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DETERMINABLES IN STOIC METAPHYSICS

Determinables en metafísica estoica

Abstract: *In this paper, I will propose a solution to a puzzle presented by Chrysippus of Soli (279-206 BC) the third head of the Stoic school. The puzzle concerns the criterion of identity; it has long been understood to appeal to concerns about diachronic identity, but I will show that it is relevant also to synchronic identity. The solution takes the form of an answer to the Growing Argument, an argument claiming that if a part, no matter how small, of an individual, changes, then the whole individual becomes non-identical to what it was before the change. With the Growing Argument as background, I will provide a form of metaphysical explanation framed by some relation characteristic of those holding between determinates and their determinables.*

Keywords*: Hupokeimenon, Substrate, the peculiarly qualified, Identity IGA, Determinables, Determinates.*

Resumen: *En este artículo, propondré una solución a un problema presentado por Crisipo de Soli (279-206 a.c.) el tercer director de la escuela estoica. El problema se refiere al criterio de identidad; durante mucho tiempo se ha entendido que apela a preocupaciones sobre la identidad diacrónica, pero mostraré que también es relevante para la identidad sincrónica. La solución toma la forma de una respuesta al argumento que afirma que si una parte, por pequeña que sea, de un individuo cambia, entonces el individuo en su totalidad se vuelve no idéntico a lo que era antes del cambio. Con este argumento como trasfondo, proporcionaré una forma de explicación metafísica entre los determinables y sus determinados.*

Palabras clave: *Hupokeimenon, Sustrato, lo peculiarmente calificado, Identidad IGA, Determinables, Determinados.*

Introduction: *the Growing Argument* and its problems

In this paper, I will propose a solution to a puzzle presented by Chrysippus of Soli (279-206BC) the third head of the Stoic school. The puzzle concerns the criterion of identity; it has long been understood to appeal to concerns about diachronic identity, but I will show that it is relevant also to synchronic identity. The solution takes the form of an answer to *the Growing Argument*, an argument claiming that if a part, no matter how small, of an individual, changes, then the whole individual becomes non-identical to what it was before the change. With *the Growing Argument* as background, I will provide a form of metaphysical explanation framed by some relation characteristic of those holding between determinates and their determinables.

The Stoics characterize three levels of existence. *The substrate*, the predisposed (as well as the relatively predisposed), *the commonly qualified*, and *the peculiarly qualified*. *The substrate* is concerned with the substances, the material that makes up for the bodies; the predisposed is the disposition the substance has to be united, or blended with another one; the commonly qualified is what is characteristic in

metaphysics as a *Universal*. But the Stoics thought about universals as bodies. Finally, *the peculiarly qualified* is the most interesting aspect. It is not an Aristotelian essence, but it is what makes an individual indistinguishable from other ones.

To get started, I propose a united work done by *the substrate* and *the peculiarly qualified*. I will characterize this as *substrate**. I choose this term because it relates *substrates* as *hupokeimenon* with *the peculiarly qualified*. It explains, in synthesis, the identity for *peculiarly qualified* objects. But it is still a *substrate*. We will see how the solution to *the Growing Argument*, a challenge posed by the academics, as it is presented by Chrysippus amounts to a characteristic feature in the relation among qualities (or properties) as determinables and determinates, determining *the peculiarly qualified*.

The Growing Argument among academics was the argument claiming that if a part of individual changes, then the whole individual can no longer be the same individual as before. It is an argument that pertains to the properties of the parts into the whole. David Sedley explains the content of the argument from the point of view of its origins in Epicharmus, a comic poet from the period of the opening decade of the fifth century B.C. who made the argument famous, hence this problem of identity was in the philosophical waters even before Socrates was born:

> Character A is approached by Character B for payment of his subscription to the running expenses of a forthcoming banquet. Finding himself out of funds, he resorts to asking B the following riddle: 'Say you took an odd number of pebbles, or if you like an even number, and chose to add or subtract a pebble: do you think it would still be the same number?' 'No,' says B. 'Or again, say you took a measure of one cubit and chose to add, or cut off, some other length: that measure would no longer exist, would it? 'No.' 'Well now,' continues A, 'think of men in the same way. One man is growing, another is diminishing, and all are constantly in the process of change. But what by its nature changes and never stays put must already be different from what it has changed from. You and I are different today from who we were yesterday, and by the same argument, we will be different again and never the same in the future. B agrees. A, then, concludes that he is not the same man who contracted the debt yesterday, nor indeed the man who will be attending the banquet. In that case, he can hardly be held responsible for the debt. B, exasperated, strikes A a blow. A protests at this treatment. But this time it is B who neatly sidesteps the protest, by pointing out that by now he is somebody quite different from the man who struck the blow a minute ago (Sedley, 1982, p. 255).

The amusement is essential in the story. The Stoics must have been delighted to have some myth on their own with the same comic structure. Zeno caught a slave of him stealing. "But I was fated to steal!" said the slave, appealing to Zeno's determinism, "and that I should beat you for it!", replied Zeno. The fault lies in Zeno, and in A from Epicharmus' story above, for not presenting a suitable principle on which they hope to rely; in Epicharmus story, A needs to show what differences in the individual make a difference in the person just as much as in Zeno's parody;

Zeno wants to show that exists an unavoidable course of actions and that we may nevertheless be punished for. Epicharmus' and Zeno's stories are about responsibility and these two stories will inevitably overlap. That is why there must be some mistake in *the Growing Argument* as well as in Zeno's determinism. It must be the case that there is some principle underlying in the situation; A must be responsible for contracting the debt and B for beating up A as well as the Slave for stealing, and Zeno for not laying down the proper principle for the slave on his determinism.

But my topic is not about the responsibility the agents must have towards each other. My topic is about how *the Growing Argument* shows that there is something that makes two objects identical, how is it that we are the same despite undergoing changes in our bodies, and also how is it that we are different. I will try to explain whatever properties the identical objects must preserve.

The notion of *Identity in the Growing Argument*

My thesis is that the notion of *Identity in the Growing Argument* (IGA) is the following, IGA**:** An object *o* is identical to *o** if they are both determined by *D*, which is a set of determinables properties in objects *o* and *o** that determine the properties in *o* and *o**. This is a thesis that has resemblances with the way the Platonists thought about growing. Along the same lines of IGA, there is a peculiar feature in the way Socrates conceives *Forms* as the efficient causes and argues for the immortality of the soul in the *Phaedo* (105a-e). He says that the opposites are excluded because of what they determine, as the number "two", excludes its being odd, or fire excludes its being cold. In rejecting the arguments from the *physicists* (as Anaxagoras), Socrates treats identity and difference as a matter of particulars being derived by their *Forms*, hence, in a strictly metaphysical fashion (and I think that he could have considered the wrongness in *the Growing Argument* as a relation among properties as determinates and determinables) *Forms* are determined by the qualifying features in the properties the particular objects must-have. For the Stoics, *the peculiarly qualified* would be the feature that makes an endurance object what it is when being subject to change. But Socrates' exposition of exclusion among opposites (determined objects) (Phaedo: 105a) also includes the oppositions of whatever determines them:

> Not only does the opposite not admit its opposite, but that which brings along some opposite into that which it occupies; that which brings this along will not admit the opposite to that which it brings along (In Grube, 1992, p. 90).

Namely, we can think that once something is determined as hot, the Hot will exclude the opposite of cold, and it is the fire that excludes the Cold, and the ice that excludes the Hot, as well as the Hot that excludes the Cold, and the Cold that excludes the Hot. But this is so because the Cold causes ice, and the Hot causes fire. The Hot doesn't produce the heat, and nor the Cold the freezing temperature. But the Hot and the Cold as *Forms, (efficient causes and objects of knowledge)* produce what we know about the heat and the freezing temperature.

The crucial passage to characterize the objections to the explanations of the natural sciences according to Stephen Menn (2009) is in the *Phaedo* 96c3 - 97b3. Menn divides the passage in four sections where Socrates speaks:

> (I) For I was then so intensely blinded by this investigation even to the things which I had previously understood clearly, as it had seemed to myself and to others, that I unlearned even the things which I previously thought I knew, about many things and in particular about why a man being grows. For previously I thought it was clear to everyone that it was on account of eating and drinking: for when from the food fleshes are added to fleshes and bones to bones, and likewise, kindred things are added to each of the others, then the mass which was small has afterward become large, an in this way the small human being becomes large. So, I thought at that time: and doesn't that seem to you like a fair judgment? (In Grube, 1992, p. 83).

Until here the passage is about how we can combine kindred objects with kindred objects and make an object of the same kind bigger. But the object is big now because of its Bigness, and was small because of its Smallness, and not because of the objects that have been blended. Until here, there is something that makes the objects being occupants of what the Stoics will characterize as a *substrate* (*hupokeimenon*) (I will further argue for this).

But, then, Socrates in Phaedo 96c, explains that the physicists were wrong because they thought about blending substances as a feature that takes place only among corporeal and kindred objects. Socrates continues:

> (II) Then examine these things too I thought it seemed enough to me that when one human being standing next to another appears large, and the other one small, he is larger by a head, and likewise when a horse appears greater than another horse (In Grube, 1992, p. 84).

Namely, there is something that makes objects *o* and *o** characteristically measurable, the qualitative aspect in the objects that makes them being bigger or smaller. This is what the qualifying feature the Stoics will further characterize. The blending of substances is completely qualitative. It takes place among the properties

the objects have. But objects are of all kinds. Not only corporeal. Blending, then, takes place among *abstracta* (or maybe the following is a case of *transition* for the Stoics see, Long and Sedley 39D):

> (III) and even clearer than these, ten seemed to me to be greater than eight on account of two being added to it, and the two-cubit to be great than the one-cubit-long on account of exceeding it by half (In Grube, 1992, p. 84).

So, blending substances is not a matter of *the peculiarly qualified*, among objects, as the Stoics will later think, nor is it a matter of kindred objects, as Socrates intends to show. Socrates then continues:

> (IV) By Zeus', he said, 'I am far from thinking that I know the cause of any of these things, I who do not even accept from myself, when someone add a one to a one, either that the one to which the addition was made has become two, or that the one which was added and the one it was added to became two on account of the addition of the one to the other: for I am astonished if when each of them was separate from the other, each of them was one and they were not then two, but when they have approached each other, this is a cause to them of their becoming two, the occurrence of their being put nose to each other. Nor, if someone divide a one, can I still be persuaded that this too is a cause of their having become two, the division: for the cause of becoming two is the contrary of what it was before. For before the cause was that they were brought together and one was added to the other, whereas now the cause is that one is brought apart and separated from the other (In Grube, 1992, p. 84).

Gregory Vlastos (1973) thinks that in (I), (II) it is not about causes, it is about explanations in general: one thing is bigger than another because of Bigness added to it, not because of whatever corporeal feature was added, so, Vlastos thinks that the explanations are alluding to the "four becauses" of the Aristotelian characterization, the formal, the efficient, the material and the prime cause, respectively. But the characterization of the Stoics will provide confines itself with a relation among *the substrate* and *the peculiarly qualified*. In a way, it is more elegant and economical. This is what I will argue further. But, before that, let's see how the explanations relate *the Growing Argument* with another area of speculation in the *Phaedo*, namely, the immortality of the soul.

The immortality of the Soul

The argument of the immortality of the soul provided by Socrates in the *Republic* book X from 608d to 611d has a nuance that is worth considering as well. *The Growing Argument* comes to mind. Socrates claims in 610b:

> Let's never say that the soul even comes close to being destroyed by a fever or any other disease, or by killing for that matter—not even if one were to cut the entire body into the very smallest pieces—until someone demonstrate to us that these conditions of the body make the soul itself more unjust and more impious (In Grube, 1974, p. 1214).

Namely, people might argue that "a dying man does become more unjust" (610d) because the soul depends on the body, and with no body, no object on which to apply the just remains. But what determines what? Does the body determine the goodness of the soul or the soul determine the goodness of the body? Socrates proceeds:

> We are sure to reply that if what he says is true, injustice must be as deadly as a disease to those who have it and that those who catch it must die because of its own deadly nature—with the worst cases dying quickly and the less serious ones more slowly (610d).

So, it is natural for the unjust soul to die quicker than it is for the just one. Namely, Socrates will attempt a *reductio* for the position claiming that the soul depends on the body, and arguing in favor of the conclusion that the bodily aspect of being just depends on the soul. Socrates' argument is explicitly correlated with *the Growing Argument* in the *Phaedo* 96c (I). No matter how small we direct the body, the soul will not be touched. And no matter how kindred corporeal objects might be subject to change, the explanation relies upon the Bigness or Smallness. And this is why Socrates responded to Crito claiming that he did not understand that when his body dies, he will not die. Socrates argues that the moral properties of the parts, the body, are independent of the moral properties of the soul. The goddess or badness in the body cannot affect the soul, and that is why no matter how small the change is undertaken in the body, it will not affect the person who is responsible for his deeds; the goodness or badness of the soul can affect the body, but the goodness or badness in the body cannot affect the soul.

The latter points to a solution among academics for *the Growing Argument*. The position alluded claims that what determines the moral properties of the soul is independent of what determines the moral properties of the body. The determinable

properties characteristic of the just, or impious, determines a determinate soul, while the determinables of the moral properties determine a determinate body. The just is determinable for the soul, not for the body. Morality, on the other hand, is concerned only with the body, it determines corporeal effects or consequences. Hence, for Plato in the *Phaedo* 96c, *the Growing Argument* is conceived as a problem about what determines what. He might be thinking about the determinables of the just soul and how the just is engaged with the good life in the *Republic* book X from 608d to 611d, regardless of whatever changes the body might undertake. But why are A and B in Epicharmus' story two in number? It is because *twonnes* is added.

There must be some criterion of identity to individuate why A and B, in Epicharmus' story, whatever they are, as two in number, which hopefully, given the necessity of identity, could explain why they are distinct even if, for some predicate F, they are the same F. Namely, even if they are predicated of something, of necessity, they are still different. The same predicate applies in different situations as well. This is why professor Bailey (2014b) thinks that the explanation requires the "necessity" component for Socrates, and not only its sufficiency. A predicate of being "the president of Mexico" could be attributed to different individuals in different circumstances, namely, on different possible worlds and at different times. But what we require, if our duty is to provide necessary truths, is to present the case that explains of necessity why something is caused by X, and not sometimes by X and sometimes by Y, as well why Andres Manuel Lopez Obrador occupies the position, of necessity, of being the president of Mexico in time *t* and world *w*.

Compare *the Growing Argument*, as stated, with the Lazy Argument also discussed at great length by the Stoics in order to relate it with Zeno's determinism. If the world is deterministic, and if it is part of the fate of A that he will be receiving a blow, then B is not responsible for his violent act. This is so because the determination of the identity is not properly laid out. No one can be held responsible for their acts, as A risks from his own position, because the criterion of identity was not being presented clearly, neither in Epicharmus' story nor in Zeno's determinism, which is an argument that alludes to the world as determinate by every and each one of the causes in turn.

The relation between determinables and their determinates is a one-many relation between properties; meanwhile, the distinct idea of determinism is a modal property of a relation between causes or networks of them. For Zeno's determinism, there is only the actual world. But, as I shall argue, these otherwise quite different kinds of relations are not in fact logically independent. The reason why the world is not deterministic, if indeed it is not, is that some causes are not fully determinate, hence, not causing an event X of necessity. As I shall show, some efficient causes are sufficient for their effects without necessitating them; and their failure to necessitate what they nevertheless cause follows from the fact that these causes are not fully determinate.

So, what is the relation taking place between determinables and determinates? This is the way to think about the problem of identity under *The Growing Argument*, hence,

under IGA, e.g., red is the determinable of one of its indefinitely many determinates, crimson. They are not necessarily identical, but they're identical by IGA. Chronic pain is a determinate of pain, and a desire for ice cream is a determinate of a desire, that is the determinable, but they are not necessarily identical with their further determinates, although, chronic pain is (with the "is" of identity) pain by IGA. Neither are the determinables and determinates equivalent. In parallel, something is determinate in an action; the cause of A contracting his debt, having the effect of B punching A in Epicharmus' story. Both, cause and effect in this sense are determinates. But there is the determinable; their respective decision, intention, and their respective character. B is exasperated and A is irresponsible with the "is" of identity. Hence, there is a logical space among determinables and their determinates that allows conceiving something that identifies the individuals A and B, as being what they are by IGA, and maybe something that holds them responsible for their action in a determinable way, even if our topic is metaphysical, and not that of responsibility.

Chrysippus on determinables

The illustration I provided regarding the relation of determinables-determinates will become useful in what follows. Chrysippus, ingeniously, uses a puzzle to help us understand what's wrong with *the Growing Argument*. Imagine a man named Dion, and then, imagine that you can isolate the body from Dion-minus-one-foot, who, for our purposes, we could claim that is another man named Theon. Now, let's say that we grab Dion after being amputated that leaves him with the same body as Theon:

> Chrysippus, the most distinguished member of their school, in his work On the Growing Argument, creates a freak of the following kind. Having first established that it is impossible for two peculiarly qualified individuals to occupy the same substance jointly, he says: 'For the sake of argument, let one man be thought of as whole-limbed, the other as minus one foot. Let the whole-limbed one be called Dion, the defective one Theon. Then let one of Dion's feet be amputated. 'The question arises which one of them has perished, and his claim is that Theon is the stronger candidate […] how can it be that Theon, who has had no part chopped off, has been snatched away, while Dion, whose foot has been amputated, has not perished? 'Necessarily', says Chrysippus.'For Dion, the one whose foot has been cut off has collapsed into the defective substance of Theon, and two peculiarly qualified individuals cannot occupy the same substrate. Therefore, it is necessary that Dion remains while Theon has perished (Long and Sedley, 1987, pp. 171-172).

The peculiarly qualified is characterized as what makes an object, in this case, a corporal object, being what it is. Individuals can be characterized as in some sense including *substrates (hupokeimena)* their matter being conceived independently of the predicates obtaining at them at a time (*huparchein*) (see D. T. J. Bailey, 2014a) a

characteristic feature of synchronic identity. *Substrates* are thus the underlying nature of things subsisting in them. Hence, the reason why Dion survives and Theon is no longer there, is because two *peculiarly qualified* bodies cannot occupy the same *substrate*. But better, the identity of the body cannot be presented by *the peculiarly qualified* individual Theon, for, even if he was there as a part of the individual Dion, *the peculiarly qualified* individual in *the substrate*, or part, namely, Theon, has to disappear. It could be that this is Chrysippus's way of thinking about this because Dion is an individual in a better consolidation than Theon; Dion is a person and Theon is only a "torso", and not a person (See Burke, 1994). So, Theon is a determinate part of Dion, the individual to which its torso belonged. But, what Chrysippus is arguing is that the individual Dion is different from its *peculiar quality* and part named Theon, and when they share *the substrate*, it becomes evident that even two individuals similar in all respects, cannot be identical [i] again, because they cannot occupy the same *substrate*. I will claim that this is rather a problem that arises due to the determinate Theon and the determinable Dion as characterized by the IGA, which is how I will explain the relation taking place from *the substrate* to *the peculiarly qualified* individual, namely, the body.

In the context in which Chrysippus will be presenting his own solution to the puzzle, he is thinking that, at the start of the experiment, "Dion" is the proper name of some whole. "Theon" is the name of a proper part of this whole; hence by Stoic assumptions about the part-whole relation, Theon is not different from Dion. When the proper part becomes presently indistinguishable from the whole, what happens is that the part is eliminated by the erstwhile whole. The idea of *the substrate* is relevant here. It is what makes it the case that one of them should be excluded: according to Chrysippus, *substrates* cannot be shared, even if now it was once a part of the other. Also, it is what makes it the case that two individuals sharing every (empirically detectable) property could still be two in number, here distinct. Due to *the substrate*, the part ceases to be when it comes to having the same *substrate* as the now altered whole. But put more bluntly, what happens is not that the part is the one that should be now replacing the whole. Just because some whole is no more does not mean there is no longer any whole: for every whole, it is the one that determines its own parts; its parts are always determinate given some whole, not the other way around. Parts enjoy their identity only in relation to a whole.

Perhaps this makes the Stoics look more Platonists than Aristotelians. But this is so because the relation of determination has various aspects that we need to emphasize. First:

Substrates: *substrates* are independent of what determinate individuals are obtained in them. *Substrates* come to exist robustly when they allude to what is true, namely, what is obtained, having an individual related to a *substrate*, and, secondly, as long as they do not interact in the world, hence:

Determinables: *the substrate (hupokeimenon*) of an individual can usefully be understood as determinable for an individual.

My thesis is that *substrates* as determinables show how the *hupokeimenon* collapses into being *the substrate* of a different *peculiarly qualified* individual, and this could be explained by the following example. Take *the substrate* of "being the president of Mexico". There is an individual occupying it, namely, Andres Manuel Lopez Obrador in the present time and (actual) world. We need to consider functions as the relation taking place among *the substrate* and the individual who is obtained.

Substrates*: *The substrate** s is a function *F* from world-times to individuals: it is of type (ιωτ)

*Substrates** are what descriptions denote, although they do not denote the individual who happens to occupy *the substrate* (without the *). Here, ω is the type of a world and τ is the type of a time. When we assign an individual to a *substrate** as its occupant we specify how an individual is being obtained as a distinctive niche within a world ω and a time τ. With s*ubstrates** at hand, we can now formulate the solution to the problem of how it is that if we substitute, say, Theon for Dion, two *peculiarly qualified* individuals, in the same *substrate*, as an individual in a *substrate**. What happens is that there is a function mapping individual into *substrates*, which is *the substrate**. So, now, our claim that predicates being attached to Dion and Theon are of the same *substrate** is fleshed out. Namely, it is a function in the mapping sense of individuals (ι) to truth values (ο) through a world-time (ωτ) which happen to contingently coincide. Hence, *the substrate** is determinable for *the substrate*, which in turn is determinable for *the peculiarly qualified* individual, Dion. Not so for Theon, who happens to be determinate of Dion, and happens to be obtained in a world-time, without eliminating Theon, the other *peculiarly qualified* individual, but, mapping both through the same *substrate**. So, as long as names of *the peculiarly qualified* individuals and their respective descriptions are similar when attaching predicates to Dion and Theon, their descriptions will refer to *substrates** in the following way:

Denotation: A description d1 (in a language L) denotes a *substrate** if of the predicate *F* as attached to Dion or Theon depending on the world-time in which *the peculiarly qualified* individual occupies *the substrate*.

Along the same lines of the problems that can be confronted by substituting Theon for Dion in Chrysippus' puzzle, we find problems with extensionalism on predicates, namely, with the following thesis:

Predicate Extensionalism (henceforth PE): Two predicates are coextensive if they are true of the same objects (in fact) and so every property is identified with its extension.

The problem with PE is that predicates could be iterated in a wide variety of ways referring to different objects, e.g., "moving the lips and throat in such and such a way" is not the same as "singing", even when the phenomena taking place is the same. But they refer to the same thing for PE. So, PE doesn't have the resources to distinguish the different peculiar qualities or properties as different objects within the same individual. Not even aspects of the same individual. For PE the wide variety of predicates referring to the same object is just a matter of shifting from speaking of objects to speaking about words. We can speak of the same object in different ways. So, we need to introduce properties of *substrates** as well as properties for individuals:

Properties: Predicates denote properties; mappings from world-times to classes of entities. A one-place property P can be truly predicated of a *substrate** s if and only if (a) either P is an individual property and the individual that is obtained in ***the substrate**** has P, or (b) it's a *substrate** property and *the substrate** itself has it.

If we were to introduce **Properties** for PE, we would be rather introducing **Properties** for *substrates** as well, we would have a rather robust ontological framework. This is the robust framework in which Chrysippus seemed to flesh out his solution to the puzzle. This system makes the Stoics look more Platonists than Aristotelians, but that is a price to pay for the solution that Chrysippus evokes. It has explanatory power in different domains within the Stoic system, as we will see. His solution to *the Growing Argument* amounts to a projection of ingenious

nourishment for the Stoic system against the Platonists, as well as explicating many problems within the Platonist system.

Explanatory power as Stoic Commensurateness under Chrysippus' solution to *the Growing Argument*

If I break the window and if you ask me, why did I break it, it would not be correct to point out to some nomological character in the phenomena that took place in our surroundings, *e.g*., it would be useless for the purposes you are asking me to consider to claim that it was because rocks are harder than crystal. If I offer these kinds of explanations, you would certainly think that my explanations would be mistaken. Rather, if I claim that it is because I was angry, then that would have explained why I broke the window better than specifying any other plethora of phenomena.

There is one of the explanations, specifically, that characterizes the event, namely, by the predicate *being angry* as a determinate of my character, and my character being what properly explains why I broke the window. Notice now how if you ask me why I am wearing a red shirt, I could provide a specific explanation. It would be different than the one I could provide if you ask me why is my shirt red, and even further, your question would point to something really interesting if you simply ask: "why is red?". That would be like asking why is red a color. It would strike you as a false form of explanation if I say that it is red because I see it red for these two forms of questions. That would be question-begging, at most. My seeing it red would not amount to why I am wearing a red shirt, neither to why it is red, which is what you are pointing out. In this case, you are asking me again to offer a form of explanation that should be specific for the event in question, not for the *Form* in question.

If something is of a specific color in virtue of its being red, then this amounts to why is it is of that color. The color could explain its being red. Intentional explanations correspond to this form. Very commonly, they reflect some properties in the explanation that allows considering why two individuals with all properties need not be mutually exclusive *unless they are occupying the same substrate*,* which is something Chrysippus' solution to *the Growing Argument* is inviting us to consider.

We have now noticed that determinables are something like thin properties, e.g., color, sound, and taste. Determinates could be thick properties like *red, loud,* and *sweet,* respectively for each determinable. If determinables are determinates of other determinables, then perhaps this is something that can be easily explored in this context due to transitivity. Determination amounts to some form of *universalization*: if an object *O* has feature *F* and instantiates feature *G* at *t*, then every other object *O** with feature *F* must instantiate feature *G* at *t**. This entails in turn the relation of *determination* of *G* in *F*. Determination, hence, could mean that there cannot be a difference in a set of properties without some difference in another

set of properties. This is the main concept underlying the position of determination as the one intently discussed by the Stoics as *Fate* (see Long and Sedley, 1987, 55). This is why we could also include the same notion in a discussion of Zeno's determinism.

A logic of determinables at hand is presented by Yablo (1992) in this way:

> Property *F* determines property *G* if for a thing to be *F* is for it to be *G*, not *simpliciter*, but in a specific way, and *F* determines *G* only if: necessarily, for all x, if *x* has *G,* then *x* has *F*; and possibly, for some *x*, *x* has *F* but lacks *G* (p. 262).

This thesis is constituted by two notions. The first part on the right-hand side of the biconditional claims that if any property is of a specific nature, then it is determined by its nature. The second part on the right-hand side of the next biconditional claims that a thing with a specific nature is necessary of that specific nature, and the specificity is contingent on its nature.

Notice how these relations are characteristic of the solution that figured in *the Growing Argument* offered by Chrysippus, and the one-under IGA happens to be the same. Explaining why Dion is the one who survives is because of its *substrate**. Chrysippus notion with IGA entail the following thesis for this form of explanations:

Commensurateness: when the determinable property is commensurate to the effect, it becomes determinate (see figure 1 below).

Due to **commensurateness**, determinables can become determinates. The explanation of Dion being the one who survives could be fruitful for the purposes of explicating through commensurateness. For even when Theon could have been a part of Dion, and Dion being turned into a body identical with Theon, still, Dion, the determinable, is the one who survives:

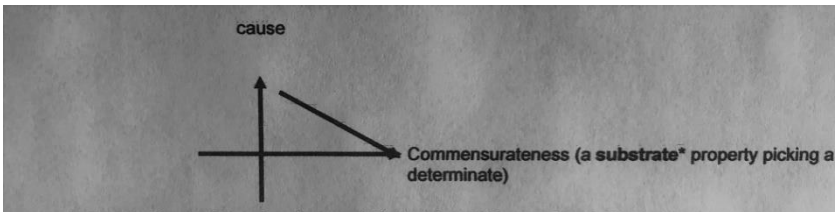

Figure 1. A vertical line of causation collides with the horizontal line of determination in a set of determinants.

When a coalition takes place, the vertical line tells us at what point the horizontal lines are correctly matching the determinate, so that they are genuine explanatory causes of the effect, which is the intersection taking place in the collapsing of the diagonal line into one of the determinates that it's being picked. The vertical line of causation becomes commensurate to the effect.

Schemas over debates in contemporary philosophy of mind, concerned with the notion of *supervenience* (see Kim, 2005) as an explanation of the irreducibility or reducibility of the mental to the physical are of this type. But the problem that arises with this schema is that we could have a chain of determinables determining other determinates, probably, in an unbounded chain due to its transitivity. Just like an unbounded chain of causes and effects, having effects as causes, we could have in our place a chain of determinates being determinables of other determinates. The contemporary consensus is that the most determinate properties are always more explanatory powerful (although, this is contested by Wilson, 2012).

But this problem is avoided by grounds that are characteristic of the *determinable* properties. If there could be *being evil* as the determinable of *being bad*, as its determinate, which in turn is a determinable of other determinate like *being cruel,* then we could iterate predicates without a lowest bound, and neither un upper bound. The same could happen for the ordered set. Succinctly, we could ask if the ellipsis halts at some point. But here is an answer. Introduce *substrates**.

We stop the chain of explanations with the deictic expression “this is Spanish crimson” (see figure 1) referring to *the substrate**; we point to what makes Spanish crimson as the color it is with no need to follow further explanations in the chain of determinables and determinates being determinables of other determinates. But now, another form of the objection could still arise to this view: if its *substrate** is due to its own determinable (what makes it a determinate), then this iteration would hardly let us understand what is a *substrate**. This distinction could undermine its own purpose, namely, provide the best understanding of the properties for *substrates**, and even, provide a good metaphysical explanation of the relation among quality and objects having those qualities. For, if there is a *substrate**, then it

is not qualitative. *Substrates** provide ontological determinacy to the indeterminacy that the logic of determinables seems to invite. But every *substrate** property could accompany the unbounded chain of iterations among determinables and determinates being determinables of other determinates, maybe, until we find a gunky universe (see Nolan, 2006). Then, the ellipsis halts. If an explanation is going to do its work, then the determinable needs to be *commensurate* to the determinate, producing an effect, or an event in question.

Commensurateness is distinguished by two properties, *contingency,* and *necessity*. *Contingency* is the claim that there could be an *F*, which is a determinable with no *G*, which is a determinate property. *Necessity* is the converse form, that for every determinate *G*, it is necessary that it is an *F*. To see why this is a good approximation to the problem of identity presented at the beginning under IGA, and why it is an entirely Stoic approximation that solves as well problems for the Platonists, think of an example of the problem that arises when we take two different types of phenomena as one: it is because they are mapped by the same *substrate**. But more specifically, we will think about the problems that arise with identity under the incorporeals. The best example is the *Lekta*, or the Sayables.

Lekta as causes

Evidence from the writings of the Stoics shows that for them cause is bodily or material; or at least, the left-hand side of the causal relation is corporeal. For the Stoics, whatever happens, having a cause in the world, is corporeal or material. But they also show that effects have an informational aspect too, a non-bodily effect:

> The stoics say that every cause is a body that causes something incorporeal in a body. For example, a scalpel, which is a body, causes in flesh, which is a body, the incorporeal predicate 'being cut' (Inwood and Gerson, 2008, p. 211).

What is followed by the cause could be a state of affairs or an event. But mostly, there is something graspable by our thought. It is a predicate, like 'being cut' when the scalpel is causing the cut in my finger. They are predicates in relation to an object, like 'having thirst', or 'being hungry', which can be caused by the lack of water or the lack of food in the body, respectively. Compare the view presented by Stoics in the puzzle of *lekta*, or sayable; the incorporeals among incorporeals. We come to understand predicate position only because there is an invariant phenomenon in our minds, the content of our thought — the *lekta* (as complete sayables) is what is ordered, and what helps us to understand other incorporeal like a *place*, *time,* and

the *void.* In an explicit and comprehensive study of Stoic metaphysics, Professor D. T. J. Bailey (2014a) comments on the latter:

> Intuitively there is some sort of priority among the incorporeals enjoyed by complete sayables. For only complete sayables stand in a certain asymmetric relation to the other kinds of incorporeals. All the incorporeals bring with them sayables, automatically. If there are times, places, and the void, then there are true and false propositions about times, places, and the void. And complete sayables themselves bring more of their own kind in their train: if there are true and false propositions, then there are true and false propositions about those propositions (Bailey, 2014a, p. 258).

Hence, *lekta,* invariant and ordered, subsume other incorporeals because bivalence is the realm of *lekta,* and everything is subsumed under bivalence. And I would add to what Professor Bailey claims, that Lekta is great example of *the substrates** of *the substrates*.

There are incomplete sayables and complete sayables. On one hand, complete ones are sentence-*like* as long as they are contingent. Deicticts, for this matter, which I used to present the way commensurateness takes place, due to *substrates**, on the last section, conform complete sayables as when we say “This man”. As we noticed before, they are grammatically well-formed sentences, like ‘Javier is drinking wine’ and ‘This man is drinking wine’*.* On the other hand, incomplete ones are predicates like ‘*drinks wine*’. In this manner, the name *Javier* would be also an incomplete sayable. But both kinds transfer meaning and gives us an understanding of what we allude to in the world. A problem arises because as long as they interact with qualifying individuals, they need to be confronted with the idea that whatever interacts in the world has to be corporeal. As we see it, this is not a real problem for the Stoics, and this is explainable by a specific kind of complete sayables: deictics.

The relation of corporals and incorporeals, evidenced by the *lekta* that Stoics characterized in their view, is directly connected to the view Chrysippus was presenting in the argument from the last section. The criteria of identity are linked to the fact that two individuals cannot occupy the same *substrate**, even when they can occupy the same *substrate*. This argument is in company with the determination in determinants view of the Stoics, claiming that whatever has the capacity to act in the world and produce effects has to be bodily, as Seneca in *Letters on ethics* claims:

> Our school believes that the good is a body because that which is good acts and whatever acts is a body. What is good benefits [someone], but for something to benefit [someone] it ought to act, and if it acts, it is a body? [Platonists] say that wisdom is good; it follows that it is also necessary to say that it is corporeal. But being wise is not in the same category. It is an incorporeal attribute of something else, namely, wisdom; consequently, it neither acts nor

> benefits [anyone]. “What then?” he says, “Do we not say that being wise is good?” (In Inwood, 2008, p. 90).

When contemporary philosophers over debates in philosophy of mind claim that something is not active in the world, but still is acted on and is dependent on what is active, they use the title “*epiphenomena”* — which are properties floating free of any causal chain. Seneca, from the passage above, is reconstructing the problem when meshing the subject position with the predicate position, correlated with the bodily (cause) and the incorporeal (the effect or the predicate), respectively. In this sense, the effect would be mere *epiphenomena*. And, in our debate over passage 96c in the *Phaedo*, if the good is not corporeal then it cannot be active. But this is what the Stoics did not conceive as a problem; for them, there are no such things as epiphenomena. They were considering that a determinable is an efficient aspect in a property when it is commensurate to the effect and becomes determinate, corporeal. The form of the principle that we can consider as the weak principle of determination in determinants is the following:

CP. If *x* causes *y*, and *x* is **C**, then *y* is **C** (where **C** is corporeal).

This would be denied by the Stoics if we do not include qualifying properties of **C**, and further, if we do not include incorporeals as the efficient aspects of the properties in **C**. Notice that from this thesis we cannot infer that whatever causes *y*, and if *y* is **I**, then *x* has to be **I** (where **I** is incorporeal). The relation of this principle is not symmetric. It does not transfer the properties of the effect to the causes, but it does transfer the properties of the cause to some of the effects.

The way we have posed the question could be interpreted differently when presented against Platonists — indicating that the question could refer to an identity between the thing said and the thing referred, namely, the corporeal and the incorporeal, respectively. **CP** conflicts with something Seneca is also pointing out, which is the following thesis:

S. Sayables, complete and incomplete ones, are effects, and as sayables they are incorporeals.

S includes part of what is acted on. Due to **CP**, which is a thesis characteristic of determination in determinants, there could be something going on in our body as

cause and effect. When something causes in our mind to grasp a sayable there could be a brain state, or a bodily state, allowing us to move our lips, tongue, nerves, and the synaptic interaction in our brains. But that is not what we are most interested in when we recognize that there are sayables. They are the informational state captured by the meaning, the meaning of our expressions, and meaning is not corporeal neither information.

This is why there cannot be an identity either among predicates for then one thing would be corporeal and incorporeal at the same time, which is impossible according to the criterion of *the* ***substrates****** which we already discussed in our last section, where bivalence, the realm of the *lekta*, is respected. That is why the question of whether being wise is good is presented by the academics and discussed by Seneca, to wit, because the good can cause something in the world. In this sense, the Stoics might have accepted what came to be named as the *Eleatic* principle to account for the good as being an efficient cause, which provides the basis of **CP**. This principle, which here I interpreted as **CP**, appears in Plato's Dialogue entitled *the Sophist* and is found in the following passage? (247 D 8—E 4) when the stranger from Elea is speaking:

> I mean that a thing really is if it has any capacity at all, either by nature to do something to something else, or to have even the smallest thing done to it, even by the most trivial thing, and even if only once. I'll take it as a definition that beings are nothing other than those things with capacity. (In Bailey, 2014a, p. 258).

This principle could mean that whatever can cause and whatever can be subject to causing joins the respectable notion of being; *non entia non grata.* And if this is the case, then, as long as predicates are caused, and if whatever is caused has "even the smallest thing done to it", then predicates also earn their place in what is being, and not only bodily things. They are *somethings*.

The way Seneca is presenting the idea when discussing if wisdom is good because it causes, and hence, the good is corporeal as well as wisdom, indicates that the answer is subtler: it is not an identity of what is in play among the good and wisdom, the determinable and the determinate as becoming identical, it is IGA. It is rather this notion taking place. Both depend on their fundamental determinable. The evidence is found next in the same paragraph where Seneca further claims: "We do say so but only by reference to that on which it depends, *i.e*., to wisdom itself" (In Bailey, 2014a, p. 258). [ii] Where dependence is that simple notion of how a determinate in a property depends on its determinable.

Wisdom is a body according to Seneca, and it is the causal power of a body we have in mind when we say "wisdom is good" because we refer to that on which it depends. Hence, Wisdom could be the determinable of knowing peculiar things for life and

wellbeing. 'Being wise' is good because it depends on wisdom itself, which in turn, for Platonists, depends on the good, but for Stoics, depends on something that has to be bodily: wisdom itself as the commonly qualified, which, causes *the peculiarly qualified* of being wise. The way this works is because 'being wise' is not bodily and is good, and it need not be a body in order to play the role it does in wisdom's making thing's good. It is just a necessary condition for the activity of wisdom. In this sense, it is what explains fundamentally, what grounds its further determinates.

Seneca referred to wisdom as the cause, which cannot be an incorporeal acting in the world because everything that acts on the world is corporeal. But he allows that 'being wise', which in principle is incorporeal, is something we could *have* in thought, something that is said of something but not that causes something directly in the world. This is so because it is "***dependent***", as he emphatically claims. But it cannot be a mere epiphenomenon either, because these effects cause something in turn, and that is so even when they have a dependent on something corporeal, in this case, 'wisdom'. Hence, this might seem like if Seneca is presenting the thesis that there are cases when the incorporeal depends on the corporeal and confronting it with the thesis held by later Platonists: there are cases where the corporeal depends on the incorporeal (as shown in the beginning). But rather, what is going on is that Seneca is presenting the case where due to the fact that the so-called dependent property is the determinable property, then the event could have a determinate, but the cause need not be the determinate, instead, it could be the determinable identifiable by IGA with the property that is doing the work of explaining.

Conclusion

This notion of determinable and determinates, therefore, appears in the solution of the puzzle that can be confronted in the explanation of what makes the relation of incorporeals and corporeals unproblematic for the Stoics. The notion of metaphysical dependence and causation, hence, is made explicit by the characterization of determinables and determinates already illuminated by Stoic metaphysics when including the work *substrates** can do in solution to *the Growing Argument* presented by Chrysippus, the third head of the Stoic school. Our notion of IGA does the work of explaining identity under contingent circumstances, although, of necessity.

References

Bailey D. T. J. (2014a). The Structure of Stoic Metaphysics. In *Oxford Studies in Ancient Philosophy*, (pp. 253-309), vol. 46. Reino Unido: Oxford University Press.

_____. (2014b). Platonic Causes Revisited. *Journal of the History of Philosophy*, (15-32). vol. 52.

Black, M. (1952). The identity of indiscernibles. In *Mind,* Vol. 51 No. 1. Pp. 204-216.

Burke, M. (1994). Dion and Theon: An Essentialist Solution to an Ancient Puzzle. In *The Journal of Philosophy,* Vol. 91, No. 3. Pp. 129-139.

Grube, G. M. A., and Reeve. (1992). "Phaedo". In Cooper John M., and Hutchinson, D. S. (eds.). (1997). *Plato Complete Works*. (Pp. 49-100). Cambridge: Hackett Publishing.

Grube, G. M. A., and Reeve. (1974). "Republic". In Cooper John M., and Hutchinson, D. S. (eds.). (1997). *Plato Complete Works*. (Pp. 971- 1223). Cambridge: Hackett Publishing.

Inwood, B. and Gerson L. P. (2008). *The Stoics Reader.* Cambridge: Hackett Publishing.

Long A. A. and Sedley D. N. (1987). *The Hellenistic Philosophers Vol 1.* Cambridge: University Press.

Menn, Stephen. (2010). On Socrates' First Objections to the Physicists. In *Oxford Studies on Ancient Philosophy*, (pp. 37-68), vol. 38. Reino Unido: Oxford University Press.

Nolan, D. (2006). Stoic Gunk. In *Phronesis*, Vol. 51, No. 2. Pp. 162-183.

Prior, N. A. (1949). Determinables, Determinates, and Determinants. In *Mind*, New Series, Vol. 58, No. 230. Pp. 178-194.

Sedley, D. (1982). The Stoic Criterion of Identity. In *Phronesis*, Vol. 27, No. 3. Pp. 255-275.

Vlastos, Gregory (1973). Reasons and Causes in the *Phaedo.* In *Platonic Studies*, edited by Gregory Vlastos, pp. 76–110. Princeton, NJ: Princeton University Press.

Yablo, S. (1992). Mental Causation. In *Philosophical Review* 101. Pp. 245–80.

Notes

[i] Compare this observation with the principle of the identity of indiscernibles, where, if two individuals share every property, then they are one. In contrast, compare it with the indiscernibility of identicals, where if two individuals are the same, then, they must have every property shared in common. The second one seems more obvious than the first one. For discussion of these principles see Max Black “The identity of indiscernibles”, in *Mind* Vol. 51 (1952 pp. 204-16)

[ii] Wisdom, as a peculiar universal, is working as *the substrate* for every wise person. The problem of universals in stoic metaphysics is better characterized, in this context, by D. T. J. Bailey in “The Structure of Stoic Metaphysics”, in *Oxford Studies of Ancient Philosophy*, Vol 46, 2014.