it, as proven by the fact that the objections faced to their cosmological model – largely faced by other pantheists throughout the history of philosophy – revolve around a

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<sup>10</sup> See Baltzly 2003, p.4. The definition follows MacIntyre's entry on pantheism in the *Encyclopedia of Philosophy*: “pantheism essentially involves two assertions: that everything that exists constitutes a unity, and that this all-inclusive unity is divine.”

<sup>11</sup> Levine 1994, p.46: “Unity may have to be explained partly in terms of divinity”.

justification that an immanent mental activity is responsible for cosmic order. In Cicero's *De Natura Deorum*, I believe that we can trace two main attacks to Stoic pantheism, which are compatible with the ones presented above. The first is mouthed by the Epicurean spokesman Velleius, who criticizes the fact that the Stoics reduced traditional gods to natural entities "without life and speech".<sup>12</sup> This objection is directed against the Stoic exegesis of traditional gods and against their claim that they can be described as being chiefly natural entities, such as elements and celestial bodies. Moreover, the Stoic idea that the cosmos itself is a god can also be affected by Velleius' criticism, if we consider that traditional gods are usually believed to be *within* the world,<sup>13</sup> rather than worlds themselves<sup>14</sup> so that, despite its popularity in philosophy, one may take the claim that the world itself is a god as reducing divinity to another "lifeless" natural entity. A second, more powerful objection, is found in Cotta's long speech against the idea of explaining cosmic order as the result of a mindful, self-ordering activity of the cosmos. For Cotta, this does not add anything at all to what a natural explanation could already do:<sup>15</sup> "the greater the spontaneity of the process, the less we must regard it as the operation of divine reason."<sup>16</sup> The core of this criticism is that there is no need to conceive of cosmic order as a self-order resulting from an internal mental activity, since this would be little more than a euphemism, adding nothing to an explanation involving simply spontaneity of ordered natural processes and laws.

Both objections are clearly related in articulating problems emerging from the Ideological Thesis, that is, problems in conceptualizing the belief that the world is divine, and, in the case of the Stoics, a divine thinking being. Velleius' objection is directed at the apparent incompatibility between the Stoic conception of divinity and the "personal" aspects of its traditional counterpart, while Cotta's objection seems to take the opposite direction, and claim that there is no advantage in attributing mental faculties, such as reason, to what can be considered a simple natural process. In both cases, nonetheless, the idea at stake seems to be that there is something essentially superfluous in the Stoic Ideological Thesis: first, because, in Velleius' opinion, the Stoics are doing nothing but reducing gods, and therefore the cosmos insofar as it is a god, to natural entities, and, second, because, even if one assumes that this was not simply a reduction, it is unclear how it would achieve anything more than a naturalistic explanation could already achieve without relying on the concept of divinity. Why, then, should the cosmos be a god at all? The answer seems to lie in the fact that the cosmos is not only a god, but a god that thinks: attributing divinity to the cosmos, for the Stoic, means that the

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<sup>12</sup> Cic. *ND* 1.36. Cotta also reiterates the same criticism later in the dialogue, at *ND* 3.24.

<sup>13</sup> Jaeger 1936, p.16.

<sup>14</sup> Although it seems that Anaximander may have believed that there were indeed many worlds, each of them a god (Jaeger 1936, pp.33-4).

<sup>15</sup> Cic. *ND* 3.20-28 features the whole objection, criticising the general idea of a sentient universe.

<sup>16</sup> Cic. *ND* 3.28.

cosmos is endowed with the zoomorphic mental faculties and that, beside and above animal psychology, a cosmic psychology exists. Therefore, the wonder for the apparent orderliness of natural processes does not only lead to the search for further explanations in philosophy, but it is also related to a fundamental notion: the notion of mind.

## 2. Cosmic Psychology

In the Stoic system, the idea that the world is “divine” implies the more puzzling idea that the world also possesses some kind of mental faculties, and that its order may be the result of some sort of mental activity.<sup>17</sup> Clearly, this second claim is essential for the Stoics, who are explicitly presented as being strongly inspired by Plato, when it comes to their view of the cosmos as a living being possessing mental faculties. The Platonic text which is generally taken to have had the most influence for what concerns the role of mind in describing the Stoic universe as an ensouled, thinking animal is the *Timaeus*,<sup>18</sup> as it is evident from this passage of Sextus Empiricus:

In effect he [Plato] laid out the same argument as Zeno; for he too says that the all is most beautiful, a work produced according to nature and, according to the likely account, an ensouled animal, endowed with mind and rational (τὸν εἰκότα λόγον ζῶον ἔμψυχον νοερόν τε καὶ λογικόν).<sup>19</sup>

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<sup>17</sup> I am here disagreeing with the claim that pantheism should not describe god as a personal entity in Levine 1994, p. 11: “Most versions of pantheism reject the idea that God is a person (Lao Tzu, the Presocratics, Spinoza, Plotinus, Bruno). Indeed, I know of no prominent versions of pantheism that conceive god as a person”. While I am in no position to discuss Lao Tzu, Spinoza and Bruno, I would not be so quick in dismissing that the presocratics or Plotinus attributed personal features to their gods. Levine defines his conception of pantheism in opposition to theism, and in his book he is very much concerned with how pantheistic religious practices would differ from theistic religious practices (p. 287-365). In his section on the notion of divinity (pp. 47-70), Levine relies heavily on the notion of “numinous” drawn by Rudolf Otto and on Otto’s distinction between a rational conception of the divine, which is Christian and personal, and a non-rational one, which in Levine’s opinion can be associated with pantheism. Notably, Levine does not mention the Stoics, whose pantheism is fully personal and rational, as I will argue in this work. More generally, it seems to me that the idea that the cosmos may be rational, personal and divine presents no more difficulties than those encountered by supposing that its mind is non-rational (or supra-rational) and non-personal. The core of the question is rather why to attribute a mind to the cosmos at all, which I take to be the main and most radical claim of pantheistic worldviews.

<sup>18</sup> See for instance Reydams-Schils 1999 and 2013, Sedley 2002 and 2008, Betegh 2003, Gourinat 2005, Long 2010, Powers 2013. Powers 2013, p.714 n.2, notes that, beside philosophical references, there may also be some verbal echoes of the language of the *Timaeus*, indicating specifically SVF 1.88 and 2.318. Given the Platonic background of both sources I would not be inclined to consider this as evidence of direct references to the *Timaeus*. The expressions Powers refers to (“matter is like wax” and “matter is the ‘receiver of all’”) were more probably part of the vocabulary of both Chalcidius and Origen, since they both had a Platonic background. Whether they are applicable, as philosophical notions, to the ideas of the Stoic, is nonetheless up to debate.

<sup>19</sup> Sextus Empiricus, *Adv. Math.* IX.107 (SVF 1.110). Plato’s quotation refers to *Ti.* 29d. This, of course, does not mean that the *Timaeus* was the only text playing a role in forming the Stoic conception of the active principle in general. Heraclitus’ conceptualization of fire was also another fundamental influence (Long 1996a), as well as Plato’s definition of being in the *Sophist* (Sellars 2010). Ademollo 2012 finds a simpler, more direct line of influence in following the *Cratylus* rather than the *Timaeus* (although he does not deny the influence of the latter). But he is mostly concerned with the active principle as immanent active cause. The *Timaeus*, on the other hand, is more relevant than the *Cratylus* for our discussion because not only it offers an account of an immanent active cause, as the *Cratylus* does, but it also describes

If Plato and Zeno are, on the one hand, compatible because they both believe that the world is a living being endowed with mind, they nonetheless also disagree on some fundamental points, as outlined in another passage concerning the philosophy of the Stoics found in Aristocles:

As Heraclitus, [the Stoics] claim that fire is the principle of the things that exist, and that the principles of these are matter and god, as Plato said. But Zeno says that these are both bodies, both the active and the passive principle, while Plato says that the first active cause is incorporeal.<sup>20</sup>

Reading these two passages together can give us a rough outline of how the Stoics translated the fully articulated idea of the living world of the *Timaeus* into their own corporealist setting. This has led scholars to focus primarily on how to trace the origins of the Stoic two-principle metaphysics back to a Platonic setting, with considerable attention granted to the influence of members of the Old Academy in the Stoic reception of Platonic doctrines.<sup>21</sup> Most lines of interpretations concerning the *Timaeus* seem to converge in the idea that, for the Stoics, the functions of the demiurge and the world-soul are somehow unified<sup>22</sup> in those of the active principle, coherently with the passages quoted above.<sup>23</sup> But this unification has been read mostly as a reduction of the functions of the demiurge to those of the world-soul, as most of what the demiurge does in the *Timaeus* can indeed be traced back

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how this principle can be understood, more importantly, as a *thinking* immanent active cause – which has direct bearing on our question concerning what the nature of god is for the Stoics.

<sup>20</sup> Aristocles, *apud Eusebium praep. Evang.* XV, 816d. (SVF 1.98). The translation is mine.

<sup>21</sup> Two fundamental pieces of literature, for this, are Sedley 2002 where he traces things back to Polemo's own re-elaborations and Antiochus, and Reydarm-Schils 2013, where she discusses the influences of the Old Academy, first concerning Antiochus, Polemo, Xenocrates and Speusippus. In both cases, the discussion focuses mostly on establishing which member of the Old Academy produced the most Stoic-compatible account of Platonism, in order to understand who mediated their interpretation of the Platonic corpus.

<sup>22</sup> Giving a precise account of why both entities are necessary (or not) has been an especially thorny problem for Platonic scholars in the last century. Stephen Menn (Menn 1995, pp.10-13) has outlined the main positions in the debate: Cornford, who claimed that the demiurge is the reason of the world-soul; Cherniss, who argued that the demiurge is a logical abstraction of intelligent causation; and Hackforth, who tried to liberate the demiurge as intellect from the claim that intellect is always present in a soul. The Stoics were, with most probability, also engaging with the same difficulties, but their solution seems to sway more in the direction of unifying the two entities, as Cornford does, rather than finding a separate role for intellect. As I will argue, this unification can be read also as joining the personal, providential features of the demiurge with the immanency of the world-soul.

<sup>23</sup> Reydarm-Schils 2013 offers a similar argument in discussing the influence of the Old Academy on the Stoic interpretation of the *Timaeus*. She writes: "even if we grant that Speusippus and Xenocrates relegated the role of the Demiurge at least to some extent to an intra-cosmic intellect or World-soul, they did not posit these as the ultimate principles of reality. For the Stoics, in contrast, intellect and the universal soul were not just the *main* ordering factor *in the world*, but rather were aspects of *one and the same* active and immanent divine principle" (pp.39-40). In my opinion, the main difference between the Platonic and the Stoic living cosmos must be found not only in the fact that the ordering principle of the latter is immanent, as one may claim that the World-soul is also partly immanent (if interpreted as metaphysically intermediate between being and becoming), but rather in the fact that in making their principle immanent the Stoics need to endow it with a self-ordering ability. The Stoic World-soul is not crafted: it crafts itself and crafts the universe through different stages of its development.

to the activities of the world-soul if read in a Stoic context.<sup>24</sup> To start with the attributes they possess, both the demiurge and the world-soul are considered divine<sup>25</sup> and endowed with intellect,<sup>26</sup> and are believed to have a wise nature.<sup>27</sup> The world-soul, moreover, seems to possess a certain degree of immanence, especially in the description given by Timaeus, where the soul is stretched through the body and envelopes it from outside.<sup>28</sup> While such an interpretation would be fairly difficult to defend if one took into account all the complex Platonic doctrines on the soul, it is nonetheless consistent with Stoic philosophy, since the Stoics believed that two objects are indeed capable of interaction only if they are, first of all, ontologically compatible.<sup>29</sup> The world-soul, therefore, with its direct influence on the heavens and its capacity to permeate all aspects of the sensible world must have inspired, to a certain extent, the Stoic conception of an immanent deity.

What role is left for the demiurge, then, if the world-soul takes over, exercising a direct ordering action in the world? In Plato, the demiurge is a fundamental figure in order to maintain the intelligible separate and independent from the sensible, but the same cannot be true in the Stoic corporealist system. The demiurge's role seems greatly reduced, then, compared to the one he has in Platonism – not only as the initiator, but as the guardian of the order of the cosmos, as it is he who returns and reverts it to the golden age in the myth of the *Statesman*: the Stoic immanent world-soul can indeed perform all these actions. According to most scholars, what the Stoics would have drawn from the demiurge is mostly his providential activity<sup>30</sup>, that is, fact that he watches over his creation. It would seem, therefore, that rather than conflating the two divine figures of demiurge and world-soul into one, the Stoics would be reducing demiurgic influence to the activity of a providential, immanent, thinking world-soul.

In my opinion, however, there is another aspect of the figure of the demiurge which the Stoics incorporated in their conception of the immanent active principle, which is directly relevant to our discussion and would prove that the demiurge had at least as much importance as the world-soul in

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<sup>24</sup> So Sedley 2008, p.210: “the Stoics treat the Demiurge as not in the last analysis anything over and above the world-soul, so that in their eyes the intelligent cause is nothing but a divinity immanent in the world”. The problem I see with this claim is that the expression “nothing but a divinity immanent in the world” is far from being easy to explain or obvious in meaning. As I have argued, the concept of divinity is related to possessing anthropomorphic mental features, for the Stoics. These personal features, in the *Timaeus*, belong primarily to the demiurge, and the world-soul does not seem to manifest them.

<sup>25</sup> Pl. *Ti.* 30a, 50d, 47c.

<sup>26</sup> Pl. *Ti.* 30b 47e 48e. The attribution of intellect is a fundamental step in attributing personal features to divinity. But it can also be a complicated one, without a proper map of how the mind works to back it up. As I have already mentioned, the association between divinity and intellect/rationality was not unpopular well before Plato. Indeed, prior to the *Timaeus*, Anaxagoras seems to have hinted at the possibility of intellect as an immanent force in the cosmos (See Menn 1995, p.27), although his account of the nature of intellect is famously confused.

<sup>27</sup> Pl. *Ti.* 46d.

<sup>28</sup> Pl. *Ti.* 34b.

<sup>29</sup> For instance in the case of soul-body relations, where the possibility of interaction and reciprocal influence between the two proves that they both possess the same nature, i.e., that they are both bodies (See SVF 1.518).

<sup>30</sup> Pl. *Ti.* 30b-c.

defining how the Stoics thought of the active principle. On this aspect depends not only the idea that the demiurge is providential, but the creation and sustainment of the cosmos itself: for the demiurge is not only providential in respect to an already crafted universe, but he also initiates the crafting of the universe itself. In order to function both as craftsman and maintainer of the cosmos, the demiurge must be an agent possessing psychological faculties that exceed those of the world-soul, such as appetitive and motivational drives to orient his actions toward creating a specific universe. In this sense, it can be rightly said that, in the active principle, “the Stoics join the notion of physical law and purposeful action.”<sup>31</sup> But the notion of purposeful action is impossible without characterizing the agent as capable of having purposes, that is, as possessing specific mental faculties, such as the ability to desire and plan. Now, the second of these two features may be ascribed to the world-soul in the *Timaeus*, as there the world-soul is said to be capable of thought,<sup>32</sup> and, considered that the project at the base of creating the world is that of making a living being which resembles the intelligible living being,<sup>33</sup> i.e. the demiurge, one may try to extend the mental faculties of the demiurge to the world-soul as well. But never in the *Timaeus* do we read directly that the world-soul wishes, or plans: the description of its behaviour is rather law-like in its precision, and even its thinking activity is associated with the circular movements which in turn produce the motion of the heavens. From reading the *Timaeus*, one does not get the impression that the world-soul is a personal deity with motivations, in the same way in which one may get it from looking at the demiurge: the demiurge is good, and wishes (ἐβουλήθη) for everything to be as good as him;<sup>34</sup> he acts (δρᾶν) after reflecting and discovering (λογισάμενος οὖν ἠϋρίσκεν);<sup>35</sup> he rejoices (εὐφρανθείς) in his activity after observing its results.<sup>36</sup> Later, in his speech to the minor gods, he refers to himself as a willful being by saying that his work are indissoluble unless he wants so (ἐθέλειν), and claims that the sensible gods, despite being generated, cannot be destroyed because they have his will (βουλήσεως) on their side.<sup>37</sup> Now, of course, considered that this narration is presented as “likely story” at best, and keeping in mind the repeated warnings of Timaeus on the possibility of gaining stable knowledge on things such as the precise modality in which our cosmos began, one may cast doubts on whether the description of the demiurge as a personal deity is literal or not, or if the fact that it is literal is relevant

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<sup>31</sup> Reydam-Schils 1999, p.78.

<sup>32</sup> Pl. *Ti.* 37a-c.

<sup>33</sup> νοητῶ ζῶν, Pl. *Ti.* 30c-d, 39e1.

<sup>34</sup> Pl. *Ti.* 29e.

<sup>35</sup> Pl. *Ti.* 30a.

<sup>36</sup> Pl. *Ti.* 37d.

<sup>37</sup> Pl. *Ti.* 41b.

at all.<sup>38</sup> This question, though, can be put aside if we try not to interpret the *Timaeus*, but to imagine how the Stoics may have read it.

The Stoics themselves describe the cosmos as possessing personal features and mental faculties similar to those of the Platonic demiurge and repeatedly claim not only that the world is a rational living being capable of thought, but also that it has desires and impulses,<sup>39</sup> and that it even rejoices in the results of its actions.<sup>40</sup> The world, much like the Platonic craftsman, is described as having the features of a personal deity and, as such, to have specific mental faculties.<sup>41</sup> It should not be a surprise, then, that the Stoics appealed directly to the idea of a crafting personal deity such as the Platonic demiurge when describing the ordering role of the active principle. The world-soul, with its law-like behaviour, does not suffice to explain the profusion of descriptions comparing the fastening of the world order to crafting activity in Stoicism and the importance that the idea of a personal deity with specific wishes seem to have, for them. While being, without any doubt, the entity which most helped the Stoics in formalizing the physical modalities in which god's providential activity unfolds within the world, the world-soul alone is not sufficient to provide an explanation for the beginning and maintaining of this activity. Beginning and maintaining, insofar as they are the actions of a providential deity, can only follow from a conception of a personal deity with precise aims, desires and feelings, capable of motivation and planning in a way that is not unlike that of humans. The Stoics may have found a model for this deity in the demiurge which, as we have seen, shows several anthropomorphic traits among the philosophical gods – if compared, for instance, to the Aristotelian unmoved mover.

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<sup>38</sup> It must be noted that, in general, demiurgic action and the demiurge are associated with intellect rather than with emotional features. In the *Statesman*, god is king (274e10-275a2) and pilot (272e4, 273c3) of the world. In the *Philebus* intellect (νοῦς) governs (28d9) the world and orders the heavens (28d9-30c5), as being the general cause of order in *Phaedo* 97c1-2 and *Laws* 967b5-6). Similarly, in the *Timaeus*, the demiurge orders the heaven (37d5-6), as well as the primary materials of the cosmos (69c1) and is identifiable, more generally, with the “intelligent cause” which sets everything in motion (46e). Therefore, at least in the context of Platonism, it seems less likely that the emotional features of the demiurge play a significant role. This does not mean, however, that they could not have done so in a possible Stoic reading: Plato's depiction is most likely a myth because demiurgic action seems to be structured temporally, through a succession of emotions, thinking, planning and realization, that does not mirror the timelessness and unchangeability of intelligible entities (which is also why, for Platonists, it is so difficult to describe how intellect or intelligible entities can have a causal role at all – see Menn 1995, p.55). On the other hand, if the Stoic god is immanent, he has no need of being unchangeable or to not act in a temporal sequence: in this sense, attributing emotions and successions of thoughts to the Stoic god would not be a problem in the context of their system.

<sup>39</sup> Cic. *ND* II.58 (SVF 1.172 = LS 58Y). Long has argued that “Plato has invested his Demiurge with a personality and a conversational style that the Stoics did not normally replicate” (Long 2010, p.47). I would object this on the base that the Stoic god, while not giving speeches like the demiurge, is depicted by the Stoics as capable of passions, impulses and voluntary movements.

<sup>40</sup> SVF 2.635.

<sup>41</sup> For some relevant passages concerning the early Stoics, see SVF 1.110-4, 1.154, 1.499; 2.633; 2.643; 2.937; 2.1009; 2.1016; 2.1020). Instances of the attribution of a psychological life to the cosmos in the late Stoa are found, for instance, in Epictetus (*Diss.* 4.1.100) and Marcus Aurelius (*Meditations* 9.1.4; 9.28).

In this perspective, it should perhaps become slightly less problematic to think of the world as a “god”, in that the notion of “mind” seems easier to tackle, than the notion of god. After all, we all possess minds (or believe that we possess them) which we inhabit (or believe that we inhabit) and use (or believe that we use). With a quick change of strategy, therefore, one may reformulate the fundamental question about pantheism in a different form, by shifting the focus from the problematic notion of “divinity” to the seemingly simpler one of “mind”, and ask what follows: why should the world possess something like a mind? What are the explanatory advantages of endowing the cosmos with mental faculties and to appeal to a “cosmic psychology” in order to understand the world? Under this perspective, pantheistic systems would present themselves as a particularly fertile ground for statements concerning the recognition of cosmic order, such as those following astronomical contemplation, in that, indeed, they would present the overlap between thought and natural order as entirely possible, if not necessary: if, indeed, the order of the world is the result of a mental activity belonging to the world itself, then, from an epistemic point of view, human beings, as thinking beings, should at least in theory have access to the understanding of such an order. This advantage, of course, is not unique to pantheism, as supposing a demiurgic ordering activity produced by an external deity would again make possible a correspondence between human thought and divine thought, at least for what concerns the order of the world. Thanks to the unity thesis, however, it would seem that pantheism would also present the advantage of escaping, at least partly, some of the problems related to conceiving the world and its demiurge as ontologically foreign entities, that is, it would escape most of the serious dilemmas concerning the possibility of interaction between such entities.

### 3. *Mind and Emergence*

But if, as discussed above, other philosophical systems, such as Platonism, seem to provide interesting explanations as to why we should imagine the world as a being endowed with mental faculties, why focus specifically on the Stoics? What advantages does the Stoic system, as a model of the world, present when compared to others? In my opinion, Stoic cosmology is not only interesting in that it presents a precise account of how and why the world comes to be a living being possessing specific mental faculties which contribute to its order, but also in that it tries to answer all these questions from a monistic point of view. Although sometimes Stoic physics may not be up to the challenge of describing the mind in physical terms, it is surely ambitious in its attempt to do so: conflating psychology and cosmology creates, for the Stoics, a productive starting point to think about intersections between natural and mental processes. Indeed, the old Stoics did not rest upon the mere

fascination of the metaphor of a thinking world, but investigated the philosophical consequences of identifying thought and matter through and through, to the point that their whole system can be seen as an attempt to have these two realities converge. If there is a point where the ambition of the Stoics surpasses that of their predecessors, and especially Plato, it is in their commitment to *both* materialist monism and the idea of mind as an ordering principle.

By joining materialistic monism with the idea that mind is present and immanent as a body within the world, the Stoics tried to maintain the Platonic thesis that mind is responsible for order while at the same time solving the problems of interactions between corporeal and incorporeal entities. Cosmology is, for them, the battleground where they attempt to join into a single system both the claim that the universe is a single body and the claim that mind works as a constitutional principle within it. Although not always successfully, it must be said that the Stoic system, in doing this, approached under many aspects a seemingly modern mindset: a corporealist monism, where everything is part a single, continuous, interconnected physical reality, would seem to be the most scientifically viable way of understanding the universe, for now. Mind, however, remains an extremely slippery topic to handle even (or especially) in this perspective, to the point of generating a significant philosophical debate around the topic of the emergence of mind and its role in the constitution of the cosmos.

Particularly relevant in this regard is the debate around panpsychism, which may be in part compatible with some Stoic theories. Thomas Nagel, in his seminal article on the subject, defines panpsychism as “the view that the basic components of the universe have mental properties”.<sup>42</sup> Nagel believes that no emergent properties can be accounted for as such, that is, as emergent in the strict sense of the word, and that all properties within a complex system must be derived from the properties of its components - making panpsychism a possible, although not particularly fertile, way to infer mind from mind, in the sense that mind itself must be a compositional part of the universe. The Stoics, as we will see, may subscribe, at least partly, to the anti-emergence argument. However, as Nagel shows, panpsychism is a response to emergentism in the specific context of the mind-body problem, that is, in order to produce an account for the presence of mental experience within the cosmos, since all physical accounts of the mind seems to be insufficient. Within the context of a Stoic corporealist system, this is not a problem: for the Stoics, mind is a body, and a constitutional body of the universe

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<sup>42</sup> Nagel 1979, p.181. For further discussion on the topic see Chalmers’ fundamental articles on the hard problem of consciousness (Chalmers 1995, 1996) which set the frame from which panpsychistic views mostly derive. In recent literature, Strawson (Straswon 2006) has notably defended panpsychism as the most solid answer against emergentism. Notably, debate about panpsychism and its application to the universe in the form of cosmopsychism has been growing, lately, with several detailed account being produced by prominent philosophers, such as Goff (2017, 2020), Jaskolla & Buck (2012), Mathews (2011, 2020), Nagasawa & Wager (2016), Shani (2015), and Shani and Kepler (2018), operating on the assumption that microcosmic manifestation of consciousness are grounded in some macrocosmic manifestation of consciousness. This argument is highly compatible with a famous Platonic and Stoic argument discussed at note 97.

as well. What is less clear, however, is that, while the Stoics generally seem to agree with panpsychists on the fact that the mental is irreducibly present within the cosmos, they also seem to claim that the most basic faculties that constitute a mind emerge through bodily interactions.

The philosophical value of inquiring into Stoic cosmic psychology, therefore, is not only in confronting a model of the universe where mind is one of its constitutional principles, but also in addressing questions pertaining the nature of the mind and its general operations. I believe, as I will argue in the second and third chapter of this work, that the Stoics not only provided an explanation for how the notion of mind can help us understand the order of the cosmos, but also did so within the framework of a corporealist theory of the mind and, even more interestingly, a corporealist theory of how some fundamental mental faculties emerge from interactions between bodies.

Clearly, this last claim going to stir up some controversy, in that most scholars working on Stoicism seem to assume that mind is a primitive component of their system, and that it cannot be explained in other terms. Generally speaking, the assumption seems to have been strengthened from a conflation between *pneuma* and the active principle, which we find in early scholars such as Sambursky.<sup>43</sup> As the scholarly debate advanced, and *pneuma* was recognized as radically different from the active principle and as a result of its merging with matter,<sup>44</sup> the question on the nature of mind in Stoicism was conveniently avoided. On the one hand, the assumption that the active principle possesses a mind has remained unchallenged, and rightly so, thanks to the overwhelming textual evidence in its favour. On the other hand, however, the claim that *pneuma*, which in Chrysippus is the material of the soul of the cosmos and of souls in general, is indeed presented, in Stoic embryology, as something that *acquires* mental faculties was not seen as inherently problematic. Indeed, if mind is present since the very beginning of the cosmos, why would mental faculties such as perception, which are repeatedly presented as the very grounding of a minded subject, emerge in material bodies that were incapable of perception?

Very little has been written on what, precisely, mind is in the context of Stoic corporealism, resting upon the notion that mind is a fragment of the immanent active principle, that is, of mind. Here, I will attempt the risky endeavour of abandoning this tautological explanation and try to explore whether and how it is possible to talk about emerging mental faculties in Stoic corporealist terms, starting precisely from the problems arising from the idea that *pneuma* is a body that can undergo a transformation in which it acquires perception. As we will see more in detail in the second chapter, Stoic embryology leaves little doubt about the fact that the pneumatic component of an animal only

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<sup>43</sup> Sambursky 1959.

<sup>44</sup> Gould 1962, Hahn 1977, Lapidge 1978, Long & Sedley 1987. Their theories will be discussed more in depth in the second chapter of the thesis, as well as the textual evidence they refer to.

becomes a soul (ψυχή), i.e. a mind capable of perception (αἴσθησις) and impulse (ὀρμή), after birth, before which it is merely a nature (φύσις) devoid of mental faculties. In the context of Stoic embryology, therefore, there must have been a theory as to how a specific bodily compound, i.e. a pneumatic compound where pneuma is disposed as a nature, can develop mental faculties without possessing them beforehand, that is, as to how a nature can effectively change into a soul. The same biological process, according to Chrysippus, underlies the birth of the cosmos as an animal, that is, as a pneumatic compound possessing a soul.

Is the question about what mind is like at the level of the principles, or before the cosmos develops a pneumatic part and a soul, simply going to be ignored? The answer is no: the second section of the second chapter will briefly address the matter. However, methodologically speaking, I believe that most accounts of what the cosmic mind may look like before its embodiment in a soul, which occurs at an already advanced stage of the διακόσμησις, will remain highly speculative, since, while we can clearly establish that a formed cosmos has at least the same mental faculties as the living beings within it, we cannot establish with the same certainty what kind of mental faculties the active principle possesses.

On the one hand, in fact, when it comes to the fully formed cosmos, we can say with certainty that it possesses at least the same mental faculties as all ensouled living beings. In this regard, Diogenes states that, according to the Stoics, the cosmos is ordered by providence and intelligence “much like we are by soul” (καθὰπερ ἐφ’ ἡμῶν τῆς ψυχῆς), in the sense that it possesses a part which is diffused through it and performs different functions, unifying it through cohesion, nature and soul, just like within a living animal.<sup>45</sup> Later on, what may have been previously interpreted as a comparison between cosmic intellect and animal soul, is presented in the following fashion:

But it is clear that **the cosmos is a rational and ensouled and intelligent living being**, as Chrysippus says in the first book of his *On Providence*, and as Apollodoros says in his *Physics* and also Posidonius; indeed, a living being is a substance that **is ensouled and capable of perception**. For the living is superior to the non living, but the cosmos is inferior to none. Therefore, the cosmos is a living being. And it is ensouled, as it is clear from our souls, which are portion of its soul (ὅτι δὲ καὶ ζῶον ὁ κόσμος καὶ λογικὸν καὶ ἔμψυχον καὶ νοερὸν καὶ Χρῦσιππὸς φησιν ἐν πρώτῳ περὶ Προνοίας καὶ Ἀπολλόδορος φεσιν ἐν τῇ φυσικῇ καὶ Ποσειδώνιος· ζῶον μὲν οὕτως ὄντα, οὐσίαν ἔμψυχον αἰσθητικὴν. τὸ γὰρ ζῶον τοῦ μὴ ζῶου κρεῖττον· οὐδὲν δὲ τοῦ κόσμου κρεῖττον. ζῶον ἄρα ὁ κόσμος. Ἐμψυχον δέ, ὡς δηλον ἐκ τῆς ἡμετέρας ψυχῆς ἐκεῖθεν οὔσης ἀποσπάσματος).<sup>46</sup>

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<sup>45</sup> Diogenes Laertius IV.137 = SVF 2.634.

<sup>46</sup> Diogenes Laertius IV.142-3 (= SVF 2.633). The translation is mine. For similar claims, see also SVF 2.633-645; 2.821; 2.825; 2.845.

From this passage it is therefore clear that a fully formed cosmos is not only a living being in the sense that it possesses a vaguely defined form of intelligence: the cosmos is quite literally an ensouled living being (ζῶον ἔμψυχον), meaning that, according to Chrysippean physics, it possesses a pneumatic part disposed as a soul. More interestingly, as Diogenes does not fail to remind us, insofar as it has a soul, the cosmos also possesses the mental faculties of a soul, which means that the cosmos is capable of perception (αἰσθητικήν). A compatible thesis is also found in the already mentioned passage from Cicero, where the cosmos is said to possess impulses: “the nature of the world has all the movements of volition, desires and impulses which the Greeks called ὀρμαί, and exhibits the actions in agreements with these in the way that we ourselves do who are moved by emotions and sensations (*natura mundi omnis motus habet voluntarios, conatusque et adpetitiones, quas ὀρμαί Graeci vocant, et is consentaneas actiones sic adhibet ut nosmet ipsi qui animis movemur et sensibus*).<sup>47</sup> A fully formed cosmos, therefore, is for the Stoics an ensouled living being which possesses at least the two most basic mental faculties that all living being possess, that is, perception and impulse, as seen above.

On the other hand, it is not as easy to understand what mental faculties, if any, are possessed by the active principle or in what sense they are operative in it. In this regard, the fragments in our possession do not venture beyond definitions of the active principle as “the intellect of the whole” (τῶν ὅλων νοῦς)<sup>48</sup> and “body capable of thought” (σῶμα νοερόν).<sup>49</sup> Intellect (νοῦς) is therefore the most likely candidate to define what kind of mental faculty the active principle possesses – or is, if we assume that the explanation of what intellect is, within the Stoic system, is that of what kind of body it is or how it functions. When it comes to the manifestation or functions of intellect, though, we seem to either lack a proper corporealist explanation or to incur into circularity when it is associated with perception following the Stoic theory that perceptive faculties and judging faculties are one and the same.<sup>50</sup> Part of the difficulty likely stems from the fact that the Stoic active bodies (either in the form of the active principle or in that of pneuma) are single bodies deployed to different functions, so that it is extremely difficult to isolate an intellectual function as entirely separated from all the others or operating independently from them, so that there is little to no evidence as to how the intellect of the active principle actually work or would work without other mental faculties.

There is, however, abundant textual evidence regarding perception, its emergence and its grounding function in constituting ensouled subjects, all of which are accounted for in materialistic

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<sup>47</sup> Cicero’s *ND* II.58 (SVF 1.172 = LS 58Y).

<sup>48</sup> SVF 2.302.

<sup>49</sup> SVF 2.313.

<sup>50</sup> See, for instance, SVF 2.849, where Sextus claims that, for the Stoics, “intellecion and perception are the same (ταῦτον ἔστι διάνοια καὶ αἴσθησις)”.

terms according to the Stoics. Thus, while the general understanding of the Stoic notion of mind, especially on the level of the principles, may remain obscure or in need of further exploration, there is a wide and unexplored argumentative space to interpret Stoic philosophy as providing an emergentist account of perception within the context of their corporealist system.

#### *4. Stoic Exegesis and the Structure of this work*

The aim of this work, then, is not only to wrestle with some important philosophical questions, but also to provide an interesting framework for interpreting problems connected to our general understanding of the philosophy of the Stoics. Now that the philosophical themes of the work have been outlined, presenting its structure should make clear what kind of interpretative problems I will face and what positions I will take in relation to current Stoic scholarship. Generally speaking, as I have said, this work will try to answer two questions, that is, “how does the notion of mind help to model the Stoic cosmos?” and “how do mental faculties emerge in the Stoic monist corporealist system?”. The question concerning the emergence of mental faculties will have priority, in that describing the conditions of possibility of a cosmic within the context of the Stoic system is necessary to understand what its functions are. The first main claim of this thesis, then, is that the most fundamental faculty of a mind, distinguishing soul (*ψυχή*) and nature a nature (*φύσις*), i.e. perception (*αἴσθησις*), emerges through a feedback loop of material interactions originated when the pneumatic part and the bodily part of a given pneumatic blend are “in sympathy” (*συμπαθής*). The second main claim is that perception (*αἴσθησις*), together with the other grounding Stoic mental faculty, i.e. impulse (*ὄρμη*) perform an eminently unificatory function within the cosmos, with the two sub-claims that, specifically, perception unifies the cosmos by referring all its internal changes, transformations and actions to itself through self-perception, while impulse, in the form of the “good passion” of will (*βούλησις*), unifies the actions of the cosmos by providing it with a motivational drive, that orients it teleologically towards a specific end.

As for what pertains to the Stoic system, by asking questions about cosmic psychology my research will be naturally oriented towards the old Stoa, where ideas concerning the world as a living being are presented in a more articulate and precise way. The majority of texts mentioning or referring Stoic physical theories point towards three chief figures: Zeno, Cleanthes and Chrysippus. The latter in particular refined the Stoic system to such an extent to be entitled to a “second fatherhood” of the system for his contributions to the ideas of the nominal father of Stoicism, Zeno. Several scholars have recognized, among Chrysippus’ most relevant innovations, the discussion of *pneuma* and of its

physical dynamics of interaction with other bodies, the theory of blending, and his refinement of Stoic embryology.<sup>51</sup> As I will argue through the first and second chapter, Chrysippus is responsible for most major innovations concerning cosmology and cosmic psychology, especially regarding the application of the notion of *συμπάθεια* to the whole universe, among others. Beside this, he is also responsible for refining the ways in which the birth and development of the cosmos can be discussed in biological terms, especially in reference to animal embryology. It is to Chrysippus, therefore, that I will mostly look when discussing why, in the Stoic system, the world is endowed with mental faculties.

In the first chapter, then, I will examine the history of the notion of sympathy or co-affection (*συμπάθεια*), which will be fundamental for my account of the emergence of perception in the following chapter. In particular, I will look at the shift towards cosmic *συμπάθεια* as a specific innovation of Chrysippus. This will help, on the one hand, to set Chrysippus as the main authority to look at when discussing Stoic cosmic psychology and, on the other hand, to settle some exegetical problems concerning the relevance of sympathy among the Stoics. In particular, I will address the position, first proposed by Reinhardt but still fairly popular among scholars, that Posidonius' introduced the main innovations concerning cosmic sympathy. While Edelstein and Kidd have contributed to re-dimensioning the importance of Posidonius' innovations thanks to their edition of his fragments, Posidonius is still perceived as one of the chief figures to consider when discussing cosmic sympathy. My thesis is that Chrysippus is mostly responsible for passages concerning sympathy and that he alone is responsible for the shift towards cosmic sympathy among the Stoics. His theory of sympathy, indeed, was part of a larger cluster of theories which included his embryological doctrines and effectively allowed him to explain how the cosmos develops mental faculties.

In the second chapter, I will argue in favour of the first main claim of this thesis, according to which the mental faculties of the cosmos emerge from interactions between bodies once the cosmos develops a pneumatic part. In doing so, I will address the position, held by most scholars, that mind is a primitive component of the Stoic cosmos as active principle. While this is indeed the case, the active principle is never encountered alone: most texts, and especially those concerning Stoic embryology, seem to assume that the active principle, after the elemental transformation and its blending with matter through and through in order to become *pneuma*, and after the subsequent blending of *pneuma* and matter, undergoes a series of adaptive changes, eventually losing its mental powers when *pneuma* is disposed in a certain way (*ἔξις, φύσις*), and developing specific mental

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<sup>51</sup> The most fundamental texts about this being Gould 1962, Hahn 1977 and Sambursky 1959.

faculties when pneuma is disposed as a soul (ψυχή). In this chapter, I will first isolate the most fundamental mental faculty as that of perception, which allows the subject to represent itself as such. Then, I will proceed to examine the adaptive changes pneuma undergoes in order to develop it. Sympathy will turn out to be a fundamental notion in order to do this, since it describes the specific relation in which the pneumatic and the bodily parts of a blend need to be so that the blend may develop perception. As I will argue, since pneuma moves with a regular pattern, and since, as a corporeal entity, it impacts and is counter-impacted by the body, once it manages to maintain a regular pattern of movement while it endows the body with movement, pneuma is at the same time acting upon the body and receiving feedback from its activity in the form of material interactions, which allows it to register, i.e. perceive, the results on its own activity on the body as such. This state, as I will demonstrate, is precisely what Chrysippus refers to when he claims that a soul and a body are in sympathy. In supporting this thesis, I will examine passages discussing cosmic sympathy as well as sympathy between soul and body, in particular from Plotinus and Sextus Empiricus, in order to show their compatibility, as well as the fact that Stoic embryology was applied both to the life of the cosmos and to that of the living beings within it.

In the third and fourth chapter, respectively on perception (αἴσθησις) and will (βούλησις), I will address the second main claim of my thesis, namely, that the cosmos is endowed with mental faculties for unificatory purposes. In the third chapter, I will examine the unificatory power of the mental faculty of perception, which is the most fundamental one insofar as it allows the subject to represent itself and, therefore, to conceive of itself as a centre of action, factually enabling it to behave as a subject. The question of the unificatory power of mental faculties emerges from Hierocles' *Elements of Ethics*, where he claims that perception can “bind” a subject in a stronger manner than its mere physical cohesion. While many scholars have discussed Stoic psychology, this claim has yet to be acknowledged as problematic. It does, however, tie into one of the major unsolved problems concerning the nature of the soul in Stoicism, which Long has discussed at length in his writings,<sup>52</sup> namely, how can the soul be responsible both for the physical cohesion of the body and of endowing it with mental faculties. One of the aims of this third chapter, therefore, is to propose a new and original interpretation of how mental faculties themselves contribute to the recognized unifying activity of the soul in the context of Stoic corporealism. After examining the compatibility of Hierocles' theories in the *Elements of Ethics* with Chrysippus', I will proceed to a close reading of some of the passages and, by building upon the physical description of how perception emerges when body and soul are in sympathy, provided in the second chapter, I will explain how the purpose of this

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<sup>52</sup> See Long 1996a.

physical process grants to the living being a unity in complexity, that is, the unity of a complex entity capable to withstand change. In particular, I will focus on describing the physical functioning of the perceptive feedback loop enabled through sympathy, and how it contributes to the unity of the living being by allowing it to maintain unity in the face of change, again, both on the cosmic and individual level.

Finally, in the fourth chapter, I will expand upon this thesis by considering the unificatory function of will (βούλησις) as the second mental faculty of the cosmos. In doing so, I will engage with the scholarship concerning the Stoic treatment of passions and, in particular with reference to the Aristotelian function argument and its connection to appetitive drives in Stoicism. I will define will (βούλησις) precisely as the appetitive drive, or impulse (ὁρμή), of the cosmos. As for the emergence of this impulse, sadly, the texts do not hint at an explanation of how it may manifest from purely material interactions; hence, on that side, my speculations will be entirely hypothetical. However, when it comes to its unificatory power, I will argue that will unifies the cosmos by providing a teleological orientation for its actions. Inwood's discussions on Stoic ethics will be particularly relevant in pinpointing what is the specific function of will, and what kind of impulse it defines. In the specific case of will, moreover, this teleological orientation is directed to a "good flow of life", that is, to an activity which justifies not only the beginning but also the continuity of the self-transformative movement of the cosmos.

My work, therefore, aims to be both philosophically original and operative for resolving specific problems of Stoic interpretation. There is, indeed, great potential for original thought hidden within the intricacies of Stoic philosophy, and it is my wish to read this originality through a comprehensive explanation of Stoicism's apparent contradictions.

## I. The Stoic Shift Towards Cosmic Sympathy

### 1. Introduction

Of the Stoic technical notions that I will examine in this work, sympathy (συμπάθεια) is not only the most fundamental, but also the one which has sparked the most heated historical debate. Sympathy, especially in its cosmic application, was widely used by Neoplatonic philosophers such as Plotinus and Proclus, and was later re-discovered by Renaissance thinkers such as Marsilio Ficino, Erasmus and Girolamo Fracastoro, to the point that some modern thinkers felt the need to dismiss it as a merely occult quality, only to be then attacked by others, such as Hume, Smith and Sophie de Grouchy.<sup>53</sup> Throughout its history, the notion of sympathy has been used to account for such a wide range of phenomena that it is almost impossible to systematize its meaning. Initially, in its most common meaning in Greek, συμπάθεια, translatable as “co-affection”, likely indicated a simple fellow-feeling, akin to our modern use of the word “sympathy”,<sup>54</sup> but was later used in ancient medicine to explain the interconnectedness between parts of the human body, in ancient physics to account for interactions between celestial and earthly bodies, and in the Renaissance to justify the possibility of certain magical practices. Clearly, it is impossible to gather such a diverse range of uses under a single definition: sympathy is the kind of philosophical notion that survives in history thanks to the general vagueness surrounding it, which allows for its continuous re-purposing to different theoretical contexts and philosophical systems.

Precisely from this elusiveness comes the purpose of this chapter: since, in this thesis, the notion of sympathy will play a fundamental role in Stoic cosmic psychology, it is first necessary to reconstruct a brief and yet fundamental portion of its history, which can lay a solid base to provide a full definition of it in the context of Stoic physics. The introduction of sympathy in Stoicism marks a fundamental shift in the use of the notion when compared to how it was used by their predecessors, namely, its application to the cosmos as a whole. This use of sympathy as a cosmic phenomenon is not registered before the Old Stoa and became widely popular in late antiquity and early modern philosophy. Here, I want to demarcate this significant segment of the history of sympathy, in order to illustrate a particular use of sympathy in Stoicism, which has great importance for our question

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<sup>53</sup> For a general overview of the history of sympathy, Schliesser 2015 is currently the main text to consult, spanning from different eras and fields of knowledge. In this chapter, I will focus on a very restricted part of the history of sympathy, namely its being re-purposed by the Stoics as a technical notion applicable to the whole cosmos.

<sup>54</sup> This use is found, for instance, in Plato’s *Charmides* (169c), where Critias finds himself at a loss following Socrates, “just as those who see people yawning opposite to them are co-affected (συμπάσχειν) with them in the same manner”.

concerning the explanatory advantages of conceiving of the cosmos as a thinking being. I will, therefore, mostly focus on where the terms συμπάθεια and συμπάσχειν directly appear in pre-Stoic philosophical and scientific sources, in order to establish, from their use, when precisely this new conception of cosmic sympathy appears, and who is responsible for it. First, I will examine the early uses of sympathy in the context of medical thought and in the writings of Aristotle, who likely imported the term from the medical context. Then I will look at how Epicurus adopted sympathy, and how some of his and Aristotle's innovations were transported into Stoicism by Cleanthes. Up to this point, I will argue, the main common element linking the uses of sympathy made by medicine, Epicureanism and Stoicism is that of appearing in the context soul-body relations: sympathy is mostly an observable phenomenon confirming that soul and body can affect each other. What changes is mostly how different thinkers use this observation as evidence for different theories. After Cleanthes, however, as I will argue, Chrysippus is responsible for the shift towards cosmic sympathy and towards a generally new and original conception of sympathy, which will be fully elucidated in the next chapter. In showing this, I will address and dismiss the well-known claim that Posidonius is the main philosopher to take into account when discussing Stoic cosmic sympathy. As a result, the discussion on cosmic sympathy and its role in the Stoa will narrow our research into the study of the philosophy of Chrysippus, his philosophical model and the particular innovations he is responsible for.

## 2. *The Medical Notion of Sympathy*

Before being applied to the cosmos, sympathy was used chiefly in the context of the human body. It is unclear when, precisely, the notion emerged, but Brooke Holmes, who has widely discussed sympathy, has argued that a notion of proto-sympathy seems to be at work already in the Hippocratic corpus.<sup>55</sup> In several places, indeed, Galen attributes to Hippocrates the claim that “there is one co-flowing, he says, one conspiracy, a complete co-affection of all with all, and a common nature” (σύρροια μία, φησὶ, σύμπνοια μία, πάντα πᾶσι συμπαθέα, φύσις κοινή).<sup>56</sup> According to Holmes, the attribution of this quote to Hippocrates by Galen seems to be highly suspect, if anything because of its pervasive use of Stoic technical vocabulary, which is usually not found in the Hippocratic corpus: terms like σύρροια and σύμπνοια, indeed, are widely used by the Stoics. However, if we take this

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<sup>55</sup> Holmes 2015 p.125-6.

<sup>56</sup> Galen, *De causis pulsum libri iv*, 88.13. A similar quote is attributed to Hippocrates in *De naturalibus facultatibus*, 39.3, 189.5 and 196.6, with no reference to sympathy. For a wider discussion on the origins of conspiracy, see Horky 2021.

passage to be more than a mere reinforcement of Stoic theories through the authoritative voice of Hippocrates, Galen's attribution may show that, in his opinion, there could have been indeed a compatibility between some aspect of the Stoic conception of sympathy and Hippocrates' theories of the interconnectedness of the body.<sup>57</sup> Holmes, moreover, argues that, within the Hippocratic corpus, one may indeed find a description of internal body relations which closely resembles the notion of sympathy used later on in medical writings: the idea concerns an interconnectedness of the parts of the body, according to which they may influence each other so that, if one is affected, another may show symptoms of that affection.<sup>58</sup> As Holmes herself admits, while it may be possible that this idea influenced the Stoic conception of sympathy, pointing, in particular, to the example of pain being felt by the whole body as a sign of the sympathy between its parts, found in SVF 2.1013, it is framed quite differently, in that the focus seems to be "less on the parts and the relationship between those parts and more on the material trafficked between them or the pathways along which it travels".<sup>59</sup> Assuming that the term may indeed have been used in early medical writings, its use would have been mostly diagnostic, in the sense that the proto-sympathetic relationships between different parts of the body were mostly observed and discussed to establish the nature of certain material exchanges within the body, rather than defining a special kind of relationship between those parts. We may say, then, that συμπαθεια can here be taken in its literal etymological sense to mean "co-affection", since it is a phenomenon in which the affection of a certain part of the body causes the affection in another part, which an observer may register as symptom for the affection of the first.

Following this lead on the possible introduction of the term in a medical context, it is useful to look at uses of the term συμπαθεια and the verb συμπάσχειν in the *Corpus Aristotelicum* precisely in the context of medical writings. Aristotle himself never uses the word συμπαθεια, but the term does appear in the pseudo-Aristotelian *Problems*,<sup>60</sup> where a whole treatise is dedicated to its discussion. In *Problems* VII, the author examines a series of questions connected to possible instances of sympathy, such as yawning in response to someone yawning,<sup>61</sup> sharing mentally in someone's pain,<sup>62</sup> but also contracting illnesses by contagion.<sup>63</sup> The treatise is considered not Aristotelian precisely because of

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<sup>57</sup> More in general, Galen seemed to believe that Hippocratic thought had been the base of many Stoic ideas, including the main opposition between two principles and, ultimately, the idea that a body is unified by a single breath and that all its parts are in sympathy (see *Methodi Med.* I.2 = SVF 2.411).

<sup>58</sup> In particular, Holmes refers to passages from *On Places in a Human Being*, convincingly showing that a lot of the theories necessary to humoral pathology are compatible with successive uses of sympathy (see Holmes 2015, p.128-138).

<sup>59</sup> Holmes 2015, p.135.

<sup>60</sup> Scholarly debate has settled upon the idea that most of the treatises in the *Problems* were not written by Aristotle. For a general overview of which treatises can be considered Aristotelian or not, see Forster 1928., Flashar 1962 (p.356-58), Louis 1991-4 (vol 1., p. xxiii-xv) and Mayhew 2011 (p.xviii-xxi).

<sup>61</sup> Pseudo-Arist. *Prob.*VII, 887a4-15.

<sup>62</sup> Pseudo-Arist. *Prob.* VII, 887a15-22.

<sup>63</sup> Pseudo-Arist. *Prob.* VII, 887a23-887b1.

its use of the word συμπάθεια, which does not appear in other Aristotelian works, where συμπαθής and συμπάσχειν are more usual, and which, here, refers most likely to a specific technical use in medicine.<sup>64</sup> This is relevant for us, not only because it may add evidence to Holmes' claims concerning the origin of the term in a medical context, but also because it gives us a measure of what kind of uses of συμπάθεια were considered compatible with Aristotle's own thought in ancient times.

The common aspect of the phenomena presented in *Problems* VII seems to be that two subjects share in the same affection, and most of the author's discussion focuses on unveiling the possible causes behind this sharing. The accounts of phenomena of co-affection seem to oscillate between two possible explanations: co-affection is either the result of a common material cause, which generates synchronic effects in different objects, or a special kind of relationship which enables an exchange of affections between two things.

An example of co-affection as result of a common cause is contagion, which, in line with Hippocratic writings, would seem to depend on an exchange of infected matter, such as infected air or humors, which result in similar illnesses occurring in different bodies.<sup>65</sup> This instance of co-affection does not define a special kind of affection, but simply presents two or more affections as a synchronic result of a common material cause: as such, it does not occur in any different way from any other affection, if not for the fact that the cause is not immediately understood, and requires further investigation in order to be discovered.

As for co-affection resulting from a special relation between the co-affected subjects, beside the example of yawning in *Problems* VII, several other passages present examples compatible with this view. For instance, in *Problems* XIX the author refers to singing along with a singer as being in sympathy with him;<sup>66</sup> in *Problems* XIII sneezing stops hiccupping because the region of the nose and that of lungs are affected together.<sup>67</sup> As for the example of yawning, in the *Problems* the common cause seems to be the mental process of "recollection" (ἀνάμνησις). In Aristotle's *De Memoria et Reminescentia* it is considered an associative mnemonic mechanism. The discussion is widely reminiscent of Plato, but the mnemonic associations triggered when recollecting are not necessarily structured in a hierarchy, for Aristotle, nor does he establish any specific path they should follow: recollection is a mechanism of free association employed by the human mind in relation to certain stimuli.<sup>68</sup> Therefore, if we assume that the term is intended to have a similar meaning in the *Problems*,

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<sup>64</sup> See Mayhew 2011 p.228-9 and Louis 1991-4 vol.1 p.121.

<sup>65</sup> Hippocratic writings, once again, do not seem to mention sumpatheia in this kind of cases, but, according to Holmes, this kind of discussion on material exchange is what we could interpret as proto-sympathy.

<sup>66</sup> Pseudo-Arist. *Prob.* XIX, 921a36.

<sup>67</sup> Pseudo-Arist. *Prob.* XIII, 961b19

<sup>68</sup> Arist. *Parva Nat.*, 451a19-453a31. As Aristotle states in these pages, recollection happens when one movement, or mental impulse, follows another naturally by being similar or contrary to it. This mnemonic movement can be either spontaneous or triggered by the subject, and it resembles what, in the English language, is usually referred to as a "train

recollection should not be viewed as the common cause of both yawns. The first yawn is not caused by recollection, but recollection is rather the means through which the second yawn establishes a relation with the first via mental association, and therefore allows for someone to be affected by a yawn in sympathy with another person yawning. This explanation can be plausibly applied to the example of singing along with a singer, and for fellow-feeling in general, as resulting from a mental process of association for which certain gestures or feelings activate in response to being detected by the mind in other human beings. The connection between the region of the nose and that of the lungs, on the other hand, may be more difficult to elucidate. Clearly, matter can be exchanged between the region of the nose and that of the lungs, but the author seems here to focus rather on the idea that, even without hiccupping occurring, there is a special, established relationship between the co-affected objects, although the relationship is not further specified in the text.

Both these uses of συμπάθεια in the *Problems* seem compatible with the uses of συμπαθής and συμπάσχειν found in Aristotle's works. From the sparse use he makes of the terms, it is clear that he did not have in mind a technical notion of any sort. Nonetheless, looking at how he uses these terms is crucial in understanding how the Aristotelian discourse around co-affection was received by the author of *Problems* VII, who believed a certain description of συμπάθεια to be compatible with Aristotle's philosophy, as well as in understanding its further uses in Hellenistic schools. In *De Partibus Animalium* (653b6) Aristotle writes that the heat in the heart is sensitive to possible co-affection by changes in the heat of the blood or the surface of the brain; in *Politics* (1340a13) that when men hear imitations their hearts are affected together; in *De Anima* (427b24) that we are not co-affected by imagining fearful things as we would be by thinking about them; in *De Somno et Vigilia* (455a34) that there is one sense which is common to all humans and makes it possible for them to perceive, so that when it is affected, all the other senses are co-affected. The examples in *De Partibus Animalium* and in *De Somno et Vigilia* seem instead to refer to the use of sympathy presented above, where the co-affection of two objects is the result of a common cause. The two examples in *Politics* and *De Anima* seem instead to use the verb συμπάσχειν to indicate affection or fellow-feeling, which might depend on an associative mental process or some other way of establishing a special relation between two co-affected subjects. A most striking case of this kind of co-affection is that of the sympathy between soul and body – a case so fertile in its possible interpretations that it will become the exemplar instance of sympathetic relations from here onwards, and will be especially

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of thought". Here is an example of recollection provided by Aristotle: "from milk to white, from white to air, from air to damp,; from which one remembers autumn, if this is the season that he is trying to recall" (452a14-16). In the case of yawning in the response to yawning, the recollective movement should be from a perceived yawn to the impulse to yawn, i.e. from perceiving an external stimuli as someone else's to perceiving it as one's own.

relevant for the Stoics. We find mention of it in the *Prior Analytics* and in the pseudo-Aristotelian *Physiognomica*:

It is possible to infer character from physical features, if it is granted that the body and the soul **change at the same time** (ἅμα μεταβάλλειν)<sup>69</sup> by natural affections (no doubt by learning music a man has made some change in his soul, but this is not one of those affections which are natural to us; but rather such natural motions as anger and desire.) If then this were granted and also that there is one sign for one affection, and if we could state the affection and sign proper to each kind of animal, we shall be able to infer character from physical features. For if there is an affection which belongs properly to an individual genus, e.g. courage to lions, it is necessary that there should be a sign of it; for *ex hypothesis* body and soul **are affected together** (συμπάσχειν).<sup>70</sup>

**Soul and body, as it seems to me, are co-affected by one another** (συμπαθεῖν ἀλλήλοισι): on the one hand, an alteration of the state of the soul produces an alteration in the form of the body, and contrariwise an alteration in bodily form produces an alteration in the state of soul. Grief and joy, to take an instance, are states of the soul, and every one knows that grief involves a gloomy and joy a cheerful countenance. Now if it were the case that the external expression persisted after the soul had got rid of these emotions, we might still say that **soul and body are co-affected** (ἡ ψυχή τε καὶ τὸ σῶμα συμπαθεῖ), but their reciprocal changes would not be entirely concomitant. As a matter of fact, however, it is obvious that every modification of the one involves a modification of the other.<sup>71</sup>

Even though the second passage cannot be attributed directly to Aristotle, it seems to be mostly coherent with the example from the *Prior Analytics*: both passages are indeed concerned with the possibility of co-affection between soul and body, and this phenomenon is defined as observing the body and soul changing at the same time (ἅμα μεταβάλλειν). In the *Prior Analytics*, this is treated as an hypothesis and is not discussed any further, while in the *Physiognomica* the συμπάθεια between body and soul is presented as a fact. Given that this example is found only twice in the Aristotelian corpus, it is unlikely that he considered sympathy to be a technical notion to specifically employ in the context of soul-body relationships. However, here, as in the case of yawning, simple proximity does not seem to be enough to explain how body and soul can affect each other, so that some other relational element, or some feature common to both should be taken into account in order to explain how one can affect the other. Now, one of the central questions of Aristotle's *De Anima* is to understand whether the affections of the complex of body and soul always belong to both, or whether

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<sup>69</sup> Here I have slightly changed the translation of the Greek word ἅμα: most often used in a temporal sense of “at once” or “at the same time”, ἅμα may also mean “together with”, without any temporal reference. In the case of co-affection, one may be inclined towards this second meaning, as the stimulus generating the co-affection seems to affect first either the soul or the body, as either a passion or a physical sensation. It would seem likely, therefore, that the togetherness just refers to the fact that, each time, both are affected, although not exactly at the same time. However, as we will see below, in *De Anima* Aristotle claims that soul and body are inseparable and interdependent entities: if this is the case, then it is likely that cases of co-affection refer to an affection shared simultaneously by the soul-body composite.

<sup>70</sup> Arist. *Prior Analytics*, 70b7-16.

<sup>71</sup> Arist. *Physiognomica* IV, 808b11-21. The translation has been slightly altered in the passages in bold.

some of them are peculiar to the soul itself, a task that Aristotle explicitly presents as difficult.<sup>72</sup> Answering this question, for Aristotle, would bear upon the question of whether the soul is capable of existing without a body – a thesis he seems inclined to reject, given that he states that the majority of the soul affections and activities, with the exception of thought, seem to be common to both soul and body.<sup>73</sup> In line with the passage of the *Prior Analytics*, therefore, in *De Anima* Aristotle claims, again, that whenever the affections of the soul occur, “the body suffers something simultaneously with them” (ἅμα γὰρ τούτοις πάσχει τι τὸ σῶμα).<sup>74</sup> When it comes to soul-body relations, most of *De Anima* focuses on attributing activities and affections either to the soul or to the soul-body composite, and tackles the question of soul-body relations by presenting the claim that soul is the form of a body which potentially has life<sup>75</sup> – with all its widely debatable consequences<sup>76</sup> – and does not seem to examine specific cases of co-affection between soul and body, despite famously maintaining that emotions, for instance, can be defined both in bodily terms and in psychic terms.

In this regard Christoph Rapp has noticed that one of the main differences between Aristotle and the Hellenistic schools in discussing soul-body relations is precisely that, while Aristotle acknowledges the psycho-somatic character of emotions, the question of how the soul and body can affect each other does not seem to be as relevant for him as in the Hellenistic schools, precisely because soul and body are not taken to be two entirely separate entities.<sup>77</sup> Nonetheless, the claim found in *De Anima*, according to which soul is the form of the body, and from which the inseparability of the two entities directly depends, can indeed yield some information on how co-affection may work in the context of the *Prior Analytics* and the *Physiognomica*, and, as such, on how Aristotle saw the possibility of a co-affection between body and soul. From these two texts alone, we are certainly not in the position of excluding, *ex silentio*, that a common, undiscovered cause may ground the

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<sup>72</sup> *De An.* 403a4-5.

<sup>73</sup> *De An.* 403a7.

<sup>74</sup> *De An.* 403a19-20.

<sup>75</sup> *De An.* 412a19; b5.

<sup>76</sup> The body-soul relation is famously one of the most challenging battlegrounds for debate in Aristotelian philosophy, especially pertaining the problem of the corporeality of the soul. Even among modern scholars, opinions tend to differ widely: Slakey 1961 has argued for an interpretation of *De Anima* where perception is to be taken solely as a physiological phenomenon, while Solmsen 1961 has taken the opposite position, arguing that perception is described mostly in non-physical terms, and a similar position is found in Barnes 1972, where desire and thought are interpreted as wholly non-physical in Aristotle. Sorabji 1974 has hinted towards a “median way” while focusing on the problem of how the soul can move the body, claiming that there may be a way in which the soul generates heat – as it seems to be the case in desire. More recently, Menn 2002 notably proposed another “median way” hypothesis, according to which the soul-body relationship should be seen as an art-tool relationship, with the corollary of the tool not requiring an artist to be used, insofar as the tool is an organic natural body, as it is the case with the human body. Here, I am not going to take a position on the problem of soul-body relations in Aristotle, insofar as I am only interested in discovering whether sympathy is in any way relevant for it: despite the brief mentions in the *Prior Analytics* and in the *Physiognomica*, Aristotle does not seem to elaborate further on co-affection between soul and body, nor does he seem to believe co-affection is a particularly relevant phenomenon to understand soul-body relations.

<sup>77</sup> Cfr. Rapp 2006 pp.204-208.

possibility of co-affection between soul and body, or that some material exchange between them may be at work, at least if we keep in mind that Aristotle may have leaned towards the idea of the corporeality of the soul.<sup>78</sup> But, if soul is the form of the body as stated in *De Anima*, then we can safely infer that συμπάθεια between soul and body depends upon a special relationship between co-affected objects, despite the evident difficulty, encountered by Aristotle himself, to thoroughly account for what this relationship may be. If the soul and the body are related as form and matter, soul-body co-affectivity cannot depend solely upon a material exchange: indeed, even if we hypothesized that the soul, as form of the body, could itself be some sort of corporeal entity, its relation with the body would not be one of mere action by proximity and touch, insofar as we maintain that it is also its form. The possibility for soul and body to affect each other, therefore, seems rather rooted in the special kind of relationship they hold as the form and matter of a single entity, in Aristotle. In inquiring soul-body relations, however, Aristotle seems mostly uninterested in the fact that some affections manifest in both: he does not rely upon συμπάθεια to describe any kind of co-affectivity between body and soul, nor does he seem to find particularly relevant the fact that soul and body can influence each other. It is possible, therefore, that the phenomenon of co-affection described in the *Prior Analytics* and in the *Physiognomica* may have not struck Aristotle as a particularly fertile ground for further inquiry – the same, however, cannot be said of Hellenistic schools.

### 3. Epicurean Sympathy

With the Hellenistic schools, συμπάθεια acquires new importance and starts developing as a technical notion, possibly thanks to Epicurus. Sadly, the use of sympathy in Epicureanism has not received much scholarly attention.<sup>79</sup> The mediation of Epicureanism was nonetheless a fundamental step in the introduction of the concept among the Stoics, and, more in general, in the history of philosophy. Possibly following the Aristotelian suggestions of the *Prior Analytics* and the *Physiognomica*, Epicurus talks about sympathy mostly in the context of the soul-body relationship and of perception. In the *Letter to Herodotus* the term is used only a handful of times, so that it may

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<sup>78</sup> The main problem at stake here being the contrast between the definition offered in the *Physics*, according to which for something to act or be acted upon, a contact between extremities (and the corporeality of the objects in contact, insofar as they have extremities) is necessary (*Phys.* 226b21-227a7), and the claims for the incorporeality of the soul offered in *De Anima*, where the soul is said to be unextended (*De An.* 407a2-3) and incorporeal (*De An.* 414a20), and therefore without edges.

<sup>79</sup> Especially concerning the relevance of sympathy in the passages quoted below, little has been said beside Long & Sedley 1987 p.76-78 and Brouwer 2015 p.19-20.

be difficult to establish with certainty whether sympathy is already a technical notion or not: it is likely, however, that Epicurus had in mind a specific meaning of the term, which applies both to the sphere of perception and to that of soul-body relations. Let us now take a look at the first occurrences of co-affection in relation to sense perception:

Also, [nothing testifies against the fact] that the creation of images happens as fast as thought. For there is a continuous flow from the surface of bodies – not revealed by diminution in their size, thanks to reciprocal replenishment – which preserves for a long time the positioning and arrangement which the atoms had in the solid body, even if it is also sometimes distorted; and formations of them in the space around us, swift because they do not need to be filled out in depth; and other ways too in which things of this kind are produced. **For none of this is contested by our sensations, if one is considering how to refer self-evident impressions from external objects to us in such a way as to refer co-affections too** (οὐθὲν γὰρ τούτων ἀντιμαρτυρεῖται) ταῖς αἰσθήσεσιν, ἂν βλέπη τις τινα τρόπον τὰς ἐναργείας ἵνα καὶ τὰς συμπαθείας ἀπὸ τῶν ἔξωθεν πρὸς ἡμᾶς ἀνοίσει). And we must indeed suppose that it is on the impingement of something from outside that we see and think of shapes. For external objects would not imprint their own nature, of both colour and shape, by means of the air between us and them, or by means of rays or of any effluences passing from us to them, as effectively as they can through certain delineations penetrating us from thought, and travelling at high speed, with the result that their unity and continuity then results in the impression, **their co-affection being preserved all the way from the object because of their uniform bombardment from it, resulting from the vibration of the atoms deep in the solid body.** (καὶ τὴν συμπαθειαν ἀπὸ τοῦ ὑποκειμένου σφῶζόντων κατὰ τὸν ἐκεῖθεν σύμμετρον ἐπερειασμὸν ἐκ τῆς κατὰ βάθος ἐν τῷ στερεμνίῳ τῶν ἀτόμων πάλλσεως) [...] Hearing too results from a sort of wind travelling from the object which speaks, rings, bangs or produces an auditory sensation in whatever way it may be. This current is dispersed into similarly-constituted particles. **These at the same time preserve a certain co-affection in relation to each other, and a distinctive unity which extends right to the source** (ἅμα τινὰ διασῶζοντος συμπαθειαν πρὸς ἀλλήλους καὶ ἐνότητα ἰδιότροπον), and which usually causes the sensory recognition appropriate to that source, or failing that, just reveals what is external to us. **For without a certain co-affection returned from the source, such sensory recognition could not occur** (ἄνευ γὰρ ἀναφερομένης τινὸς ἐκεῖθεν συμπαθείας οὐκ ἂν γένοιτο ἡ τοιαύτη ἐπαίσθησις).<sup>80</sup>

The passage attempts to explain the nature of perception, which, for the Epicureans, is mediated by a flow of atoms emanating from the perceived object towards the perceiver,<sup>81</sup> so that, once the perceiver's sense organs are impacted by the atoms flowing from objects, perception arises. This, however, results in a problem, namely: how can we be sure that the flow of atoms emanated from the object produces an accurate representation of the object itself in the perceiver? One of the controversial theses of Epicureanism is that there is no error in sense-perception, which is also

<sup>80</sup> Epicur. *Ep. Her.* 48-52 = LS 15A. The translation has been slightly modified in the parts in bold.

<sup>81</sup> Usually, the images generated in this flow are called εἶδωλα, but I will here use the expression “flow of atoms” because it more generally refers to all kind of sensory perception. The expression εἶδωλα refers to visual perception, and some atomic flow are not eminently visual: smell, in particular, which requires the mediation of an atomic flow in Epicurean philosophy, would be particularly difficult to account for by referring to a visual term.

formulated as the thesis that all impressions are true.<sup>82</sup> As Long and Sedley have argued, this should be interpreted in the sense that “all sensations are real events”,<sup>83</sup> in that they accurately report the state of atoms impacting the sensory organs. The analogy used by Long and Sedley is that of a photograph, which “accurately reports the pattern of light waves arriving at the lens, and thus provides *bona fide* evidence about the external object reflecting a light.”<sup>84</sup> This, however, is not sufficient evidence for the accuracy of perception: indeed, if three elements are necessary to preserve the accuracy of perception, i.e. the perceived object, the mediating atoms flowing from it, and the perceiving organ, then we must account for the accuracy of two mediating moments in order for perception to be accurate. One is, of course, the passage of the flow of atoms into the perceiving organ, which is accurate insofar as it only involves the flow of atoms emanating from the perceived object and its reception from the organ. The other is the emanation of this flow of atoms from the perceived object, which, according to Epicurus, can be disturbed by external events,<sup>85</sup> in the same way in which a change of light can make an object more or less visible. Therefore, Epicurus must have had a need to account for how a given flow of atoms could maintain its unity and structure in passing from the perceived object to the perceiving organ. This is essential not only to understand how can we have a continued, undisturbed perception of an object over time, but also to understand how two observers can have similar experiences of the same perceived objects: if nothing guarantees that the flow of atoms emanating from a perceived object can maintain its structure, then nothing guarantees that a given observer is perceiving the same object over time, or that two or more observers would be perceiving different objects instead of the same.

In the passages above, Epicurus introduces *σμπάθεια* precisely to indicate how structure in atomic flows is preserved.<sup>86</sup> As we see from the highlighted passages in the text, co-affectations are a character of the atoms flowing from the perceived object to the perceiver, on the preservation of which depends the unity and accuracy of the image of the perceived object we receive: co-affectations are that which

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<sup>82</sup> See Long & Sedley 1987, pp.78-86.

<sup>83</sup> Long & Sedley 1987, p.85.

<sup>84</sup> Long & Sedley 1987, p.85.

<sup>85</sup> *Epic Ep. Her.* 48: “For there is a continuous flow from the surface of bodies – not revealed by diminution in their size, thanks to reciprocal replenishment – which preserves for a long time the positioning and arrangement which the atoms had in the solid body, even if it is also sometimes distorted”.

<sup>86</sup> Again, the scholarly discussion on this passage has not focused chiefly on the meaning of “co-affectations”, despite the fact that the term seems to have a rather central role in the passage, being repeated three times in a row in similar context. Long and Sedley seem inclined to believe that “co-affectations” would indicate the changes undergone by the flow of atoms to track changes in the perceived object (Long & Sedley 1987, p.76), which is at least partially compatible with our idea. Bailey proposes “the corresponding sequence of qualities and movements” (Bailey 1926, p.194) as a possible translation, and then defines it as “correspondence of qualities” (Bailey 1928, p.405): the focus on correspondence however lacks an explanation as to how this correspondence is obtained – and why it should be referred to in terms of co-affectation. My explanation that this correspondence of quality depends on mirroring atomic structures in both the perceived object and the flow of atoms, i.e. by having atoms affect each other in similar ways in the sense of being relatively disposed towards in each other in similar ways, tries to shed light on this ambiguity.

is brought to the perceiver when, through the atomic flows, he brings back “self-evident impressions from external objects”; they are something which is preserved in the flow of atoms alongside with the unity and continuity of the flow (“their co-affection being preserved all the way from the object”); and they are something occurring among the atoms of the flow alongside with their being united (“These at the same time preserve a certain co-affection in relation to each other, and a distinctive unity which extends right to the source”). Now, it remains unclear from this text whether co-affections are the cause of the unity of the atom flow or whether they are simply correlated to it. A passage from Lucretius, however, would seem to point towards a causal explanation: Lucretius, indeed, refers to a theory akin to Epicurus’, when he makes the following example: “when the wind beats us little by little, and when bitter cold creeps on us, we do not normally feel every separate particle of that wind and that cold, but rather the combination of them (*sed magis unorsum*)”.<sup>87</sup> This passage is relevant because it presents the unity of the flow of atoms in relational terms: the word *unorsum*, meaning “the aggregate” or “the combination”, is here used to stress that the unity of the flow of atoms is a unity depending not merely on proximity, but on disposition of atoms into a specific structure.<sup>88</sup> Co-affection has a similar relational meaning, in that, as a concept, it seems to need at least two or more elements partaking in the co-affection: between atoms flowing from perceived objects there is “co-affection in relation to each other” (συμπάθειαν πρὸς ἀλλήλους), which seems to indicate that a special relation among these atoms is preserved. Given that, in the final lines of the text, Epicurus states that “without a certain co-affection brought back from the source, such sensory recognition could not occur”, we can safely infer that the relation established by co-affection between the atoms of a sensory flow is essential for the unity of it, since recognition can only happen if the flow of atoms is unbroken and undisturbed. Co-affection, therefore, is not only correlated with the unity of the sensory flow, but is indeed the very cause of it, both in the sense of maintaining the continuous unity of a single perception in time, and in the sense of preserving, within the perceiver, the unitary structure

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<sup>87</sup> Lucretius 4.256-68 = LS 15C. In reference to this passage, Brouwer claims that the role of co-affections in Epicurean theory of perception is unclear, because it is uncertain whether they happen in the objects themselves or in our images of them (Brouwer 2015, p.19). The language of “bringing co-affections back from the object” and “preserving co-affections” seems to suggest that co-affections may have origin in the object, and could be used to describe its unity. However, the fact that they are used only in the context of perceived images, may suggest that they are mostly a way to explain how a moving flow of atoms, rather than being perceived partially as it strikes our sensory organs, is perceived unitarily. I would therefore be inclined to agree with Long & Sedley: co-affections do indeed happen mostly in the images, but not only for them to track the changes in real objects, but to preserve the image as the unified image of a given object *despite* the fact that the flow of atoms is ever-moving.

<sup>88</sup> The word likely translates the Greek term ἄθροισμα, used by Epicurus to indicate atomic aggregates. One of such aggregates, as seen from the passage of the *Letter to Herodotus* quoted below, is the soul-body aggregate. However, Lucretius uses the word *unorsum* in reference to the atomic flow, which he also perceives as an atomic aggregate with specific structural features. In the *Letter*, on the other hand, while appearing in the context of perception, Epicurus never refers to the atomic flow as an aggregate, although the fact that sympathies are preserved within it would point precisely to the fact that it indeed possesses a structural unity of some kind.

of whatever is perceived. This use of co-affection seems peculiar to Epicurus, which should not surprise us, for the problem of how isomorphic structures are preserved through a flow of individual atoms is a problem of atomistic philosophy in general. If my interpretation is correct, moreover, this may also explain why this theory does not seem to have been popular with the Stoics, namely, because for them the perceptive sensory flow is continuous and, as such, it does not need further explanation for its unity.<sup>89</sup>

The second occurrence of co-affection in the *Letter to Herodotus* seems, instead, strongly reminiscent of Aristotle. Epicurus claims that body and soul show sympathetic relations, because they are affected at the same time by certain stimuli, and because they are capable of reciprocally affecting each other:

The next thing to see – referring it to the sensations and feelings, since that will provide the strongest confirmation – is that **the soul is a fine-structured body diffused through the whole aggregate** (ἡ ψυχὴ σῶμά ἐστι λεπτομερές, παρ’ ὅλον τὸ ἄθροισμα παρεσπαρμένον), most strongly resembling wind with a certain blending of heat, and resembling wind in some aspects but heat in others. But **there is that part which differs greatly also from wind and heat themselves in its fineness of structure, a fact which makes it more co-affected with the rest of the aggregate** (ἔστι δέ τι μέρος πολλὴν παραλλαγὴν εἰληφὸς τῇ λεπτομερείᾳ καὶ αὐτῶν τούτων, συμπαθὲς διὰ τοῦτο μᾶλλον καὶ τῷ λοιπῷ ἄθροίσματι). All this is shown by the soul’s powers, feelings, mobilities and thought processes, and by those features of it whose loss marks out death. [...] Hence the soul, so long as it remains in [the rest of the aggregate], will never lose sensation through the separation of some other part: whatever of the soul itself is destroyed too when all or part of the container disintegrates will, so long as it remains, have sensation. But the rest of the aggregate, when either all or part of it remains, does not have sensation following the separation of however many atoms it take to make up the soul.<sup>90</sup>

For Epicurus, the possibility of co-affection between soul and body becomes the basis of a philosophical argument concerning, once more, perception. In the passage, Epicurus presents the soul as composed by heat and wind, and resembling both. A third part, different from wind and heat, would then be responsible for the faculties of the soul, such as feelings, motivity, thought and perception. Its fineness is what makes it “more co-affected with the rest of the aggregate” (συμπαθὲς μᾶλλον καὶ τῷ λοιπῷ ἄθροίσματι), a particular which is relevant for us, because it seemingly expands upon Aristotle’s empirical observation that body and soul undergo reciprocal affection. Indeed, Epicurus is here adding a physical explanation to the phenomenon, namely, that co-affection is possible because the soul is itself a thin body spread through the rest of the animal’s constitution. Co-affection

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<sup>89</sup> Sympathy is not mentioned in the context of perception among the Stoics, except to justify the soul-body relation in which self-perception arises in Hierocles IV.3-23. The sympathy discussed here, however, is a sympathy between body and soul, and it has little to do with the unity of the perceived image of an object, while being more concerned with how a ψυχὴ-blend must be structured in order for it to be capable of perception in the first place. A discussion of sympathy as contributing to the unity of perception, however, seems to have been picked up by Plutarch (*Quest. Conv.* 626c), and later by Plotinus (*Enneads* 4.4.23, 4.5.1, 4.5.2, 4.5.8, 4.9.2).

<sup>90</sup> Epicur. *Ep. Her.* 63-4 = LS 14A. The translation of the parts in bold has been slightly modified.

between soul and body, for him, is still mostly introduced as an observed phenomenon, to which he adds the explanation that it results from the corporeal nature of the soul. A similar argument is later found in Lucretius, who, however, inverts the modality of explanation:

But when the mind is affected by a more powerful fear we see the whole spirit throughout the limbs share its sensation, with sweat and pallor arising over the whole body, the tongue crippled and the voice choked, the eyes darkened, the ears buzzing, the limbs buckling - indeed, we often see men collapse through the mind's terror. **From this anyone can easily tell that the spirit is interlinked with the mind: when it is impelled by the mind's power it immediately hurls the body forward with its own impact** (*facile ut quivis hinc noscere possit esset animam cum animo coniunctam, quae cum animi vi percussast, exim corpus propellit et icit*). This same reasoning proves the nature of the mind and spirit to be corporeal. For when it is seen to hurl the limbs forward, to snatch the body out of sleep, to alter the face, and to govern and steer the entire man - and we see that none of these is possible without touch, nor touch without body - you must surely admit that the mind and spirit are constituted with a corporeal nature. **Besides, you can see that the mind is affected jointly with the body and shares our bodily sensations** (*praeterea partier fungi cum corpore et una consentire animum nobis in corpore cernis*). If the frightful force of a spear, when it penetrates to wrench apart the bones and sinews, fails to strike at life itself, there nevertheless follows relaxation and an agreeable descent to the ground, and on the ground a turmoil which develops in the mind and at times a half-hearted will as if to rise. Hence the nature of the mind must be corporeal, since it suffers under the impact of corporeal spears.<sup>91</sup>

Lucretius, as it appears from the passage, is more interested in the argumentative potential of the empirical observation of co-affection: for him, co-affection confirms the corporeality of the soul, since soul and body would not be able to interact and be co-affected if they were not both corporeal entities. Now, while it is entirely plausible to suppose that Epicurus also argued in favour of this thesis, the text of his letters does not provide us with a definitive proof and, since Lucretius' same argument is historically attributed to Cleanthes, as we will see in the next section, it is possible that Lucretius is here following Stoic, rather than Epicurean modes of discussion. Much about the context of the passage, concerning the relation between body and soul, would let us assume so: the soul is here stated to have its seat in the heart (a known Stoic theory) and the references to pain strongly resemble the Chrysippean theories presented by Sextus Empiricus in SVF 2.1013 - one of the fundamental Stoic passages concerning co-affection.

Most likely, Epicurus' interest in the notion lies elsewhere, as shown by the previous discussion on co-affection and perception. If we want to believe that his use of co-affection is in any way technical, we should explore the possibility that co-affection has a compatible meaning in both contexts in which it appears. Previously, we have argued that Epicurus mentions co-affection to ensure that the structural coherence of the flow of atoms is maintained from the perceived object to

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<sup>91</sup> Lucretius, *De Rerum Natura*, 152-176 = LS 14B.

the perceiver. Similarly, in the context of soul-body relationships, co-affection may have been brought up in relation to structure: from the Epicurean passage above, indeed, we learn that the soul is not only a fine structured body, but that its fineness allows it to be “diffused through the whole aggregate” (παρ’ ὅλον τὸ ἄθροισμα παρεσπαρμένον). If this is the case, then co-affection would testify not only to the fineness of the soul’s atoms, but also to their presence in all the parts of the body, since, as Epicurus argues later on in the letter, as long as body and soul are united, perception continues unbroken.<sup>92</sup> In this sense, co-affection marks the fact that the soul’s structure matches the body’s, in that all parts of body and soul can reciprocally affect each other. In Epicureanism, co-affection may have therefore marked the compatibility between different structures: if, in atomic physics, direct contact is necessary for affection, the possibility for two entities to share in the same affection would mean that either the vast majority or the whole of the atoms would need to be in direct contact. But for this to happen a structural compatibility is necessary: two things which are wholly in contact, meaning that all their parts are in contact with no part being left out, must have the same shape. In the context of perception, then, co-affection marked a structural compatibility between the perceived object and the flow of atoms emanating from it, in which the “co-affections”, and thus the unity of the image, were preserved: this compatibility is marked by the fact that both the atoms flowing from the perceived object and the perceived object share in the same shape. In the context of the soul-body relationship, the same happens for the soul and the body: the reason why they can be co-affected is that they have the same structure.

In Epicurus, therefore, sympathy seems to be employed mostly to highlight how the structural unity of certain entities is possible. Given how little evidence there is for it, however, it is quite difficult to establish with absolute certainty whether sympathy was a technical notion or simply a term gathered from other texts and not critically expounded. What we can be sure of is that some parts of the Epicurean discussion of sympathy seeped into Stoic thought, especially for what pertains to its use in arguments concerning the corporeality of the soul. Epicurus has thus contributed to show how the empirical observation of co-affection can be used as evidence to build upon for further inferences. As we will see in the next chapter, his concern for sympathy as a phenomenon signalling a special kind of unity which is maintained throughout the unfolding of specific processes (in his case, perception) seems to have been essentially inherited by the Stoics, despite the many differences in their physical theories.

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<sup>92</sup> A similar thesis is also held by the Stoic Hierocles (Hierocles IV.3-23), in confirmation of the fact that there must have been ongoing contaminations between Stoic and Epicurean thought on this matter.

#### 4. Stoic Sympathy: Cleanthes, Chrysippus and Posidonius

In all probability, sympathy enters Stoicism through this Epicurean filter by the time of the second head of the school. Absent in fragments that refer to the philosophy of Zeno, sympathy makes its first appearance in Stoic testimonia in an argument about the corporeality of the soul attributed to Cleanthes by Nemesius:

Again Cleanthes says: **nothing incorporeal is coaffected with the body** (οὐδὲν ἀσώματον συμπάσχει σώματι), nor vice-versa, but only a body [can be coaffected] with a body: **but the soul is coaffected with the body** (συμπάσχει δὲ ἡ ψυχὴ τῷ σώματι) when it is sick or hurt; and the body with the soul: when the soul feels shame, the body flushes, and when the soul is afraid, the body becomes pale. Therefore, the soul is a body.<sup>93</sup>

We can see that Cleanthes is following a line of argument which is compatible with the empirical observations made by Aristotle and Epicurus regarding the co-affection of body and soul. Aristotle, however, did not see the sympathethic relation between the two as revealing something about their nature because of the way he conceived soul as the form of the body. Epicurus and Cleanthes, on the other hand, believe that two things that can affect each other must partake of the same corporeal nature, since they share the idea that only bodies can act and be acted upon. Therefore, for both of them, sympathy becomes a clue that reveals something about the nature of the soul: if the soul can affect the body and be affected by it, both entities must be ontologically compatible with each other, which means that the soul is itself a kind of body. As we see, up to this point, the use of sympathy has progressively changed: while co-affection is still taken to be something empirically observable, especially in the relation between soul and body, this empirical fact now becomes a fundamental element of specific philosophical arguments. With the Stoics and the Epicureans, indeed, the idea arises that sympathy should not simply be viewed as something occurring between bodies (or between body and soul), but as a phenomenon which yields some essential information about the nature of both.

This particular use of sympathy must have held some value for Stoic thinkers because, after Cleanthes, the term comes to be more widely used, to the point of becoming not only a technical notion employed up until the imperial Stoa and worth mentioning in the original Greek in Cicero's account of Stoic cosmology in *De Natura Deorum*, but, long after the old Stoa, a technical term found in Neoplatonic thinkers such as Plotinus and Proclus. This shift towards a radically new use of the term συμπάθεια as indicating "cosmic sympathy" happens chiefly in the philosophy of the "third

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<sup>93</sup> Nemesius *De Nat. Hom.* 32 = SVF 1.518. The translation is mine.

father” of the Stoa, Chrysippus, who is responsible for a great number of innovations and additions to the theories of his predecessors.<sup>94</sup> Before discussing this shift, however, we must note that Chrysippus is the first Stoic author whose direct quotation contains a use of the term συμπάσχειν, as Galen quotes a passage of Chrysippus’ *On the Soul* where, in the context of soul-body relations, Chrysippus mentions sympathy:

Palpitations are a known phenomenon in cases of fear; during palpitations, all the soul tumultuously moves towards that point, **according to the co-affecting that binds the parts to each other** (καθάπερ ἄλλοις ἄλλου συμπάσχειν πεφυκότος), and makes it so that they gather together converging there as if it was the hegemonic place.<sup>95</sup>

Chrysippus’ use of sympathy in this passage is strongly reminiscent of Cleanthes’: the idea that soul and body can co-affect each other because of their corporeal nature, which was the conclusion of Cleanthes’ argument, becomes here the premise of Chrysippus’ line of reasoning, according to which palpitations in the heart are generated by the soul flowing into it. This time co-affection is not simply a piece of evidence brought to demonstrate that both soul and body are corporeal, but rather a notion that seems to be rooted in the particular kind of unity soul and body achieve not only insofar as they are both bodies, but insofar as they are specific kinds of bodies with specific features. The movement of the soul towards the centre, here, follows the dynamics of pneumatic physics, which are a Chrysippean innovation: indeed, pneuma, although discussed by Chrysippus’ predecessors, becomes a body with very peculiar features, the most fundamental of which, as we will explain more in detail in the next chapter, is regularity of movement. Here, therefore, co-affection is introduced in the frame of a specific kind of interaction among bodies with peculiar qualities, and is not simply the result of shared contact between two corporeal entities. It is precisely with this specific kind of interaction in mind that Chrysippus may have decided to expand the use of the notion of sympathy to the whole cosmos, as I will show in the next chapter – and with precise reasons to do so.

While we can be certain that Chrysippus used the notion of sympathy in his account of body-soul interactions, the same cannot be said for other passages usually attributed to him, especially the ones concerning cosmic sympathy: indeed, for quite a long time, Posidonius has generally been taken to be the key figure in this expansion of the meaning of sympathy from its Aristotelian use in the context of soul-body relationships to its cosmic counterpart. Karl Reinhardt, who wrote extensively on

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<sup>94</sup> For Chrysippean innovations, see Gould 1971 and Hahm 1977. Gould believes that Chrysippus’ innovations depend chiefly on his strengthening the monistic tendencies inherent to the Stoic system (p.96), a task for which he develops new theories on blending and sympathy (p.101). Hahm focuses mostly on Chrysippus’ refinement of Stoic cosmobiology, with a concern over how his psychological theories seeped into his cosmological views (p.160) particularly in reference to the cohesive power of the soul (p.165) – both points concern soul-body relationships, and, as we will see, are relevant for Chrysippus’ complex conception of sympathy and its applicability to the cosmos.

<sup>95</sup> SVF 2.899.

Posidonius underlining his relevance in the history of ancient philosophy, argued that he was not only responsible for this shift, but that he was also the link between past philosophies and what he perceived as the innovation of Neoplatonic mysticism.<sup>96</sup> Against this interpretation, Ludwig Edelstein instead argued that the range of innovations imported by Posidonius must be strictly re-dimensioned:<sup>97</sup> once we look at the fragments in which Posidonius is explicitly credited as the author of certain theories, few of the ground-breaking and original theses put forward by Reinhardt seem to survive. However, while the general role of Posidonius in Stoicism has been reviewed, an attempt to precisely locate when the shift towards cosmic sympathy happens in the history of philosophy has yet to be made: as a result, despite the revaluation of Posidonius' general originality, the depiction of him as the "philosopher of sympathy" seems to have survived among some scholars<sup>98</sup> and, as a result, the role of Chrysippus in this shift towards cosmic sympathy has often been overlooked.

Generally speaking, Reinhardt's account seems to draw most of its inferences from the Ciceronian summary of Stoic cosmological theories we find in *De Natura Deorum* where Posidonius, who had also been the Stoic teacher of Cicero during his time in Rhodes, is mentioned several times.<sup>99</sup> The thinkers of the old Stoa, however, also feature prominently. In the passage where συμπάθεια (*cognatio*) is mentioned, no specific attribution to an author is made:

Consider again the harmony, the conspiring (*conspirans*) co-affection (*cognatio*) in nature; this will surely compel one and all to express agreement with my case? How could the earth at one time blossom, but then in turn become rigidly barren? How could the approach and departure of the sun at the summer and winter solstices be signalled by a spontaneous transformation in so much of nature? How could the sea-tides and the confined waters in the straits be affected by the rising and setting of the moon? Or the diverse courses of the stars be maintained in the single rotation of the entire heavens? What is certain is that these processes could not take place through harmonious activity in all parts of the universe, unless they were each embraced by a single divine, all-pervading, spiritual force.<sup>100</sup>

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<sup>96</sup> See Reinhardt 1921 and 1926.

<sup>97</sup> See Edelstein 1936 p.324, where he addresses directly the importance of sympathy in Posidonius, and Edelstein & Kidd 1999, p.1-31.

<sup>98</sup> For instance, Sambursky 1959 sees Posidonius as the Stoic responsible for the shift towards cosmic sympathy (p.ix), Pigler 2001 follows into the footsteps of Reinhardt in indicating Posidonius as the chief figure influencing Neoplatonic thought on sympathy. Brouwer 2015 mentions Chrysippus together with Antipater and Posidonius as the possible figure responsible for the shift towards cosmic sympathy, taking Cicero's *De Natura Deorum* as a main reference text for it, but does not further elaborate (p.20). Holmes 2019 acknowledges that the shift towards cosmic sympathy happens with the Stoics, and hints towards Chrysippus as the possible source of it, but does not further elaborate because of the complicated state of the doxographical material (p.244).

<sup>99</sup> See Reinhardt 1921, p.113-119.

<sup>100</sup> Cic. *ND* 2.18-19. No direct mention of Chrysippus is made here, but, in addition to my arguments, the reference to "conspiracy" also seems to point to him. The notion, as I will show in the next chapter, is closely related to that of συμπάθεια, and is likely another innovation introduced by Chrysippus, as argued in Horky 2021 and in chapter 2 of this work.

Two facts bring support in favour of an attribution of this theory to the old Stoa rather than Posidonius. The first is that the passage strongly echoes accounts from both Sextus and Alexander of Aphrodisias which, as we will see, are most likely summarizing theories from Chrysippus. The second is that the context for this passage is that of typical arguments from the old Stoa concerning the existence of the gods – thus making an attribution of it to Posidonius rather uncertain. Specifically, two arguments are mentioned before this passage: one, attributed to Chrysippus, according to which, if something superior to man exists, then something superior to man must have created it,<sup>101</sup> and the second, took up from Xenophon by Zeno, according to which, if the cosmos can bestow intelligence on its parts, then it must itself be intelligent.<sup>102</sup> The context in which Cicero mentions sympathy, therefore, is undoubtedly that of the old Stoa. Cicero, however, introduces sympathy only as a corollary to the conclusion that there is a divine mind ordering the world (which can follow from both arguments), since, for him, the regularity and interconnectedness of cosmic changes is mostly empirical evidence from what has been proven before. Therefore, given that neither Chrysippus nor any other old Stoic mentions sympathy in the context of this specific argument outside of Cicero, there would indeed be an opening to claim that either Posidonius or Cicero himself may have originated the corollary as a way of integrating the old Stoic arguments. But there doesn't seem to be much left to this thesis once we examine the philosophical compatibility of this passage with others, such as the following text from Alexander of Aphrodisias:

This is Chrysippus' theory on blending: the whole substance is one, and traversed by one single breath, from which it is compressed and held together, and **the whole is co-affected with itself** (ἔστι δὲ ἡ Χρυσίππου δόξα περὶ κράσεως ἥδε· ἠνῶσθαι μὲν ὑποτίθεται τὴν σύμπασαν οὐσίαν, πνεύματός τινος διὰ πάσης αὐτῆς διήκοντος, ὑφ' οὗ συνέκεται τε καὶ συμμένει καὶ συμπαθές ἐστὶν αὐτῷ τὸ πᾶν).<sup>103</sup>

The passage is meant to introduce Alexander's account and criticism of Chrysippus' doctrine of blending and of different modalities of unification. The general argument, here and in other passages

<sup>101</sup> The argument is attributed to Zeno (SVF 1.111) and then gain to Chrysippus, in slightly different forms (SVF 2.633, 2.641). The origin of the argument is most probably the claim, in Plato's *Timaeus* 30b1-3, where Timaeus states that nothing devoid of intellect can be better than something possessing intellect.

<sup>102</sup> The argument likely finds its base in the Stoic claim that the soul of human beings is believed to be a fragment a fragment (ἀπόσπασμα) of the soul of the cosmos (SVF 2.633). As Salles has successfully shown (see Salles 2018), a similar line of thought is already found in Plato's *Philebus* (29a9-30a8) and in Xenophon (*Mem* I, 4.8; a passage which is openly quoted by Sextus Empiricus as the source of this argument in *Adv. Math.* IX. 95 = SVF 2.1015), according to whom soul or intellect are present in us as literal parts of the soul or intellect of the universe.. Among the Stoics, it is attributed to Zeno in SVF. 1.101, 1.104, 1.110, 1.112, 1.113, 1.114 – so there can be no doubt that it was known in the old Stoa. Von Arnim also attributes it to Chrysippus at SVF 2.638, 2.1015, but no direct mention of him is made in those passages. Despite its different formulations in the testimonia, there seems to be a certain agreement on the possibility to infer certain features of the cosmos starting from those it bestows on its parts: Meijer argues that “the cosmos appears to be a thinking, animate being which has much in common with human beings” (Meijer 2007 p.2).

<sup>103</sup> Alexander Aphr. *De Mix.* 216.14 = SVF 2.473 (part). The translation is mine.

concerning blending and sympathy, is the following: if a body presents internal sympathetic interactions between its parts, then this means that the aforementioned body is unified through blending and not through another modality of unification, such as juxtaposition (παράθεσις), i.e. the unity of artifacts, or confusion (σύγχυσις), i.e. the unity of two bodies which are both destroyed to create a new one.<sup>104</sup> Here, before introducing the argument, Alexander immediately mentions cosmic sympathy: the whole cosmos is presented as a blend traversed by a single breath holding it together, and being in co-affection with itself (συμπαθὲς αὐτῷ). The meaning of this reflexive use of sympathy will be explained in the next chapter: as for now, may it suffice to say that it seems to be a mark of Chrysippus' theory of sympathy, since no other Stoic uses this expression. Alexander uses it again in relation to Chrysippus in another passage concerning mixture, where he mentions “the unity of the all and its co-affection with itself” (ἡ τοῦ παντὸς ἐνωσίς τε καὶ συμπάθεια πρὸς αὐτό).<sup>105</sup> Now, a very similar reflexive use is also found in a passage from Sextus Empiricus, which can help us connect Alexander's passages with Cicero's:

[79] Since, then, the world too is a body, it is either a unified body or from things fastened together or from things standing apart. **But it is not from things fastened together or from things standing apart, as we show from the sympathies towards itself** (οὔτε δὲ ἐκ συναπτομένων οὔτε ἐκ διεστώτων, ὡς δείκνυμεν ἐκ τῶν περὶ αὐτὸν συμπαθειῶν). For it is in line with the moon's periods of growth and decline that many land and sea animals decline and grow, and falling and rising tides occur in certain parts of the sea. Similarly, it is in line with certain risings and settings of the stars that changes in the atmosphere and the great variety of shifts in the air take place, sometimes for the better, but sometimes to pestilential effect. **From which it is clear that the world is a unified body.** (ἐξ ὧν συμφανές, ὅτι ἠνωμένον τι σῶμα καθέστηκεν ὁ κόσμος).<sup>106</sup>

Here, Chrysippus is not directly mentioned as the author of the doctrine discussed, but the context immediately strikes the reader as being the same as that of Alexander's, namely, the doctrine of blending and different modalities of unifications. Moreover, as we see, Sextus claims that, for the Stoics, the world exhibits “co-affections towards itself” (τῶν περὶ αὐτὸν συμπαθειῶν), which is an expression that we can connect directly to Chrysippus. Now, if the context of the passage is likely Chrysippean, what comes immediately after the mentioning of co-affection should help us claim that Cicero's theories are Chrysippean as well, rather than Posidonian: indeed, Sextus presents a series of

<sup>104</sup> It must be noted that although blending (κρᾶσις) is a specific modality of unification discussed by Zeno and Cleanthes, Chrysippus likely developed it further, especially when it comes to introducing different modalities of unification and their relation to blending, as well as refining the idea that the cosmos itself is a specific kind of soul-body blend. For a general discussion of these points, see Gould 1971 p.109-112.

<sup>105</sup> SVF 2.475.

<sup>106</sup> Sextus, *Adv. Math.* IX.79, partly in SVF 2.1013. The philosophical meaning of the passage in its entirety will be expounded in the next chapter. As for now, I will just explore the compatibility of its use of sympathy with Cicero's and Alexander of Aphrodisias'.

examples concerning changes in seasons, sea tides, atmosphere and cosmic events that are compatible with Cicero's. The context of the passages also seems extremely similar, in that both are inserted in a larger set of demonstrations about the existence of god attributed to the old Stoics: similarly to Cicero's *De Natura Deorum*, both Sextus' and Alexander's<sup>107</sup> texts try to show how the universe can be identified with god because it possesses a mind. There are, therefore, little to no elements to attribute the account of sympathy presented in Cicero's *De Natura Deorum* to Posidonius, unless we assume that Posidonius' account was strongly influenced by Chrysippus. By all means, Chrysippus seems then to be the chief philosopher to focus on, when discussing Stoic innovations concerning cosmic sympathy.

Chrysippus' shift towards a cosmic conception of sympathy passes through the idea that the cosmos is a living being endowed with mental faculties, like human beings, and thus must possess a mind and body blended together through and through. But if the unity of the cosmos can be conceptualized in terms of a soul-body relationship, then the features of soul-body interactions, such as sympathy, must be projected upon the cosmos itself. Chrysippus' innovations, therefore, find their grounding in previous Stoic theories: his original addition is that of pointing towards particular natural phenomena as instances of something that, before him, was observed chiefly in the human body.

## 5. Conclusion

Through a reconstruction of its history, it seems evident that sympathy was not advanced as a technical notion and that, before solidifying into one, it likely went through a series of more liquid and flexible uses among ancient Greek thinkers. Probably originated in the context of medicine, sympathy enters philosophy through Aristotelian arguments, to then acquire increasingly specific meanings thanks to Epicurus and the Stoics. Sympathy, both in medical and philosophical writings, was initially used to describe the empirical observation of two things affecting each other, mostly (but not exclusively) in the context of soul body-relations. Epicurus, then, used sympathy in order to explain how structure can be maintained in an atomistic universe, while Cleanthes introduced it among the Stoics to prove the corporeality of the soul. Once Chrysippus starts using the notion of sympathy, however, we notice a shift: empirical evidence for co-affections now seems to be gathered

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<sup>107</sup> For Alexander's the connection to the arguments about the existence is made SVF 2.475, and not in SVF 2.473 quoted above. In this passage, where we find another use of reflexive sympathy, he claims that most Stoic theories gain traction because of their theory of blending: "This is true for the principles, for theology, for the doctrine of the unification of the cosmos and its co-affection with itself. All these things are god diffused through matter, for them."

from a wider range of interactions, and for the first time sympathy is applied to the cosmos as a whole, which is said to be “in sympathy with itself”.

It appears, therefore, that by the time of Chrysippus sympathy may have become a strictly technical notion, although its precise use is in need of further clarification. The way it is introduced in arguments is still reminiscent of its diagnostic meaning in the medical field, in that it appears to be used mostly to provide empirical evidence for specific theories, but the range of these theories had undoubtedly widened throughout history, to the point that sympathetic phenomena had started to indicate evidence for the specific unity that characterizes living beings as different from non-living beings. If this is the case, then we must assume that what Chrysippus had in mind, when talking about co-affection, was not a simple instance of reciprocal affectivity such as the one mentioned by Cleanthes – likely in line with Epicurus in Aristotle – but something different and, possibly, more complex. A further exploration of the nature of sympathy in the next chapter will offer definitive evidence to the claim of a technical use of it by Chrysippus. Once we have established that the innovation of cosmic sympathy is to be found in Chrysippean philosophy, we finally have the elements to narrow the scope of our research and look closely to the specific innovations introduced by Chrysippus in the Stoic system and to their aims. In Stoicism, as I will argue, the cosmos undergoes a series of organic mutations in which it acquires new levels of complexity and becomes capable of organizing itself as orderly as possible: in this series of mutations, the notion of sympathy finds new meaning, not only as a general feature of organic entities, but also, and more fundamentally, as an essential component of the Stoic theory on the emergence of the cosmic mind.

## II. Sympathy and the Emergence of Perception

### 1. Introduction

In the previous chapter, I have argued that Chrysippus is responsible for the invention of a cosmic notion of sympathy. But what are his motivations to do so? And what purpose does the introduction of sympathy serve in the system of Chrysippus? My thesis, here, is that sympathy is used to explain how the cosmos becomes capable of perception and, thus, a living being. This implies that perception is not a mental faculty of the cosmos in all its stages of development, but rather emerges in it through a series of physical interactions. Most critics, however, seem to lean towards the position that mental faculties are intrinsic qualities of the Stoic cosmos.<sup>108</sup> This, of course, seems to be the case when it comes to the level of the principles, since the active principle is repeatedly presented as an intelligent entity. However, one must keep in mind that this principle is never found separated from matter, to the point that some have argued that the distinction between active and passive could be intended as purely theoretical.<sup>109</sup> I do not subscribe to this theory, but I think that the inseparability of active and passive has some interesting consequences in that, at least for some ancient authors, it seems that the entity resulting from their union may not be an entity necessarily possessing mental faculties at all stages. In this regard, I will examine an objection from Plotinus based in a possible application of

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<sup>108</sup> Several authors have discussed Stoic cosmology in relation to Stoic biology, but none have taken the comparison so far as to consider that, as stated in cosmic embryology when discussing the birth of animals, soul, and the mental faculties coming with it, may be emergent properties of pneuma. Sambursky 1959 identifies cosmic pneuma with the sensible mind of god and with a unifying force in matter (p.35), both of which are correct, but does not inquire whether there can be a relation between the two, or how and why pneuma should assume both these forms. Gould 1962 also correctly describes the physics of pneuma in Chrysippus (p.99-103) but again, leaves the question of why pneuma, which can be disposed in different forms, should be disposed as a soul in the cosmos unanswered. Hahn 1977 has inquired the use of embryological vocabulary in the context of Stoic cosmology, and has individuated many but he does not seem to see a problem with Plotinus' claim that the soul of the cosmos may have to develop from a φύσις, much like that of an embryo (p.68). Lapidge 1978 also believes, in line with Hahn, that the origins of cosmic pneuma are biological (p.168), but he does examine the possibility that this implies that it may not possess mental faculties in all its stages. Long & Sedley 1987 seems to attribute mental faculties mainly to the active principle, but the lines distinguishing it from cosmic pneuma are rather blurred. At p.278 the commentary suggests, on the one hand, that the reference to fire may refer to "a mechanistic method of explanation" while, on the other hand, they take the reference to "designing fire" to indicate an "intelligent energizing power" of god through matter. Later on (p.319), they associate the function of god with that of the active principle and the soul of the cosmos, thus blurring the distinctions between the three; while in their treatment of Stoic theology (p.331), they identify the Stoic god both with the active, rational principle and with the whole world. There are reasons to be confused, as several Stoic passages refer to the active principle as to a "designing fire" (SVF 1.120, 2.1027), and Diogenes Laertius claims, for instance, that god created the elements (SVF 1.102). I fundamentally agree with Long & Sedley that the active principle is intrinsically intelligent, but I believe the picture changes radically once the cosmos reaches a higher level of diversification and creates a body for itself, namely, once the cosmos becomes an animal. Even in more recent literature, however, the problem has been mostly unexamined. Cooper 2009, for instance, seems to correctly outline the distinction between the principles and the unified, self-transforming body of the cosmos, as well as the embryological features of elemental generation, but does not see this as creating any problems concerning possible changes in pneuma as a composite of air and fire.

<sup>109</sup> See, for instance, Todd 1978 p.139 and Lapidge 1978 p.163.

Stoic embryology to Stoic cosmology, in which it becomes clear that the composite of active and passive principle may have to go through a series of adaptive stages in order to develop mental faculties as a composite. The problem posed by this passage has not been noticed beforehand, and I think it paves the way for a philosophically interesting and potentially new perspective on Stoicism.

Indeed, despite Stoicism being an explicitly materialistic system, the possibility that it might present a properly outlined materialistic explanation for the emergence of perception has not been thoroughly examined by the scholarship. Philosophically speaking, the nature of the mind and of mental faculties in general is especially elusive, and it may have been so for the ancients as well. But, when a system is openly committed to a materialistic view, it should be of great interest to test the coherence of the model proposed precisely where it faces challenging questions – as is the question of the mind – especially if that system does contain explicit elements to think about such questions. Stoic embryology, indeed, seems to consider the possibility of emerging mental faculties, since the Stoics believed that, in living beings, some of them do emerge through a transformation of their pneumatic part at the moment of birth. Therefore, there seems to be an interesting philosophical as well as exegetical problem to tackle, when examining Stoic embryology and its application to the cosmos. Moreover, from a purely historical point of view, a vision of Stoicism where no account for the emergence of mental faculties is provided would end up presenting very little differences from Platonism. In Platonism mind is indeed a principle, separated and different from the cosmos, which superimposes a rational order upon it from outside. The only difference with Stoicism would be the immanence and corporeality of this principle, which may on the one hand solve the Platonic problems of interactions between ontologically different entities – sensibles and intelligibles – but, on the other, it generates plenty more, from defining what thinking and thought are for such an immanent corporeal entity, to describing how its thought process organizes the world.

I think that it is possible to discuss mental faculties in Stoic philosophy from a different perspective: the mental faculties of the cosmos can be understood as emergent properties with specific purposes, rather than engrained into it from the beginning, even though mentality in some form seems to be implied in it. Of course, in order to understand how mental faculties from interactions between bodies, and recognize it as such when it does, we must first isolate which one of them is the most fundamental. As we have seen, for the Stoics, the mind of the cosmos is essentially the mind of a living animal, that is, a soul (*ψυχή*), and all souls must possess at least two basic faculties: the first, and most important, is perception (*αἴσθησις*),<sup>110</sup> and the second, depending upon it, is impulse (*ὄρμη*),

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<sup>110</sup> Another term that is frequently used by the Stoics to discuss the receptivity of the soul is “representation” (*φαντασία*). Representation, however, is clearly a consequence of perception, for which reason Hierocles takes perception to be the most fundamental of mind rather than representation (Hierocles I.31-34). In SVF 2.458 (2), Philo seems instead to distinguish between representation and perception, with the first being a direct consequence of the latter. Indeed, it is

which in the case of the cosmos, as we will see in the last chapter, is articulated as the positive and rational appetitive disposition that is will (βούλησις). However, it is impossible for an animal to have any kind of appetitive drive without first representing itself as the subject of those appetites and, therefore, as distinct from their object. Perception, then, is clearly prior to impulse, in that it enables the self-representational ability on which impulse is based, being, effectively, the defining faculty of the mind of a living being, since it is the condition of possibility for other faculties to work as the mental faculties *of* a subject. The most fundamental aspect of a mind, then, is that upon which the mind is capable of referring all of its activities to itself, that is, to a subject performing them. In Stoicism, perception is entrusted with this task and, as such, perception will be the core mental faculty the emergence of which we should account for, if we want to define how the cosmos first develops a mind.

But how and when does perception emerge? In order to understand this, I will look at Stoic embryology first, where the Stoics provide an account of how nature transforms into soul. For the Stoics, perception is a fundamental faculty of the soul (ψυχή),<sup>111</sup> to the point that a soul that is not capable of perception would not be a soul, but something else: either a nature (φύσις) or a cohesion (ἔξις).<sup>112</sup> Therefore, understanding what changes are at work in the transformation of pneuma from nature to soul should yield some information pertaining the emergence of perception. After explaining what kind of change occurs in the pneumatic part of embryos, I will try to map a similar physical process in the Stoic cosmos, with particular attention to elemental generation: indeed, the cosmos undergoes a series of adaptive changes, mirroring, in elemental generation, the embryological development of an animal, which will open the way to discuss how perception develops in the cosmos. After establishing that cosmic pneuma is not always disposed as a soul, I will thus show how this development into a soul happens, by examining the two closely interrelated concepts of co-affection and conspiracy: both will present fundamental evidence of how pneumatic activity in animals comes to be different from that in plants and inanimate objects, in producing a different kind of unification which necessitates of mental faculties. Finally, the analysis of co-affection and conspiracy will reveal how perception emerges in living beings precisely because of the specific properties of an animal's pneumatic movement.

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impossible to have representations without having had, or at least being somehow capable of conceiving, perceptual experiences.

<sup>111</sup> In line with the idea that perception is the chief mental faculty, Hierocles claims, in the *Elements of Ethics*, that soul itself is a “perceptive faculty”, and throughout his work he seems to hold the terms soul and the term αἴσθησις as almost entirely exchangeable (Hierocles IV.24).

<sup>112</sup> See SVF 2.458 (1-2) for a distinction between nature and soul. In 2.718, possessing perception and impulse is established as the criterion to distinguish beings possessing souls and beings possessing natures. The point is maintained through the Stoic tradition, and is found in Hierocles (I.31-34).

## 2. Embryology and perception

A common thesis in Stoic embryology is that, before birth, animals do not have souls. Their soul, indeed, is a nature and only at the moment of birth nature is “cooled and tempered” (ψυχόμενον καὶ στομούμενον) into a soul,<sup>113</sup> which means that their pneumatic part is not disposed as a soul – and, therefore, does not have perception – until certain conditions are met. This theory, however, is far from being unproblematic, as other ancient philosophers soon noticed. In particular, Plotinus has reflected upon it, highlighting several interesting questions that a transformation from nature to soul may raise, both on an individual and on a cosmic level:

**Now to claim that the same breath was formerly at the level of nature** (Τὸ δὲ καὶ φύσιν μὲν προτέραν τὸ αὐτὸ πνεῦμα λέγειν), but when it comes into contact with cold and is tempered it becomes soul, through coming to be more thin in the cold – a proposition that is in itself actually absurd; for many living beings come to exist in the heat, and possess a soul which is never cooled – but, at any rate, they say that nature is prior to soul, which comes into being due to external circumstances. **The result for them is that they put the worse first, and before that again something inferior still, which they call “cohesion”, while intellect, it would seem, comes last of all, after soul** (Συμβαίνει οὖν αὐτοῖς τὸ χεῖρον πρῶτον ποιεῖν καὶ πρὸ τούτου ἄλλο ἔλαττον, ἢν λέγουσιν ἔξιν, ὁ δὲ νοῦς ὕστατος ἀπὸ τῆς ψυχῆς δηλονότι γενόμενος). Indeed, if intellect is prior to all others, one should have made soul next, and then nature, and so on down from better to worse, in accordance with the order of nature. **If, then, god too, who is for them associated with intellect, is later generated and has thinking as something externally acquired, it would be possible for neither soul nor intellect nor god to exist at all** (Εἰ οὖν καὶ ὁ θεὸς αὐτοῖς κατὰ τὸν νοῦν ὕστερος καὶ γεννητὸς καὶ ἐπακτὸν τὸ νοεῖν ἔχων, ἐνδέχεται ἂν μηδὲ ψυχὴν μηδὲ νοῦν μηδὲ θεὸν εἶναι.). If that which is in potency were to come to exist without the prior existence of that which is in actuality, namely, intellect, it will indeed never attain to actuality.<sup>114</sup>

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<sup>113</sup> The expression is found in Plutarch, *de Stoic. Repugn.* 1052f. = SVF 2.806. The theory seem to have had a great weight, in Stoicism, since several authors report it (SVF 2.804-808), and since the etymology of “soul” (ψυχή) derived from “cooling” (ψύξις). So, there can be little doubt that the idea that cooling participates in constituting a soul was canonical among the Stoics.

<sup>114</sup> Plotinus, *Enneads*, 4.7.8(3), partly in SVF 2.804. The translation has been slightly modified. The reliability of Plotinus as a source for the old Stoa has been called into question in scholarly debate. Rist (Rist 1967, p.174) laments the generic quality of his references to old Stoic material, and Graeser claims that, despite his references to some fundamental doxographical material such as Alexander’s writings, and despite a good knowledge of Epictetus, Plotinus rarely quotes directly any Stoic material (Graeser 1972, p.4-5). Again, according to Graeser, Neoplatonic scarcity in quotes does not necessarily imply a poor knowledge of the texts, but it leaves us, sadly, without any conclusive evidence that Plotinus had read texts from the old Stoa. More recently, Gerson (Gerson 2016) has also written about Plotinus as a Stoic source, with a slightly more positive outlook, following Porphyry’s claim that Porphyry in his biography of Plotinus tells us that “Stoic and Peripatetic doctrines are blended into his [Plotinus’] writings, though they are not obvious (14, 4-5).” I think, however, that there are good reasons to take his discussion on Stoic embryology to be accurate, although with some reserves on the matter of divinity and the active principle, which I will elucidate below. The first, and possibly more solid, is that it is possible, in my opinion, that Plotinus was working on the same material available to us, when it comes to discussing Stoic embryology, since the doctrine is discussed at large in Plutarch, and particularly in *De Stoic. Repugn.*, a text of which he was likely aware (see *Enneads* 1.2.7; 2.1.1; 2.3.18; 3.2.5; 3.2.9; 4.7.4; 5.9.1; 6.3.16; 6.8.1, where he addresses problems discussed in the text). The second is that, as I hope to show, his objection shows a high level of philosophical engagement with Stoic doctrines: his way of shifting from basic biology and psychology to the larger plane of cosmology is, argumentatively speaking, widely compatible with the Stoic modalities of discussion addressed in this

The passage appears in the context of *Enneads* 4.7, a treatise titled *On the Immortality of the Soul*, where Plotinus examines a series of doctrines on the soul advanced by other philosophical schools (4.7.1-8), to set the ground for the Platonic claim that the soul immortal, indestructible and incorporeal (4.7.9-15). In this specific passage, Plotinus is surveying Stoic cosmology alongside with Stoic embryology, stating that the Stoics “put the worst first” in their theory of pneuma, because they claim that the same pneuma, first disposed as nature, can then be disposed as soul.<sup>115</sup> Plotinus’ problem derives from an essential clash between his ontology and that of the Stoics: by relying on the Aristotelian notions of potency and actuality, indeed, Plotinus poses an entity whose actuality is the source of all potency – namely Intellect, without which, as stated in the last sentence of the quoted passage, no entity can attain actuality. The problem at stake, here, is precisely the category of emergence: for Plotinus, there is no such thing as emergence, as we see from another passage, again criticizing the Stoics on a problem compatible with that of the passage quoted above:

Why, then, must one ascend above Soul, and refrain from positing it at first? Indeed, it is because Intellect is different from Soul, and greater than it and that which is by nature greater is first. For it is actually not the case, as they think, that Soul, when it has been perfected, generates Intellect. **For where will the actualization of that potency come from if there is not a cause that brings it to actuality? For if it happens by chance, it is possible for it not to come to actuality. For this reason, we must posit first principles in actuality that are self-sufficient and complete** (πόθεν γὰρ τὸ δυνάμει ἐνεργείᾳ ἔσται, μὴ τοῦ εἰς ἐνέργειαν ἄγοντος αἰτίου ὄντος; Εἰ γὰρ κατὰ τύχην, ἐνδέχεται μὴ ἔλθειν εἰς ἐνέργειαν. Διὸ δεῖ τὰ πρῶτα ἐνεργείᾳ τίθεσθαι καὶ ἀπροσδεᾶ καὶ τέλεια· τὰ δὲ ἀτελεῖ ὕστερα ἀπ’ ἐκείνων, τελειούμενα δὲ παρ’ αὐτῶν τῶν γεγεννηκότων δίκην πατέρων τελειούντων, ἃ κατ’ ἀρχὰς ἀτελεῖ ἐγέννησαν·).<sup>116</sup>

According to Plotinus’ ontology, emergent properties do not exist, since he follows Aristotle in re-defining the ontology of emergent properties as that of potential properties – meaning that no

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work. If Plotinus did not have direct access to old Stoic sources, he still shows a remarkable capacity to think within the frame of the old Stoic system.

<sup>115</sup> A further discussion of a similar problem in Plotinus on the emergence of intellect from soul can be found in *Enneads* 5.9.4-6. The problem of whether the mind comes before or after bodies is rooted in Plato’s discussion on whether the soul comes before or after the elements, posed in *Lg.* 891b-c. In this sense, we can talk about an opposition between a Platonic and a Stoic worldview, in that, for the Stoics, the concept of body either overlaps the concept of mind, or comes before it. As for the thesis that soul is nature before birth and that it is tempered into a soul in the moment of birth is echoed in several other authors (see SVF 2.804-808, Hierocles 1.1-10), so that there can be little doubt on the fact that this thesis was spread in the old Stoa, although it may have been abandoned by later Stoics, such as Panaetius (see Tieleman 2007 p.129). Relevant for this idea is Boys-Stones 2021, in which he explores the possibility that the Stoic god may learn empirically: from an epistemological point of view, this lays the basis to think about the Stoic god’s mind as something that evolves in time, since it learns, in stages, something that it didn’t know before. Plotinus’ passage indirectly supports this model, by contrasting the emergentist paradigm of the Stoics with the innatist Platonic paradigm: if pneumatic substance disposed as a soul is capable of evolution and improvement through empirical learning, the same should be possible for it when it is disposed in pre-mental states such as cohesion and nature.

<sup>116</sup> *Enneads* 5.9.4. The “they” in the passage refers to the Stoics – see, for instance SVF 2.835, 2.836, 2.837, 2.839.

property that comes to be at any given moment ever “emerges” in the sense of manifesting out of nothing as an entirely new feature, but rather all properties that come to be must have already existed, before coming to be (i.e. being actualized), albeit potentially. For Plotinus, the question of emergence is a question of ontology, that is, of defining the mode of being of entities before they come to exist on a given plane or level of reality. In the specific case of mental faculties, therefore, Plotinus denies that they can emerge and come to exist simply as a result of interaction between bodies devoid of mind: for him, such faculties must already exist as potentialities which only later become actualized. In order for this to happen, Plotinus needs to posit a principle, i.e. Intellect, which is always in actuality, self-sufficient and complete, from which the potential existence of other incomplete entities, such as Soul, directly depend.

Without further adventuring in Plotinus’ ontology, we can see, from these two passages, that Plotinus is underlying a fundamental incompatibility between his ontology and that of the Stoics. Indeed, for the Stoics there are no degrees or being, or modalities of being according to which one can structure a hierarchy of any sort: what exists is simply what can act or be acted upon. Everything, for the Stoics, must manifest as a result of acting or being acted upon, and complexity is but an articulation of performing or undergoing a given activity.

Plotinus’ passage in 4.7.8(3) is, therefore, of major interest for us for two reasons: the first is that it criticizes the very idea that novelty is possible within a monistic system such as the Stoic one, where there is only one possible kind of entity, i.e. body, and the second is because he directly links Stoic embryology with Stoic cosmology, raising the question of a possible connection between the emergence of mental faculties in pneumatic blends and the supposedly innate intelligence of god. Why should animals develop perception, impulse and eventually intellect through a transformation of their pneuma from nature to soul, while god, in its most primitive state, should be assumed to be intrinsically intelligent? Answering this question becomes even more crucial, if we consider that, following the refinement of Stoic physics through the introduction of Chrysippus detailed theories around pneuma,<sup>117</sup> the cosmos itself comes to be considered a pneumatic blend possessing a soul and mental faculties identical to those of other living beings,<sup>118</sup> and is considered to be a god.

But what god is Plotinus precisely referring to, and can it be identified with the cosmos? In this passage, one may think that Plotinus is referring to the Stoic active principle, since he seems to

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<sup>117</sup> For the innovation introduced by Chrysippus’ conception of pneuma, see Gould 1962, p.99-103. According to Gould, the Stoics may have imported the theories of pneuma from the Hippocratics through the Peripatetics. Chrysippus, then, first advanced the idea that pneuma is responsible both for the qualities and the unity of any given being – an idea which he supports by claiming that pneuma is a composite of air and fire, as we will see. See also Hahn 1977 p.162-168 for an overview of the uses of pneuma in Chrysippus, focusing more on the biological side and the function of pneuma as breathing, both as a nourishing and as a unifying activity. Hahn and mentions the development of psychic faculties in pneuma, but he does not offer an explanation for how these faculties emerge.

<sup>118</sup> SVF 2.633-645.

associate god and intellect. If this was the case, his objection could be easily dismissed, since there is overwhelming evidence, in Stoicism, stating that god, intended as the Stoic active principle, is intrinsically intelligent, making it clear that this intelligence is in no way an emergent property.<sup>119</sup> If Plotinus was referring to the active principle, therefore, he would not have been entirely fair in its criticism of emergence as a Stoic category, since the Stoics indeed had been problematizing the category themselves, not only by assuming that intelligence was axiomatically present in the cosmos as active principle, but also through the series of arguments derived from Xenophon mentioned above, according to which, for the cosmos to bestow intelligence upon the animals within it, the cosmos itself must be already intelligent.<sup>120</sup>

It is possible, however, that Plotinus, being aware of this definition, was instead referring to another entity – a hypothesis which finds textual support in the way he introduces his question: Plotinus, indeed, is openly concerned about the fact that “the same pneuma” (τὸ αὐτὸ πνεῦμα) transforms itself into something which possesses mental faculties. Plotinus, then, must have likely had in mind an entity such as a “pneuma capable of thought” (πνεῦμα νοερόν) as we found it, for instance, in Alexander of Aphrodisias,<sup>121</sup> which is already a blend of the active and passive principles. Pneuma is indeed a composite of air and fire,<sup>122</sup> and, since most Stoic cosmogonies seem to imply that the elements are generated by the principles, as we will see, it would be difficult to account for how the first principle can both be, indeed, a principle and an elemental composite. The intrinsically intelligent entity Plotinus is likely referring to, therefore, cannot be god intended as the active principle alone, but the cosmos itself in its early fiery stage, where, according to Chrysippus<sup>123</sup> it is reduced purely to its fiery part.<sup>124</sup> If this is the case, Plotinus’ passage leads towards an extremely

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<sup>119</sup> Beside the well known claim, already found in Zeno, that the active principle is the logos of the cosmos – which one may interpret merely as meaning that the active principle is “rational” in the sense of “rationally organized” or “rationally moving” - the active principle is also called “the intellect of the whole” (τῶν ὅλων νοῦς) SVF 2.302 and a “body capable of thought” (σῶμα νοερόν) SVF 2.313. Therefore, very little doubt can be cast on the idea that the active principle is intrinsically intelligent.

<sup>120</sup> See note 100.

<sup>121</sup> SVF 2.310. According to Graeser, Plotinus indeed shows knowledge of Alexander’s *De Fato* and *De Mixtione* (Graeser 1972, p.5). I am here following Sandbach 1975 p.71-75 in my interpretation: Sandbach notices the problems that come with identifying god and pneuma in Stoicism, in that it may seem as if the active principle is identified with an elemental composite, which cannot be the case. The ambiguity, for him, lies in the use of the word “god”, which is applied both to the active principle and to some of its composites with matter, such as fire, pneuma, and the cosmos. In agreement with Sandbach, I do not believe, contra Sedley 1999 p.388 that pneuma being god implies that pneuma is identical with the active principle, rather than being a composite of active and passive.

<sup>122</sup> SVF 2.841, 2.442, 2.444, 2.841.

<sup>123</sup> SVF 2.604, 2.605. Both passages will be discussed in detail below. According to 2.605, the cosmos in between the conflagration and the next cosmic order, in its fiery state, is only its hegemonic, which would match Plotinus identification between pneuma and nous. See also SVF 2.1047, again by Alexander of Aphrodisias, for the properties of the fiery blend after the cosmic conflagration: Alexander claims that this is a blend of both active and passive.

<sup>124</sup> To further support this idea, it must be noted that in another passage referring to the Stoics, Plotinus uses the expressions “intelligent pneuma” (ἔννοον πνεῦμα) and “fire capable of thought” (πῦρ νοερόν) interchangeably (*Enneads* 4.7.3 = SVF 2.443).

interesting question, because, at least from how he puts it, cosmic pneuma is not, necessarily, always a soul, especially if we consider its successive stages of transformation. According to several sources, the cosmos is indeed a god but is also a living being,<sup>125</sup> which means that it possesses, at least in its Chrysippean version, both a pneumatic part deployed as its soul, endowing it with mental faculties, and a body. Plotinus' criticism and his reference to embryology, then, point us towards a legitimate problem, namely, whether cosmic pneuma should undergo any adaptive transformation when it changes part of itself into a body to act upon. Plotinus seems to assume so on the basis of the fact that different dispositions of pneuma are possible – namely, cohesion, nature and soul – and that not all entities containing a portion of pneuma are necessarily intelligent. Some of them, like animals, seem to develop their intelligence at a later stage, and this is highly problematic for Plotinus, in that it seems to imply that mental faculties can indeed be developed from physical interactions between things which do not possess mental faculties. Plotinus' objection, as such, contains the possibility of thinking about the Stoic cosmos as not intrinsically intelligent, insofar as it is a pneumatic blend: for him, it seems entirely plausible to apply the idea that mental faculties are emergent properties of living beings, as stated in Stoic embryology, to the Stoic cosmos, insofar as it is a living being.

If the transformation of nature into soul can thus pose some problems on a cosmic scale, it then is necessary to look more in detail into how the Stoics describe this process, in order to see whether, and eventually how, it can be applied to the cosmos. Plotinus writes in the passage quoted above that the same pneuma “was formerly at the level of nature, but when it comes into contact with cold and is tempered it becomes soul, through coming to be more thin in the cold”. This theory is generally echoed in several Stoic testimonia concerning embryology,<sup>126</sup> and seems to have been a specific theory introduced as part of Chrysippus physics of pneuma.<sup>127</sup> The main idea is that soul, in animals, is not developed until the moment of birth: before birth, the pneumatic part of an animal's constitution is still disposed as a nature, deployed to self-nourishment and self-growth, and only once the animal is born, thanks to the contact with cold air, nature is “cooled and tempered”, thus transforming into a soul. So described, this process seems to suggest that some kind of environmental change is

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<sup>125</sup> SVF 2.633-45.

<sup>126</sup> See SVF 2.804-808. Hierocles I.20 also shares the same thesis.

<sup>127</sup> See Hahm 1977, p.57-69 for an historical reconstruction of how the Stoics draw their theories from previous sources. According to Hahm, the idea that the birth of the cosmos could be described in biological terms can be traced back to presocratic thinkers, including Anaxagoras and the Pythagoreans. Hahm sees as a merit of the Stoic the fact of having revived what had then become a mere metaphor of cosmic biology into a new theory, to be taken literally (p.66). He also acknowledges Chrysippus as the fundamental figure driving this revival: while some thoughts concerning cosmic biology can already be traced back to Zeno, Chrysippus' theory of breath becomes then the core for a proper understanding of the life of the cosmos (p.162). Lapidge sees instead Aristotle as a fundamental figure for Stoic biological theories (see Lapidge 1973 p.241 and Lapidge 1978 p.167-170) and, while acknowledging the presence of biological language since Zeno, together with Hahm, he also agrees in attributing to Chrysippus' many innovations in this regard, particularly regarding the physics of pneuma and the theory of tonos (p.172-3).

involved in the transformation of nature into a soul, as Plotinus himself claims: “they say that nature is prior to soul, which comes into being due to external circumstances.” Now, this is problematic for us because, of course, the cosmos is not subjected to environmental change, since the environment in which the cosmos is placed is the void, which, by definition, cannot act or be acted upon.<sup>128</sup> There are, therefore, two questions that we must answer, the first concerning a description of the physical modalities of this tempering through cold air and its implications for a blend, and the second concerning whether it is possible at all for a tempering of this sort to happen on a cosmic level.

As for the physical implications of a tempering of pneuma through cooling, we must first of all keep in mind that heat and cold, in Stoicism, are not only associated with states of matter, but with patterns of movement as well. This means that a cooling of pneuma would necessarily result in a change in the pattern of motion of pneuma inside the body. If we look more in detail at the texts, we see that, in Chrysippean physics, the elements composing pneuma are eminently active,<sup>129</sup> but in different ways: as a hot fiery element and a cold airy one, they respectively act by heating and thus dilating the body, and by cooling it off and thus tighten it.<sup>130</sup> Once fire and air are blended in pneuma, pneuma itself blends with the two passive elements of earth and water,<sup>131</sup> so that, in the resulting mixture, pneuma (air+fire) has the active role of “that which holds together” (τὸ συνέχον) while matter (earth+water) the passive role of “that which is held together” (τὸ συνεχόμενον). Not all entities the cosmos are necessarily a blend of all four elements,<sup>132</sup> but living beings, and the cosmos as the entity which contains all entities, are pneumatic blends composed of all four. Thus, the active elements manifest specific patterns of movement, namely expansion and contraction, and pneuma is active insofar as it moves according to both: famously, indeed, pneuma moves through the body in an inward-and-outward movement, mirroring the activity of both air and fire,<sup>133</sup> with the outward movement being responsible for the qualities of the pneumatic blend, and the inward movement for its unity.<sup>134</sup>

Now, if pneumatic movement is determined by the natural movement of the elements that compose pneuma, then a change in the patterns of movement can only depend on the proportions of air and fire in the pneuma under examination. Clearly, if pneuma is itself a blend, and each blend is blended through and through via mixture, this means that even a pneuma where fire and air are not present in equal quantities would still maintain the properties of both and, thus, manifest *both* their respective

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<sup>128</sup> See SVF 2.331.

<sup>129</sup> SVF 2.418, together with the previously quoted Plutarch passage (SVF 2.444).

<sup>130</sup> SVF 2.416, 2.841 = LS 47H.

<sup>131</sup> SVF 2.439.

<sup>132</sup> The moon, for instance, seems to be a blend of air and fire, while the sun a pure fiery entity. See SVF 2.413.

<sup>133</sup> SVF 2.441, 2.444, 2.450, 2.458.

<sup>134</sup> Nemesius 70, 6-71,4 = LS 47J.

motive patterns. However, pneuma can dispose itself in different ways, namely, as cohesion, nature and soul, which are responsible, respectively, for the physical cohesion, self-nourishing and self-growing, and mental faculties of a given entity. We read in Philo and other authors, for instance, that in human beings pneuma disposed as cohesion is responsible for the hardness of the bones, nature for the growth of muscles, hair and nails, and soul for its mental faculties.<sup>135</sup> While in all its dispositions, pneuma must preserve both the motion patterns of air and fire, some difference is required, in order for pneuma to change its disposition. Indeed, there would be no reason, for a pneuma containing fixed portions of air and fire, and moving accordingly to their patterns of movement, to be the cause of different dispositions – unless we assume that the portions of air and fire in it are susceptible to change, as we gather from the embryological fragments. Indeed, according to Stoic embryology, the cooling of one disposition of pneuma (nature) triggers its re-disposition in a new state (soul): this happens because a portion of air is added to the pneumatic part, changing, as a consequence, the movement of pneuma, strengthening its contractive and unificatory movement. The cooling of pneuma described in the embryological passages, therefore, is only relevant insofar as it represents a modification in the portions of air present in a given pneumatic blend, showing that, through contact with air, the pneumatic part of an animal – and its way of moving – changes as well.<sup>136</sup> But how does this map into Stoic cosmology?

### 3. *Cosmic embryology and elemental change*

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<sup>135</sup> Philo *Leg. Alleg.* II.22 ff. = SVF 2.458(1). A question one may raise is why Philo is referring to intellect (νοῦς) at the beginning of this passage instead of writing about pneuma. A similar thing happens in passage from Diogenes Laertius, who writes that providence (πρόνοια) “pervades some parts more and others less (δι’ ὧν μὲν μᾶλλον, δι’ ὧν δὲ ἥττον.). Through some parts it passes as cohesion (ἔξίς), as through bones and sinews. Through others as intelligence (νοῦς), as through the commanding faculty.” (DL 7.138= SVF2.634 = LS 470). Both passages are similar in tone in that they claim that one body pervades others in different ways, but it is referred to once in terms of intellectual faculties such as intellect and providence. Here, like in Plotinus, the reference to intellect may be considered a reference to the fiery pneuma which pervades the cosmos and remains as the hegemonic after the cosmic conflagration, according to Chrysippus (SVF 2.604, 2.606), that is, to an entity which is already a blend of the active and passive principle, rather than to the active principle alone. The use of intellect would not entail, then, that plants or inanimate objects possess intelligence, but rather that pneuma adapts to specific bodies in different ways, sometimes losing its intellectual faculties, and sometimes acquiring them again if the certain conditions are satisfied.

<sup>136</sup> For now, let us now keep in mind that this change must be related to the animal achieving a new level of unification, because the contractive movement of pneuma, for which the airy portion of pneuma is responsible, results precisely in producing unification. As we will see later in analyzing Sextus, the difference between plants/animals and inanimate objects can be articulated precisely in terms of their unification degree: inanimate objects are less unified because the pneumatic movement of cohesion does not allow them to withstand change, in the sense that inanimate objects, once divided or damaged, stay so. An inanimate object cannot preserve its constitution in the face of change. This is a major difference between inanimate objects and both plants and animals. Plants are indeed capable of maintaining their own constitution unified through changes in time, by absorbing substitutive matter through nourishment and using it to grow and regenerate themselves. The mental faculties of humans also play an essentially unifying function, for which reason it is plausible to believe that an addition of portions of air, responsible for unity, is responsible for their development, rather than an addition of fire.

On a cosmic level, as stated above, there cannot be environmental contact with air, because the environment of the cosmos is the void, which does not contain air and it cannot act nor be acted upon. But if the fundamental factor to trigger change in a given pneumatic disposition is not cooling insofar as it comes from the surrounding environment, or as a general external factor, but cooling insofar as the air responsible for it endows pneuma with its specific motive properties, then environmental interactions as such are not responsible for the transformation of nature into pneuma: cooling off pneuma through an addition of a portion of air is itself a sufficient condition, even if this air does not come from the surrounding environment. If this is true, then, Plotinus is wrong in assuming that only external change may trigger the transformation of nature into soul, especially in the case of the cosmos. The cosmos is indeed capable of self-transformation and, among the changes it undergoes, one of the most fundamental is that of the generation of the elements, during which the elements come to be through different stages of concretion starting from one element alone, namely fire.<sup>137</sup> But if the elements can change into each other, then the portion of a given element in the cosmos will also change over time, which means that the cosmos itself will be subjected to variations of its internal temperature, as the portions of fire and air, composing its pneumatic part, change over time. The Stoic cosmos, then, in passing from a single fiery state to a four-fold elemental articulation, must become progressively cooler, as the portion of the cooling element in it, i.e. air, increases. At least physically speaking, therefore, there are all the premises to suppose that a cooling off and a tempering of nature into soul through internal elemental change is entirely possible within the cosmos – which means, in turn, that the cosmos may develop perception in this transformation, and that the Stoics, as Plotinus claims, could indeed have been putting “the worst first”, especially in the context of Chrysippean philosophy.

Consistently with our thesis, the cosmology of Chrysippus borrows concepts and vocabulary from Stoic embryology precisely in the context of the generation of the elements. If the model Chrysippus has in mind for the birth of the cosmos is eminently biological, then it is entirely possible that the cosmos, much like a human embryo, gradually develops mental faculties as it changes and evolves towards higher stages of complexity. Elemental generation, however, is famously problematic in Stoicism, especially because, according to a passage of Stobaeus thoroughly discussed by Cooper,<sup>138</sup>

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<sup>137</sup> 2.418 = LS 47A is the passage most often referenced in relation to the Stoic theory that elements mutate into each other. See also SVF 2.579. For more, the passage of Diogenes Laertius discussed below (DL 7.136) also seems to work on this assumption. The idea of elements as different concretions of fire, is, for Long, a doctrine reminiscent of Heraclitus, which is part of the very core of Stoa, adopted by Zeno and especially by Cleanthes (Long 1996). Another presocratic to whom the theory is indebted, according to Salles, is likely Anaximenes (Salles 2015).

<sup>138</sup> SVF 2.413. The passage is notoriously problematic, and has been touched upon by several authors: Bréhier 1951 p. 138 n.1, Gould 1962 p.119-120, Lapidge 1973 p.271, Long-Sedley 1987 p.278. Cooper, on the basis of the three uses of the term “element” from Chrysippus, which Stobaeus reports, and by cross-referencing it with DL 7.136, argues, against

the term “element” is used in different ways: in one way as fire, insofar as it is the element from which all others are generated and into which all are reabsorbed; in the second way as indicating each of the four elements; and, in the third way, as something from which other things are built, and to which they are then reduced.<sup>139</sup> In order to understand how elemental generation happens, then, and how embryology applies to it, one must understand how the active and passive principle first interact with each other. Here, I will partly follow Cooper’s account,<sup>140</sup> which is extremely helpful in outlining the first phases of Stoic cosmology, as well as to elucidate why, if the active principle is intrinsically intelligent, as stated above, mental faculties should be considered emergent properties of the cosmos. According to Cooper, the active principle, i.e. god or reason, and the passive principle, i.e. matter as qualityless substance, are not material bodies: indeed, while both principles are bodies, i.e. three-dimensional and extended entities that offer resistance to each other, the active principle is *in* matter, without being material, since there is not matter *in it*, while the passive principle is matter and is a body, but it is *not* a material body, since material bodies are made of matter *plus* the active principle. The first material body is, therefore, what results from their blend: a material body is a body that preserves the features of both the active and the passive principle and can effectively *act* (qua being infused with the active principle) *on itself* (qua being partly composed of passive matter).<sup>141</sup> Cooper’s innovation is precisely in elucidating the distinction between mere bodies, i.e. the active and passive principle, and *material* bodies, i.e. bodies resulting from a blend between the two, and the only bodies which can be infused with qualities. Qualities are indeed not present in matter itself, but only in material bodies: if this is the case, however, all qualities are to be considered emergent properties resulting from the blend of active and passive, including the qualities which distinguish animals from plants, that is, mental faculties. Despite the fact, then, that the active principle is intrinsically

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Lapidge 1973, in favor of a two-stage generation of the elements, were, first, proto-elements are created. I do agree with his account that the state the cosmos is in between the conflagration and the cosmic generation cannot be the same as that of elemental fire, and that it may be that of “light” (Cooper 2009, p.104), but I do not believe that this fully justifies a double generation for all elements. Indeed, beside DL 7.136, no passage seems to imply this. I believe, therefore, that DL 7.136, despite the weird phrasing, is actually presenting two perspectives on the same process, namely, elemental generation, first by using the Stoic embryological vocabulary, and then simply by stating the succession of the elements.

<sup>139</sup> “So, according to Chrysippus, element is spoken in three ways: in one way it is spoken of as fire, because the rest and constructed by change out of it and get their reduction into it; in a second way, in the way the four elements, fire, air, water and earth, are spoken of (since the rest are constructed through some one or some ones or even all of these: through the four as the animals and all the things on the earth are compounds, through two as the moon is constructed through fire and air, through one as the sun, for it is through one only, since the sun is pure fire); in the third way of speaking, that is spoken of as element which is originally constituted in such a way as to provide generation from itself methodically up to a conclusion, and out of that [conclusion] to receive reduction into itself similarly methodically.” Stobaeus, *Eclog.* I, 129. 1–130 = SVF 2.413. The translation here presented is Cooper’s (Cooper 2009).

<sup>140</sup> See Cooper 2009 p.99-101. Most of his account follows from a thorough analysis of Diogenes Laertius’ summary of the Stoic doctrines on the principles as presented in DL VII.134 ff.

<sup>141</sup> Together with Cooper 2009, therefore, I oppose the idea advanced by Lapidge 1973 and Todd 1978, according to which the active and passive principles are nominally distinct but essentially unified aspect of a single body; and I side instead with Long & Sedley 1987, who claim that, were this the case, then active and passive principles, as concepts, would be incorporeal and deprived of any causal power (p.273).

intelligent, the same cannot be said of the first material body resulting from its blend with the passive principle, which needs to go through a series of transformative stages in order to acquire qualities, among which are those of being an animal endowed with mental faculties. If, indeed, in the blend between active and passive there must be a passage from the passive being qualityless to its being qualified as a component of a new material body, then all qualities of the first material body are *acquired* and not *intrinsic* qualities – which means that the first blend between active and passive is not intrinsically intelligent, and develops mental faculties as a result of a series of transformations, much like an animal embryo.

The following passage from Diogenes Laertius can be brought as evidence of this, in that the embryological language here is used precisely when in the formation of the first material bodies, i.e. the elements, factually confirming the hypothesis advanced in the beginning of this section:

[God] transformed the whole of substance **through air into water** (δι' ἀέρος εἰς ὕδωρ), and just as in animal generation **the seed is encompassed in a moist vehicle** (ἐν τῇ γονῆι τό σπέρμα περιέχεται), so in the cosmic moisture god, who is the seminal reason of the universe, **remains behind in the moisture** (ὑπολείπεσθαι ἐν τῷ ὑγρῷ) as such an agent, adapting matter to himself with a view to the next stage of creation. Then (εἶτα), he created the four elements: fire, water, air and earth.<sup>142</sup>

As we see, the language of embryology is explicitly used here. In particular, the expressions ἐν τῇ γονῆι and ἐν τῷ ὑγρῷ are used in several other passages in reference to the cosmos at its pre-elemental stage and immediately after the conflagration. Ἐν τῇ γονῆι refers most likely to a moist vehicle, such as the moisture provided by the female in animal reproduction.<sup>143</sup> Ἐν τῷ ὑγρῷ, on the other hand, is used in Zeno in relation to the idea that sperm is “pneuma through moisture” (πνεῦμα μετ' ὑγροῦ) and, similarly, in Chrysippus, who defines sperm as “pneuma in moisture” (πνεῦμα ἐν ὑγρῷ).<sup>144</sup> In its early stages, the cosmos seems to assume a form where its pneumatic part is contained inside a

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<sup>142</sup> DL 7.136 =SVF 1.102. Sorabji uses this passage to claim that god (the active principle) and matter are not two distinct bodies in the same place, but rather “different categorial levels of a single body” (Sorabji 1988, p.97). To a certain extent, we agree with him in that the passage can be brought as further evidence that the active and passive principle are already united once elemental generation beings, although the difference between them is not merely categorial – the point being, again, that the cosmos is in a unified state as a blend of active and passive between the conflagration and the next cosmic generation, as argued before.

<sup>143</sup> See SVF 2.622, where it is used again in reference to the cosmos. The expression is not easy to translate, because, as Cooper has noticed, translating it as seminal fluid would be awkward in that it would force us to translate σπέρμα as spermatozoa (Cooper 2009, footnote n.19). Its use as “female womb”, suggested by Lapidge 1978, has been dismissed by Long & Sedley as rather unusual (Long & Sedley 1987 p.272). Hahm translates it as seminal fluid (Hahm 1977 p.60), but Cooper suggests, on the base of its use in Aristotle, that it may also refer to a moisture provided by the female in reproduction. Thus, Cooper opts for “generative material”, which seems to me a viable translation, although, I would be more inclined towards ἐν τῇ γονῆι referring to female moisture, mostly because of the passivity of watery elements, and the association between passivity and femininity in Stoicism.

<sup>144</sup> For Zeno see SVF 1.128, for Chrysippus see SVF 2.741-2.

moist vehicle, much like an embryo of the coming universe is contained in sperm,<sup>145</sup> but Diogenes' passage seems to suggest that this stage does not coincide with elemental creation, because, as he says "then (εἶτα), he created the four elements". However, the fact that god creates a moist vehicle for itself "through air" seems to suggest that the sequence of elemental creation is somehow at work even when the cosmos is still in its embryological state, and the fact that no other author seems to rely elemental generation as a two-stage process makes Diogenes' passage highly suspect in this regard. Plus, Diogenes himself does not describe elemental generation as requiring two stages when he recapitulates it, later on, at DL 7.142: there, the expression "through air into wetness" (δι'ἀέρος εἰς ὑγρότητα), very similar to the one found at DL 7.136, clearly refers to elemental generation, since he begins the successive sentence by saying that these are the things out of which both the elements and the cosmos are made – i.e. the elements. Cooper seems instead to interpret the fact that fire is mentioned both at the beginning and at the end of the cycle as evidence for the fact that generation happens in two stages, the first in which fire, as light, generates a series of proto-elements, and the second in which the actual elements are generated.<sup>146</sup> However, a direct quote from Chrysippus' first book *On Nature* seem to point rather to a difference in the geographical distribution and physical separation of the elements rather than a two stage creation: Chrysippus writes that fire transforms "through air into water (δι'ἀέρος εἰς ὕδωρ); and it separates from this air through evaporation. Once air rarefies (λεπτυνομένου), aether surrounds it in a circle, and the stars, together with the sun, ascend from the sea."<sup>147</sup> The stage in which elements are created is the same in which fire mutates, through air, into water: what follows is their distribution and separation from a blended state into distinct entities with precise geographical locations – airy elements above, earthy elements below. There are no two stages of elemental creation as such: Cooper's second stage, in which elements are actually created, most likely refers to their distribution in different areas of the cosmos. Diogenes' use of "then" (εἶτα) remains problematic, but, since a two-stage generation is not presented by any other author, and since the language used to describe what Cooper calls proto-elements is actually used, both by Diogenes and by Chrysippus himself, to describe the generation of the elements, it seems safe to assume that in DL 7.136 Diogenes might be presenting as different two processes that are instead one and the same, only, seen from different perspectives.<sup>148</sup>

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<sup>145</sup> It is worth noticing that Stoic embryology is also employed in the proofs for the intelligence of the cosmos. By referencing SVF 1.112-4, both Sedley and Salles argue that the Stoic argument for which, if the cosmos produces intelligent beings, it must be intelligent itself, has an embryological component, in that transmission of intelligence is presented as transmission of a seed (Sedley 2007 p.223-25; Salles 2018 p.51-53). This further supports the idea that generation of intelligence proceeds in the same way both for the cosmos and for human beings.

<sup>146</sup> Cooper 2009 p.106-111.

<sup>147</sup> SVF 2.579. The translation is mine.

<sup>148</sup> While there is indeed an explanatory advantage concerning Cooper's discussion of the first material body as light, or as a fiery/luminous body from which the cosmos begins and to which it returns (Cooper 2009 p. 104), I see no advantage

Now, once we assume that the cosmos is indeed in an embryological state during elemental generation, how can we say whether its pneuma is disposed as a nature or not? Two quotes from Chrysippus' *On Providence*, mentioned by Plutarch, seem to point in the direction of a weakening of pneuma precisely during the generation of the elements:

Even though death is the separation of the soul from the body, this does not happen for the soul of the cosmos: but this instead grows continuously to the point of absorbing matter in itself: one must not mention the death of the cosmos.<sup>149</sup>

As long as the cosmos is fiery, then it is only its own soul and hegemonic, when instead it **changes into moist substance** (εἰς τὸ υγρὸν) and in the soul which is enclosed in it, in a way it changes in body and soul, as if it was a composite of both: but **the logos is then different** (ἄλλο τινα ἔσχε λόγον).<sup>150</sup>

Both passages signal that, according to Chrysippus, the condition of the cosmos at the beginning and end of its life is different from that of a fully developed cosmos. Before the διακόσμησις, we read, the cosmos is purely its soul and its directive principle, but, when it changes into moist substance and develops a body, becoming a soul-body composite, this results in some kind of change, described as follows: “the logos is then different”. It is unclear what Chrysippus means by this expression, but Plutarch interprets it as follows: “again, as it is turned off, the soul weakens and becomes moist (ἀνίσθαι καὶ ἀνυγραίνεσθαι), changing into the corporeal”.<sup>151</sup> According to Plutarch, then, the last sentence in Chrysippus' quote refers to a change in the nature of the soul, which becomes weaker because of its new state, that is, the state of a soul united with a body. But, as we have seen, the state

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in assuming that elemental generation should follow two steps, as it seems to me to create an unnecessary gap between a first embryological stage and the successive cosmic generation. I think that conflating these two stages can provide us with a stronger explanation as to why the cosmos should take on an embryological form: namely, if we suppose that the elements have different properties, and that having them distributed in certain quantities changes the qualities of a being, for the cosmos to differentiate itself into four elements would coincide with it developing a new form and qualities, and reaching a higher level of complexity. Should I, however, assume that Cooper's theory concerning the proto-elements is true, this would still leave the core of my discussion unscathed: insofar as we can admit that the cosmos undergoes a series of transformation through which it is plausible to assume that mental faculties, as qualities, are to be acquired, and insofar as the conditions stated above (i.e. constitution of pneuma through a blend of air and fire; change of the proportion between the two during elemental transformation) are preserved, then a fruitful application of Stoic embryology to Stoic cosmology is still plausible.

<sup>149</sup> Plutarch *de Stoic. Repugn.* 1052c = SVF 2.604. Plutarch's translations are mine. The passage is largely discussed by Salles 2009 as evidence for the Chrysippean theory of the transformation of the elements. This is a theory he claims to be peculiar to Chrysippus, and developed starting from Zeno and in contrast with Cleanthes. In Cleanthes, the conflagration means the destruction of the cosmos, because of the specific properties of fire in his cosmology. But for Chrysippus, since elemental transformation of fire is possible, nothing is technically destroyed, and everything is instead transformed into something else.

<sup>150</sup> Plutarch *de Stoic. Repugn.* 1053b = SVF 2.605.

<sup>151</sup> Plutarch *de Stoic. Repugn.* 1053b = SVF 2.605.

in which the universe is, once it creates a body for itself, is that of an embryo, where pneuma is contained within a moist vehicle so that a living being may be born out of it.<sup>152</sup>

The thesis that the cosmos may not be capable of perception in its initial stages, also finds some support in the language of a passage from Diogenes: “nature consists in the designing fire (τὴν μὲν φύσιν εἶναι πῦρ τεχνικόν); and this is fiery pneuma, capable of design (πνεῦμα πυροειδὲς καὶ τεχνοειδές): but the soul is a nature capable of perception (τὴν δὲ ψυχὴν αἰσθητικὴν <φύσιν>)”<sup>153</sup>. As Dorandi signals, φύσιν here is supplied in Von Arnim’s edition of the text, while Gigante supplies ἔξιν.<sup>154</sup> I am inclined to agree with Von Arnim because soul is generally defined as a nature with the addition of perception and impulse, as we read, for instance, in a passage from Philo, where soul is referred to as “nature with the addition of representation and impulse” (ψυχὴ δὲ ἐστὶ προσειληφύια φαντασίαν καὶ ὁρμήν),<sup>155</sup> and in Hierocles, who, after discussing embryology and the transformation of nature into a soul, claims that anything that, once born, “the living is different from the non-living because of two things: perception and impulse”.<sup>156</sup> In Diogenes’ passage, there is a clear distinction between designing fire as a simple nature, and soul as a nature capable of perception, as signaled by the use of the particles μὲν and δὲ. But if nature is equivalent to the designing fire, then it is plausible to assume that, in some early fiery stage, the cosmos may be considered to be a nature rather than a soul, and therefore devoid of perception. This claim is also echoed by Stobaeus, who states that the fiery blend in which the conflagration resolves and from which the cosmic generation begins is “well-moving by itself, and the principles and the spermatic reason, and the eternal power having a nature (ἢ ἀίδιος δύναμις φύσιν ἔχουσα) such as to move itself towards change and back from it altogether in a circle”.<sup>157</sup> It is unclear, however, in what stage precisely this happens: these passages seem to be at odds with Chrysippus’ claim that all that is left of the cosmos after the conflagration is its soul,<sup>158</sup> so they may refer to the stage immediately prior to the generation of the moist vehicle. What stage they precisely refer to, however, does not impact our argument that, a certain point, the pneumatic part of the cosmos becomes a nature, thus maintaining the necessity for the emergence of mental faculties once it turns into a soul.

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<sup>152</sup> Moreover, if we wanted to take the “moist vehicle” more specifically as sperm, we could find some support in several fragments on the subject. For instance, the Stoics believed that the word “sperm” (σπέρμα) derives from “being condensed” (σπείρασις) (SVF 2.744), and the cosmos, during the cosmic generation, becomes progressively more condensed (SVF 2.619). Furthermore, the pneumatic part of sperm is, for the Stoics, not yet a soul, but a nature (SVF 2.743-5).

<sup>153</sup> DL 7.156 = SVF 2-774.

<sup>154</sup> Dorandi 2013 p.567.

<sup>155</sup> Philo *Leg. Alleg.* II.22 ff. = SVF 2.458(1). See note 108 for how representation cannot be independent from perception.

<sup>156</sup> Hierocles I.32-34.

<sup>157</sup> Stobaeus *Ecllog.* I.129 = SVF 2.413.

<sup>158</sup> SVF 2.605.

At this point, then, there should be little doubt that both the diffusiveness of the biological vocabulary in the context of Stoic cosmology, as well as the theories directly presented by Chrysippus, point towards the existence of a stage in which cosmic pneuma is disposed as nature. The Stoics had indeed a precise way to conceptualize the emergence of certain features, such as mental faculties, from biological interactions, and were concerned with how complex beings can evolve from less complex ones. A change in elemental proportions creates the conditions for the evolution of nature into a soul both in individual animals and in the cosmos. But how does this result in developing perception? To understand this more clearly, we must look at the two fundamental Stoic concepts of conspiracy and co-affection.

#### 4. *Co-affection and conspiracy*

What I aim to demonstrate here is that co-affection (σμπάθεια), or sympathy,<sup>159</sup> defines the specific modality of interaction that pneuma must have with the body in order for the composite to perceive its own constitution. Most scholars consider co-affection to be little more than a way to talk about Stoic interconnected causality and, more specifically, to describe how synchronic events are actually causally related to each other. Essentially, since Reinhardt, who first dedicated an extensive study to sympathy, the idea that this notion is an “Aufeinanderabgestimmstein”,<sup>160</sup> that is, a “reciprocal concordance” between different things, has never been substantially challenged.<sup>161</sup> This is due to the fact sympathy is indeed presented by some authors as action between things “separated indeed in space, but not living separately thanks to kinship (τόπος μὲν διεξυγμένων, συγγενεία δὲ

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<sup>159</sup> I consider “co-affection” the most accurate translation of the Greek word σμπάθεια, because, as we will see, the use of the prefix συν- has a fundamental role, in that it defines the concept of “co-affection” as applicable only in the specific case of highly diversified beings. The use of “sympathy” has been favored by scholars – with the advantage of being a literal translation of the Greek word, and with the disadvantage of remaining essentially vague. This vagueness, however, is rather harmless, in that it allows for the word “sympathy” to adapt to an eventual technical meaning. Here, therefore, I will use “sympathy” as a synonym of “co-affection” and “sympathetic” as a synonym of “co-affective”.

<sup>160</sup> Reinhardt 1921, p.654.

<sup>161</sup> The idea of causal interconnectedness has been often used to make the case that sympathy is a way to discuss cases of hidden causality within the cosmos, and to signal the occurrence of a sort of “butterfly effect” within the material continuity of it. This is the position of Sambursky, who distinguishes two types of movements in Stoicism: movement as exchange of matter, and movement as the transmission of a state (Sambursky 1959 p.22), and classifies sympathy as a movement of the second kind (Sambursky 1959, p.40-43). Emilsson follows in his footsteps (Emilsson 1988, p.47; Emilsson 2015 p.39-40). I am not sure how far the distinction between these two kinds of movements may be brought: a change in state, in the Stoic corporealist system, must always result from an exchange of matter, or at least from its movement in space, for there can be no re-disposition of matter (i.e. change of state from one disposition to the next one) without movement of matter. More recently, Meyer 2009 p.82-85, Brouwer 2012 p.26-28, Holmes 2019 p.263 seem to hold, again, that sympathy mostly signals the interconnectedness of the whole by displaying hidden causal relation between its parts.

ού διωκισμένων)”.<sup>162</sup> While potentially fertile in a Platonic context struggling to account for interactions between corporeal and incorporeal entities, action at a distance, with no further implication attached, is in itself not particularly interesting in the context of the Stoic system, where the only kind of interaction possible is that between bodies within a continuous whole. In turn, sympathy, as action at a distance, would become a rather uninteresting notion, if we consider that the Stoics were the first to apply it to the cosmos. Indeed, if no incorporeal force or entity is ever involved, then action at a distance, in Stoicism, can only be the result of a series of interactions between entities that are physically touching each other in sequence within the continuous body of the cosmos. According to this conception, therefore, sympathy would be employed mostly as empirical evidence for the continuous unity of the cosmos by showing the interconnectedness and orderliness of all the events and processes within it. What most scholars seem to miss, however, is how the unity for which sympathy is considered evidence is closely connected to the notion of life, and in which way. The unity of an entity whose parts are in sympathy is not simply the unity of any entity, but that of a living being: thus, sympathy is not only evidence of unity, but of the specific kind of unity that characterizes living beings, precisely because it offers proof of the interconnectedness of the cosmos insofar as it depends on the pneumatic movement belonging to living beings, that is, a pneumatic movement in which perception arises. If the aim of introducing sympathy was simply to portray a certain degree of causal interconnectedness between apparently unrelated events, then the notion of fate would have been more than sufficient: after explaining that events are causally interconnected through fate, sympathy would be little more than a corollary to the idea of an unbreakable causal chain, stating that even apparently unrelated events are actually causally connected.<sup>163</sup>

But, as we have seen in the previous chapter, sympathy was chiefly used to talk about soul-body interactions and about interactions between the body and its environment: as such, sympathy is eminently biological as far as its origins are concerned, and introducing it merely to discuss cases of “hidden causality” would not do justice to its previous uses. In particular, we have mentioned how Cleanthes has used the notion to prove the corporeality of the soul via the possibility of its affection by the body.<sup>164</sup> The example by Cleanthes in the context of soul-body relations seems to be concerned,

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<sup>162</sup> Philo *De Migrat. Abrah.* 178 = SVF 2.532. See also SVF 2.1211 where sympathy is a “natural kinship of distant things” (*distantium rerum naturalis cognatio*) and Marcus Aurelius IX.9 for sympathy as a “union of separated things” (διεστηκότων ἔνωσις). It must be noted Philo, Cicero and Marcus Aurelius are more platonically oriented – and therefore, I would say, more keen to underline action at a distance as possible evidence of incorporeal action, as it will be the case when the term is later adopted by Plotinus.

<sup>163</sup> Brouwer seems to interpret sympathy in this way: “Providence relates to the overall divine plan, and fate to the aspect of the web of causes, whereas sympathy brings out the physical interconnectedness of the world within itself and the entities in it” (Brouwer 2012 p.27). The three concepts are related not simply in showing the interconnectedness of the world, but, more importantly, in showing how it depends from the fact that the world is ensouled. Brouwer and others fail to see that the unification and interconnectedness they talk about is a direct consequence of the world having a mind.

<sup>164</sup> Nemesius *De Nat. Hom.* 32 = SVF 1.518.

to a certain extent, with the idea of the human being perceiving itself, in that the reciprocal affection of body and soul seems to have a cognitive aspect: one becomes aware of the pain in the other. A similar example, found in Sextus, is put forward by Chrysippus, the chief figure in Stoicism when it comes to sympathy, as we have seen in the previous chapter: he claims that “if a finger is cut, the whole body suffers”.<sup>165</sup> In both examples, sympathy is used to signal a specific interconnectedness in which each affection is shared among the parts of a given whole (in this case, the human’s constitution). To this, one may object that the two examples do not seem to exactly overlap: the first, seems indeed to be concerned with the affection of one part reverberating in another, i.e. the body on the soul and vice versa, while the second seems to be concerned with the affection of one part somehow being shared by the whole.<sup>166</sup> Indeed, the idea that the whole body suffers when a finger is cut is rather counter-intuitive, in that, pain is clearly localized in a specific part of the body. What does it mean, then, to say that a whole is affected by what happens to its parts? For now, let it suffice to say that, in general, for this claim to make sense, we must suppose that whatever it is that classifies the whole as a whole is what receives the affection: in Stoicism, what classifies an object as a whole is the activity of *pneuma*, since it is responsible both for the qualities and for the unity of the entity. Thus, for the whole to be affected, this activity must be affected as well.

But how does this translate on a cosmic scale? When Chrysippus applies sympathy to the cosmos, he preserves both aspects of the notion, namely, its signaling interconnectedness as well as an affection of the whole. Chrysippus’ use of cosmic sympathy seems mostly concerned with two classes of examples: the first pertaining sympathy between celestial bodies and bodies on earth, with the chief example being that of the relation between moon phases and tidal change,<sup>167</sup> and the second concerning sympathy between prophetic signs and prophesized events.<sup>168</sup> At a first look, it might be difficult to understand in which sense such different events can be explained in a manner similar to that in which one would explain cases of co-affection in the human body. The example of prophecy, though, can give us a hint to better understand what is at work on a larger scale: a prophetic sign is indeed not the cause of a prophesized event, but rather happens synchronically with it because of a common cause. Similarly, the alleged influence of celestial bodies on earthly changes, although

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<sup>165</sup> SVF 2.1013.

<sup>166</sup> This seems to be a fundamental difference between the use of sympathy made by the Stoics, and in particular by Chrysippus, and those made before them. As specified by Holmes (Holmes 2013), in the medical context sympathy was used in diagnosing by claiming that, since certain parts of the body are co-affected, observation of symptoms in one could lead to identify illness in another. The Stoics, on other hand, seem less concerned with this “diagnostic” use of sympathy: what sympathy signals, for them, is always a particular kind of unity and the interconnectedness of the whole. Thus, it is only fitting that they talk of coaffection in the body in the terms of an affection that is spread and perceived through the whole of it, rather than a simple interaction between two parts.

<sup>167</sup> SVF 2.532, 2.1013; Cic. *ND* 2.19ff.

<sup>168</sup> SVF 2.1211 = Cic *De Div.* 2.33; Cic. *De Div.* 2.124.

sometimes the language used seems to fluctuate between correlation and causation, most fragments indicate that earthly changes happen “according” (κατά) to the changes of celestial bodies.<sup>169</sup> Beside these two uses, however, we find a third one which seems to be the most mysterious and problematic, namely, the sympathy of the cosmos “with itself” or “towards itself” (συμπάθεια αὐτῷ; συμπάθεια πρὸς αὐτό).<sup>170</sup> This third use brings us back to the idea of the whole being affected, in that it seems to imply that the cosmos is co-affected by itself, or, to be more precise, by something happening within itself. But if the cosmos as a whole can be affected by what happens to its parts, in the same way in which the body is affected by localized pain in the finger, then it will be true for the cosmos what is true for the body, namely, that its pneumatic activity is affected when the whole is affected by something happening to a part.

Co-affection has thus pointed us towards a concept that is symmetrical to it and inseparable from it, namely, that of a constant activity at work through the body, from which results the co-affection of the whole: this is none other than the activity of pneuma through the body of the animal, from which depends the fact that the animal as a whole can be affected by what happens to its parts. As we have seen in our discussion on the elements, this is precisely the kind of activity that pneuma performs in the body, by endowing it, thanks to the properties of fire and air, respectively with qualities and unity. The Stoics usually refer to pneumatic movements through the body as “tensional movements”,<sup>171</sup> and these are shared by all pneumatic blends.<sup>172</sup> Sympathy depends directly from pneumatic movements, as this passage from Alexander of Aphrodisias shows: “Chrysippus’ theory of blending is as follows: he holds that the whole of substance is unified because it is totally pervaded by a pneuma through which the whole is held together, is stable, and is sympathetic with itself (συνέχεται τε καὶ συμμένει καὶ συμπαθὲς αὐτῷ το πᾶν).”<sup>173</sup> Co-affection, as this passage states,

<sup>169</sup> See, for instance SVF 2.1013. Reinhardt 1926 (p.118-9) has argued for a unidirectional influence of celestial bodies on earth, especially when discussing Posidonius, to whom he attributes the major innovations concerning cosmic sympathy. But Posidonius’ language does not seem to be at odds with my thesis, since he claims that the changes of the tides are called “star-like” (ἀστροειδῆ) (EK217) – namely, following the changes of an astral body synchronically rather than being causally influenced from them. Similarly, in EK 219, tidal change happen “in a lunar way” (*lunaliter*) and “according to the cyclical movement of the moon” (*ad lunae ambitum*). In EK 219 it is also stated that sun and moon are direct causes of the changes on earth, but I would be skeptical toward this interpretation. Indeed, Posidonius’ theory on sea tides is reported here by Priscian of Lydia, who not only is more distant in time from Posidonius than Stobaeus (author of EK 217) but also very probably received a mediated account on sympathy through the Neoplatonists – specifically Iamblichus. Despite the popularity sympathy enjoyed with Plotinus, Iamblichus’ attitude toward it is mostly critical, as he sees it as a mere “butterfly effect” happening among bodies, making certain inferior forms of divination possible (Cfr. *De Myst.* 3.16.29; 3.26.23; 3.27.2; 4.10.6; 5.7.8; 6.4.6).

<sup>170</sup> SVF 2.473, 2.475.

<sup>171</sup> SVF 2.441, 2.444, 2.450, Nemesius 70, 6-71,4 = LS 47J.

<sup>172</sup> LS 47R = SVF 2.802, 2.458(2). In general, that of tensional movements was considered a well-known doctrine of the Stoic School, and is addressed in these terms by Hierocles, IV.27-39. Hierocles also mentions in the recap of the argument for the continuity of the soul through IV 39.53.

<sup>173</sup> Alex. Aphrod. *De Mixtione*, 216, 14 partly in SVF 2.473. The translation is mine. A similar claim is then made again at 223,25 = SVF 2.411, where Alexander criticizes the idea that pneuma is required to grant the unity of any given entity, by providing an alternative explanation for co-affection. Co-affection, for him, cannot be used as evidence of the

depends directly from the fact that a single pneuma holds substance together, that is, from the double-movement of pneuma. But considering the double-movement of pneuma as the fundamental activity from which co-affection of the whole results would bring us back to our initial problem concerning the distinction between nature and soul, namely: if all entities participate in the double-movement of pneuma, whether they are inanimate objects unified by cohesion, plants unified by nature, or animals unified by soul, how would pneumatic movement result in a phenomenon which concerns only the bodies of animals? Or, to put it in simpler words, how is the pneumatic movement in animals any different from that in plants and inanimate objects, and why does it generate the unique phenomenon of the co-affection of the whole?

The Stoics seem to have employed a specific technical term to qualify pneumatic movement within living beings: “conspiration” or “co-breathing” (σύμπνοια). The term, once again, is likely an innovation introduced by Chrysippus,<sup>174</sup> and is applied, like co-affection, to the human body and the cosmos. Galen, in particular, uses the expression σύμπνουν τε καὶ σύρρουν, “conspiring and co-flowing”<sup>175</sup> to describe the internal pneumatic movement within animal bodies. In particular, he writes that the animal is held together by being σύμπνουν τε καὶ σύρρουν, and describes the process as follows:

[Pneuma], since it turns on and off at the right time, as Heraclitus said, is always in motion. It turns on when it goes downwards in search for nourishment, and turns off when it raises up, scattering in every direction. It moves upwards and externally by reason of its nature, which is being hot. And the movement downwards, towards the center, which is its original place, depends upon its participation in cold. For it is a mixture of heat and cold.<sup>176</sup>

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unificatory activity of pneuma. But this proves that, for the Stoics, pneuma, and the unity resulting from its tensional movements, was the condition of possibility for co-affection and definitely disproves the idea that sympathy can be some sort of “butterfly effect”. Beside Alexander, other authors, such as Clemens (SVF 2.546) and Plutarch (SVF 2.912) state that sympathy depends from the unificatory activity of pneuma.

<sup>174</sup> See DL 7.140, where term appears in relation to Chrysippus’ discussion on void in his *On Void*, leaving no doubts on who introduced conspuration among the Stoics. For an inquiry into the origins of conspuration and its use in Stoicism and Pythagoreanism, see Horky 2019 and 2021. Horky 2021, in particular, also considers conspuration a Chrysippean innovation. The expression occurs a handful of times in Galen, sometimes in contexts that are not explicitly Stoic, which may lead one to think that σύμπνουν τε καὶ σύρρουν is likely an original expression of Galen’s writings. However, Plutarch seems to be the earliest author to use it in reference to the philosophy of Chrysippus (SVF 2.912), which supports the idea that the term was first used by him. As Horky notices, (Horky 2021, p. 58-59), another term that occurs in relation to conspuration is συντονία, although its use in reference to the Stoics is only recorded in a passage from Diogenes Laertius (DL 7.140= SVF 2.543). Both σύρροια and συντονία, in my opinion, describe the conspiring activity of pneuma: pneuma, indeed, is “conspiring” in the sense that it “co-flows”, quite literally, throughout the organism as a whole, despite its division in parts, moving outwards and inwards. But it is also σύντονος, in that its double-coursed movement results in a unified “co-tension” of all the parts of the blend. Both Pigler 2001 and Laurand 2005 acknowledge the connection between σύμπνοια and συμπάθεια in the Stoics: we agree with Pigler in that both σύμπνοια and συμπάθεια indicate that the cosmos is involved in a single activity, but we add to this explanation the fact that it is necessary for the cosmos to also be divided in parts performing different functions, for it to co-act and be co-affected.

<sup>175</sup> SVF 2.411, 2.446.

<sup>176</sup> Galen, *De Tremore, Palpitatione, Convulsione* 6.vii.616K = SVF 2.446. The translation is mine.

Here, Galen is stating how the unity of the animal depends upon the body being “conspiring and co-flowing”, in the sense that its pneumatic part preserves, in it, both the movements of air and fire. The unity of the body, then, is directly dependent upon the qualities endowed upon it by heat and cold: a balance between them makes the animal both capable of movement and physically unified. Indeed, both features are essential requirements for something to be deemed alive. In another passage, Galen provides us with more insight on what, precisely, is unified through co-breathing, and what is co-affected: “the whole body is conspiring and co-flowing (σύμπνοον τε καὶ σύρροον), and all the parts of the living being are co-affected (πάντα συμπαθῆ τὰ τῶν ζώων μόρια)”.<sup>177</sup> This reference to “the parts of the living being” brings us back to our mereological discussion, since only in the context of a composite body can the concepts of co-breathing and co-affection make sense. By composite, however, I do not mean a body that is generally divisible, but a body that is comprised of different parts deployed to different functions: if, indeed, the whole is defined in relation to the kind of action that it performs as a whole, that is, conspiracy, then for something to be defined as a part of it, the part would need to be deployed to a specific function, as all the parts of the body of an animal are.<sup>178</sup>

This differentiation in the functionality of the parts is the fundamental aspect to take into account, here, in order to distinguish living beings from other beings. In the case of the human body, indeed, sympathy was described chiefly in terms of a co-affection between organs, especially in its diagnostic use.<sup>179</sup> The cosmos, like the human body, is also comprised of parts deployed to different functions,<sup>180</sup> traversed by one and the same pneuma, and, as we will see when discussing Hierocles more in detail, the most primitive level of perception in the animal is precisely that of a perception of its own parts and how to use them, that is, of their potential function. If we assume this perspective, though, the way in which we could take sympathy as empirical evidence for unity, either of the cosmos or of an animal body, becomes radically different, in that it shows that sympathy is not taken for evidence of a unity depending solely from the physical continuity of the cosmos: the unity signaled by sympathy

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<sup>177</sup> Galen, *Methodi Med.* I.2 = SVF 2.411. The translation is mine.

<sup>178</sup> This deployment of pneuma to different functions has been noticed by Pohlenz 1949 p.99 and Gould 1962 p.102. The theory seems to find further support in passages such as SVF 2.458(1), where it is stated that, in a human being, pneuma can be disposed as ἔξις in the bones, as φύσις in nails, muscles and hair, and as soul in perceptive organs and in the heart. The fact that one pneuma can pass through the same body in different dispositions seems to prove that different parts of the body are deployed to at least three macro-functions (physical cohesiveness, growth and regeneration, perception). Moreover, given that pneuma is responsible for qualities as well, these functions are further diversified in those of specific organs, specific muscles and specific bones, much like soul is responsible for perception in specific sensorial organs and in reproduction (see SVF 2.850-74).

<sup>179</sup> For the mereology of sympathy, see Holmes 2012 p.52, where sympathy is defined as a case of affection deriving from the relation between two parts of the bodies. Sympathy does imply, for obvious reasons, a diversification between the things that are co-affected: however, for the Stoics, this diversification is not only marked by division in space (as different parts of a rock or a tree may be), but from a diversification in function. Different parts of the body need not only to be differently located, in order to be in sympathy, but also to perform different functions.

<sup>180</sup> See SVF 2.634 = LS 470. The debate on the localization of the hegemonic of the cosmos mirrors that around the localization of the hegemonic in the human bodies.

is that produced by conspiracy, that is, the unity of a being possessing indeed one pneuma, but a pneuma that moves synchronically through parts engaged in apparently unrelated activities – as the organs in a human body.<sup>181</sup> The abundance of technical terms using the prefix συν- (σύμπνοια, συμπάθεια, συντονία, συρρεῖν, συμφύης, συναίσθησις) specifies that, in a living being, different parts are engaged in different activities, and that the synchronic movement of pneuma makes them co-act and co-react.<sup>182</sup> Conceptually speaking, the ideas of synchronicity of action and reaction, or commonality of nature, do not make sense if some level of differentiation between the parts to which the term is referred is somehow implied. This level of differentiation is the most elementary distinction between living and non-living and, starting from it, co-activity and co-reactivity are necessary to explain how, in a being whose parts are highly differentiated and deployed to different tasks, the parts can nonetheless act “together” (συν-).

Co-affection and conspiracy, therefore, point us towards the vital question of how to conceptualize the unity of a highly differentiated being. If they characterize, specifically, the pneumatic activity within living beings and its effects, then, in explaining how this activity produces the unity of the living being and its features, conspiracy and co-affection will also explain how perception emerges in living beings. Since the achievement of the unity of a living being and the emergence of perception seem to be inseparable from each other, the vital question at stake, then, is this: what kind of unity is the unity of a living being?

### 5. *The Emergence of Perception*

The following passage from Sextus Empiricus can give us some precious insight into what kind of unity is that of a highly differentiated being:

[78] Again, some bodies are unified, some are from things fastened together, and some are from things standing apart. Unified are those that are governed by a single holding, like plants and animals; from things fastened together are those that consist of things lying next to each other and heading towards a single culmination, such as chains and cabinets and ships; and

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<sup>181</sup> In this sense, the focus on “action at a distance” we have seen in some authors, could be taken not as a focus on distance qua distance, so much as a focus on differentiation in general. No part of the cosmos is truly distanced from the others, in that the continuity of the body of the cosmos grants the possibility of interaction equally to all its parts. Acting together despite being distant is not, as such, in any way unique, in the Stoic cosmos. But for parts that are deployed to different functions, and supposedly engage in independent activity, to act synchronically is indeed something that can only happen given specific conditions, even in a continuous body. These conditions are pneumatic movements which move in synchrony and allow the parts to act in unison.

<sup>182</sup> I am here interpreting συμπάθεια to quite literally mean co-affection, in that the same affection is shared by different parts. The prerequisite for this to happen is for entities to be parts of the same organism, that is, to be deployed in performing function which contribute to the unity of the whole.

from things standing apart are those that are composed from distinct and separate things existing by themselves, such as armies and flocks and choruses. [79] Since, then, the world too is a body, it is either a unified body or from things fastened together or from things standing apart. **But it is not from things fastened together or from things standing apart, as we show from the sympathies towards itself** (οὔτε δὲ ἐκ συναπτομένων οὔτε ἐκ διεστώτων, ὡς δείκνυμεν ἐκ τῶν περὶ αὐτὸν συμπαθειῶν). For it is in line (κατά) with the moon's periods of growth and decline that many land and sea animals decline and grow, and falling and rising tides occur in certain parts of the sea. Similarly, it is in line (κατά) with certain risings and settings of the stars that changes in the atmosphere and the great variety of shifts in the air take place, sometimes for the better, but sometimes to pestilential effect. **From which it is clear that the world is a unified body.** (ἐξ ὧν συμφανές, ὅτι ἠνωμένον τι σῶμα καθέστηκεν ὁ κόσμος.) [80] For in the case of those from things fastened together or things standing apart, the parts do not have sympathy with one another – in an army, for example, when everyone has been wiped out, the survivor does not appear to suffer anything by way of an influence; but in the case of unified bodies there is an affinity – **if a finger is cut, the whole body is affected along with it.** The world too, then, is a unified body. [81] But since some unified bodies are held together by simple cohesion, some by nature, and some by soul – by cohesion, like stones and bits of wood, by nature, like plants, and by soul animals – the world too is certainly governed by one of these. [82] And it cannot be held together by simple holding. For things that are governed by simple holding, such as bits of wood and stones, **do not admit of any significant change or shift, but are merely affected from themselves by the conditions associated with relaxation and compression.** [83] **But the world does admit of significant changes** (οὐδεμίαν ἀξιόλογον μεταβολὴν τε καὶ τροπὴν ἀναδέχεται, καθάπερ ξύλα καὶ λίθοι, ἀλλὰ μόνον ἐξ αὐτῶν πάσχει τὴν κατὰ ἄνεσιν καὶ τὴν κατὰ συμπίεσμον διάθεσιν. ὁ δὲ κόσμος ἀξιολόγους ἀναδέχεται μεταβολάς); the atmosphere sometimes becomes chilly and sometimes warm, sometimes arid and sometimes moist, and sometimes altered in other ways in line with the motions of the heavenly bodies. **The world, then, is not held together by simple holding.** [84] **But if not by this, then certainly by nature; for even the things governed by soul were held together by nature long before.** (οὐ τοί νυν ὑπὸ ψιλῆς ἕξεως ὁ κόσμος συνέχεται. εἰ δὲ μὴ ὑπὸ ταύτης, πάντως ὑπὸ φύσεως· καὶ γὰρ τὰ ὑπὸ ψυχῆς διακρατούμενα πολὺ πρότερον ὑπὸ φύσεως συνείχετο) Therefore it is necessarily held together by the best nature, since it includes the natures of everything. But what includes the natures of everything also includes rational natures. [85] But what includes rational natures is certainly rational; for it is not possible for the whole to be worse than the part. But if what manages the world is the best nature, it is intelligent and excellent and immortal. And if it turns out to be like that, it is a god. [86] Therefore there are gods.<sup>183</sup>

Here, Sextus discusses the Stoic modalities of unification as well as the difference between living and non-living. The purpose of the argument is to prove the existence of the gods by analyzing how the body of the cosmos is unified. For us, the passage is interesting because it proposes a criterion to distinguish between the unification enabled by soul, that is, by conspiracy and as its specific pneumatic activity and co-affection as the its effect, and that enabled by other dispositions of pneuma. Indeed, in the first part of the argument, Sextus presents different modalities of unification, and claims that the cosmos is unified through blending rather than juxtaposition “because of the sympathies in it”. The empirical observation of sympathetic relations generally provides evidence that the cosmos is a pneumatic blend, because, as he seems to assume, only certain pneumatic blends can present

<sup>183</sup> Sextus, *Adv. Math.* IX.78-85; Partly in SVF 2.1013. The translation of the parts in bold has been slightly changed.

sympathetic relations between their parts such as the one described at IX.80 with the example of the whole body being affected by a cut on the finger. For some reason, Sextus does not seem to take into account the possibility that sympathetic relationship may occur into blends that are not pneumatic, such as the famous example of wine and water. It becomes apparent, however, in the following passages, that Sextus has mentioned sympathetic relations for a specific reason, namely, because he believes that they can only occur in pneumatic blends, or, to be more precise, into specific kinds of pneumatic blends.

At IX.81, he states clearly that the world, insofar as it is a pneumatic blend, must be held together chiefly by one of the three dispositions of pneuma, i.e. by cohesion, nature or soul. He then poses the fundamental question concerning which of the three is responsible for the kind of unity that the cosmos exhibits. Much like in the case of an animal body, we know that it is possible that cohesion, nature and soul coexist within the body of the cosmos by being deployed to different functions, as it is evident by the fact that, within the cosmos, certain entities are held together by cohesion, nature or soul. But, in line to other Stoic writings, Sextus seems to ascribe the responsibility for the unity of the whole to the most developed part of pneuma. As we will see in the next chapter, this is due to the fact that more complex pneumatic dispositions, such as soul in respect to nature or nature in respect to cohesion, are responsible for more complex forms of unity. For now, what we can observe from this passage is that Sextus mentions sympathy again as a criterion to establish which kind of pneumatic blend the world is. This leaves little doubt, therefore, that sympathy is a phenomenon that does not occur in all kinds of pneumatic blends, and is only specific to some.

The first kind of pneumatic blend that does not manifest sympathetic relations is cohesion. As Sextus writes, things that are unified through cohesion alone “do not admit of significant change or shift (οὐδεμίαν ἀξιόλογον μεταβολὴν τε καὶ τροπὴν)”,<sup>184</sup> and they are “merely affected from themselves by the conditions associated with relaxation and compression (ἐξ αὐτῶν πάσχει τὴν κατὰ ἄνεσιν καὶ τὴν κατὰ συμπίεσμον διάθεσιν)”. The world, on the other hand, seems to admit of significant changes, examples of which are atmospheric temperature changes and all those changes “in line with the motions of the heavenly bodies,” an expression that openly recalls the changes “in line with certain risings and settings of the stars that changes in the atmosphere and the great variety of shifts in the air” which were examples of sympathetic relations in the first half of the quoted passage. The significant changes the world can admit are, for Sextus, instances of internal sympathetic changes. Therefore, if by the expression “significant changes” Sextus means instances

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<sup>184</sup> The term is not used elsewhere, in Sextus or the Stoic fragments. There is a possible similarity with a passage from Philo (*Quod Deus Sit Immut.* 37, partly SVF 2.458(2)), according to which one of the differences between ἕξις and φύσις is precisely that φύσις is μεταβλητικῆς “admitting of change”.

of co-affection, then the criterion to distinguish between living and non-living and, thus, the criterion on which we can dispose cohesion, nature, and soul on different degrees of unification, is, at least partly, the ability to admit of co-affection. Of course, not all “significant change” may be co-affective, but the association between significant change and sympathy seems to point towards a specific direction, that is, the direction of constitutional change: changes in the seasons and cases of co-affection, as we have seen, always involve the whole constitution of the animal being affected, because, as Sextus writes, “if a finger is cut, the whole is affected”.

Animals, such as human beings and the cosmos, preserve their unity in the face of constitutional change, while inanimate objects can't. The fact that objects unified through cohesion alone are “merely affected from themselves by the conditions associated with relaxation and compression” means that the pneumatic movement in them is the only kind of internal self-movement they are subjected to, which, in turn, means that pneuma, when disposed as cohesion, is not sufficient to make the whole blend move. But to say that a blend does not move is the same as saying that it does not change itself: the only affection of an inanimate object is that of its internal pneumatic movement, which means that, in the face of change, that is, in the face of movement to which the object is passively submitted, an inanimate object can manifest barely any reaction beside its own physical cohesiveness. To put it in simpler words: an inanimate object can only resist change because of its hardness. Once it is moved, or scratched, or cut, it will stay so: inanimate objects have no means to reconstitute their unity in the face of constitutional change, or to maintain it, beside their physical cohesion. Plants and animals, on the other hand, are different. They do admit, to different extents, of significant change, in the sense that they can preserve their unity in the face of a certain amount of constitutional change.

We can infer from Sextus, then, that the ability to resist change is what characterizes nature and soul as different from cohesion, but he adds that if the cosmos is not held by cohesion “then certainly by nature; for even the things governed by soul were held together by nature long before” (οὐ τοί νυν ὑπὸ ψιλῆς ἔξεως ὁ κόσμος συνέχεται. εἰ δὲ μὴ ὑπὸ ταύτης, πάντως ὑπὸ φύσεως). Sextus is here dealing with the consequences drawn from his assumption at IX.81, where he stated that the world must be a pneumatic blend. If the world is a pneumatic blend, and if it exhibits sympathetic relations by being capable of maintaining unity in the face of constitutional change, then the world must be a pneumatic blend where pneuma is disposed either as nature or as soul. He seems, however, to hesitate between the two: on the one hand, he claims that the world must certainly be held together by nature, but, on the other, he also believes it to be relevant to state, immediately afterwards, that all things governed by soul were held together by nature long before. This sentence, coupled with the ideas that follow, according to which the world is kept together by the “best nature” and is “intelligent”, strongly

points towards the conclusion that its pneumatic part is disposed a soul, in line with other Stoic sources.<sup>185</sup> If the cosmos was not held together by a soul, indeed, there would be little reason to mention soul at all in this context, and the argumentation could proceed by talking about the “best nature” without any reference to soul. But, given that the “best nature” is rational, and given that soul is the only pneumatic disposition which possesses mental faculties, even without considering the abundant Stoic evidence in favor of an ensouled cosmos, there is very little reason to think that, in this specific passage, Sextus believes the pneumatic part of the cosmos to be anything other than a soul. But if, indeed, the pneumatic part of the cosmos is a soul, then the rule stated by Sextus according to which “things governed by soul were held together by nature long before” must apply to the cosmos as well.

Sextus is therefore putting forward, like Plotinus, the idea that the cosmos was held together by nature before possessing a soul. But, in addition to our previous embryological discussion on sympathy, Sextus is now offering a criterion to identify the difference between cohesion, nature and soul, and, thus, a criterion to explain how perception emerges and characterize soul as different from nature. The criterion is the capacity to withstand significant change, which implies manifesting sympathetic relations. The fact that, in the passage, this capacity seems to be attributed to nature alongside with soul occurs because sympathetic relations first appear during the transformation of nature into soul: a nature capable of withstanding significant change indeed evolves into a soul, by manifesting sympathetic relations and, alongside with them, the faculty of perception.

Let us now elucidate this statement by joining the findings from our embryological discussion with the criterion and explain how perception emerges, by joining together our embryological discussion with the criterion extracted from Sextus’ passage. The cosmos, indeed, much like an animal, is an entity which differentiates itself and yet maintains its unity. But, as the cosmos changes and becomes more differentiated, so will the modalities through which it is unified; hence the necessity for the cosmos to go through a series of adaptive stages before becoming an animal. The embryological discourse was meant to give us the tools to understand how the cosmos maintains its unity through increasing stages of differentiation, that is, by increasing the portion of the cooling element within cosmic pneuma. This allows for the inward pneumatic movement to be strengthened, which, in turn, means that the animal will be capable of maintaining unity through a wider range of changes. At a certain point, the cooling will reach balance between hot and cold, as written by Galen,<sup>186</sup> so that the heating part will now allow the animal to move and the cooling part for it to maintain its unity while in movement. The aim of importing embryology into cosmology is precisely

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<sup>185</sup> See SVF 1.172; 2.633-645; 2.821; 2.825; 2.845.

<sup>186</sup> Galen, *De Tremore, Palpitatione, Convulsione* 6.vii.616K = SVF 2.446, analysed in the previous section.

that of describing the achievement of this balance as a process, given that it is not present at the beginning of the cosmic ordering, but rather requires a series of adaptive stages. Once a pneumatic blend reaches this point of balance, that is, once it becomes self-motive while at the same time remaining unified, the conditions for sympathy are met: sympathy, as we have claimed, is a co-affection between differentiated parts of the cosmos, and a co-affection of the cosmos as a whole resulting by the co-activity of pneuma through all its parts.

Perception emerges precisely once a pneumatic blend is capable of co-action (in the form of conspiracy) and co-affection. Different parts of the cosmos being deployed to different functions work, as we have claimed, in the same way as organs in human beings. For an animal, the first attempt to constitute its own unity is precisely by co-acting, that is, by gathering under one coordinated co-activity of pneuma the ever-changing flow of the activity of its organs: this is conspiracy. In this sense, an animal withstanding significant change is the same as an animal being and maintaining itself alive, in that withstanding significant change is, for the animal, doing precisely what defines it as such: to move itself and yet preserve its unity. But this is only possible if each movement and each affection of the parts of an animal's constitution are registered by the whole animal as pertaining its own body as something belonging to it, because there cannot be unity of differentiated parts acting together if these actions are not referred to the whole of which they are parts. A passage from Chrysippus' *On the Soul*, quoted by Galen, confirms this theory:

In general, it seems to me that many reached these conclusions, because they realized that, when certain passions come to be in the mind, we co-perceive (συναίσθανόμενοι) them in the chest, and especially in the area of the heart, in the case of pain, for instance, and fear and wrath and spiritedness. For the latter, exhaling from the heart, moves towards the outside, swelling the face and the hands, coming to be in our outward appearance.<sup>187</sup>

Here, Chrysippus is presenting a typical case of co-affection between soul and body in order to prove that the heart is the seat of the hegemonic. However, as Chrysippus writes, both the psychic and the bodily phenomenon are co-perceived, suggesting that, although affections happen synchronically in different parts of the animal's constitution, the subject as a whole co-perceives<sup>188</sup> them as localized in specific places of its own constitution. Perceiving, I believe, is an activity which pertains the animal as a whole: it is not the eye, the hand or the ear that perceives, but rather, the whole animal perceives *through* the eye, the hand or the ear. In this sense, to say that "when the finger is cut, the whole is affected" means precisely that the sensation of pain, although localized in the finger, is registered by

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<sup>187</sup> SVF 2.886. The translation is mine.

<sup>188</sup> I take συναίσθησις to be a technical term, in Stoicism, meaning "co-perception". The notion of "co-perception" will be discussed in detail in the next chapter. For now, let it suffice that it indicates a kind of perception involving multiple elements, and that it signals the connection between perception and sympathy.

the animal as a whole as belonging to itself: if *my* finger is cut, *I* am affected by pain. In the exact same way, when the mind and the heart are affected, the human being co-perceives it insofar as its own mind and its own heart are being affected together, that is, it perceives the affection of its parts as concerning its whole constitution.<sup>189</sup>

The state in which “the whole is affected”, then, or in which something is “co-affected by itself” marks the beginning of a feedback loop within the animal, where affections of the parts become affections of the whole and vice versa. Pneuma changes, reaching certain proportions of air and fire, and then conspires, triggering coordinated activity between the parts and the whole, thus making it possible for co-affections between the parts and making the whole co-affected by its parts. Each step of this activity implies not only pneuma modifying and moving the whole (conspiration), but also pneuma being modified by it (co-affection), which means that, for each pneumatic activity through a complex body, the whole must receive a feedback by being affected by it.<sup>190</sup> In terms of pneumatic movement, this feedback comes in the form of changes to which pneuma – and, as a consequence, its pattern of movement – is subjected in moving through the body. This feedback is the equivalent of the animal perceiving itself.

Thus, what sympathy signals is not simply the interconnectedness of parts within a unified whole, but the fact that the whole constantly receives a feedback on its activities thanks to the internal activity of its pneumatic part, which maintains its pattern of movement despite change: this feedback, coming in the form of an affection, is “the whole being affected when the finger is cut” and “the cosmos being co-affected by itself”, or, more simply, the animal perceiving its own constitution. Sympathy, then, marks the emergence of perception in that the animal, and the cosmos insofar as it is an animal, when co-affected by itself, receives feedback concerning its own activities: the animal perceives its own constitution as its own because pneuma spreads through it, moving the composite of pneuma and body as a whole, and is at the same time affected by the consequences of this spreading.

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<sup>189</sup> As Holmes notices (Holmes 2013, p.155), the idea that in the perceptive process soul and body are affected together can already be found in Plato *Phlb.* 33d5-6, where we read that αἰσθησις is a movement that is common to both but particular to each. Holmes seems aware, in this article, of a possible connection between sympathy and perception, but does not discuss the latter as depending on the first. Sympathy, here, is a causal interconnectedness between parts of the bodies which also happens to be perceived, without being in any way the enabler of perception as such.

<sup>190</sup> Sympathetic relations, therefore, do express that everything is created in relation to something else in the Stoic cosmos, as Holmes claims (Holmes 2019, p.261), but only if we understand the cosmos as an organism, that is, as an entity in which all the parts perform specific functions that can be gathered under a single, unifying macro-function. Holmes seems to insist rather on the fact that sympathy is the consequence of the activity of a single pneuma which is, of course, true – but the fundamental aspect of this activity is that it becomes diversified and yet it maintains its unity. Sympathy, therefore, is not characteristic of pneumatic activity in general, but of pneumatic activity as it structures itself in the activity of a complex organism.

## 6. Conclusion

That Stoic biology and Stoic cosmology were deeply intertwined is well known, but here I have attempted to provide an in-depth explanation of the consequences of this connection. I have examined Stoic embryology and mapped its possible applications in Stoic cosmology in order to understand how the cosmos becomes an animal capable of perception. In union with the notion of co-affection, also borrowed by the sphere of biology, the Stoics presented a deeply complex account of how the cosmos becomes alive while, at the same time, underlining the reasons for this to happen: the cosmos becomes alive to reach a higher level of unity. Indeed, if my explanation has pointed us towards a direction, it is that the necessity of articulating an idea of unification compatible with an ever-changing cosmos. The Stoics explain this unification by appealing to a biological theory concerning how animals, by nature capable of self-change, can nonetheless maintain themselves united: the embryological discussion, then, served the purpose of presenting the physical criteria upon which pneuma can establish itself as a unifying body within animals by assuming specific unificatory features. The discussion on sympathy showed us how this unificatory features translate in the specific pneumatic movement that is conspiracy, and the consequent co-affection, both of which are unique to animals and allow for changes in the parts to be registered by the whole. What is left to be inquired in greater depth, now, is how perception contributes to the unity of the animal. It is now clear that pneumatic activity creates a feedback loop within itself by responding to the need of coordinating diversified elements; it is less clear in which way this results in the living being achieving a higher level of unification. The next chapter, focusing on Hierocles' *Elements of Ethics*, will answer this question.

For now, we have understood that mental faculties can be emergent properties within the Stoic system, and that this can be applied to the cosmos as well. The picture presented in this chapter, I hope, is philosophically relevant in that it presents us with a possible account for the emergence of mental faculties in a materialistic system. In the Stoics, the most fundamental thing to keep in mind for the emergence of mental faculties seems to be the necessity, for at least some bodies within the universe, to move according to a regular pattern. Perception is a function of the regularity of this pattern, in the sense that it results from the fact that a certain regularity in the motion of bodies is always preserved, and can maintain itself in the face of change.

### III. The Binding Power of Perception in Hierocles' *Elements of Ethics*

#### 1. *The importance of Hierocles for Stoic psychology*

In the previous chapter, we have assessed that the most fundamental of the mental faculties of the cosmos, i.e. perception, emerges from material interactions, but we have yet to establish what purpose does it serve in the context of animal's life. Unless this is understood, the reason why the cosmos should be an ensouled animal will remain obscure: why, indeed, should we believe that the universe possesses any kind of perceptive ability? In this chapter, I will try to understand, more generally, what is the purpose of perception within ensouled animals, according to the Stoics, which will reveal its explanatory value on a cosmic scale.

The purpose of perception, as I will explain, is unification. Unification,<sup>191</sup> in Stoicism, is usually conceived as the result of possessing a pneumatic part disposed in at least one of these three ways: as cohesion (ἔξις), as nature (φύσις), and/or as soul (ψυχή). Cohesion would be responsible for physical cohesion, nature for growth, self-nourishment, and self-regeneration, and soul for the mental faculties of living being, more precisely perception (αἴσθησις) and impulse (ὁρμή). As one may easily notice, there is a significant difference here: while ἔξις and φύσις seem to be concerned with constituting and maintaining the physical unity of the entity they are blended with, the faculties bestowed on it by soul do not seem necessarily concerned with unification or unifying activities in general. According to the Stoics, living beings, that is, ensouled beings, participate in both cohesion and nature, respectively in the physical cohesiveness of bones and in the growing and nourishment of parts of the body such as muscles, hair and nails,<sup>192</sup> so one may think that the pneumatic part, disposed as cohesion and as nature, is directly concerned with the unification of the living being, while the soul is not. However, a passage from Sextus Empiricus, states that soul, for the Stoics, “has two meanings, that which sustains the whole compound, and in particular, the commanding faculty.”<sup>193</sup> If this is the case, then it would seem that the soul has indeed some unifying function. But what kind of function is this? And

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<sup>191</sup> When referring to unification, here, I am referring to a unification that provides a being with structure from within, that is, to the pneumatic process that allows a given entity to naturally maintain its structure. I am not referring, therefore, to modalities of unification in the sense of ἔνωσις presented in the Stoic theory of blending, since they do not, in themselves, produce structure: in juxtaposition, indeed, structure is produced by the external activity of a craftsman, while, in fusion, there is no concern for the structure of the new entity emerging from the fusion of the previous two. A pneumatic blend, on the other hand, is necessarily unified from within by virtue of being partly composed of a structuring body (πνεῦμα). Therefore, the question concerning unification, in this chapter, is a question concerning how a body with a self-structuring principle within it comes to unify itself.

<sup>192</sup> See Philo *Leg. Alleg.* II.22 ff. = SVF 2.458(1) and DL 7.138= SVF2.634 = LS 470.

<sup>193</sup> Sextus Empiricus, *Adv. Math.* VII.234 = LS 53F.

how does it relate to the physical cohesion and maintenance resulting from the workings of ἔξις and φύσις in the animal's constitution?

These questions define a problem concerning soul-body relations in Stoicism, highlighted by Long in several places,<sup>194</sup> namely: what is the soul precisely responsible for in Stoicism? Does it simply endow a living being with mental faculties, or does it produce some level of unity in the animal's constitution as well? Long's solution goes into the direction of attributing to the soul the double-function of generating ἔξις in the body *and* endowing it with mental features, without further explaining whether and in which way, these two functions could be further connected. I believe, however, that it is possible to find a more elegant solution to this puzzle: what may seem like two, separate functions of the soul, could instead operate as one and the same.

The Stoic Hierocles seem to have suggested this possibility, when he claims that soul, or rather, the primary mental faculty it produces in living beings, i.e. perception, indeed performs a function which is not so different from that of ἔξις and φύσις, after all:

In general, one must not be ignorant of the fact that every hegemonic faculty begins with itself. In this way a cohesive structure (ἔξις) which binds together what pertains to it, is first binding of itself. For indeed it could not bind together any other thing, when it has attached its parts to itself, if it had not previously provided this to its own parts. A "nature" too, indeed, when it binds together, preserves, nourishes, and increases a plant, first shares in these very things itself. There is a similar argument for every beginning; thus, **perception (αἴσθησις) too, since it is an initiating faculty (ἀρχική δύναμις), must be a thing even more binding (συνεχέστερον) than a cohesive structure and a nature**, obviously because it must begin from itself and, before apprehending something else, must perceive itself.<sup>195</sup>

After stating that every hegemonic faculty begins with itself, Hierocles claims that perception (αἴσθησις) can be considered "more binding" than the physical cohesive structure of inanimate objects (ἔξις) and the self-nourishing nature of plants (φύσις). The reference to perception rather than soul has been dismissed as Hierocles' collapsing the more general notion of soul upon one of its

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<sup>194</sup> Long 1996a, p.233-9. Long seems to conclude that the soul is responsible for both these activities, but as separate ones. In Bastianini & Long 1992, a similar question emerges in the missing part of the four premise on the argument concerning continuous self-perception in the *Elements of Ethics* (p.418-9), and Long claims, in line with his position, that the soul is responsible for both.

<sup>195</sup> Hierocles VI.11-21. Bastianini & Long 1992 (p.434) claim that here Hierocles would be using αἴσθησις as an equivalent for ψυχή, which is usually mentioned as a third element when talking about different level of cohesion after ἔξις and φύσις (see, for instance, SVF 2.1013). Thus considered, of course, the equivalence seem to complicate the picture, especially because Hierocles clearly refers to perception as "beginning from itself" (as self-perception), rather than soul in general. But if we think that soul's two most basic faculties, which are perception and impulse, are not equivalent – in the sense that the first impulse toward self-preservation can only be enabled if the animal has self-perception of itself, as Hierocles himself claims (VI.24-27; VI.40-51) – then perception ends up being the primary and most fundamental faculty of the soul. This would be a valid reason, for Hierocles, to mention perception instead of soul in general as a binding faculty, since it is the most fundamental activity of the soul.

faculties,<sup>196</sup> but I believe that some interesting conclusions can be drawn following a literal interpretation of his claim. By doing so it may be possible to understand in which sense the soul is responsible both for mental faculties in animals and for their physical cohesion: indeed, the claim that perception is “binding”, in a sense comparable to that in which ἔξις or φύσις are “binding”, seems to suggest that the function of αἴσθησις is not merely that of allowing the subject to gain a grasp on itself and the external world, but that it may also be the cause of some level of unity in living beings. But how would something like a mental faculty “bind” a living being in a way that is not only comparable, but even superior to that of the physical cohesiveness of a body? A close reading of Hierocles’ arguments in the *Elements of Ethics* could not only present us with an interesting elucidation of the nature of perception, but also, in turn, put us in a better position to understand why the cosmos should be considered perceptive at all. The claim that perception is “binding”, in a sense comparable to that in which ἔξις or φύσις are “binding”, seems in fact to suggest that the function of αἴσθησις is not merely that of allowing the subject to gain a grasp on itself and the external world, but that it may also be the cause of some level of order in the living being – at least for Hierocles. In this sense, then, understanding how perception contributes to the “binding” of living beings, could produce interesting results when it comes to explaining why the cosmos should be endowed perception, and, thus, what is the explanatory value of introducing cosmic psychology at all.

It must be noted that the passage understands this “binding” activity on two, parallel levels, that is, as “self-binding” and as “object-binding”. As we have seen, Hierocles writes: “a cohesive structure (ἔξις) which binds together what pertains to it, is first binding of itself. For indeed it could not bind together any other thing, when it has attached its parts to itself, if it had not previously provided this to its own parts”. “Self-binding”, therefore, refers to the pneumatic activity exercised by the pneumatic part of a blend on itself, while “object-binding” refers to its exercising unifying power on the material part of the pneumatic composite. In order to understand in which way perception can be considered more binding than cohesion and nature, therefore, we must understand both its “self-binding” and its “object-binding” aspect, that is, we must understand how perception binds itself and how it comes to bind the composite of a given living being, in both its pneumatic and its material part. As we read in the text, perception, as any other hegemonic faculty, is self-binding, because “before apprehending something else, it must perceive itself”. In order to understand in which way

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<sup>196</sup> Bastianini & Long 1992, (p.434-5) notice how Hierocles here is referring to αἴσθησις rather than soul as an instantiation of pneuma, and that this is inexact as soul is defined as αἴσθησις plus ὁρμή. But if we consider that it is impossible to have desiderative inclinations without perceiving oneself as a subject (which is the point of Hierocles argument that self-perception precedes self-love and not vice versa – see Ramelli note 11, p.5) αἴσθησις immediately appears as the fundamental unifying factor rather than ὁρμή.

perception can be considered “binding”, therefore, it is necessary to look at the most primary instance of the exercise of its binding power, namely, that of the animal perceiving itself.

Before beginning, though, I think it is necessary to consider two methodological issues. The first concerns the general compatibility between Hierocles’ theories and those of the old Stoa, which may be questioned when considering the rather large temporal span of four centuries which separates the key figures of the old Stoa, who lived in the third century BC, from Hierocles, who was active between the first and second century AD. Answering this question is relevant for our research, in that we are trying to use passages from the *Elements of Ethics* to solve a problem emerging from theories laid out several centuries before by Chrysippus. The question of his compatibility with the old Stoa and that of individuating possible points of departure from his predecessors has been no easy task, with positions varying from an early dismissal of Hierocles’ philosophy as fundamentally derivative and in line with Chrysippean “orthodoxy”,<sup>197</sup> to more recent acknowledgements of Hierocles’ originality in presenting Stoic concepts and possibly in departing from some well-known Stoic doctrines.<sup>198</sup> At this point, however, it seems fairly established that Hierocles’ philosophical stances can be read in relation to those of the old Stoa, possibly with some integrations from the middle Stoa.<sup>199</sup> There can be little arguing around the evidence that Hierocles shows familiarity with a wide set of specific notions drawn by Stoic physics, such as those of ἔξις, φύσις, συμπάθεια, and κρᾶσις, as well as a solid grounding in the technical vocabulary of the old Stoics. For what pertains to the points I am going to make on his theory of perception, I believe that Hierocles’ claims are essentially compatible with what we know about perception in the old Stoa, especially regarding his physical description of how perception arises in living beings. As I will try to prove, there is sufficient evidence to argue that Hierocles’ theories mostly rely on principles that were well established among the old Stoics, which would render the claims concerning soul-body relations, if not directly derived from accounts of the old Stoics, at least highly compatible with them on a philosophical level. For now, may it suffice to state my position on Hierocles’ compatibility with the old Stoa: that Hierocles’ text is indeed widely informed by old Stoic vocabulary and notions, and that, in most places where he seems to present original or innovative points in discussing perception, he does so by maintaining a high philosophical coherence with established doctrines of the old Stoa.

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<sup>197</sup> So Von Arnim 1906, (p.lviii), who concludes that there are little points of originality in Hierocles. While I think that Von Arnim has had the merit of noticing many connection between Hierocles and the old Stoa, I believe that he is too severe in his judgment of his philosophy. Moreover, I think that the claim for a Chrysippean orthodoxy has become problematic as the development of Stoic studies has shown that there were numerous internal debates in the school and that the material in which this “orthodoxy” should have come to us is notoriously difficult to handle due to its fragmentary (and doxographical) nature.

<sup>198</sup> Inwood 1984, Ramelli 2009. In her introduction to the *Elements of Ethics*, Ramelli discusses specific points of originality at pp.lxi-lxii.

<sup>199</sup> See Ramelli 2009 p.lxiii.

A second methodological issue concerns the possibility of mapping Hierocles' psychology into Stoic cosmology, given that Hierocles does not refer to the latter in the text of the *Elements of Ethics*. Again, here, the distance in time may not be helpful, but I think there are nonetheless good reasons to allow for this connection. If, indeed, from a philosophical standpoint, as I have claimed, Hierocles builds his explanation of the physical workings of perception starting from the theories of the old Stoa, then it is plausible to think that these can be mapped into cosmic psychology, since, as stated in the previous chapters and in the introduction, in the old Stoa, cosmic psychology and animal psychology were generally compatible. Hierocles is using doctrines that can easily refer to both spheres, as are the doctrines of blending, sympathy and tensional movements. More in general, one should not forget that Stoic philosophy is first and foremost a system, where no individual part can be properly understood without a reference to the whole system: the *Elements of Ethics* perfectly exemplifies this systematicity, by engaging both with a vast quantity of empirical data and with the most theoretical and general aspects of Stoic philosophy.

## 2. *Self-perception and co-perception*

In the *Elements of Ethics*, Hierocles is trying to build an ethical theory starting from the most basic faculties of the soul, namely, αἴσθησις, or the perceptive faculty, and ὁρμή, the impulsive and appetitive faculty. Sadly, we do not know much about the way he treated ὁρμή, but most of the surviving text is indeed concerned with questions pertaining perception and, more specifically, self-perception, since, as we have seen, this seems to be the condition of possibility for the apprehension of external objects. According to A.A. Long, the idea of self-perception could be considered a Stoic invention, since we find little to no use of it before the Stoics, and no extensive philosophical account of it before Hierocles.<sup>200</sup> Generally speaking, in the context of Stoicism, self-perception already was a fundamental part of ethics already by the time of Cicero,<sup>201</sup> but it is only with Hierocles that we are

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<sup>200</sup> Long 1996b, p.250. Long also mentions that the locution αὐτοῦ αἰσθάνεσθαι is used by Aristotle in *De Sensu* 7 448a26 where, as he specifies, it is referred to the human being and it points at the phenomenon of apperception, rather than self-perception. Before Long, Schwyzer 1960 has held a similar position: he reconstructs the history of awareness ("Bewusstsein", p.349 ff.), by taking into account several Greek terms corresponding to the notion. As he notices, the verb συναίσθάνεσθαι αἰσθητικῆ is present in Aristotle (*EE* 1245b 24; *EN* 1170b 4), but it is only with the Stoics that it starts to be used in relation to consciousness (p.355-9). Schwyzer, together with others (Pohlenz 1946, Pembroke 1971), takes as evidence of the use of συναίσθησις in the old Stoa a passage of Diogenes Laertius (see p.357), where he writes claims that, for the Stoics, the first thing an animal appropriates is "its own constitution (σύστασις) and the consciousness (συνείδησις) it has of it" (DL 7.85 = SVF 3.178). The debate on this passage focuses on the possibility of emending συνείδησις as συναίσθησις. While the arguments produced are convincing, it is difficult to obtain a final confirmation of the presence of συναίσθησις starting from Diogenes' passage. However, Tieleman 1996 (p.168 ff.), has noticed that the verb συναίσθάνεσθαι appears in two passages of Chrysippus, which will be examined later in this chapter.

<sup>201</sup> See Cic. *De Fin.* 3.16, a passage that has been largely discussed in Brunschwig 1986 and Engberg-Pedersen 1990.

faced with a detailed, physical explanation of the workings of self-perception. As successfully reconstructed by Badalamenti and Inwood,<sup>202</sup> Hierocles here aims at refuting two objections to the idea that animals perceive themselves since the very beginning of their lives: the first, probably of Peripatetic origin, states that the faculty of perception only apprehends external objects; the second, attributed by many to the academic Antiochus, states that self-love precedes self-perception.<sup>203</sup>

Hierocles' response to the first objection is an attempt to show that perception is a reflexive, "self-binding" faculty, which he does in the first part of his treatise by presenting a series of examples in which animals show awareness of their own constitution and how to use it. However, the vocabulary of self-perception in Hierocles may seem to be rather flexible, especially if we look to the two most known translations of the text, where several different expressions, including αἴσθησις ἑαυτοῦ, συναίσθησις, συναίσθησις ἑαυτοῦ,<sup>204</sup> are considered translatable into "self-perception". While αἴσθησις ἑαυτοῦ quite literally means "self-perception", I think instead that συναίσθησις and συναίσθησις ἑαυτοῦ must have a different meaning, which can help us to better make sense of the text. My suggestion is that συναίσθησις should be translated as "co-perception": this, as I will show, will make Hierocles' argument both more refined and more solid, as well as helping us to gain a better grasp on the notion of self-perception and, in turn, on the "binding" nature of perception in general.

If we look at the way Hierocles uses the term συναίσθησις through the text, it emerges that συναίσθησις does not indicate, precisely, the animal perceiving itself, but the broader idea of having complex, multiple perceptions at the same time, hence my translation of it as "co-perception". A first proof of this is the following passage: "the first confirmation that the entire animal perceives itself (αἰσθάνεσθαι ἑαυτοῦ) is the co-perception (συναίσθησις) of its parts and of the activities for which the parts were given."<sup>205</sup> These lines, which incidentally also mark the first use of συναίσθησις in the *Elements of Ethics*, appear in the context of Hierocles' attempt to show that animals are capable of self-perception by showing that "animals perceive their own parts".<sup>206</sup> He seems to be claiming,

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<sup>202</sup> Badalamenti 1987, Inwood 1984.

<sup>203</sup> Badalamenti 1987, p.62, Bastianini & Long 1992, p.391, Inwood 1984 p.168-9. Part of the debate surrounding this aspect of οἰκείωσις, according to Inwood 1985 (p.184 ff.) was also to establish that the natural orientation of the animal is towards self-preservation rather than pleasure. From the argument that self-love precedes self-representation, indeed, it was possible to claim that the first natural inclination of the animal is to seek pleasure. The Stoics, instead, for Inwood, wanted to establish that "man's basic orientation is to himself" (p.185) and preserving himself.

<sup>204</sup> Both Bastianini & Long and Konstan, the translator of Ramelli 2009, take these terms as synonyms. Ramelli follows Bastianini & Long claim that the concept of self-perception is rendered in many ways, because Hierocles' vocabulary is not particularly consistent (Bastianini & Long 1992, p.386).

<sup>205</sup> II.1-3.

<sup>206</sup> I.50. The same arguments concerning the fact that animals have self-perception because they seem to be aware of how to use their bodies is made in Seneca *Ep.* 121.9-13. Seneca's letter 121 is concerned with self-perception as the basis of οἰκείωσις in a manner that closely resembles Hierocles'. However, as Inwood 1984 claims: "Seneca treats the issue as a mere detail of traditional Stoic theory, not crucial for the practical matter of ethics" (p.156). Hierocles, on the other hand, makes self-perception the basis for ethical development in animals.

therefore, that the συναίσθησις of the animal's parts confirms that the animal perceives itself. If συναίσθησις could be translated as "self-perception", then Hierocles would be saying that the fact that the animal has self-perception of its parts and their activities confirms that the entire animal has self-perception in general. While this thesis is not wrong,<sup>207</sup> I believe that Hierocles is trying to make a different and stronger point: he rather insists on the idea that animals perceive both their parts and how to use them *at the same time*, that is, on the idea that the perception of one's own parts and that of their function must be at least simultaneous, if not thoroughly conjoined. Indeed, if one was aware of one's own bodily parts *without* also being aware of the way they can be used, as well as of their strengths and weaknesses, as Hierocles points out in the immediately following paragraph, how would the perception of one's own body be different from that of any other external object, except for its proximity? Perception of one's own body without perception of the possibility of its use is no different from perception of external things, if not for the proximity of the perceived object. Without a certain awareness that its bodily parts are usable, it would be impossible for the subject to distinguish between the perception of its constitution and that of an external object. Hierocles, on the other hand, wants to argue that the same faculty, namely perception, is always applied both to the self and to external objects, but he also must do so in a way that makes it possible to distinguish between the two.

This seems indeed to be the case if we interpret συναίσθησις and its corresponding verb as references to co-perception in its second appearance, again in the context of the first argument. There, we read: "animals also co-perceive (συναισθάνεται) which of their parts are weak and which are strong and hard to affect".<sup>208</sup> Here as well, Hierocles seems to refer to a case of complex perception, namely, the fact that the animal is capable to perceive which parts of its body are strong or weak in relation to certain situations or tasks. If we translated συναίσθησις as "self-perception", it would look as if Hierocles here was trying to prove that an animal has self-perception because it can perceive which of its parts are strong or weak. But, assuming that we already translated συναίσθησις as self-perception in the previous case, namely, when he was claiming that an animal is self-perceiving because it has self-perception of its parts and their use, maintaining the translation of it as "self-

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<sup>207</sup> From the passage, indeed, it is not clear whether Hierocles is referring to the fact that the animal perceives "its own parts" in the sense of all the parts of his body or not. It may be argued that he is. Otherwise, perception of a single part does not seem to entail "the entire animal" perceives itself: self-perception, if we only take the empirical evidence as proof, may only be partially explained. In my opinion, given that most examples reported by Hierocles are of animals having perception of specific parts of their bodies such as wings and eyes, it would be more likely to read the text in this second and more problematic way. The point that animals perceive their own parts, of course, would be enough to refute the claim that perception is only for apprehending external objects. However, as we have seen, Hierocles wants to show that "the entire animal" perceives itself, which is a stronger claim and would connect itself more smoothly with his final claims that perception is not only reflexive, but that its reflexivity is the base for the apprehension of external objects, as well as having a binding nature in the animal.

<sup>208</sup> Hierocles II.19.

perception” would make it so that Hierocles’ second point would bear very little difference from the first, since, in the first case, he would be arguing that animals perceive themselves because they perceive their own parts and their use, and in the second that they do so because they perceive which of their own parts is strong or weak. On the other hand, if Hierocles was saying that animals perceive themselves because they have a complex perception, or “co-perception”, of the strengths and weaknesses of their parts in relation to certain tasks, he would be saying that self-perception relies upon the composite perception of the characteristics of one’s own constitution as well as the environment they are in, by adding, compared to what he said before, a further level of complexity.

The difference may seem subtle, but it is relevant: if we interpret συναίσθησις as self-perception, the focus is on the fact that animals have self-perception because they perceive their own parts, if we instead interpret it as co-perception, the focus is on the modality of perception of those parts. The line of argument that we would follow by translating συναίσθησις as “self-perception” would not be inherently flawed, but if we translate it as “co-perception” it would be significantly strengthened, considered that Hierocles would not only be offering empirical proof for the fact that animals perceive certain objects as belonging to themselves, but he would also be pointing towards an account of *how* they come to perceive those objects as belonging to themselves. When referring to συναίσθησις, Hierocles is not simply using a synonym for self-perception. He is, instead, making his account of self-perception more sophisticated: he is not only stating the empirical fact that animals perceive their own parts, but also explaining the cause at the foundation this phenomenon, namely, that perception entails a certain level of complexity in that it is always accompanied by the perception of the possible uses of one’s body, that is, by the perception of the activities the body can supposedly be deployed to in a perceived environment. It is not, then, just *any* kind of perceptive element that is coupled with another to constitute a “co-perception”, but always an “external” perceptive element together with an “internal” one.

### *3. Perception as Self-Binding*

In order to understand the unifying power of perception, we must grasp how perception first binds itself in self-perception. But if self-perception depends upon co-perception, then it is necessary to understand first how an animal could achieve co-perception and what is its precise structure. This is made clear in the second part of the surviving text of the *Elements of Ethics*, where Hierocles tries to answer to Antiochus’ claim that self-love precedes self-perception. His answer focuses on an attempt to establish in which moment does self-perception begin, so that he may state that the self-

representation resulting from it is indeed the object of self-love or any other reflexive benevolent disposition. To do so, Hierocles, structures his arguments in two parts: the first claiming that an animal has continuous co-perception of itself, and the second that self-perception must at least begin with the life of the animal. The first of these two points is the most complex, as is shown by Hierocles' open appeal to the philosophical principles of Stoic physics, but it is also the one from which we can gather his most detailed account of the nature of co-perception as well as the workings of self-perception.

However, keeping in mind what we said in the previous section, a question arises. Hierocles, indeed, aims to demonstrate “that an animal immediately, as soon as it is born, perceives itself (αἰσθάνεται ἑαυτοῦ)”, but, so that he may do so, he proposes to bring as evidence the thesis that “an animal's co-perception of itself (συναίσθησις ἑαυτοῦ) is continuous and uninterrupted”.<sup>209</sup> The question, then, is the following: how would the fact that the animal co-perceives itself continuously be relevant for the claim that it perceives itself from birth? There must indeed be some connection between the two, both because the context is that of showing the primacy of self-perception in the animal's psychological life, and because, as we will see more in detail, one of the conclusions of the argument, when Hierocles re-caps it, is the following: “this is the equivalent of the animal perceiving itself (αἰσθάνεται ἑαυτοῦ)”.<sup>210</sup> To show, then, that an animal has continuous co-perception of itself, means, for Hierocles, to explain how an animal perceives itself and thus, for our inquiry, to explain how perception is “self-binding”. In this specific case, translating συναίσθησις as self-perception would sound inevitably redundant since, if συναίσθησις alone already meant “self-perception”, then there would be no need to add a further ἑαυτοῦ to indicate reflexivity. If we want to find a reasonable explanation for the difference between συναίσθάνεσθαι and συναίσθάνεσθαι ἑαυτοῦ, then it is necessary to translate συναίσθησις as indicating a perceptive phenomenon that is indeed complex, and, while it may include a reflexive element, it is not solely characterized by it. My proposal of translating it as “co-perception”, indicating a composite perception would allow for this required flexibility.

But is it not true that, if an animal co-perceives itself continuously, then it means that it is also perceiving itself continuously? It most certainly is, but what we should ask at this point is why would Hierocles refer to co-perception in the first place, if it did not mark a difference in the way he is structuring the argument. My interpretation is that, by engaging with the physics of co-perception, and by defining how precisely co-perception is structured according to the principles of Stoicism, Hierocles manages to make the claim that an animal must, *by constitution*, always be perceiving itself.

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<sup>209</sup> V.55. The expression is used again at VI.55.

<sup>210</sup> IV.53.

This would not simply show that self-perception is uninterrupted, but also that it is *necessarily so*, to the point that it must be considered coextensive with the life of the animal. The cause of this is, as I will show, the “self-binding” activity of perception.

Let us now examine the details of the argument, to see how the reference to co-perception strengthens it in the direction I have indicated, and what is Hierocles’ explanation of how an animal is constitutionally bound to perceive itself. The argument for the continuous co-perception of the animal is structured as follows:

1. Both body and soul are bodies (III.56-IV.3).
2. They are blended and therefore capable of co-affection (συμπάθεια) (IV.3-23).
3. The soul is a perceptive faculty (αἰσθητική δύναμις) (IV.23-26).
4. Soul and body participate in τόνος [unclear premise with missing parts in the text] (IV.27-39).

**Conclusion:** the animal has continuous co-perception of itself = it is constitutionally bound to always perceive itself (IV.39-53).

The argument builds a detailed explanation of the phenomenon of co-perception and its continuity starting from the principles of Stoic physics and psychology. In most of the four premises, Hierocles does not seem to deviate much from what could be considered a “canonic” interpretation of the principles. The original aspect of his explanation, however, is the way in which the four premises are structured to construct an account of how animals perceive themselves.

Premise 1 and premise 3 both concern the nature of the soul. They are possibly the least problematic for us, as they seem to rely on two widely accepted Stoic assumptions – the first, namely, that the soul, like everything else in Stoicism, must be a body, and as such it must also be capable of “pressure and resistance, blow and counterblow, and whatever else is analogous to these”<sup>211</sup>; the second that the soul is a perceptive faculty, “since it would have remained just a nature (φύσις), had it been deprived of impulse and perception”.<sup>212</sup> Premise 1 aims at establishing the possibility for the soul to act and be acted upon, and premise 3 at establishing that it is capable of perception.

Premise 2 and 4, on the other hand, are concerned with the interactions between body and soul and the activity of the soul on the body: it is from them that we learn most of the interesting aspects of Hierocles’ account. Premise 2 is primarily concerned with the physical modalities of interaction of

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<sup>211</sup> IV.2-3.

<sup>212</sup> IV.26-7. This thesis is already found in Zeno (SVF 1.141), and is later taken up by Chrysippus (SVF 2.773-4). Although this thesis may not be problematic for us in the context of answering the question of why perception can be considered “binding”, the claim that the soul is capable of perception is indeed problematic if taken by itself (for a discussion, see Bastianini & Long 1992, p.415-6). The second chapter of this work has luckily provided a full explanation for how perception arises from nature, so that premise 3 would not remain unexplained.

body and soul and the physics of co-perception. By relying on the Stoic doctrine of κρᾶσις,<sup>213</sup> Hierocles claims that the soul is not enclosed in the body, but wholly blended with it:

For the soul extends outward with an expansion and strikes all the parts of the body, since it is also mixed with all of them, and when it strikes them it is struck back in turn. For the body too offers resistance, just like the soul: and **the affection ends up being simultaneously characterized by pressure and counterpressure** (καὶ τὸ πάθος συνερειστικὸν ὁμοῦ καὶ ἀντερειστικὸν ἀπολεῖπεται). And, tilting inward from the outermost parts, the affect is borne in toward the hegemonic faculty in the chest, so that there is apprehension of all the parts, both of the body and the soul, and this is the equivalent of the animal perceiving itself.<sup>214</sup>

In this passage, Hierocles is summarizing the operations of blending of body and soul presented in premise 2, by joining them with the other premises – but there seems to be a shift from what Hierocles had initially proposed to demonstrate, namely, that the animal’s co-perception of itself is uninterrupted. Indeed, his account concludes by saying that “there is apprehension of all the parts, both of the body and the soul, and this is the equivalent of the animal perceiving itself”.<sup>215</sup> Therefore, if we want to understand what is self-perception, it is first necessary to understand how does the apprehension of all the parts of body and soul occur. From the passage, this apprehension is characterized as the result of an affection (πάθος) being passed from the soul to the body and returned to the soul, happening in the form of “pressure and counterpressure”. This idea builds upon premise 1, in which the fact that both soul and body are bodies, since, in Stoicism, only bodies are capable of

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<sup>213</sup> The doctrine of blending was in all probability introduced by Chrysippus, although as Long and Sedley notice, there must have been some discussion on blending before him (see LS 48E2; p. 293). Also, blending is mentioned in a few fragments of Zeno (SVF 1.102, 1.145) showing that the founder of the Stoa must have been familiar with the notion (in all probability through Aristotle’s description of different modalities of unification in *De Generatione et Corruptione*). There is no sign, however, that blending had had the central role that it has in Chrysippus’ version of Stoicism before his own discussion of it – namely, of the idea that blending is the modality of unification of the two principles. In support of this, it has been argued that Chrysippus showed a stronger tendency toward monism than his predecessors by introducing exactly the doctrines of blending, sympathy and of the unified soul (Cfr. Gould 1962, p.101, 159, 201-208). The doctrine is usually considered difficult to justify on a physical level because it seems to imply that two bodies can occupy the same space. Recently, Helle 2018 has discussed some interesting features of Hierocles’ account of blending, claiming that, by introducing the idea of a constant exchange of motion between soul and body, Hierocles accounts for how both are able to occupy the same space and participate in each other features. In Helle’s view, this is possible because their interaction is dynamic and not static in nature: tensile motion, therefore, plays a crucial role. Here, we fundamentally agree that Hierocles’ account of blending lays the basis for both self-perception and the cohesion of the animal, but I will address the central role of tensile motion in the next chapter.

<sup>214</sup> Hierocles IV.45-53.

<sup>215</sup> Following this claim, I would exclude Long’s hypothesis that self-perception can be compared to Oliver Sack’s account of proprioception (Bastianini & Long 1992, p.388, 421; Long 1996b, p.258). Proprioception, indeed, mainly accounts for the perception of one’s body as one’s own, which is surely one of the elements of Hierocles συναίσθησις ἑαυτοῦ. But, on the other hand, this does not seem enough to account for what in Hierocles is the apprehension of all the parts of the soul. What Hierocles notices, and includes in his concept of self-perception, is that along with perceiving the body as its own, the soul perceives itself as the entity appropriating the body. The reason why proprioception and self-perception do not coincide completely, then, is because, for Sacks, proprioception contributes to our sense of ourselves (Bastianini & Long 1992, p.388), but for Hierocles that sense of ourselves is what self-perception as a whole is. Hierocles’ self-perception, therefore, may include proprioception as part of the elements that compose it, but is not exhaustively explained in terms of proprioception.

acting and being acted upon, and therefore to be pressured and counterpressured. In the blending of body and soul, the soul acts on the body by spreading through it and pressuring it, and is acted upon in the form of a “counterpressure” received from the body in return. The affection they share, therefore, is a transmission of movement from body to soul and then back to soul. Hierocles, in line with the Chrysippean theories presented in the previous chapter, calls this phenomenon συμπάθεια or co-affection: “Thus, too, what pertains to co-affections (συμπαθίας), is total for both. For each shares the affections of the other, and neither is the soul heedless of bodily affections, nor is the body completely deaf to the torments of the soul”.<sup>216</sup> It is not a coincidence, then, that the few occurrences of the verb συναισθάνεσθαι in the old Stoa, found in some direct quotations from Chrysippus’ *On the Soul*<sup>217</sup> reported by Galen, appear exactly in the context of cases of co-affection:

In general, it seems to me that many came to these conclusions as it were by co-perceiving (συναισθανόμενοι) in their chest when the passion arose according to their thought, that the hair especially drew itself up, especially, for instance, in the case of pain, or fear, or rage or anger.<sup>218</sup>

It would then be absurd if one would not say that pain and distress are not suffering, and that suffering occurs in a place different from the hegemonic: we find the same for joy and courage, which display that they occur in the heart. For in this way, whenever our head or our foot hurts, the work occurs in these places, and this we co-perceive (συναισθανόμεθα) the suffering for the pain to occur in the chest, and neither

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<sup>216</sup> IV.10-3.

<sup>217</sup> The passages are quoted by Tieleman 1996 (p.168), who refers to them as instances of “inner perception” or as an “unclear form of cognition” (p.174 ff.). This presents a problem, of course, given the canonical translation of συναίσθησις as “self-perception” in the Stoics, namely, that the only direct occurrence of the term in the old Stoa does not seem to refer to self-perception in general, but to a perception of an inner state. This, of course, could still be taken to be an instance of self-perceiving a specific inner state. However, given the context and the composite nature of the perception here examined (partly mental, partly physical), it seems to me that translating the term as co-perception would both produce a clearer account of what Chrysippus is saying and help us build a coherent idea of its meaning from old to late Stoa.

<sup>218</sup> Gal. *De Hipp. et Plat. Plac.* III.1 (113) = SVF 2.886. The translation is mine. Beside this and the second quotation from Chrysippus at SVF 2.900, there is also a passage from Plutarch in which we are told that, according to Zeno, it was possible to “to co-perceive (συναισθάνεσθαι) one’s own progress starting from dreams.” (*De prof. in Virt.* 82f = SVF 1.234). As Plutarch himself reminds us later on, Zeno’s doctrine recalls Plato’s idea that someone’s dreams can be observed and purified by reason, expressed in the *Republic* (571c-572b), where he states that dreams are reflective of someone’s inner state and desires. More precisely, he writes: “But when someone’s condition is healthy and sober, and he goes to sleep after arousing his rational part and entertaining it with fair words and thoughts, and attaining to clear self-consciousness (σύννοια), [...] in such case, he is most likely to apprehend the truth”. Given the Platonic background of Plutarch, it is possible, in my opinion, that he is taking συναίσθησις to be a synonym of σύννοια, which indicates a certain level of awareness in sleep obtained through the exercise of reason. In case however, he was referring to Zeno’s own vocabulary, the claim could be consistent with Hierocles’ theories. Hierocles indeed states that an animal’s continuous co-perception is uninterrupted even through sleep (IV.54-59), therefore Zeno’s claim that co-perception is possible in sleep wouldn’t contrast his account. The only problem with SVF 1.234 is that it seems unclear what the elements of the co-perception are, since Plutarch seems to be talking about moral progress being detectable through dreams. It could be that the complexity of the co-perception is the result of examining multiple actions or states of the soul, or multiple parts of it at the same time. Another hypothesis is that the passage may be referring to a quality of co-perception, which could change according to the state of one’s soul. But it seems difficult to go beyond the level of pure speculation, in establishing the value of co-perception in this passage.

is the pain not a suffering, nor does it occur in a certain different place from the hegemonic.<sup>219</sup>

In both these passages, Chrysippus is mentioning specific cases of simultaneous perceptions of states of the body and the soul, in which psychological phenomena generate physical symptoms and vice versa. In the first passage, indeed, he claims that we co-perceive our psychological distress and its physical manifestations, while in the second he claims that, when physically hurt, we co-perceive physical pain (λύπη) and the psychological distress it entails (ἄγωνία). The examples produced by Chrysippus are typical examples of co-affection in the context of the human body-soul composite, in which both the soul and the body are affected at the same time. It is clear, then, that Hierocles' reference to co-perception in the context of an animal co-perceiving both mental and physical states was not his own innovation, but rather that he was elaborating upon established Stoic doctrines and terminology – and, possibly, on the very theories about the emergence of perception through co-affection presented in the previous chapter, with which he shows a high degree of compatibility.

At this point, we have all the elements to understand the precise structure of co-perception. As hinted at the end of the last section, the elements of co-perception are not just any perceptive element, but always seem to involve an “internal” perceptive element (e.g. perception of the use of a given part of our body) and an “external” perceptive element (e.g. perceived objects, distances, environmental features, etc.). In Hierocles' account, the soul, which possesses a perceptive faculty, is blended with the whole body and, as a consequence of acting upon it, it perceives the body as something “external”, that is, as something available to be acted upon. On the other hand, since the soul is itself a tridimensional body, and as such is counter-pressured by the body when it interacts with it, the soul perceives its own activity mirrored in the body: it is therefore only by engaging in direct activity with its immediate surroundings (i.e. the body) that the soul is capable to perceive its own parts.<sup>220</sup>

Joining, now, the account of chapter two with Hierocles' sophisticated account of perception, we discover that the fact that the soul receives a feedback to its own activity through the counterpressure of the body (i.e. is co-affected by it, as stated in the second chapter) makes possible the perception of its own parts, and, in turn, self-perception understood as perception of the animal's own composite constitution (body and soul).<sup>221</sup> Self-perception, in this account, is an aspect of co-perception, namely,

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<sup>219</sup> Gal. *De Hipp. et Plat. Plac.* III 7 (126) = SVF 2.900. The translation is mine.

<sup>220</sup> This interpretation is followed by Von Arnim 1906 p.xxvi-xxviii, and Pembroke 1971, p. 119. Pembroke, however, notices the implications of this: “Consciousness, on this view, would necessarily involve the operation of a minimum of two factors” (p.119). If this is true, then, the reference to co-perception is justified: the operation taken into accounts by the Stoics is indeed the conjoined perception of (at least) these two factors which compose the animal's self-perception.

<sup>221</sup> Seneca is here once again in line with Hierocles (Ep. 121.12-13; 121.21), in the sense that, for him as well, to perceive oneself was to perceive one's own constitution (σύνστασις), that is, oneself as a body-soul composite. In this sense, an

the co-perception of oneself resulting from the exercise of the soul's perceptive activity on its environment, that is, the body: συναίσθησις always involves a reflexive perceptive element, inseparable from the non-reflexive one, indicated through the expression συναίσθησις ἑαυτοῦ.<sup>222</sup> The first perceptive step, which happens at the level of the blending of soul and body, is then replicated on a larger scale once the composite becomes itself perceptive: just as the soul co-perceives its own parts and the body they act upon as different entities, although blended, so the soul-body composite co-perceives itself and its environment as different from each other, namely, it perceives on the one hand the soul-body composite, or constitution (σύστασις) as being “appropriate” or “belonging to” itself and therefore being available for use, and on the other hand the environment as something independent from it.

This account may bring one to think, then, that self-representational abilities are for Hierocles directly rooted in a separation between the perceiving subject and its perceived environment, that is, in the separation between “internal” and “external”. This dichotomy, however, can create some confusion, especially if applied to both the relationship of body and soul and to that of the body-soul composite and its environment. Soul is indeed capable of perception, which means it possesses a certain receptivity rendering it capable to register feedback to its own activity, but as long as this activity is not exercised, no feedback can be received, and no co-perception is possible. But if the dichotomy of “internal” and “external” is not actualized as long as the soul does not act on the body, then it is clear that another, more fundamental division is at work, here. Rather than an opposition between perceptive soul/ensouled being (“internal”) and perceived body/environment (“external”), the essential division is that between who acts (i.e. the agent) and what is subjected to its activity (i.e.

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animal perceiving itself is indeed perceiving a unified individual, but composed of at least two elements blended together, a body and a soul, constantly affecting each other. I would not subscribe to the distinction made by Radice 2000 (p.187-89) between constitution (costituzione) and self (se stesso), the first indicating the stage of development of the animal and the second the element of continuity between different stages, which he reads in Seneca *Ep.* 121.15. As Seneca claims, the self is the hegemonic disposed in a certain way towards the body. The fact that the hegemonic is disposed in a certain way towards the body is the only element of continuity, but what the subject perceives is the different dispositions and their sequence, i.e. bodies disposed in certain ways. There is no account of a further bodily element of continuity which could justify splitting constitution and a hypothetical “true” self. And in the Stoic corporeal system, one cannot divert from bodies: when the animal perceives itself, it is perceiving a body disposed in a certain way, composed of certain elements, and involved in certain activities.

<sup>222</sup> In this sense, we disagree with Tieleman, who claims that “an animal’s self-perception comes about independently of externals because of the tensional movement of the soul, which causes it to meet the resistance of the body (col. IV 39-53)” (p.177) as well as Long, when he writes: “la percezione di sé è non solo la preconditione per la percezione degli oggetti esterni, ma anche precedente a questa (VI 1-17). In altre parole, la percezione di sé non è, o non è necessariamente, concomitante alla percezione degli oggetti esterni; è qualcosa che può aver luogo indipendentemente dal vedere, dall’udire, ecc.” (Bastianini & Long 1992, p.416). The activity of the soul on the body is the activity of a perceptive entity upon an external, first, and the activity of the soul-body composite, once perceptive, on its environment replicates this relation. We have touched upon tensional movement only briefly in this section, because it will be more carefully examined in the next one. Here, the focus on blending is meant to underline that, for the way in which the soul is present in the body, a co-perception of all the elements of both body and soul necessarily follows from it. In the next section, instead, the focus will be more on how, through the movement in which the blending is achieved, the constitution of the animal is bound together in a specific way through the emergence of self-perception.

the object). The activity of the agent indeed defines whatever is subjected to it as its “environment” or as something external to it, be it the body subjected to the activity of the soul, or the environment subjected to the perceptive activity of the soul-body composite. Whatever is perceptive, always perceives itself as a result of this agent/object dichotomy, namely, it perceives itself as the center of a perceptive activity to which certain objects are subjected, through the feedback received from them as a consequence of its own activity.<sup>223</sup> The pressure and counter-pressure happening at the level of the soul define a relation of acting and being acted upon, with its consequences, which is at the base of any perceptive activity. The elements involved in “co-perception”, therefore are not necessarily important, as long as they maintain this fundamental relation, namely: one of them is active, and the other passive – one is an agent, and the other an object which is acted upon. So is the soul in relation to the body, and so is the perceptive faculty of the body-soul composite in relation to its environment.

In the light of this relation, the difference between “self-binding” or “object-binding”, in the case of perception, becomes clearer. Following our account, perception is “self-binding” when it perceives its own activity, that is, when it is self-perception, as is the case of the soul being counter-pressured by the body and perceiving its own parts. This “binds” perception to itself in the sense that it establishes it as an activity referred to the agent exercising it. In the next section, we will examine in which sense perception becomes “object-binding” by binding the body. It must be stated, however, after our discussion on co-perception, that the two activities, although the first clearly is logically prior to the second, happen simultaneously in the blending between soul and body, as showed in this section. Just as the agent/object relation is inseparable, in that something is not an agent if no object is acted upon by it (and vice-versa, something is not an object if an agent is not acting upon it), so is the “self-binding” aspect of any binding activity from its “object-binding” one. In order for something to bind itself, the agent must first exercise its activity on an object: this both defines the agent as an agent, binding it to itself, and something else as its object, by subjecting it to its activity.

The innovative aspect of this account is that it results in saying that co-affection, and the co-perception resulting from it, are not generic epiphenomena of being ensouled, but are rather part of

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<sup>223</sup> It may look counter-intuitive to refer to perception as an “activity”, since we are usually drawn to describe it as a reaction to a given stimulus. It must be noted, however, that the Stoics indeed considered perception to be active and not only reactive, as proven by the several descriptions of sight as a tension generated in the air, which assumes a conical shape when hit by the “pneuma of the eye” (see SVF 2.886, as well as 863-72 for other fragments on their theory of sight). While this may be a perplexing account of sense perception because of its materialist frame, it does reveal something fundamental about perception in a philosophical sense: indeed, perception can be considered an activity, because, even in absence of perceptive stimuli, perception does not cease to function, although we may not notice that it does. In absence of stimuli, it may be difficult to register perceptive activity, but this does not change that one’s senses are still working even if they register nothing. To grasp this difference, one may think about how “looking” differs from “seeing”: technically speaking, our eyes are always “looking”, in the sense that they are always actively perceiving, even when our eyelids cover them, or when we sleep. However, they only “see” when they perceive a specific object through the activity of “looking”, which is why one may “look” in the darkness, while “seeing” nothing. Perception, therefore, is always at work, even if it does not grasp a specific object or sensation.

the very constitution of the animal, as well as the basis for its self-representational abilities. As Long noticed,<sup>224</sup> introducing the idea that soul and body are connected through blending has the main function of justifying that all parts of the body are in contact with all the parts of the soul. This, however, is not Hierocles' only point, since the blending of body and soul is precisely what constitutes the animal as such, so that any features resulting from it must necessarily belong to the animal's constitution. In the previous section, we claimed that Hierocles introduced co-perception in order to prove that animals are capable of self-perception, because perception is always coupled with a reflexive element. We are now in a better position to understand the dynamics through which one perceives a certain object as one's own. Indeed, to perceive something as one's own, was to both perceive what it is and "how to use it": the perception of "how to use it", though, pertains to the soul rather than the body, and is the result of the counterpressure of the body on the soul. The soul directs the use of different bodily parts, and perception of how they may be used is, essentially, a perception of their availability to possible directions from the soul, that is, a perception of the fact that the soul has the power to act upon them. But they can only be perceived in such manner as the result of an observed activity of the soul on the body which, in the context of Hierocles, is expressed as the counterpressure of the body on the soul which occurs in the blending.

By showing that the co-perception of the parts of body and soul results necessarily from the blending of body and soul, and the pressure and counter-pressure of soul and body, Hierocles demonstrates that self-perception is continuous through life because it is coextensive with it: there is no blending of body and soul, indeed, that does not necessarily produce co-perception of all the parts of body and soul and, in turn, self-perception. Self-perception, therefore, is a constitutional feature of every animal. What is left to discover, now, is in which sense perception, given its connection with co-perception and self-perception, binds the animal together more than ἔξις and φύσις.

#### *4. The Binding Power of Perception*

As we have seen, when Hierocles refers to the binding power of perception, self-perception is involved, because perception, like any other binding power, is first of all "self-binding" through self-perception.<sup>225</sup> Moreover, Hierocles has demonstrated that self-perception is a constitutional feature of animals in general, and that it is coextensive with their lives. Now, we must show in which sense

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<sup>224</sup> See Bastianini & Long 1992, p.414.

<sup>225</sup> Hierocles VI.14-15.

perception is “object-binding” with regards to the constitution of the animal, and how it can be considered “more binding” than ἔξις and φύσις.

As mentioned in the introduction, it is usually believed that the soul does exercise a binding power on the animal’s body, but reconciling the physically binding aspect of the soul with the one engendering mental faculties in the animal is all but easy. Hierocles, however, seems to take this into account in his discussion of self-perception. Premise 4 of his argument for the continuity of co-perception seems to be concerned exactly with this point, as shown by the fact that it refers to the soul’s tensional movement:

What then do the present considerations require as a fourth point? It is clear, surely, that it is to present how the soul participates in movement. Now, this last runs the risk of not being specific to the soul, at least according to the most convincing doctrine of our school, but neither is it independent of it, but rather it is common to both soul and body. For bodies would not at all cohere from mid-parts to extremity by tension (τόνος) and tensional movement (τονικὴν κίνησιν), unless this kind of movement of all the cohesive forces existed throughout. Thus, the soul too is a cohesive power (συνεκτικὴ δύναμις), and it too must move in a tensional movement (τονικὴν κίνησιν) \*\*\* to both ... their specific... destroyed \*\*\* ... movements.<sup>226</sup>

The passage is difficult to reconstruct, but it seems clear that the premise is concerned with the movement of the soul, or, more precisely, with “how the soul participates in movement”. Tensional movements, which in Stoicism are responsible for the physical cohesion of the living being, are brought into the discussion on the continuity of co-perception for ends that are not entirely clear. Why, indeed, would the fact that the soul is responsible for the physical cohesion of the animal be relevant in a discussion concerning whether an animal perceives itself continuously? Would it not suffice to talk about the blending of soul and body? For Long, it is plausible to hypothesize that Hierocles was here presenting an argument composed of a general claim regarding how cohesive faculties generate tensional movement in bodies, with another claim stating that the soul is one of such faculties, and finally a conclusion linking the two together.<sup>227</sup> While this interpretation is acceptable, it also leaves many questions unanswered, and there are reasons to refine it further. From Long’s account, it may seem that the tensional movements of the soul, for Hierocles, are not much different from that which causes the physical coherence of inanimate bodies. The text, on the other hand, seems to point towards a different direction: Hierocles, while stating that the doctrine that he is about to present is “common to soul and body”, is on the other hand also worried that it “runs the risk of not being specific to the soul”, which indicates that, beside stating that there are similarities

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<sup>226</sup> Hierocles IV.29-35.

<sup>227</sup> Bastianini & Long 1992, p.418.

between the tensile movements in inanimate bodies and in the soul, Hierocles is also trying to highlight some relevant difference between them.

There are two main questions we should look at, then, if we want to understand how the soul moves through the body. The first is: what is “the most convincing doctrine of our school” Hierocles is referring to? The second is: how does its application differ in the case of the soul? Hierocles’ summary of his argument at lines IV 39-53 offers a good starting point to build our answers. Here, if we isolate the passages referring to the movement of the soul (in bold in the text), we can gather some information about the shape Premise 4 might have had:

Since, then, an animal is no other kind of thing than a composite of body and soul, and both of these are touchable, able to deliver blows and subject to pressure [Premise 1], and since furthermore they are mixed be wholes [Premise 2], and one of them is a perceptive faculty [Premise 3], and **this itself too moves in the way we have shown** (τὸ δ’ αὐτὸ τοῦτο καὶ τρόπον, ὃν ὑπεδείξαμεν, κεινεῖται) [Premise 4], it is clear that an animal must continuously perceive itself. For **the soul extends outward with an expansion and strikes all the parts of the body** (τεινομένη γὰρ ἔξω ἢ ψυχὴ μετ’ ἀφέσεως προσβάλλει πᾶσι τοῦ σώματος τοῖς μέρεσιν) [Premise 4], since it is also mixed with all of them [Premise 2], and when it strikes them, it is struck in back in turn. For the body too offers resistance, just like the soul [Premise 1]: and the affect ends up being simultaneously characterized by pressure and counterpressure (πάθος συνεριστικόνόμοῦ καὶ ἀντεριστικὸν ἀποτελεῖται). And, **tilting inward from the outermost parts** (καὶ ἀπὸ τῶν ἀκροτάτων μερῶν εἰσω νεῦον) [Premise 4], the affect is borne in toward the hegemonic faculty in the chest, so that there is apprehension of all the parts, both of the body and of the soul: and this is the equivalent of the animal perceiving itself.<sup>228</sup>

The movement of the soul described by Premise 4 is a movement that extends outward through the body and then returns inward from the outermost parts – i.e. the double movement of pneuma discussed in the previous chapter, which we can now examine more in detail in the effects it produces on the body once pneuma is disposed as a soul. The doctrine Hierocles is referring to, therefore, is clearly the Stoic theory of tensional movement (τονίκην κίνησιν). In his thorough discussion on topic, Sambursky has elucidated the fundamental role that tensional movement plays in Stoic physics, in particular with regard to how it re-defines how the Stoics conceive of the unity of an entity as a dynamic state – but his focus has been chiefly directed at identifying how tensional movement is directly responsible for the physical unity of a given entity through cohesion and nature.<sup>229</sup> I believe, however, that Hierocles here is pointing towards a more complex account of unity, when it comes to

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<sup>228</sup> Hierocles IV.39-53.

<sup>229</sup> See Sambursky 1959, p.29-33 for his treatment of tensional movement. At p.30, in regard to tensional movement and unity, he writes: “The whole conception of unity created in the living body through the bond of the tensional motion was transferred by the Stoics in a generalized form to *physis* and also to our main topic of interest, to *hexis*, the physical structure of inorganic matter.”

the case of living beings. Indeed, as seen in the previous chapter, in fact, living beings are capable not only of maintaining their physical unity, as inanimate objects do, but of maintaining it in the face of constitutional change, that is, despite the fact of being self-motive and despite the fact of having their motion disturbed (or their bodies damaged) by environmental factors. Again, as said before, living beings are complex beings, composed by parts deployed to different functions, and if we assumed that tensional movements were only responsible for the physical cohesion of these parts, we would still lack an explanation for how the unity of the living being as a whole is maintained, since this unity directly depends not only on the physical cohesion of the parts, but also from their unitary coordination and contribution to unified motion of the living being.

How, then, is this unitary coordination achieved? The blending of body and soul is indeed a perpetually<sup>230</sup> dynamic state: this dynamicity is enabled precisely by the fact that the soul is moving outward and inward through the body, which is why the pressure and counterpressure that makes co-perception a constitutive feature of soul-body interactions is continuous throughout the life of the animal. The picture emerging from a deeper examination of Premise 4, however, is even more complex. Let us start from how Nemesius and Simplicius describe tensional movements:

If they should say, as the Stoics do, that there exists in bodies a kind of tensional movement which moves simultaneously inwards and outwards, the outward movement producing quantities and qualities and the inward one unity and substance we must ask them (since every movement issues from some power), what this power is and in what substance it consists.<sup>231</sup>

The Stoics claim that there is a power, or rather a movement that produces relaxation and consistency; one inwards and another outwards; and one they name cause of being and the other of the qualities.<sup>232</sup>

Both passages are concerned with the Stoic doctrine for which every object is traversed by at least two tensional movements, which are respectively responsible for its qualities (movement outward) and its being or unity (movement inward), as mentioned before. This doctrine is consistent with Hierocles' description, as it presents the movement of the soul through the body as a double movement outwards and inwards, which generates a series of qualities. In his account, however, perception features prominently, given that the movement outward, supposed to generate qualities, is

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<sup>230</sup> I am here defining this activity as perpetual because I am taking the relation between active and passive in Stoicism to be actual and not potential, as underlined in the previous section. "Being active" does not mean to have the possibility of acting, but to act – so that the soul is active in the sense that it acts on something, not that it is potentially active in relation to certain things. This claim is rooted into the fact that active and passive principle can only be separate theoretically in Stoicism (see Long 1996a, p.228-9), which means that none of them is ever encountered as a principle that could potentially act or be acted upon. If this is true, then the exchange of activity between them must be perpetual and uninterrupted.

<sup>231</sup> Nemesius *De Nat. Hom.* 2.42 = SVF 2.451. The translation is mine.

<sup>232</sup> Simplicius *in Aristot. Categ.* 68e = SVF 2.452. The translation is mine.

the one through which the soul pressures the body and renders the whole composite perceptive,<sup>233</sup> while the movement inward, which is the one that generates the unity, or being, is the movement through which the soul becomes aware of its own activity in the body by receiving a counterpressure from it. As we see, then, not only does the doctrine of the double movement of pneuma reflect Hierocles description of the physical movements of the soul as well as their effects on the soul-body composite, but it is also consistent with the claim that self-perception is “self-binding”: indeed, self perception first binds the agent to itself by defining it as the center of perceptive activity.<sup>234</sup>

Given this correspondence, it remains to be understood in which sense perception is also “object-binding”, that is, in which way it binds the material part of the animal through perceptive activity, rendering the composite, in all effects, physically unified in the sense discussed above, that is, both physically unified and capable to maintain this unity in coordinated motion. This latter kind of physical unity in motion is what distinguishes the unity of living beings, which are self-motive entities, from that of non-living beings, and, as Hierocles claims, it is achieved by developing the faculty of perception. How then does perception relate to tensional movements? In order to do so, let us look at how Galen describes tensional movement operating in living beings in his *On the Movement of the Muscles*:

On the one hand, when the muscles are active, we say that they move themselves; on the other hand, when they appear to move neither the whole limb of which they are a part nor themselves alone, we do not venture to agree that they move at all. What solution may one find of the difficulty? Shall we hypothesize **tensional movements** (τονικὰς κινήσεις), or find something else better, or shall we decide nothing concerning this until we have examined it carefully and then speak up? This seems to me to be much better. Let us do so, then, and let the discussion proceed immediately as indicated above. Let us observe some inanimate object, either wood or stone, being dragged about by some force. Again, let us observe this same object pulled back contrariwise in the opposite direction by some other force and suppose

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<sup>233</sup> This should not let us think that the animal becoming capable of perception implies that perception of external objects precedes self-perception. Perceptivity as a feature of the soul precedes both, and the spreading of the soul through the body makes the body capable of registering external stimuli, but only when the subject is bound through self-perception those stimuli can be gathered around a center. Without self-perception, there can be no perception because there would be no subject to which those perceptions would be gathered. Therefore, while perceptivity as a faculty of the soul is primary, its ability to perceive external objects is enabled only when the subject is capable to perceive itself as such – that is, to say it with Hierocles, only when perception “begins from itself” and “binds itself”.

<sup>234</sup> It may be baffling that this movement, in which the agent is defined as the center of perceptive activity, seems to occur only after perception is stretched through the body. This, however, only means that the composite is made capable of perception, not that it fully perceives: for it has nothing to refer its perception to, until the active principle reverts upon itself and individualizes the self. This must also be true about tensional movements in simpler objects: for, if the outwards movement literally precedes the inward movement, then there should be a moment in which an object which is not unified possesses qualities. But how could these qualities be referred to it, if the object is not yet unified, that is, not yet an object? If the movements are chronologically disposed, then the first movement can generate qualities only as potentialities, before the inward movement actualizes them. Otherwise, we must admit that the two movements are simultaneous: in this sense, we can share Edelstein’s claim: “Looked at from the parts of which the whole consists, the effect of the organizing force can be described as a successive movement; looked at from the point of view of the whole the movement is characterized by simultaneousness” (Edelstein 1966, p.23).

that the first dragging force prevails by its might and for this reason the object follows it, but much less than if pulled back by no opposing force. Let us present a third situation for this object: where it is pulled in the opposite direction with equal force. Now, in the first situation the object made the one movement which the power of the moving force was capable of producing and it was necessary for it to proceed to the distance which the mover carried it. In the second situation, less distance was evident than in the first to the extent the other force dragged the moving object in the opposite direction. In the third situation, where however much one motion drags forward, the other drags backward, the object is forced to remain in the same place. It does this, not as a completely motionless object which must remain thereafter in the same place, but because in the latter instance, it is not moved at all, whereas in the former, it is moved in two ways just as a swimmer striving against the current of a river is pulled in the opposite direction. This swimmer, if he has strength equal to the violence of the current, remains always in the same spot, not as if motionless but because he propels himself forward by his own effort as much as he is carried backward by the external force. Since it is not wrong to explain an obscure point by numerous examples, let us suppose that some bird in the air seems to stay in the same place. Should it be said that it is motionless as if it happened to be hung suspended or that it is moved by its own upper motion to the same extent as carried downward by the weight of its body? The latter seems to me to be the truest. **Should you deprive it of the soul or the tension of the muscles, you would quickly see it falling: it is clear that the downward momentum, congenital to the weight of the body, is equally counterbalanced by the upward action of the tension of the soul** (στερήσας γούν αὐτὸν τῆς ψυχῆς ἢ τοῦ τῶν μυῶν τόνου ταχέως ἐπὶ τὴν γῆν ὄψει καταφερόμενον· ὃ δῆλον ὅτι τὴν σύμφυτον τῷ τοῦ σώματος βάρει κάτω ῥοπήν εἰς ἴσον ἀντεσῆκου τῆ κατὰ τὸν τῆς ψυχῆς τόνον ἄνω φορᾶ). In all similar situations, the object is carried alternately now downward, now upward, and, since the changes are rapid and sudden and the motions are carried out in the shortest intervals, it seems to remain in the same place, held in one spot thereafter. This is not the fitting place to make this clear, for in the book of physics “On Motion”, these points are examined more according to custom. It is enough for the present to have disclosed that there is some form of activity which is called tensional, or if you wish to call it something else, it will not matter.<sup>235</sup>

Galen classifies the internal movements of an animal as a kind of tensional movement. Sambursky has also discussed this passage at length, mostly as an exemplification of how the impression of rest in a physically coherent object can be accounted for in terms of a succession of rapid motions.<sup>236</sup> However, what his account seems to miss is that, while the general thesis that rest (in any entity) is the result of balance in a dynamic state, there are fundamental differences when it comes to living and non living entities. The idea of the succession of rapid motions in the case of the bird, in fact, signals a different phenomenon, which does not occur in the balanced unity of inanimate objects. In this passage, Galen does not only apply the doctrine of tensional movement to living and non living

<sup>235</sup> Galen. *De Musculorum Motu*, I.7-8 = SVF 2.450. The translation is slightly modified in the passage in bold. I have here translated τενετικὰς κινήσεις as “tensional movements” and τόνοσ as “tension” to indicate the latter as a result of the former, i.e. to specify tension as a the state in which things that move according to tensional movements are. In this sense, the “tension of the soul” is the state in which a soul is by performing “tensional movements”.

<sup>236</sup> Sambursky 1959, p.33.

beings, but he also offers the possibility to compare how this application produces different effects in the first and the latter.

For an inanimate object, to maintain the material cohesion that is necessary for it to be distinguished from others means to be at the center of two opposing but equally strong movements. This also seems to be the case in Nemesius' and Simplicius' passages on tensional movements, namely, that the static appearance of a unified object is, in reality, the result of a temporary balance of opposing forces. Tensional movements, therefore, redefine what the unity of an object is by stating that it is the result of a knot or bundle of forces counterbalancing each other, rather than a fixed state. The Heraclitean roots of Stoicism are well known, but in the theory of tensional movements they seem to reconcile the idea that everything is in motion with the static appearance of certain beings, by claiming that this as well is the result of a constant exchange of motion, although not immediately visible.

The same, of course, is true of animals, but with some relevant differences: tensional movements, indeed, describe the inner movements that are responsible for the physical unity of an entity but, as we have said, living beings are themselves capable of maintaining unity in the face of constitutional change. A living being is, first and foremost, itself a motive body, which means that its constitution is always subjected to self-change as well as being constantly immersed in the movements of an ever-changing corporeal environment, in the case of individual animals. Inanimate objects are not self-motive, and they are passive with respect to environmental change: a rock that is thrown in a river does not move by itself, nor will it actively resist being thrown or being carried away by the current of the river.<sup>237</sup> Animals, on the other hand, are capable of moving themselves and are constantly reconfiguring their constitution through movement. This also makes them capable of resisting environmental change, as shown by the example of the bird: the bird, indeed, resists its natural downward momentum through a series of tensional movements which are now more complex than those responsible for the unity of an inanimate object. Galen's example shows that an inanimate object put in the same condition of a bird on a branch would simply fall, but the bird can instead resist the fall through peculiar tensional movements of its soul. I say "peculiar" because, at this point, it should be clear that the bird is doing something that inanimate objects cannot, namely, it is *adjusting* part of its own tensional movements.<sup>238</sup> Although depending from the same tensional movements, the

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<sup>237</sup> If we do not consider the resistance that his constitution exercises naturally against other bodies. Stoic physics does not admit of void, which means that, in each case, an inanimate object moving is always moving through some kind of body (air, water etc.), which in turn possesses a certain degree of movement and cohesion itself, and therefore resists the movement of the first.

<sup>238</sup> Aoiz 2012, p.25, talks about the function of self-perception in Hierocles in similar terms: "Hierocles concibe la relación de la percepción de sí con la utilización de las partes del cuerpo en otra dirección, pues la entiende como antilepsis, es decir, como el propio término griego sugiere, una especie de feedback, que lejos de entabrar la actividad, la sostiene evaluando y calibrando constantemente su desarrollo y la transacción que implica con el medio, lo que muestra además

unity of non living and living beings are achieved in radically different ways. The unity of non living beings is accounted for in terms of mere physical cohesion, and the working of tonal movements which produces it is similar to that of a tensed string: the result is a static physical unity depending on the dynamic balance. The unity of living beings adds upon this physical cohesion a further level, due to the fact that the living being is a self-motive being: the dynamic balance required for it to maintain its unity does not produce a static physical unity, but a dynamic one in turn, which despite its dynamism maintains itself united through continuous self-adjustment.

This ability to adjust is the fundamental difference in the unification of living and non living beings, and it relies on the animal's capacity to register what kind of actions it is performing and to improve on them. This capacity cannot be accounted for solely in terms of physical cohesion, but it must instead be a physical cohesion in motion which is rooted in the animal perceptive faculty.<sup>239</sup> As we have seen, the animal has a continuous co-perception of itself, which is in turn composite, in that it registers the perceived surroundings together with the perceiving activity of the agent. These are exactly the elements needed in order to adjust one's own behaviour to change: namely, that the agent is capable to register both what kind of actions it is performing, and to internalize feedback on the effects that those actions have on its own constitution or on its surroundings. The two-folded nature of co-perception, in which self-perception arises, is therefore the condition of possibility of the self-directive features necessary in order for the animal to be alive, as established by the fact that the animal is constitutionally bound to perceive itself continuously. As a proof of this, we may adduce the fact that almost all the examples that Hierocles presents in the first part of the *Elements of Ethics*, when trying to show that animals are capable of self-perception, are examples of animals being aware of how to use certain parts of their bodies, that is, of animals exploring the potentiality of self-directing and self-adjusting themselves in certain ways in relation to their environment, thanks to the composite nature of co-perception. For instance, he describes how human beings know which organ of sense corresponds to which sense:

when we wish to see something we direct our eyes toward the visible object, not our ears, and when we want to hear, we extend our ears and not our eyes, and when we

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su intrínseco carácter referencial y normativo." Essentially, I agree on him on this point, but he does not discuss what the end of this "constant calibration" may be, for Hierocles. According to my interpretation, self-adjusting (or self-calibration) has the chief function of achieving for the animal a dynamic unity that is more complex and articulated than that of plants and inanimate objects.

<sup>239</sup>As Inwood 1984 states: "At the heart of the Stoic position is the sensible realization that all purposive action is relational, based on a view, however inchoate of the agent's relation to the world" (p.177-8). The effectiveness of an animal's use of its own body is a complex factor, which requires both awareness of the self and awareness of the environment. These two, moreover, need be connected in reference to the subject. Hierocles' move is to claim that one and the same faculty grasps both elements (the self and the environment) and as such is able to relate them to each other, so that the self is able to perceive how to dispose of itself in an effective manner in relation to external conditions, and at the same time to know which elements of that environment can be advantages or disadvantages for it.

wish to walk, we do not use our hands for this but rather our feet and our entire legs, and in the same way we do not use our legs but rather our hands when we desire something.<sup>240</sup>

Perceiving the potential functions of one's own body enables the capacity of disposing of one's own body according to these functions. Since all perceptive activity implies a co-perception of the perceiving agent together with the perceived subject, the faculty of perception becomes, for Hierocles, the foundation for the possibility of adjusting one's own movements in order to dispose of one's body in the most effective way. In this sense, perception is "object-binding", that is, it binds the animal's body, and thus its own constitution as a whole, in the sense that it makes it usable and adjustable in the face of change.

Of course, the idea that the use of our bodies can be more or less effective makes sense only if we conceive of our own activities as goal-oriented activities, i.e. if we suppose that there are some uses our bodies are actually built for. Hierocles explains this in his definition of οικείωσις: "the above mentioned becoming one's own and familiar (οικείωσις) is the co-perception (συναίσθησις) of what tends to one's own safety".<sup>241</sup> The goal towards which we direct our activities is our own safety. The soul is characterized by both αἴσθησις and ὁρμή in order to establish that, together with our representation of ourselves, we always feel self-love for our own constitution, which is the base for the unified agency and self-regulative capabilities of any animal. But this impulse towards self-preservation would be impossible without a representation of ourselves and an assessment of the abilities of our bodies, as Hierocles states:

not even if he were Margites, could say that an animal, when it has been born, is displeased with itself and with its representation of itself. And indeed, it does not remain indifferent: for not being pleased, no less than displeasure, leads both to the destruction of the animal and to a contempt for its own nature. Consequently, this reasoning compels us to agree that an animal, when it has received the first perception (αἴσθησις) of itself, immediately becomes its own and familiar to itself and to its constitution.<sup>242</sup>

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<sup>240</sup> Hierocles I.66-II.3.

<sup>241</sup> Hierocles VI.46-48. Again, this is another case in which συναίσθησις can hardly be translated as self-perception. The expression "self-perception of what tends to one's own safety" would make little sense, since Hierocles here seems to be referring to the perception of something that can benefit the subject. On the other hand, our interpretation of "co-perception" involves perception of the perceiving agent as what should be preserved and perception of an object subjected to its perceptive activity as what tends to its own safety.

<sup>242</sup> Hierocles VI.44-51. The same argument is also made in Seneca *Ep.* 121.20-21.

If self-love and the impulse for self-preservation are a consequence of a pleasure felt towards our self-representation, then it is clear that this self-representation is the condition of possibility for orienting our actions toward preserving ourselves.<sup>243</sup>

To conclude, then: why is αἴσθησις “more binding” than φύσις and ἕξις? Because it enables the animal’s ability of redefining its own unity in relation to change, by endowing it with the power to adjust its own tensional movements. Any perceptive activity cannot be exercised without a reflexive element, as shown out discussion of co-perception. Thus, any perceptive activity is, necessarily, also a self-perceptive activity, as Hierocles claims: “perception of itself is naturally joined to the perception of something else”.<sup>244</sup> Through self-perception, then, the animal reaches a higher level in the articulation and control of its own tensional movements in comparison to plants and inanimate entities. In Stoicism, pneuma is responsible for the way most of things are, by manifesting itself in different dispositions, as we have seen, so that it acts as ἕξις in inanimate beings, φύσις in plants, and ψυχή in animals. In each of these three states, pneuma produces beings that show a certain degree of activity directed both at themselves and at their surroundings. The differences in these dispositions of pneuma are produced at the level of tensional movements which, while preserving their basic character of “quality-defining outward movement” and “unity-creating inward movement”, become more complex in articulation in living animals, by making animals motive and capable to adjust their own movements to change (i.e. environmental movements).

This change in complexity can be described as a change in the complexity of their reflexive “inward” tensional movements to which, as we have claimed, corresponds the actualization of the perceptive activity as co-perception in animals. In inanimate objects, “inward” tensional movements show the simplest form of reflexivity by a simply reverting upon the “outward” movements, which results in the object maintaining their physical cohesion. Inanimate objects, however, achieve the least complex level of unity, because they are passive in relation to change: once a an inanimate object undergoes change, it does not reconstitute its unity so that, for instance, a rock that is cut, stays cut.

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<sup>243</sup> An interesting thesis to explore in relation to this point is the whether there may be a stronger relation between self-representation and attribution of value. Engberg-Pedersen, in his book on Stoic οἰκείωσις, examines the possibility to interpret Cicero’s *De Fin.* 3.16 in this direction. He puts the thesis in this words: “perspective understood as sheer descriptive viewpoint implies valuation” (Engberg-Pedersen 1990 p.71). While he himself recognizes that his interpretation of *De Fin.* 3.16 is speculative, the possibility that the Stoics believed not only that self-perception is the condition of possibility of self-love, but that it also necessarily produces self-love, may be worth inquiring further. An interesting attempt in this direction has been made by Doyle 2012, who thinks that the root of the connection between self-perception and self-love is to be found in the distinction between self and other: for Doyle, the distinction between self and other operated through self-perception already implies an evaluative point (p.47-8). While this may seem convincing, the point needs further clarification, as awareness of the difference between two objects does not necessarily entail an evaluative comparison between them. The problem, therefore, remains unsolved, but addressing may produce a more solid account of οἰκείωσις, in which the first impulse towards self-preservation follows naturally from the animal’s self-representation.

<sup>244</sup> Hierocles VI.8-9.

If this movement inwards becomes capable to adjust to certain changes, it becomes a φύσις: namely, it allows the entity to regenerate, nourish and sustain its constitution in the face of change. This is the reason why plants, which have φύσις, are capable, to a certain degree, of adaptation to change: all these abilities tune in with the idea that plants are beings which can interact with the environment in order to preserve their own constitution, by absorbing elements of it as nourishment for growth and regeneration. However, a plant is unable to assess to what kind of change it is reacting to, since it lacks perception. In this sense, its tensional movements can only be organized around maintaining its own constitution, rather than how to use it in response to change, because a plant is not aware of the conditions of change, but at best only of their effects on its own constitution. Animals, finally, reach an even higher level of complexity by being able to perceive both themselves and the results of their own actions on themselves and on a given environment. They can perceive the possible uses of their own constitution in relation to change. Thus, they are not only capable of self-nourishing and self-regenerating tensional movements, as plants are, but of self-defining ones as well. If, for the Stoics, “to be” equals to be in a state of constant activity or reactivity, an animal, as an entity which is capable of using its own body, i.e. of acting, is an entity which continuously redefines the flow of activity that composes it, that is, an animal capable of redefining its unity through self-movement. As Hierocles himself notices, animals seem aware of what parts of their bodies are apt to be used in certain situations, or which ones are weak or strong, and from which parts of other animals they could be harmed. This shows that animals are able, as we said, to adjust the movements of their own bodies to environmental change as a result of perceiving both their own constitution and the environment around it, so that they may figure out what the most effective use for their bodies is in specific situations.

A vast number of complex movements is organized around the animal as a center<sup>245</sup> as a consequence of the animal perceiving itself as such center, that is, as the “center of use” of its bodily parts. Therefore, perception is more binding than ἔξις and φύσις because it allows for a higher complexity of movement to be organized around the animal as a center. An animal is a being that is not only physically coherent thanks to an inward and outward movement, but that is in turn capable to move and act in a given environment and to react to it, just as Galen’s bird reacts its natural downward momentum by organizing its tensional movements so that it may balance itself on a tree

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<sup>245</sup> My reference to the animal as a center of reference of a series of movements is also advanced in Seneca’s *Ep.* 121, which is concerned with the relation between self-perception and οἰκειώσις in a way that closely resembles Hierocles. Seneca claims that “The animal is first conciliated with itself, for there must be something (*aliquid*), to which all else is referred to. I seek pleasure; for whom? For myself. I am therefore taking care of myself. I shrink from pain; on behalf of whom? Myself. Therefore, I am taking care of myself.” (121.17) The idea that he is putting forward, here is that the actions an animal performs in seeking pleasure and pain only make sense if they are referred to something, namely, to the animal itself. The animal, thus, works as a center of reference for all the actions.

branch. The tensional movements defining the animal's shape and position and the self-adjusting movements that each animal performs in every single moment of its waking and sleeping life are not to be seen as different from each other: they are both parts of one and the same unified flow of movements which composes the life of the animal as a whole. The self-adjusting movements performed by the body in simple actions, such as standing or balancing oneself, participate in unifying and preserving the constitution of an animal as much as the physical cohesion of its limbs. But these self-adjusting movements are possible only if the animal is endowed with a perceptive faculty, and develops self-perception in turn: in this sense, therefore, the perceptive faculty of the soul makes it possible for the animal to bind together as "its own" and "belonging to it" a more complex series of movements than ἔξις and φύσις alone would.<sup>246</sup>

## 5. Conclusion

Hierocles' account shows that the unity of a living being cannot be explained simply in terms of ἔξις, and that while ἔξις defines a specific kind of physical cohesion for inanimate beings and parts of animals, such as bones, the unity and physical cohesion of an animal, being itself a motive entity, is of a different kind, and is therefore achieved through a different mean. This mean is the perceptive faculty of the soul, which enables the self-organization and balance of all the complex tensional movements through which the living being becomes capable of interacting with its environment. The fact that the soul is responsible for the physical coherence of the soul-body composite is not separable from the fact that it endows it with mental features, since both contribute to defining the specific kind of mobile physical cohesion that is achieved in animals. Indeed, the physical coherence of the soul-body composite involves organizing around the animal as a center movements of a higher complexity than the simple inward and outward motion of ἔξις. This organization, in turn, must be maintained through a series of continuous self-adjustments which are enabled by the continuous self-perception of the animal conjoined with its impulse toward self-preservation. Therefore, rather than saying that the soul is responsible for the animal physical coherence *and* endowing it with mental faculties, it would be more correct to say that the soul is responsible for the animal physical coherence *because* of the mental faculties it endows it with.

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<sup>246</sup> May it be added, as a final remark, that logos in human beings seem to achieve an even higher level of reflexivity by endowing the animal with the ability to organize its own inner movements, in the form of impulses and emotions, and therefore to achieve an even higher level of self-directivity. But the gap, here, seems to be smaller than the one between inanimate objects and plants, and between plants and animals, since self-perception already establishes that the animal has a perception of the parts of its own soul.

In respect to the unity of the cosmos, then, if the previous chapter introduced the physical process through which animals can develop a self-representational faculty, this chapter has showed how this self-representational faculty contributes to the unity of the animal, offering, therefore, a more than valid reason to endow the cosmos – or any living being – with it. Claiming that the cosmos is a living being endowed with perception, therefore, means to endow it with the self-representational faculty that comes when one's pneumatic part becomes disposed as a soul, that is, to endow it with the ability of perceiving its own parts and therefore to be in the condition of improving its effectiveness in using them. Like all living beings, the cosmos is capable of self-motion and to maintain its unity in the face of constitutional change thanks to the faculty of perception. But why should it? There is indeed another element lacking in order for an animal to be constituted as a fully functioning subject, namely, a motivational drive. Once the cosmos awakens to itself, perceiving itself as a subject, its next step is deciding what to do: but in order to do so, it also needs to have an impulse towards certain dispositions of itself rather than others.

## IV. Will as a Unifying Drive in the Stoic Cosmos

### 1. Introduction: αἴσθησις and ὁρμή

Up to now, we have made two main claims about the Stoic model of the universe, namely, that its intelligence emerges as a self-reflexive loop in pneumatic activity once sympathetic relations become possible, and that this self-reflexivity, as perception, plays a crucial role in the unification of the cosmos. If we had to draw this back to the fundamentals of Stoic psychology, we would have mapped, in the life of the cosmos, its birth as a thinking animal – by understanding its embryological development and the emergence of its mind through the establishment of reflexive co-affection – and its constitution as a unified potential subject, capable of referring its thoughts and actions to itself, that is, capable of perception. Stoic psychology, however, famously relies on two fundamental components to distinguish animal and non-animal, namely: perception (αἴσθησις) or impression (φαντασία), indicating the animal's capacity of receiving impressions, and impulse (ὁρμή), which represents the animal's primeval appetitive drive. Through the first two chapters we have fully explained what role perception plays on a cosmic scale, but in order to wholly grasp the explanatory advantage of conceiving a mindful cosmos, it is necessary to examine also what role impulse may play on a cosmic scale since, without a motivational drive a subject is not yet complete.

Clearly, in order to construct a fully functional, independent mind, some kind of motivational drive, or appetitive drive, must be present in it, since, without it, a living being would not have any reason to perform a certain action rather than another. Some internal drive must therefore be at work within the mind of an animal so that some actions may fall under the description of being preferable to others. In order for this to happen, though, the subject must first be capable of representing itself as the agent of certain actions, or, more broadly, to conceive actions as actions potentially performed by itself, and holding a special relation towards itself. Logically speaking, a subject would not be capable of actions aimed at preserving, moving, and reproducing itself (the typical actions of animal in Stoicism) if it wasn't able to represent itself as an end of these actions first.<sup>247</sup>

A question that may be asked at this point, understandably, is the following: what is the material account for the emergence of impulse? We have indeed produced a material account for the

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<sup>247</sup> I am therefore siding with Bastianini & Long 1992 on the matter of the priority of αἴσθησις on the first ὁρμή, which, for them coincides with the first appropriative action of the living being: arguing against Inwood 1984, who believes that οἰκείωσις depends on a desiderative, more fundamental part, and a perceptive part (p.155-157), Bastianini and Long claim instead that οἰκείωσις is the desiderative drive of the animal, identifiable with the first impulse, and depending directly upon perception as its condition of possibility (p.381-383).

emergence of perception in living beings; therefore, at least on a theoretical level, there should also be a way to materially account for why perceptions and impressions should be qualified in a certain way as preferable or not. This is indeed the question of impulse: why does an animal feel, as Hierocles claims in the *Elements of Ethics*, naturally well-disposed towards its self-representation? Hierocles writes:

It is necessary, however, to pause over three points in total: either the animal is pleased with the representation that it has received of itself, or it is displeased, or else it remains indifferent. [...] But nature would also be subject to the charge of making these kinds of effort in vain prior to birth, if an animal were not going to be pleased with itself as soon as it is born. Because of this, no one, it seems to me, even if he were Margites, could say that an animal, when it has been born, is displeased with itself and with its representation of itself. And indeed, it does not remain indifferent: for not being pleased, no less than displeasure, leads to both the destruction of the animal and to a contempt for its own nature. Consequently, this reasoning compels us to agree that an animal, when it has received the first perception (αἴσθησις) of itself, immediately becomes its own and familiar to itself and to its constitution.<sup>248</sup>

As Brunschwig has noted,<sup>249</sup> Hierocles' argument presents affinities with Chrysippus' theories, as reported by Diogenes Laertius, according to which: "nature was not likely to either alienate the animal itself, or to make it and then neither alienate it nor appropriate it. So it remains to say that, in constituting the animal, nature appropriated it to itself".<sup>250</sup> Both authors, though, seem to believe that the qualification of an animal's self-representation as good follows naturally from the self-representation itself, or is somehow implied in it, and neither offers more than an empirical argument as a possible explanation for it: namely, since most animals seem to want to survive, then this means that their self-representation must appear, to them, under the description of being good. The interesting aspect of this Stoic theory is usually taken to be the fact that the articulation of one's self-perception as good evolves from the apparent selfishness of the child into the articulate ethical vision of an adult, but as for the origin of this qualification of an animal's self-representation as good, we are left with no explanation. Long suggests, as a possible direction, to look at how impressions (φαντασίαι) usually come to be qualified: in particular, he hypothesizes that, since impressions make the subject aware of a given object, then it is plausible that they also imply an attitude towards that object.<sup>251</sup> This explanation, however, seems unsatisfactory: we know that, in Stoicism, qualities are taken to be dispositions of bodies and that, as a consequence, the goodness or badness of a specific representation should be accountable for in terms of a given material disposition of a certain imprint in the soul. The problem of claiming that self-representation is always, or in most cases, qualified as

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<sup>248</sup> Hierocles VI.29-53.

<sup>249</sup> Brunschwig 1986, p.39.

<sup>250</sup> DL 7.85 = SVF 1.178 (LS 57A).

<sup>251</sup> Cfr. Bastianini and Long 1992 p.437; Long & Sedley p.239.

good is the problem of explaining why a certain representation should always appear in a specific material disposition. Translated on a cosmic scale, moreover, the problem becomes even more difficult to solve, given that the Stoics usually identified the good with that which is according to nature, i.e. according to cosmic order. While it may be possible, therefore, to say that animals within the cosmos are naturally ingrained with a self-representation which qualified as “good”, it is more difficult to say why the cosmos, as an animal, would be ingrained with one without sounding tautological – unless we assume, once again, that goodness (or its material counterpart, i.e. a “well disposed body”) is something axiomatically present in the universe. Sadly, no explanation to this problem is presented in the Stoic fragments to my knowledge. If I had to provide an hypothetical argument for this, starting from Stoic theories of movement as in the previous chapters, I would be inclined to propose an explanation based in the conception of Stoic movement as generating unity-within-complexity, in line with what stated in the previous chapters. We have seen, indeed, that the double movement of pneuma through matter tends to articulate itself as qualifying (external movement) and unifying (internal movement). It is therefore possible that, while the external movement provides the object with multiple specific features, the internal movement could be responsible for the qualification of each of those features as good, or “belonging to one’s own” in order to provide a higher level of unification. My account of impulse on a cosmic level will indeed focus on its unifying features but, regrettably, I have found no passage that could effectively help me bridge the gap within a psychological and materialistic explanation in this specific case, nor a versatile notion, such as συμπάθεια, that could help me explain why self-representation should always be qualified as good.

Here, then, I will not deal with how the first impulse emerges from material interactions, but I will mostly focus on how it works, as a unifying appetitive drive, on a cosmic level. I will demonstrate how βούλησις<sup>252</sup>, or “will”, is the fundamental appetitive drive of the Stoic cosmos: far from being simply an expression of the will of the universe, βούλησις is the base for motivation and action in the self-organizational activity of the cosmos. The notion is, once again, eminently technical, as I will proceed to demonstrate through textual analysis, and it points towards a specific articulation and orientation of the most basic appetitive drive of living beings, i.e. impulse. Despite its translation, the

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<sup>252</sup> In my discussion, I have tried to leave the term βούλησις mostly untranslated, as I believe that it is part of a technical vocabulary both in Aristotle and in the Stoics and as its clarification is part of the aims of this chapter. When necessary, I have translated it as “will” in the Stoic context. This, of course, is not meant to suggest any reference to the modern notion of will nor to a discussion of free will in Stoicism. The choice of “will” rather than “wish” in the Stoic context is due rather to the fact that it seems to be more appropriate to fit the greek βούλησις together with its latin correspondent, *voluntas*, at the same time. Both terms will need a parallel discussion when presented in Cicero’s treatment of Stoic sources. While discussing Aristotle’s material, I have instead maintained the traditional translation of βούλησις as “wish”, as it is the one used by most scholars and, had I translated it otherwise, I would have risked creating confusion in my discussion of secondary literature.

term has little to do with the notion of free will and the tangle of philosophical problems related to it, which in emerges only in the later Stoa, therefore this chapter will feature no discussion on the subject.<sup>253</sup> First, I will trace the origin of the Stoic use of βούλησις back to Aristotelian ethics as an appetite which precedes and motivates calculation. Next, I will discuss how the notion is modified and used in early Stoicism, and then qualify it as the most fundamental drive of the wise man. Finally, by analysing the occurrences of the term βούλησις in relation to the activity of god, I will draw a comparison between the psychology of action of the perfect sage and that of god, showing how the Stoics utilize the notion of appetite in order to describe the life of the universe as a unified process.

## 2. The Aristotelian Origin of Βούλησις

It has been argued that Aristotle had little influence over Stoic ethics,<sup>254</sup> but some authors have touched upon the relation between Aristotelian and Stoic βούλησις.<sup>255</sup> Here I will not deal with the general extent of the influence of Aristotelian ethics on Stoic ethics, but I will mostly be concerned with elucidating the aspects of Aristotle's βούλησις which may help us understand what the term meant for the Stoics. I believe that there are two main aspects of Aristotelian βούλησις that are fundamental for its Stoic application to the cosmos: first, that βούλησις is an appetite aimed at an activity rather than a state, and second that βούλησις is an appetite prior to calculation.

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<sup>253</sup> As Frede signals in his fundamental work on free will in ancient philosophy (Frede 2011, p.81), Chrysippus had no notion of free will and, if one should try to trace any, it would probably reside in his theory of assent. This theory, however, seems to have little relation with Chrysippean account of will and the good passions, insofar as they are mostly introduced to discuss which articulation of our impulses are correct or incorrect, and which ones are most likely to lead us to a good life. In this sense, “will”, in this chapter, does not correspond to the modern notion of “volition”, i.e. the faculty to direct our appetitive drive towards its correct object, but rather to the drive itself as naturally directed towards the correct object. Stoic “will”, in the old Stoa, is a kind of appetite, not something that informs appetites.

<sup>254</sup> Sandbach 1985 is considered a fundamental text on the matter and it argues against most examples of possible influences, especially when it comes to ethics. Long 1968 tries to establish the extent of Aristotelian influences on the Stoics by quoting sources such as Cicero (*De Fin.* 3.41), who reports Carneades' idea of the essential compatibility of Aristotelian and Stoic Ethics in most things except terminology, and Plutarch (*Comm. not.* 1069e), who states that Zeno agreed with Aristotle, Xenocrates and Polemo in taking nature and accordance with it as elements of happiness.

<sup>255</sup> See in particular Long 1968, p.81: “The Stoic concept of *logike horme* is closely analogous to Aristotle's *bouleutike orexis* (*EN* iii.1113a9ff.). I suggested that this *orexis* in Aristotle is a pleasurable response to something *kalon*, reached by the good man via *boulesis*. But the Stoics, I believe, have slightly modified Aristotle here. They subsume *boulesis* under *orexis*, thus relating ‘wish’ to the particular object desired now, not the long-term objective.” Long believes that the Stoics were not as refined as Aristotle in distinguishing wishing from the end and deliberating the means (cfr. p.78). Inwood 1985 also believes the Stoic use and their definition of βούλησις as a correct ὄρεξις may have been inspired from Aristotle, but he claims that “the psychology behind Aristotle's usage is of course quite different from the Stoic psychology of ‘desire’” (p.237). I will disagree with these claims, stressing that there are more similarities than differences when it comes to their treatment of βούλησις, and that differences in vocabulary are given mostly by the specific features of Stoic psychology.

The meaning of βούλησις in Aristotle’s philosophy has been debated in recent literature,<sup>256</sup> particularly when it concerns what its object is and its status in relation to the other two Aristotelian appetites (ὀρέξεις) – ἐπιθυμία and θυμός. In *De Anima*, Aristotle classifies appetites in this way:

If any order of living things has the sensory (αἰσθητικόν), it must also have the appetitive (ὀρεκτικόν); for appetite is the genus of which desire, passion and wish (ἐπιθυμία, θυμός, βούλησις) are the species; now all animals have one sense at least, viz. touch, and whatever has a sense has the capacity for pleasure and pain and therefore has pleasant and painful objects present to it, and wherever these are present, there is desire, for desire is the appetition of what is pleasant.<sup>257</sup>

The tripartition of appetites seems to mirror Plato’s tripartition of the soul, with βούλησις corresponding to the desire of the rational part.<sup>258</sup> As for its object, Aristotle writes in the *Nicomachean Ethics* that “wish (βούλησις) is for the end”.<sup>259</sup> The Stagirite himself seems to be struggling to provide an explanation of this statement, as he argues that some people believe that “the end” must be interpreted as the apparent good, while others as the actual good. His conclusion is that “without qualification and in truth, the object of wish (βούλησις) is the good, but for the individual it is the apparent good”<sup>260</sup> so that “for the good person the object of wish (βούλησις) is that which is truly an object of wish (βούλησις), but for the bad person is any chance thing.”<sup>261</sup> This definition is unclear, but it is usually thought to mean that βούλησις is the appetite for happiness, given that this is the end of human life for Aristotle. On the other hand, ἐπιθυμία and θυμός would have different aims, with ἐπιθυμία being focused on the pursue of pleasure and θυμός on that of retaliation.<sup>262</sup> I mostly agree with this interpretation, but some clarifications are in order as to what it means to have a “wish (βούλησις) for the end”, and whether its object is the actual good or the apparent good.

Pearson has argued that the difference between βούλησις and irrational desires is that βούλησις aims at the actual good while irrational desires aim at the apparent good but, in order to achieve this

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<sup>256</sup> The most elaborate discussion on desire in Aristotle is found in Pearson 2012, especially pp.62-87 and 140-169. Irwin 1975 Aristotle on reason desire virtue, is also relevant for Aristotle’s conception of desire – although here we will focus mostly on the notion of βούλησις. Relevant literature focusing on βούλησις in Aristotle are Mele 1984, Tuozzo 1991 and Gronroos 2015, whom I will discuss here more in general.

<sup>257</sup> Arist. *De An.* 414b1-7.

<sup>258</sup> See, for instance, *De An.* 432b5-6. Aristotle classifies βούλησις as rational, although he does not endorse the Platonic tripartition but rather elaborates on the distinction between three species of desires. Their differences and classification will be discussed here.

<sup>259</sup> *EN* III.4 1113a15.

<sup>260</sup> *EN* III.4 1113a23-24.

<sup>261</sup> *EN* III.4 1113a25-26.

<sup>262</sup> For ἐπιθυμία as pursuit of pleasure, see the passage of *De Anima* quoted at the beginning of this passage. As for θυμός, its aims and scopes are less clear in Aristotle but, as Pearson has showed, the term is often used as a synonym for ὀργή, which would allow for an interpretation of it as a desire for ‘retaliation’. Even though this may not be the best way to put it, what concerns us most, here, is to show that it is a desire reacting in relation to some deprivation rather than an active pursuit of something new.

distinction, he is forced to claim that “apparent good” means “what appears good though it’s not” only in the specific passage of *Nicomachean Ethics* III.4 1113a25-26.<sup>263</sup> Gronroos, instead, focuses on the distinction in perception between the good pursued by βούλησις and that pursued by irrational desires, and claims that the first is less easily identifiable than the other because it is a “complex value”.<sup>264</sup> Both interpretations, in my opinion, fail to see the larger point, namely, that βούλησις is aimed at an activity: in the *Nicomachean Ethics* Aristotle establishes through what is usually referred to as “the function argument” that the good for human beings is to be found in a specific activity and, more precisely, in “activity in accordance with virtue”<sup>265</sup> – a definition which the Stoics will themselves adopt. Βούλησις is an appetite for performing the function that is specific to human beings in the best way possible, that is, it is the appetite for existing and living as humans in the best possible way according to what our faculties and external conditions are.

Βούλησις thus serves as the motivation toward the correct mode of living and, as such, it precedes calculation and deliberation. As Aristotle writes: “deliberation (βουλή) is about what he can do himself, and actions are done for the sake of other things, because it is not the end but what is conducive to an end which is the object of deliberation.”<sup>266</sup> Calculation (λογισμός) is never concerned with establishing ends, but always means for those ends. The end, insofar as it is an activity, cannot be qualified but formally – which means it cannot be qualified but as a rule to follow, the application of which will change in relation to the specific conditions at the time it is applied. Independently from the conditions of life, βούλησις does not exhaust itself as long as life is present, since it is the motivational drive which constantly draws the subject toward the best modality of life.

Aristotle does indeed argue that appetite (ὄρεξις), rather than thought (νοῦς) is the cause of movement in animals:

That which moves therefore is a single faculty and the faculty of appetite (ὄρεξις); for if there had been two sources of movement – thought (νοῦς) and appetite (ὄρεξις) – they would have produced movement in virtue of some common character. As it is, thought is never found in producing movement without appetite (for wish (βούλησις) is a form of appetite; and when movement is produced according to calculation it is also according to wish), but appetite can originate movement contrary to calculation, for desire (ἐπιθυμία) is a form of appetite.<sup>267</sup>

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<sup>263</sup> Cfr. Pearson 2012, pp.62-87. The only exception to this interpretation would be exactly the aforementioned passage of the *Nicomachean Ethics*, discussed at pp. 81-82.

<sup>264</sup> Cfr. Gronroos 2015, pp.82.

<sup>265</sup> Arist. *EN* X.7 1177a.

<sup>266</sup> *EN* III.3 1112b32-34. At 1112b11 Aristotle had already claimed that deliberation is not about ends.

<sup>267</sup> Arist. *De An.* 433a21-5.

As Gronroos notices, here the line of reasoning is not that both cognition and desire are necessary to produce movement but that, even when mind operates at full capacity in its understanding of the good, an appetite is necessary to produce action.<sup>268</sup> The rational, practical reasoning discussed in the *Nicomachean Ethics* essentially builds an “action-guiding conception”<sup>269</sup> of what the good in a particular circumstance is – but the appetite that motivates both action and reasoning in the first place is the appetite towards finding what is generally good for one’s condition as a human being, namely, βούλησις. Βούλησις is therefore depicted as an appetite that occurs in accordance with calculation, while other drives, such as ἐπιθυμία, do so in opposition to calculation. In both cases, appetite is prior to calculation and it is the source of movement for the living being, although βούλησις, as we have argued, subsequently accords itself with calculation and practical reasoning to articulate an action-guiding conception of the good, which is necessary for it to continue being the motivational force which drives the living being to exercise its main function.

### 3. Stoic Βούλησις

What is Stoic βούλησις, then, and how does it connect to Aristotelian βούλησις? First, it should be noted that Stoic terminology mirrors Aristotle’s when it comes to his psychological vocabulary and the relation between ὁρμή, ὄρεξις and βούλησις. Brad Inwood has claimed this relation can be defined as follows: ὄρεξις is a kind of desiderative ὁρμή directed at the good and, as such, it can be rational (and be therefore classified as βούλησις) or irrational (and be classified as ἐπιθυμία).<sup>270</sup> As we have seen by analyzing his *De Anima*, Aristotle also classified both βούλησις and ἐπιθυμία as appetites, the first according to, and the second against, calculation.

<sup>268</sup> Cfr. Gronroos 2015, p.64.

<sup>269</sup> Gronroos 2015, p.64.

<sup>270</sup> Inwood 1985, p.236: “It appears from evidence elsewhere (for Arius Didymus does not give an account of ὄρεξις in this text) that both kinds of ὄρεξις are impulses to the apparent good. The difference is that βούλησις is to a correctly conceived good in the correct way and ἐπιθυμία is to a mistakenly conceived good in an incorrect way. This is clear in many texts. At TD 3.24 *cupiditas* (=ἐπιθυμία) is an *appetitus magni boni*; at περί παθῶν 1 (=SVF 3.391) ἄλογος ὄρεξις is glossed as ‘the pursuit of an expected good’. Similar wording is used by Aspasia (SVF 3.386): ὄρεξις is of the apparent good. Again in the *Tusculans* (4.12), βούλησις is said to be an impulse to acquire something good which is according to Reason, i.e. correct.” Some other textual support for this claim is found in Diogenes Laertius’ claim (DL 7.115 (SVF 3.431)) that the Stoics considered βούλησις a εὐλογος ὄρεξις, a “reasonable desire”, as opposed to unreasonable desire (ephithumia) – a claim repeated in several other sources such as Andronicus’ περί παθῶν (p.20 Kreuttner) (SVF 3.432); and Plutarch’s *De Virt. Mor.* 449a (SVF 3.439). Also, and more simply, βούλησις, as an εὐπάθεια and an ὄρεξις, can be classified as an ὁρμή, considering the classical stoic definition of passions as excessive impulses (ὁρμή πλεονάζουσας), found in: Diogenes Laertius VII.110 (SVF 1.205.1); Stobaeus *Ecl.* II 7.2 p.44.4 (SVF1.205.5-6); Clemens Al. *Strom.* II.460 (SVF 3.377); Stobaeus, *Ecl.* II.88.6 (SVF 3.378); and in particular Plutarch, *De Virt. Mor.* 449c (SVF 3.384), who seems to quote directly from Chrysippus: “not all judgements are passions, but only the movement of a violent and excessive impulse.” Cfr. also Dihle A. 1982, p.40, who underlines that the origin of the idea of βούλησις as a rational impulse have Platonic roots in *Ti.*81e-87a, where βουλή is characterized as part of the rational part of the soul.

At least when it comes to terminology, then there would seem to be a certain compatibility. It is not yet clear, though, whether βούλησις could play a similar role in Stoic psychology of action to the one it plays in Aristotle's. Stoic βούλησις, like its Aristotelian counterpart, is teleologically oriented. However, there is disagreement on whether the Stoics preserved βούλησις as an appetite directed at the same aims depicted in Aristotle. In particular, there has been some debate over what the object of Stoic βούλησις actually is: Long, for instance, has claimed that the Stoics modified Aristotle in that they “related wish [βούλησις] to the particular object desired now, not the long term objective”<sup>271</sup> and Inwood has argued that “βούλησις is to a correctly conceived good in the correct way and ἐπιθυμία is to a mistakenly conceived good in an incorrect way”.<sup>272</sup> I believe that for the Stoics βούλησις is, compatibly with Aristotle, an appetite directed at an activity, rather than at particular objects classified under the description of good. Nonetheless, there are indeed some differences in their classification of βούλησις and ἐπιθυμία although this, as we will see, will not alter the essential idea that an appetitive disposition prior to calculation is at the base of a subject's actions.

The Stoic notion of βούλησις and its compatibility with the Aristotelian paradigm can be shown if we delve deeper in how the concept was defined in the Stoic treatment of passions. Βούλησις is indeed part of the Stoic technical vocabulary of passions: Diogenes Laertius, Plutarch and Andronicus report that the Stoics considered βούλησις one of the three εὐπαθεῖαι or “good passions”, together with χαρά (joy) and εὐλάβεια (caution), which belong characteristically to the wise man.<sup>273</sup> The three good passions are opposed to three of the four canonical passions: will (βούλησις) to desire (ἐπιθυμία), joy (χαρά) to pleasure (ἡδονή) and caution (εὐλάβεια) to fear (φόβος) – leaving out only pain (λύπη). Both Diogenes Laertius and the Peripatetic Andronicus also report a fourfold division of Stoic βούλησις into “species”:<sup>274</sup> εὐνοια (goodwill or benevolence), εὐμένεια (favour), ἀσπασμός (embrace) and ἀγάπησις (affection). Andronicus also provides a definition of each of the four starting

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<sup>271</sup> Long 1968, p.81.

<sup>272</sup> Inwood 1985, p.236. Another author who has claimed a similar thesis is Cooper 2005, by addressing Cic. *Tusc. Disp.* IV.12-13 (SVF 3.438). There, Cicero openly states that both βούλησις and its opposite are oriented toward a specific object, namely, whatever has the aspect of the good, the difference being that βούλησις is a rational longing, while ἐπιθυμία is violently aroused. Now, this seems to channel directly into Aristotle's *De An.* 433a2-5, where he claims that the difference between βούλησις and ἐπιθυμία is that the first is an appetite according to calculation and the second is against it. The Stoics are claiming that the rational or irrational nature of a specific appetite, and its subsequent classification as βούλησις or ἐπιθυμία, depends on the subject's control over himself: Cicero mentions the object of appetite as the “apparent good”, and never defines it, but claims that desiring it rationally or irrationally is what makes the difference between having βούλησις or ἐπιθυμία as our defining appetite. Therefore, Cicero's treatment of appetite is, in this sense, intensional, which means that appetite is classified as βούλησις or ἐπιθυμία according to certain qualities it possesses, not according to its object.

<sup>273</sup> Cfr. Diog. Laert. VII 115 (SVF 3.431); Andronicus *περί παθῶν* (p.20 Kreuttner) (SVF 3.432); Plutarch, *De Virt. Mor.* 449a (SVF 3.439).

<sup>274</sup> I am here using Andronicus' vocabulary, who calls these four species (εἰδή) of βούλησις. Given that they seem to be defined as different degrees of εὐνοια, I am not sure whether they could be classified as different species of βούλησις. This does not change, in any case, the fact that will and benevolence are strictly related.

from εὔνοια, defined as the will for someone else to have goods.<sup>275</sup> The other three passions are then characterized as different degrees of εὔνοια: εὐμένεια (favour), is a εὔνοια ἐπίμονος (lasting benevolence); ἀσπασμός (embrace) is a ἀδιάστατος εὔνοια (continuous benevolence) and ἀγάπησις (affection), although we lack a definition due to a lacuna in the text, was probably a stable and unchanging form of benevolence. Now one may object that appetite for the good is not only directed at things that are good for others but also at things that are good for ourselves. But again, we are here talking not of ordinary desiderative attitudes, but of the desiderative attitude of the wise man and the cosmos. For the sage there is no difference between personal and collective benefit:

All goods are common to the virtuous, and all that is bad to the inferior. Therefore a man who benefits someone also benefits himself, and one who does harm also harms himself. All virtuous men benefit one another... but the foolish are in the opposite situation.<sup>276</sup>

The verb translated as “benefit” in the quote of Stobaeus is the Greek ὠφελέω, which channels directly into the Stoic definition of the good as benefit (ὠφέλεια) shared by most sources.<sup>277</sup> Sextus Empiricus, who discusses this definition at length, writes that, by benefit, the Stoics meant “virtue and virtuous action” and that, coherently with the idea that what the sage desires is beneficial to himself and others, actual good was indeed described in one way as “that which is cause of benefit” and “that from which benefit derives.”<sup>278</sup> Let us keep in mind that, of course, the object of βούλησις is more easily defined in the case of human psychology of action, while it will need further clarification when referred to the universe. Indeed, one could say that what benefits the sage – and in turn those around him – i.e. “virtue and virtuous action” essentially indicates action in accordance to the will of the cosmos. It was a shared doctrine from Zeno to Chrysippus, with little variations, that the end of life was “living in accordance with nature”, that is, to have a “good flow of life” (εὐροια βίου):<sup>279</sup> acting virtuously means to act in accordance with nature, that is, to align one’s will with the providential activity of the cosmos and have a good flow of life. In this, there is a striking similarity to Aristotle in that the Stoics essentially believed that the end of life was to exercise the function

<sup>275</sup> Cfr. also Stobaeus *Ecl.* II p.74.16 (SVF 3.112), where he classifies goodwill as a good towards something else.

<sup>276</sup> Stobaeus *Ecl.* II.7, p.101.21W. (SVF 3.626 = LS 60P). It is notable that among the things shared by the wise men in the passage omitted in Long & Sedley’s translation we find exactly εὔνοια.

<sup>277</sup> Cfr. Long & Sedley, chapter 60. The definition is shared by enough sources to be considered canonical.

<sup>278</sup> Sextus *Adv. Math.* IX.22-26 (partly translated in LS 60 G = SVF 3.75). Cfr. also Diogenes Laert. VII 94 (SVF 3.76) and Stobaeus *Ecl.* II, 69, 17 W (SVF3.74).

<sup>279</sup> Stobaeus *Ecl.* II.77 (SVF 3.16 = LS 63A); cfr. also LS 63B-C and p.400 on how Zeno, Cleanthes and Chrysippus fundamentally agree on this point, with small additions from Chrysippus regarding the alignment between the will of the sage and the will of the cosmos.

which is proper to the human being in the best way possible.<sup>280</sup> The Stoics, therefore, agree with Aristotle in claiming that βούλησις is essentially an appetite for an activity.

But does βούλησις, like in Aristotle, precede and motivate calculation and planning? At a first look, Stoic psychology, with its intellectualist orientation and its theory of assent, may seem to point toward a paradigm where reason, rather than appetite, is the source of all action. But a more detailed inquiry will reveal otherwise, especially if we consider how they articulated their doctrine of appropriation:

They [the Stoics] say that an animal has self-preservation (τηρεῖν ἑαυτό) as the object of its first impulse since nature from the beginning appropriates it (οἰκειούσης αὐτῷ), as Chrysippus says in his *On Ends* book I. The first thing appropriate to every animal, he says is its own constitution (σύστασιν) and the consciousness of it (συνείδησιν). For nature was not likely to alienate the animal itself, or to make it and then neither alienate it nor appropriate it. So, it remains to say that in constituting the animal, nature appropriated it to itself. This is why the animal rejects what is harmful and accepts what is appropriate.<sup>281</sup>

As we read, the animal first impulse is toward self-preservation. Nature endows the animal with such an impulse as a mean to appropriate it to itself, by making it conscious of its own constitution. It is not yet clear whether there is a relation between this first impulse toward self-preservation and the consciousness which seems to result from the animal appropriating itself, but this problem will be addressed in the next section. For now, it is essential to establish whether the impulse toward self-preservation is appetitive in nature. Diogenes Laertius seems to suggest that self-preservation articulates itself into the ability of rejecting what is harmful and accepting what is appropriate. We find a similar thought in Cicero<sup>282</sup> and, later, in Seneca:<sup>283</sup> both claim that the first impulse towards self-preservation coincides with being able to reject what is harmful and seek what is beneficial.

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<sup>280</sup> Long & Sedley 1987 reached the same conclusions by analyzing Stoic material discussing happiness: “Aristotle’s ethics was founded on the assumption that human life has a ‘function’, which can be specified by reference to the distinctive human attribute of ‘living rationally’ (*Nicomachean Ethics* I.6). It is just the same for Stoicism” (p.400).

<sup>281</sup> Diogenes Laertius VII 85 (SVF 3.178 = LS 57A).

<sup>282</sup> Cic. *De Fin.* III.16 (SVF 3.182): “immediately upon birth [...] a living creature feels an attachment for itself, and an impulse to preserve itself and to feel affection for its own constitution and for those things that tend to preserve that constitution; while on the other hand it conceives antipathy to destruction and to those things which appear to threaten destruction.”

<sup>283</sup> Seneca *Letters* 121.6-15 (LS 57 B): “A tortoise on its back feels no pain, but desire for its natural state makes it restless, and it does not stop struggling and shaking itself until it stands on its feet. So all animals are conscious of their own constitution, and this explains such handling of their limbs...”

The final confirmation that the impulse toward self-preservation is appetitive, though, comes from Hierocles, in what is possibly the most detailed discussion of the Stoic theory of appropriation.<sup>284</sup> Here, he defines the first impulse toward self-preservation in relation to εὔνοια:

The appropriate disposition relative to oneself is benevolent (εὐνοητική), while to one's kindred is affection... Just as our appropriate disposition relative to our children is affection and, to external property, choice, so an animal's appropriate disposition relative to itself is <self-preservation><sup>285</sup>

Self-preservation and benevolence are connected in that they are both essential to the animal's survival: an animal needs to be well-disposed toward itself and desirous of acquiring or doing what will benefit it in order to survive. If βούλησις is an appetite for the end, that is, for exercising at our best our main function as rational living beings, at its very first stage it must manifest in a form that makes life and the active exercise of its function preferable to its opposite.<sup>286</sup> Therefore, βούλησις does indeed precede calculation in Stoicism – whether or not the animal is rational – and it constitutes both the chronological and the constitutional basis for the life of the living being. As Diogenes Laertius writes at the end of his discussion on the first impulse: “since reason, by a way of a more perfect management, has been bestowed on rational beings, to live correctly in accordance with reason comes to be natural for them. For reason supervenes (ἐπιγίνεται) as the craftsman of impulse.”<sup>287</sup> This “epigenesis” of reason, again, is both chronological and constitutional, and it explicitly confirms that the appetitive impulse toward self-preservation precedes rational calculation

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<sup>284</sup> As for the other theories from Hierocles discussed in this work, his thoughts οἰκείωσις also seem much in line with those of the old Stoics (cfr. Ramelli's introduction to the edition in bibliography, pp. xxxiv-xxxv) and compatible with most of the sources attributing the theory to Zeno and Chrysippus.

<sup>285</sup> Hierocles 9.3-10, 11.14-18 (LS 57D).

<sup>286</sup> Beside the textual evidence, other lines of reasoning could be used in support of a connection between βούλησις and the impulse toward self-appropriation. Inwood 1985 claims, in line with this that “appropriation (and hence primary impulse) is the factor by reference to which the Stoics determined what is natural” (p. 197). He quotes in his support SVF 3.180 and 3.181. While it may be argued that Stoics catalogued what is natural starting from empirical observation, the texts make clear that animals are indeed lead toward the mode of life that is more natural to them from the impulses of appropriation. Hence, βούλησις as a desire for the best life would fit this model. Another way of connecting them would be following Salles 2005, who claims that, for the Stoics “our moral evolution is determined by the development of our concern for self-preservation” (p.48). This is indeed what happens if we support the thesis that βούλησις begins as a benevolence directed toward the subject as impulse for self-preservation and is later expanded as a general benevolence toward other living beings and the cosmos.

<sup>287</sup> Diogenes Laertius VII 86 (LS 57A; SVF 3.178). The passage is also discussed in Gill 2006 p. 32-33. Gill refers to this process as a “layering of functions” and claims that Hierocles' account of how the birth of an embryo involves the change of mere nature into a soul essentially agrees with the idea put forward in Diogenes. He is right, in my opinion, in recognizing that mind as well as body is composed by a plurality of coexisting tensions – but rather than a “layering” of these, in Stoicism there is “folding” of one and the same active element, i.e. the active power of god immanent in matter, articulating itself first as tension, then as nature, then as mind. The apparent opposition between different tensions is given by the active power flowing from one into the other in the form of assent, as testified by the Stoic ideas about mental conflict representing not the conflict between different parts/faculties of the soul, but rather as the rapid changes of one and the same faculty. We could say, therefore, that when the active power of the soul yields to excessive impulses, that it is flowing backwards into a lower articulation of itself and the subject is failing in acting in its full function of rational living being.

in both ways, and that the latter has the role of shaping and rearranging the first toward its appropriate objects.<sup>288</sup> Βούλησις, therefore, in the Stoics as well as in Aristotle, is an appetite for the specific activity that is the end of life and it precedes calculation. What does it mean, though, to attribute it to the cosmos? And what role does it have in Stoic cosmic psychology?

#### 4. *The βούλησις of the Stoic Cosmos*

In the second book of Cicero's *De Natura Deorum*, Balbus summarizes some fundamental Stoic cosmological theories, especially regarding the life of the cosmos. As we mentioned in the introduction, the explanatory value of claiming that the universe is alive has been questioned – and it is questioned in *De Natura Deorum* as well, when Cotta claims that most of the workings of the Stoic living universe, and in particular the relations that Balbus has described as depending from sympathy, could be explained by referring simply to the spontaneity of nature.<sup>289</sup> Balbus, nonetheless, seems deeply invested in this model, since not only does he provide a detailed description of which natural events are part of the life of the cosmos, but he also attributes to the cosmos a psychological life not different from ours:

Just as other natural substances are each generated, made to grow and sustained by their own seeds, so the nature of the world has all the movements of volition (*motus voluntarios*), desires (*conatus*) and impulses (*adpetitiones*) which the Greeks called ὁρμαί, and exhibits the actions in agreements with these in the way that we ourselves do who are moved by emotions and sensations (*ipsi qui animis movemur et sensibus*).<sup>290</sup>

If the reference to life was to be taken as a metaphor or as a rhetorical move invoking an apparently simple concept – life – to explain a thoroughly complex one, there would have been no need to go as far as to claim that the universe has a psychological life. An insistence on how the multiplicity of processes which compose the universe are actually part of a single process would have been enough,

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<sup>288</sup> An objection may be raised here as to how could the self-preservation impulse, if associated with βούλησις, be “according to reason” if reason is still not playing any role (and, moreover, if it does not even enter the picture as in the case of irrational animals). The appetite for good is logical and rational not in that it is crafted by reason though, but in that it accords with what reason decides to be best. Reason, as in Aristotle, is necessary to fully articulate a conception of the good and plan how to achieve a “good flow of life” but it does not change the character of the appetite for a “good flow of life”. It may articulate what is necessary to achieve a good life, and in this sense it is a craftsman, but it never changes the direction of the appetite towards it. To take the specific example of the appetite toward self-preservation: self-preservation is in itself good for brute and for rational animals, but for rational animals it is also rationally good in that reason would agree with our appetite in that self-preservation is necessary, tautologically speaking, to have a good “flow of life”.

<sup>289</sup> Cic. *ND* III.28: “the greater the spontaneity [of nature] the less must we regard it as operation of divine reason.”

<sup>290</sup> Cic. *ND* II.58 (SVF 1.172 = LS 58Y).

and the notion of life, without explaining much, could have been introduced in the attempt to find a name for this all-encompassing process. The appeal to the existence of a psychological life of the universe, instead, demonstrates that this reference to life has more depth than it shows at first sight, as the universe is described as literally possessing features that are proper of the existence of human beings. It must be mentioned, moreover, that not only was this idea attributed to Zeno by Cicero, therefore tracing it back to the very founder of the Stoa, but also that it has consistently featured in Stoic thought since then, surviving even among thinkers of the late Stoa.<sup>291</sup> What are, then, the structural similarities between human and cosmic psychology? Cicero's passage introduces three aspects of the psychological life of the cosmos: voluntary movements (*motus voluntarios*), desires (*conatus*) and impulses (*adpetitiones*). At first, Balbus may seem to be gathering all three under the definition of ὁρμαί. But only one of the terms, *adpetitio*, is usually translated by Cicero as ὁρμή.<sup>292</sup> It would be more difficult for us to translate *motus voluntarios* or *conatus* as ὁρμή. Luckily enough, Cicero himself can help us to solve this interpretative problem by explaining what he means when he mentions *voluntas* in a Stoic context:

By law of nature all men pursue apparent good and shun its opposite; for which reason, as soon as the semblance of any apparent good presents itself, nature of itself prompts to secure it. Where this takes place in an equable and wise way the Stoics employ the term βούλησις for this sort of longing, we should employ the term will (*voluntatem*). That, they think, is found in the wise man alone and they define it in this way: will is a rational longing for anything. Where, however, will is alien from reason and violently aroused, it is lust or unbridled desire, which is found in all fools.<sup>293</sup>

At this point, it should be clear that when referring to *conatus* and *adpetitio* together with *voluntas*, Cicero is translating Stoic technical vocabulary and projecting it onto the cosmos as a living subject. If the passage shows that *voluntas* is the translation of βούλησις, *conatus* is then the appropriate Latin translation of ὄρεξις, which can be rendered as “desire”, “conation”, or the more Aristotelian “appetite” – while *adpetitio*, as we have seen, is the usual way in which Cicero translates ὁρμή. It is interesting to notice that Balbus does not mention any other passion in relation to god. I would not take this as a sign that the other good passions are not important, or that the analogy between the psychological life of the cosmos and that of the wise man is only partial: indeed, we may imagine that the universe feels joy in that it rejoices in its own activity and that it will be prudent rather than

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<sup>291</sup> For some relevant passages concerning the early Stoics, see SVF 1.110-4, 1.154, 1.499; 2.633; 2.643; 2.937; 2.1009; 2.1016; 2.1020). Instances of the attribution of a psychological life to the cosmos in the late Stoa are found, for instance, in Epictetus (*Diss.* 4.1.100) and Marcus Aurelius (*Meditations* 9.1.4; 9.28).

<sup>292</sup> Cfr. Inwood 1985, p.25. He refers to the following texts for Cicero's translations: *Acad.* 2.24, *Fin.* 3.23, 4.39, 5.17, the aforementioned *ND* 2.58 and *Off.* 1.101, 2.18.

<sup>293</sup> Cic. *Tusc. Disp.* IV.12-13 (SVF 3.438).

fearful as there is nothing which could possibly threaten the most perfect being. The main difference between βούλησις and these other passions, and the reason why Cicero may have found it necessary to mention it specifically in the context of *De Natura Deorum*, is that βούλησις is the only good passion that plays a fundamental role in the ordering activity of the universe, which is the matter of discussion of *De Natura Deorum*.<sup>294</sup> Of the three good passions, indeed, βούλησις is the only one that is openly desiderative and teleologically oriented: as such, it is the best candidate as cause of movement and activity.

In the previous chapters, we have analyzed Cicero's *De Natura Deorum* as a possible source to identify the origin of certain Stoic doctrines, and these passages are no exception. Up to now, most of our findings pointed as Chrysippus as the chief innovator when it comes to articulating the idea that the cosmos is a living being. This seems to be the case also when it comes to cosmic βούλησις. Plutarch writes: "as Chrysippus says, not even the smallest of the parts is made not accordingly to the will (βούλησις) of Zeus."<sup>295</sup> Diogenes Laertius also mentions that, for Chrysippus, "the virtue of the happy man and a good flow of life is this, whenever all actions are made in attuning with the demon of each according to the will (βούλησις) of the governor of the whole."<sup>296</sup> As seen in the previous section, these authors also report the Stoic technical use of βούλησις in psychology: therefore, if both Plutarch and Diogenes were aware of this technical vocabulary in Stoic psychology, it would be unlikely for them to be using it by chance in reporting Stoic cosmological theories. Terminologically speaking, then, there can be little doubt that the attribution of βούλησις to the cosmos is not a generic reference to the "will of god", but the use of a specific technical vocabulary of Stoic psychology which was well known and often applied to the cosmos – as in the case of Cicero's attribution of appetites and impulses to it.

But what does it mean, to endow the cosmos with βούλησις? And what is the explanatory value of this philosophical theory? In their doctrines concerning the relation between subjectivity and impulses, the Stoics put forward the idea that an appetitive impulse is the cause of the unity of subjective agency. The Stoic world, indeed, is not only self-moving, but self-ordering, which means that its movements result in a unified whole. Their innovation is to refer to the soul not only as a self-

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<sup>294</sup> The attribution of βούλησις to god has been noticed by Inwood 1985 (pp. 21, 167-8) but it has not been further explored as a potential explanatory factor for the order of the cosmos.

<sup>295</sup> Plutarch, *De Com. Not.* 1076e (SVF 2.937).

<sup>296</sup> Diog. Laert. VII.87 (SVF 3.4). Beside the passages quoted, cfr. also SVF 2.914 "from god's will (βουλήσεως)"; 2.937 Chrysippus used to quote the following Homeric verse according to Plutarch: "the will (βουλή) of Zeus was realizing" in reference to fate and the nature of the universe, according to which everything happens. 2.1009 "[god is] capable of transforming into whatever he wants (βούλεται), 2.1054 "[every material body] is susceptible to whichever material changes the demiurge wants (βούλεται), 3.29, 3.180 "to live according to the will (βούλημα) of nature", 3.336 "[the wise man] attunes his actions to the will (βούλημα) of nature". The apparent flexibility of Stoic technical vocabulary must have already been allowed in the original Stoic sources, if we think that in SVF 2.937 Chrysippus refers to the will of Zeus as βουλή.

moving factor but also as a self-ordering one: the Stoics insistence on cosmic psychology, as we have claimed, is mainly aimed at outlining its unificatory activity. In the previous chapter, we have seen that the first thing an animal appropriates is its own constitution and the consciousness of it. This process of appropriation is the process of the unification of the animal as a subject. Yet, this is not enough to establish the unification of its agency, that is, to explain why parts of a single being should act as one rather than not. While, indeed, perception is the condition of possibility for these modalities of action it is not, in itself, sufficient to explain what the motivational drive of any living being is. Βούλησις has precisely this role in unifying an impulse by directing it towards the preservation of the self and then by appropriating other things insofar as they constitute objects of rational appetite finalized to “good flow of life”. In Stoicism, to exist is the same as to act or be acted upon, from which follows that a “subject” is essentially capable, at least in a certain measure, to act upon itself. Βούλησις grants the possibility to dispose one’s actions organically because it unifies them by providing a single teleological orientation for the multiple activities composing a living being. The essential aspect of Aristotelian βούλησις, as we have seen, was that βούλησις is a pathos that precedes calculation: the Stoics agree with this idea and use βούλησις as the motivational basis for each and every action of the subject. But, as an appetite for our general end as human beings, βούλησις unifies this subjective mental experience by orienting it toward a single end.

In the same way, the Stoic cosmos unifies its agency around the notion of such an appetitive drive. There are some differences, of course, in that the constitution of the cosmos and that of animals are different, but the essential structure and βούλησις in both cases are similar. In the case of rational animals within the cosmos, the process of appropriation can extend βούλησις and εὔνοια to other parts of the universe.<sup>297</sup> The cosmos, on the other hand, does not need to appropriate anything other than itself, since it already is an all-encompassing and perfect being: the last stage of the sage’s process of appropriation is the first stage of the process of appropriation of the cosmos. The first act of appropriation as self-preservation and benevolence toward itself is what we are witnessing when we witness the life of the cosmos. The βούλησις of the cosmos, then, is directed toward the constitution of the cosmos as an acting subject, and we are parts and observers of the process through which the universe preserves, constitutes and articulates itself as a living subject: we are part of the universe’s inner life.

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<sup>297</sup> Hierocles describes this in his theory of the encompassing circles, according to which we should progressively extend appropriation by “encircling” living beings other than ourselves: namely, we should become able to “draw the circles together somehow towards the center, and to keep zealously transferring those from the enclosing circles into the enclosed one.” Hierocles (Stobaeus 4.671-673.11) (LS 57G). If the first stage of appropriation is a form of benevolence toward oneself, then the aim of appropriation is to become able to extend that benevolence to every living being, which is exactly the state reached by the Stoic sage when he has the εὐπάθεια of βούλησις, namely, becoming benevolent toward everyone, i.e. wishing the good/benefit/εὔροια βίου of the whole cosmos.

## 5. Conclusion

In this chapter, we explored what the purpose of attributing impulses to the universe may be, and we have discovered that, as in the case of a living being, attributing an impulse to the universe provides it with the motivational force to operate as an agent. This, as we have seen, implies a further level of unification of the cosmos in the sense that its actions are now teleologically oriented towards a specific end. In discussing how the cosmic appetitive drive articulates itself in Stoicism, we have touched upon the good passions and we have isolated βούλησις, or “will” as its main appetitive drive. The notion, developing from an Aristotelian background, is useful in allowing the cosmos to be teleologically oriented without having to achieve a specific form: since βούλησις, as the appetitive drive of the sage, aims to produce a “good flow of life” within the living being in which it operates, then it can also be said that the cosmos itself does not aim to achieve a specific form, but rather, in the endless cycles of its changes and transformations, to live the best possible life. This allows for the Stoic system to maintain that the whole is an ever-active entity, while at the same time arguing that it is also an entity that acts in an orderly fashion, having a “well-ordered activity” rather than “a well-ordered final state” as its aim.

There are, of course, perplexities as to what a “well-ordered activity” or a “good flowing” life are for the cosmos, considered that the criterion for “good flowing” life in the case of human beings seems to be cosmos itself. However, even if only on a formal level and without a specific definition of the notion of goodness, we have still reached the significant result of confirming that βούλησις serves a unificatory purpose in the context of the life of the cosmos, complementary and intertwined with the unificatory purpose of αἴσθησις presented in the previous chapter. For the Stoics, indeed, every subject is, first and foremost, an agent, and as such it must gather its actions around a centre. On a primary level, this happens through its self-reflexive faculty, i.e. perception, through which the cosmos is capable of representing itself, and on a secondary level, this happens through will as a unifying teleological orientation. At this point, therefore, we can conclude that imagining and modelling a living cosmos, that is, a sensible and desiderative cosmos was, for the Stoics, a way of conceptualizing the unity of the whole in terms of the only unity we truly experience as human beings, that is, the inner mental unity of a living subject.

## General Conclusions

When it comes to scholarship in ancient philosophy, the task of balancing the aims of historical research and those of philosophical research is a complex and difficult one, since the objectives of these two kinds of research may clash more often than they overlap. On the one hand, in producing interpretations of a given philosophical doctrine, one must keep in mind its historical context and development, and locate it in an evolutionary and narrative continuity, so that we may actually talk about an intelligible and coherent “history” of thought, rather than a collection of scattered and unrelated intellectual outbursts. On the other hand, however, nothing forbids that such outbursts may after all be possible, although rare, and a perfectly arranged historical continuity sometimes risks to suffocate the genuine novelty and originality of philosophical doctrines, transforming new thoughts into trite ruminations and making each school a mere derivative branch of previous ones or even, in the worst cases, the ideological continuation of some perennial ur-philosophical “tradition”. The Stoics, I believe, because of their ties with Plato’s Academy, and because of their many references to both Platonic and Aristotelian philosophy, some of which have been examined in this thesis, are more vulnerable than other philosophical schools when it comes to possible accusations of being unoriginal. Nonetheless, in this work I have fully elucidated at least some of what I believe are the innovative and valuable insights to be gained by a thorough examination of Stoic thought.

I have aimed to show that the premises of the Stoic system present interesting solutions for poignant philosophical problems that are still far from being solved. Their claims are not without cracks, of course, and the skilled reader may have found more weaknesses than I dared to directly address in this work. Most of these weaknesses lie in the conception of an immanent, material mind existing within the world, compenetrating it and ordering it. If one wants to be merciless against the Stoics, this can be considered their point of highest derivativeness: mind as an ordering factor was postulated by several thinkers before them, and much of their system is highly indebted to Plato’s doctrines when it comes to describing its demiurgic action upon the world. Even their attempts to elaborate a fully corporeal system seems to have been mediated by the definition of “being” found in Plato’s *Sophist*, according to which to exist means to act or be acted upon.<sup>298</sup> One may therefore argue, with Brehier,<sup>299</sup> that the Stoic conception of an immanent, thinking active principle compenetrating matter as a body, and its supporting doctrines of mixture and blending, are essentially an attempt to solve Plato’s problems of participation found in the *Parmenides*, and to elude the

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<sup>298</sup> Confront Pl. *Soph.* 247e-248a with LS 45A = SVF 1.90. Sellars 2010 discusses the problem at length.

<sup>299</sup> Brehier 1951 p.127.

complications derived from theorizing interactions between ontologically different entities, such as corporeals and incorporeals. And one may, in addition to Brehier, and with an eye towards modern philosophy, state that the Stoics failed in solving such problems, insofar as their reduction of mind to a completely corporeal entity does not really offer an account of what mind actually is and how it works. Were this the case, one could indeed attack the Stoics and accuse their physics of being both unoriginal and ridden with *ad hoc* arguments meant to mend the evident flaws of a system that – like all philosophical systems – bites off more than it can chew.

I believe, however, that the Stoic doctrines of an immanent mind compenetrating the cosmos, although stemming from a confrontation with Platonism, stimulated some of their most original thoughts on the nature of both mind and the cosmos, and that there is a nucleus of Stoic physics which can still offer imaginative and relevant insights to philosophers today. Philosophy, indeed, is not often a cumulative endeavor, but the fragility of certain solutions should not make us overlook their originality, especially if, in this originality, there is potential for new and imaginative interpretations of the world. As I have tried to show, there is room in Stoicism for a corporealist theory of the emergence of mental faculties, and a fertile, although not unassailable, understanding of how we may model mind as a result of material interactions. Mind, for the Stoics, was a physical phenomenon, inextricably related to the regularity of the motion of certain bodies or, more precisely, to a regularity of motion capable of absorbing within its own pattern of movement the modifications resulting from external as well as internal change. In the context of their system, nothing but this regularity of movement was needed in order to define what the life of a minded being is. For a materialistic worldview, or, more simply, for materialistic accounts of the mind, this theory can indeed be relevant and worth inquiring further, as it offers many openings for theorizing mind within a materialistic frame. In addition this, the Stoics also offer to us a definition of mental activity as the activity of preserving the unity of a body in the face of constitutional change, producing, therefore, also an account of the activity and the effects of mind once it is described as a body.

As for possible points of research stemming from this work, I believe that much is yet to be said about the cosmic mind, as well as its relationship with the other minds contained within it. In this thesis, as stated in the introduction, I was mostly concerned with how the cosmic mind, and mind in general, may emerge in the context of the Stoic corporealist system, but clearly there are many questions to be asked once the fact that mind can indeed emerge from material interactions alone is established. Indeed, while perception and impulse are the most essential faculties of the soul, indeed qualifying it as such, they are not its only faculties: the cosmic soul, as well as the souls of human beings, must also develop a rational faculty, which raises an entire new class of problems as to how this faculty may emerge. Furthermore, a discussion on the emergence of cosmic reason would

inevitably branch into a series of further questions concerning how reason is employed by the cosmos to further transform itself. Here, we have explored the conditions of possibility for such self-transformations, by showing how the faculties on which they are based, that is, the cosmos' perceptive faculty and its primeval motivational drive, emerge and work in order to make it a living subject. Without this self-representational ability and without an ingrained motivational drive, as I have argued, no self-transformation is possible. However, once these conditions are established, one may want to learn how this self-transformation happens, as well as what mental faculties are directly employed in this process and, ultimately, how cosmic mental life relates to the human sphere and its quest for virtue and knowledge. The relation between cosmic life and human ethics in Stoicism has indeed been widely researched, but I believe that the more sophisticated our account of cosmic psychology becomes, the deeper our understanding of how human life should unfold according to the Stoics will be.

Another possible point of future inquiry, again concerning philosophy of mind, would be to bring Stoicism into the context of modern discussions on the hard problem of consciousness, and see if their theories hold when it comes to explaining how the phenomenological aspects of inner experiences emerge in the mind. In this work we have focused mostly on the mind being capable of registering change and adjusting to it, but never on the fact that this activity is experienced by living beings as possessing specific aesthetic qualities. This problem was partly outlined in the fourth chapter, in relation to the discussion as to what makes an animal well-disposed towards its own self-representation: why, indeed, should any representation fall under a specific qualitative description, such as “good” or “bad”? The Stoics do produce an account of how the computational abilities of a mind may appear, but they do not exhaust the entirety of our inner experience, being especially lacking when it comes to producing an account of how motivation emerges, since motivation is undeniably interlinked with describing the quality of our inner experiences as good and bad. Surely, there is possibility to research the topic further in exploring relations between Stoic theories of experienced qualities – which nowadays we call *qualia* – as “dispositions” (πρός ἔχον)<sup>300</sup> of the soul and Stoic ethics.

Much should also be further studied concerning the Stoic doctrine of the double-movement of pneuma, which has been fundamental for our theories, in that it examines the consequences of conceiving of bodies within a materialistic system not simply as bodies, but as bodies defined by the fact that they are moving in specific way, i.e., that they perform a specific kind of activity. As for the explanations and sources of this movement, at the moment, we are at a loss – much like the Epicureans

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<sup>300</sup> For qualities as “dispositions” of pneuma see SVF 2.379.

were, when they had to explain the reasons behind the irregular motion of atoms. To suppose a principle already moving in regular patterns seems to be, again, an axiom of Stoicism itself. How these patterns come to define something akin to the reflexive activity of a mind, incorporating foreign movements within its pattern, reacting to them and still maintaining its regularity and unity – all this was the main point of interest, and the core of my inquiry. Hopefully, as to the origins of the specific patterns of movement described by the Stoics as peculiar of active bodies, and as to their general relevance as philosophical ideas, more research will be conducted in the future.

Finally, another possible point for future research would be that of carrying onward the historical and philosophical inquiry on the notion of sympathy. Thanks to the volume edited by Schliesser and the recent attention dedicated to it by Holmes, significant steps forward have been made in the understanding of this fascinating notion, but more in-depth studies are needed. Chrysippus' theories were a cardinal point in shifting the notion of sympathy towards a new meaning, and I believe much innovation can be found in other authors. Plotinus seems to me to show the most potential when it comes to exploring an interesting theory of sympathy, not only because he shows extensive knowledge of Stoic theories – as proven by the passage examined in the second chapter – but also because, for him as well, the notion of sympathy intertwines with that of consciousness and self-perception. In *Enneads* IV.3-5 we found his most detailed discussion of sympathy, which, according to Plotinus' definition, works as a *διάδοσις*<sup>301</sup> of soul between things sharing some similarity,<sup>302</sup> possible through the soul's activity "above choice"<sup>303</sup> in the sensible world. What role do these three factors – the Soul acting "above choice", its performing a *διάδοσις*, and the similarity between coaffected objects – play in his overall understanding of sympathy? Answering this and similar questions could provide a starting point for future inquiries on the notion of sympathy and how it was received throughout history.

In conclusion, while the Stoic theories discussed in this work may indeed present some weaknesses and be in need of further refinement, I believe that there is nonetheless value in the originality of the thoughts they advanced, at least in the sense in which a failed attempt in exploring a new perspective still produces some knowledge, albeit only *via negativa*, by showing us what paths are not viable for our future investigations. Should the reader have found some mistakes in this thesis, then, may they serve, for me as well as others, as portals of discovery.

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<sup>301</sup> Plot. 4.3.20.17; 4.4.35.41.

<sup>302</sup> Plot. 4.4.32.13; 4.4.32.19; 4.4.32.22; 4.5.1.36.

<sup>303</sup> Plot. 4.4.36.26.

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