Recebido em 16-09-2024
Aceite para publicação em 15-10-2024

Revista Filosófica de Coimbra
vol. 34, n.º 67 (2025)
ISSN: 0872-0851
DOI: https://doi.org/10.14195/0872-0851_67_8

HYLOMORPHISM: ARISTOTLE'S SNUB NOSE, DESCARTES'S WAX, KANT'S PLATE AND DOG, HUSSERL'S BROWN BOTTLE OF BIER

NOTES ON *THE HISTORY OF THE HYLOMORPHISM: FROM ARISTOTLE TO DESCARTES* (OXFORD: OUP, 2023).
ISBN 978-0-19-289766-4 DOI: 10.1093/OSO/9780192897664.001.0001

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1. Hylomorphism

The main aim of the recent book *The History of the Hylomorfism: From Aristotle to Descartes* is to present the approach of hylomorphism to some philosophical issues.[2] This simple question *what is hylomorphism?*[3] *isn't so straightforward to answer. It's about how shape or form (morphē, eidos*) and matter (*hylē*) are connected. The chapters look at authors who, after Aristotle, looked closely at this link between matter and form, body and soul, and the schools they set up. Sometimes their answers were like Aristotle's ideas, following along the same lines. Other times, though, their research pulled apart the close connection between form and matter. Descartes goes to the extreme, radically separating soul from body. This book covers a spanning period of two thousand years from Aristotle until Descartes: Epicurus and Epicureanism, the Stoics and Stoicism, Alexander of Aphrodisias, Galen,

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[2] Cf. Gordon P. Barnes, "The Paradoxes of Hylomorphism", *The Review of Metaphysics* 56, no. 3, 2003, 501-23; Mark Johnston, "Hylomorphism." *The Journal of Philosophy* 103, no. 12, 2006, 652-98; Michael C. Rea. "Hylomorphism reconditioned", *Philosophical Perspectives* 25, 2011, 341-58. Gideon Manning, "The History of 'Hylomorphism.'" *Journal of the History of Ideas* 74, no. 2, 2013, 173-87; M. Peramatzis, "What is a form in Aristotle's Hylomorphism?", *History of Philosophy Quarterly*, *32*(3), 2015, 195-216; Charlotte Witt, "Hylomorphism in Aristotle", *The Journal of Philosophy* 84, no. 11, 1987, 673-79.

[3] Michael C. Rea, "Hylomorphism reconditioned", *Philosophical Perspectives* 25, 2011, 341-58.

Plotinus, Neoplatonism, Philoponus, Avicenna, Averroes, Aquinas, Suarez, Descartes, following the body-soul problem and the traditional aporetic solutions: Emergentism, Pan-psychism, Reductionism, Materialism, Holism, etc.). Therefore, the selection of authors included in the index is based on both systematic considerations, as the editor pointed out, and historic reasons.

In this critical review, we will focus mainly on

1. on the two authors who defined the arch: Aristotle and Descartes. I'll read David Charles's detailed and insightful introduction, referring to his book 2021 whenever necessary.
2. I'll also read Lilli Alanen's chapter on Descartes. 6. Perceiving Descartes' wax candle burning.[4]
3. I will also venture a glimpse into the future of the narrative. 7. Kant's plate[5] circularity and geometric circles in the "Doctrine of Schematism" (resembling David Charles's Sigma-Structure)[6] and
4. We will try to catch up with the phenomenological stance, analysing 7. Husserl's "brown bottle of beer",[7] where the *morphē-hylē* relationship undergoes a transformation in his analyses of time consciousness.

Both Kant and Husserl attempt to address Descartes' perplexing dual--substance proposal. Kant seeks a middle ground by linking categories with intuitions. "Thoughts without contents are empty and intuitions without concepts are blind [*Gedanken ohne Inhalt sind leer, Anschauungen ohne Begriffe sind blind*]" (Kant KrV B75, A48) while Husserl links matter without forms [*formloser Stoff*] and forms without matter [*stofflose Form*] (Husserl 1913 Ideen, §85, p. 173).

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[4] René Descartes, *Meditationes de Prima Philosophia*. In *Œuvres de Descartes* (vol. 7, edited by Charles Adam and Paul Tannery. Paris: Léopold Cerf, 1904). (Translation used: René Descartes, *Meditations on First Philosophy: With Selections from the Objections and Replies*, translated and edited by John Cottingham. 2nd ed., Cambridge: Cambridge University Press, 2017).

[5] Immanuel Kant, *Kritik der reinen Vernunft* (Riga: Johann Friedrich Hartknoch, 1781). (Translation used: Immanuel Kant, *Critique of Pure Reason*. Translated and edited by Paul Guyer and Allen W. Wood, Cambridge: Cambridge University Press, 1998).

[6] David Charles, *The Undivided Self: Aristotle and the 'Mind-Body Problem'* (Oxford: Oxford University Press, 2021).

[7] Edmund Husserl, *Zur Phänomenologie des inneren Zeitbewusstseins (1893-1917)*. Edited by Rudolf Boehm. Husserliana X. The Hague: Martinus Nijhoff, 1966. (Translation used but modified: Edmund Husserl, *On the Phenomenology of the Consciousness of Internal Time (1893-1917)*. Translated by John Barnett Brough, Dordrecht: Kluwer Academic Publishers, 1991).

First things first. Diachronic studies provide an essential perspective on the evolution of philosophical traditions, enabling a deeper understanding of how contemporary philosophical questions have emerged. Such investigations can reveal critical assumptions, errors, or missteps from historical contexts. This insight can suggest that present philosophical challenges might be more effectively conceptualised or addressed if re-evaluated in light of past formulations.

It is an overly optimistic view to assume that all philosophical problems are ideally framed when first encountered. A comprehensive examination of the historical development of a subject can lead to a more profound understanding of certain philosophical issues compared to a narrow focus on individual past philosophers or specific sections of their works.

While studies dedicated to particular authors or writings are undoubtedly valuable, diachronic investigations hold a unique and indispensable role in understanding the influence of historical context on current philosophical thought[8].

From a philosophical point of view, the introduction to the problem is difficult. On the one hand, it introduces hylomorphism as a descriptive account of real entities that are already understood to consist of two elements or 'parts', matter (*hylē*) and form (*morphē*) - human beings, animals (horses, cows, cats, dogs), plants (lettuce, cabbage), artefacts (pieces of furniture, cars), mountains, plains, plateaus, rivers, oceans, the sky and the earth. On the other hand, we don't realise that what we are experiencing is a 'double' rather than a single concrete singular being.

What each of us sees is a human being and not a composite of soul and body, nor the shape of the mountain and its mineral components, nor the spherical shape of the football and the leather it is made of. Just as when we eat a salad we know that lettuce and cabbage taste different even though they have similar shapes. Natural substances: human beings, artefacts, footballs are already hylomorphic as a whole. True, they are composed of matter (*hylē*) and form (*morphē*), but we don't see "cylindrical configurations", "leather", "clay". We see people, footballs and plates. On the other hand, we don't see "spirits", "spheres", "discs". Natural substances are to be understood as particular people, footballs, plates. These beings are never static. Their complexity lies in the way they are "acted upon" by us, how they behave, how they react, how we deal with them, how they are appropriate, how they adapt to use. In this sense, they offer possibilities even when they are 'still', when they are mere 'things', mere 'objects'. They don't act spontaneously. Human beings, on the other hand, are souls, have mind and spirit as their forms, which shape and manifest behaviours, manners, ways of being[9].

[8] Charles, *The history of Hylomorphism: From Aristotle to Descartes*, vii.

[9] Charles, *The history of Hylomorphism,* 2.

Let's take a bronze sphere as an example. The bronze ball is a unified object. If it were disintegrated into fragments of bronze, melted down, cut into pieces, "it would cease to be a unified object"[10]. The variation of matter or ingredient allows us to perceive the identity of a natural substance. The form or structure remains constant. The variation of form or structure, on the other hand, allows us to perceive the permanence of the matter or ingredient of a natural substance. The bronze ball is a ball of bronze. The bronze is its matter. The round shape is its form. Its circularity is what makes this object a sphere. The bronze could have been moulded into various objects: cube, pyramid, prism, oval egg, or left as a lump of bronze, unformed, or melted down, cut in two: it would cease to be a sphere[11].

Bronze is a versatile material capable of being manipulated into a variety of forms, including being melted, cut, disintegrated, and reshaped. It can be crafted into numerous geometric figures such as orthogonal polygons, pyramids, parallelepipeds, cubes, and notably, spheres. The spherical shape specifically enables a ball to roll and move in its characteristic manner[12].

Conversely, spheres and balls are constructed from a diverse range of materials such as marble, iron, and wood. The disintegration or neutralisation of a material disrupts the cohesive relationship that binds form and matter. This does not imply the disappearance of both; rather, the original form undergoes deformation and transformation, and the material is either substituted, associated with another, or it merges and disintegrates.

The opposing viewpoint emphasizes the dynamic nature of a ball or sphere. Unlike objects with broad bases, spheres lack inherent stability due to their single point of contact with surfaces. Even if the physical point of a bronze ball is somewhat wider than that of an idealized geometric sphere (which, incidentally, doesn't exist physically), it still falls short as a paperweight compared to a bronze cube.

The question is whether we perceive from our natural standpoint "bronze spheres" or "what does it take for us to see bronze spheres?" When we observe a ball, we might say we see a "spherical object". "To be spherical" (shape) retains the same meaning across different objects and is recognised as a geometric shape. Being spherical varies when it is "predicated on or instantiated in different types of objects"[13]. A ball is a *pollachōs legomenon* (football, handball, basketball, billiards, petanque). Being spherical also pertains to marbles, cannonballs, bullets, and beads.

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[10] Charles, *The history of Hylomorphism,* 2.
[11] Charles, *The history of Hylomorphism,* 1.
[12] Charles, *The history of Hylomorphism,* 2.
[13] Charles, *The Undivided Self: Aristotle and the 'Mind-Body Problem'*, 47.

The manner in which we manipulate various ball shapes, sizes, and materials – whether we engage in play with feet, hands, or both, in water or on the pitch – entails a specific interpretation of movement, point of application, throw, reception, kick, defence, attack, ornamentation, use, etc. Sphere-shaped objects may also serve as lethal forms (bullets, cannons) or as remedies (lead for a tooth).

The hylomorphic relationship explores not only natural substances in reality – both the form and material of objects – but also in the mind, involving desires and their contents. It delves into each element's specific behaviours and the intricate connections between the human mind and body, and external objects. Every mind is inherently somatic, and every sōma fundamentally mental. Furthermore, the atmosphere in which life unfolds is mental. This does not imply all content is mental, but that it is shaped by mental access or relationships, structured by the mind's form. This structure enables the body to interact with external objects. For instance, identifying how a ball is kicked, or the goalkeeper's technique – whether catching with both hands or punching – reflects a mental interpretation of the action, rather than the geometry of the sphere.

1. Essence, unity, particularity, action

Aristotle endeavoured to elucidate what constitutes the essence of specific objects, be they a distinct human or a bronze ball, thereby granting them their unique identities.[14] "Aristotle aimed to say what makes a particular object, such as the particular human or bronze ball before us, the object it is." (Charles 2023: 2) He ascribed this identity formation to what he termed the 'formal cause' – the essential form or shape of an object. "His answer involves, in his terminology, its 'formal cause': its form (or shape)[15]." For these forms to be actualized, they must be embodied in matter. "[Such] forms have to be instantiated in matter to exist as the forms that are[16]." Aristotle distinguished between the forms inherent in natural substances – which instigate various processes – and those of mathematical or geometrical entities, which lack the capacity to enact physical changes. "The forms of natural substances are the starting points (or 'efficient' causes) of various processes."

[14] Qingyun Cao, "Aristotle on the Unity of Composite Substance", *Frontiers of Philosophy in China* 10, no. 3 (2015): 457-73; Kit Fine, "Towards a Theory of Part." *The Journal of Philosophy* 107, no. 11 (2010): 559-89; Edwin Hartman, "Aristotle on the Identity of Substance and Essence", *The Philosophical Review* 85, no. 4, 1976, 545-61.

[15] Charles, *The history of Hylomorphism,* 2.

[16] Charles, *The history of Hylomorphism,* 2.

In contrast, mathematical forms are unable to exert any influence over physical objects. "As Aristotle put it: 'mathematical triangles do not cut'."[17] He posited that form and matter provide a more fundamental explanation than the objects themselves, which they partly constitute. "Form and matter were explanatorily more basic than the objects of which they are, in some way, 'parts'."[18]

Is the interplay between matter and form amenable to abstract inquiry? "Is the relationship between matter and form open to abstract questioning?" Does abstraction reduce the significance of matter, or does decomposing elements into simpler parts undermine form? "Does abstraction neutralise matter? Does the analysis of elementary components suspend form?" Alternatively, might abstraction and concretisation represent two sides of the same analytical coin? "Or are abstraction and concretisation two complementary directions of the same analysis?" Aristotle's scrutiny encompasses a wide array of entities: from living beings (humans, horses, oxen, bees, plants, trees) to artefacts (houses, musical instruments, weapons), cognitive functions (perceptions), epistemological knowledge (grammar), scientific knowledge (mathematics, geometry, logic), and emotions (desire, anger, fear). From a hylomorphic standpoint, how do we engage with these entities (onta)? What insights do we uncover, and how do we ascertain the material and formal elements and their interconnections? How can we approach them from a hylomorphic perspective? What can we gain from this perspective? How do we identify the material element, the formal element, and the connection between the two: form and matter?"

(a) What is Aristotle's objective when he questions what defines a particular being, or what constitutes its essence? "[Essence] What exactly is Aristotle looking for when asking what makes this particular being the object it is? Or what does it take for a being to be the being it is?"

Is he exploring the essence (essentia) of a being, even when it doesn't physically exist? "Is he asking for the essence (essentia) of a being even when it doesn't exist?" We recognize the variations among humans, horses, plants, artifacts, balls, numbers, and geometric shapes. A being exists not only in essence but as a tangible entity: this specific person here, identified as a woman with particular traits, and that specific person there, identified as a man with distinct characteristics. "Being one is an essential feature of beings."

[17] Charles, *The history of Hylomorphism,* 2.
[18] Charles, *The history of Hylomorphism,* 3.

(b) **What grants this object its unity? What distinguishes this being** as a cohesive whole rather than a mere aggregation of parts? "**[Unity]** What makes this object a unity? What makes this particular being one unified object as opposed to a particular collection of distinct parts?"

(c) **What differentiates this particular being** from all others? "**[Particularity]** What makes this being the particular being it is as opposed to any other being?"

Questions (a) to (c) delve into the interplay between unity and diversity, structure and components, and individual distinctiveness versus collective generalities. However, the essence of form becomes significant when we focus on what it actively 'does', the specific effects it engenders. "This is different from asking about the aspect, the configuration of an entity, which points to an optical or sensory determination."

(d) **Form represents the inherent potential for action**, restraint, or 'behaviour' unique to a being. "**[energeia]** The form is the potential activity and also the inhibition of that characteristic or 'behaviour' peculiar to a being."[19]

Let's consider a sphere. The shape may represent a geometric configuration; it is rounded. The sphere possesses actions and inherent limitations, capacities and incapacities, which 'we think' are linked to its form. The concept of form relates to how an entity manifests its actuality (energeia). As the sphere rolls down a hill, its instability becomes evident.

We can't kick the ball as an "entity" existing in intra-mental space. The sphere has to become a ball, a football, in order to be kicked in the school playground, in the extra-mental space of the earth. The form of an entity represents its potential. An entity may either be activated to reveal this potential or be inhibited. The form manifests either as activity or inactivity. Consider a ball: its movement characteristics, such as rotation, speed, acceleration, deceleration, and rest. Similarly, a footballer might be a virtuoso at kicking or an outstanding goalkeeper proficient at defending the goal.

The sphere looks like a football, yet its design allows it to be kicked by a striker and caught by a goalkeeper. An entity embodies its form (eidos) as a potential. When this potential is activated, the entity fully realises its nature. Consider a football on a playground: once in play, it shows its true capabilities, but its potential for "being played" fades when the game ends. Similarly,

[19] Charles, *The history of Hylomorphism,* 3.

a bronze ball has the same shape (morphē) as a football or any other ball, but it does not have the same functional form (eidos). Although all balls, regardless of material and size, look similar, their functional forms vary.

2. Up or All the way down

There are significant differences among humans, horses, spheres, and artefacts. How does this diversity impact the complexity of analysis? It's straightforward to understand the materials and components that make up an object. However, understanding a human in the same way is much more complex. Does the interaction between body and mind significantly differ, or does it largely follow the basic principles of material composition and geometric structuring of essential forms? Let's sum up with some questions.[20]

(1) Can unique shapes arise from different kinds of materials, including genetic makeup?

(2) Does a person maintain a single shape, or can she exhibit multiple shapes? It's undeniable that we experience somatic transformations, such as daily temperature fluctuations or changes from infancy to old age. Do these changes affect our fundamental essence?

(3) Is it possible to understand the essence of a human in the same way we comprehend the essence of an artefact?

(4) Can matter exist in humans as it does in technical artefacts, independently of form? For example, can we consider trees as just trees, not as "firewood" or "material for furniture"?

(5) What does it mean for a natural entity to exist purely as such, without being defined as "matter," yet also function as an artefact or an apo technēs entity, like tides, wind, or electrical energy? Do we "impose" the energeia on these entities or discover and harness their potential for our own purposes?

(6) If matter and form are integral parts of a whole, what is their relationship? Are they mere sums of each other? Which precedes the other, and how do they interact?

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[20] Jennifer E. Whiting, "Form and Individuation in Aristotle." *History of Philosophy Quarterly* 3, no. 4, 1986, 359-77; R. D. Sykes, "Form in Aristotle: Universal or Particular?" *Philosophy* 50, no. 193, 1975, 311-31.

From this set of questions we can infer that there are different ontological takes. So it seems. The apo technēs entities are different from the physei beings, the praxei beings, for example. In the case of the enquiry in question, there is a striking difference between the being that has a mind as form and its own body as matter, and the other beings. In order to be a human being, a being must manifest its essence mentally in a body with certain characteristics and bodily with a mind with those characteristics.

The main features of the current research are the following:

> [A] the form, in question, is prior in definition to the composite object and to its matter [PRIORITY],
>
> [B] forms (or possibly forms and matter) underwrite the unity of the composite as a human being or as a bronze ball as one unified object [UNITY],
>
> [C] the matter in some way 'underlies' the form. There is, it might appear, a true upwards story which begins with matter at some level and ends with a type of matter which (in some way) 'underlies' form. [UPWARDS STORY], and
>
> [D] forms are the basic efficient and teleological causes of material changes [CAUSE][21].

Priority is given to the essence of the composite over form and matter. The focus is on the individuality of a specific person or type of human over the generic category of a human being. This involves considering whether the essential nature (form) extends downwards to matter or whether the physical substance (matter) rises upwards to meet the form. Forms are seen as both the initiators (efficient causes) and the ultimate goals (teleological causes) of material changes.

Different entities require different analytical approaches. Living beings, in particular, present the most complex challenges. How should we interpret the transformations of matter in living beings? Is the substance of a human being merely reducible to DNA? Are the forms themselves pure? If they are to act as efficient causes of material processes, how can they do so without being 'causally inert' like mathematical forms?[22] If forms are indeed prior to matter, they must be both definitionally prior and causally effective, actively shaping processes and preceding life stages such as birth, aging, and death. Hence, unity can be thought of structuring matter over time.

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[21] Charles, *The history of Hylomorphism,* 4.

[22] Charles, *The history of Hylomorphism,* 5.

David Charles raises the question, "*what kind of upward narrative could he construct, moving from matter to form*?" As he notes, *form* might either *emerge from* basic matter as mysteriously as "*Aladdin's Djinn from his bottle*"[23] or *descend in* a transformative leap (*metabasis eis allo genos*) just as enigmatically. Aristotle's commitment was either to a form of panpsychism or to stark emergentism[24]. Matter and form should not be considered merely as items to be mixed randomly.

These puzzling problems lead Charles to the following questions:

> How did Aristotle think of the case of living beings "whose form is their soul (De An. B.1, 412a10ff) and their matter, their bodies?" The soul is 'the essence of a natural body of a given type' (412b15-17) and as the actuality of such a body (entelecheia: 413a8-9) and in B.2 described it as that 'by which primarily we live and perceive and think' (414a12-13). How did he understand their form, their soul, and their matter, their body?"[25]

In addressing those questions, there are several approaches: purists who emphasize either form or matter, and impurists who also focus on either form or matter but with less rigidity. Panpsychism contrasts with brute emergentism, presenting two competing interpretations. David Charles sets versions of radical realism and idealism, as well as extreme empiricism and rationalism, against milder forms of purism and impurism, based on whether one isolates matter or form.

> [1] "Regarding form, purists believe that the relevant form can be defined without explicit reference to matter, while impurists argue that it cannot" [26].

> [2] "Concerning matter, panpsychists contend that the underlying matter in a composite living being can be defined without considering how that being lives or perceives. Conversely, others believe this is not feasible."

[A] The relationship between the strictly physical, corporeal, material, and even somatic aspects and the formally mental and psychic aspects can be interpreted in various ways. If taken to extremes, the physical and hyletic elements may seem unrelated to the formal, mental, or psychic elements. Conversely, we encounter a similar dilemma to Cartesian dualism when the

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[23] T.H. Huxle and W.J. Youmans, The Elements of Physiology and Hygiene: A Textbook for Educational Institutions (New York: D. Appleton and Company, 1868), 193; Charles, *The history of Hylomorphism,* 6.

[24] Charles, *The history of Hylomorphism,* 10.

[25] Charles, *The history of Hylomorphism.*

[26] Charles, *The history of Hylomorphism,* 7.

mental, the form of the psyche, does not connect to the somatic or corporeal aspects[27].

[B] A second group of purist interpreters believes that form intricately defines matter at every level, influencing the structure of the composite living being throughout[28].

[A] and [B] need to explain how pure forms (formal causes) can be efficient causes of material change while mathematical forms cannot.

3. A 'one size fits all', 'mix and match' or the *impurist* strategy?

In the relationship between form and matter, we must take into account the particularities of the different entities. In the case of man, form is psychē and matter is sōma. There are different interpretations of the relationship between eidos and hylē. Some schools emphasise eidos to the extent that they give importance to morphē or configuration. In this case they emphasise the geometric figure or the molecular structure or the silhouette or the contours of an object. Other schools emphasise matter. They emphasise the ingredients, the elements, the atoms, the letters, the numbers, what an object is made of. The more they radicalise matter or form and don't allow form in matter or matter in form, the more or less purist they are, the more or less impure their version.[29]

Impurism presents an alternative perspective. For impurists, form can instigate material changes, acting as an efficient cause due to its inherent connection with matter. 'Forms of natural substances' cannot be defined without explicitly referring to their matter in their definition. They might essentially be material capacities or structures, which, as argued, could form parts of a unified material object[30].

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[27] Charles, *The history of Hylomorphism,* 8.

[28] Charles, *The history of Hylomorphism,* 2.

[29] Abraham P. Bos "Aristotle on the Differences between Plants, Animals, and Human Beings and on the Elements as Instruments of the Soul (*De Anima* 2.4.415b18)." *The Review of Metaphysics* 63, no. 4, 2010, 821-41. http://www.jstor.org/stable/25681173; Mary Krizan, "Substantial Change and the Limiting Case of Aristotelian Matter." *History of Philosophy Quarterly* 30, no. 4, 2013, 293-310.

[30] Charles, *The history of Hylomorphism*, 8-9.

[C] One faction of impurists portrays Aristotle as treating "matter as an independent definitionally component"[31]. They define 'the impure form' as either a 'property of matter' or as 'a relation between bits of matter.' The structure of form is described as 'one dependent on bits of matter.' Consequently, 'impure forms,' much like 'pure forms,' are said to emerge from matter defined independently of these forms, though the process remains unspecified.

[D] A second group of impurist "suggests that Aristotle interpreted matter 'as definitionally dependent at every level on form at the highest level'", but "needed to show how Aristotle avoided pan-psychism".[32]

> "Both groups of impurist interpreters face a further difficulty with regard to form and matter (that immediately underlies the relevant form): can impure forms be definitionally prior to that matter if they cannot be defined independently of it? Matter, it seems, must – in their account – be prior to the form in question if the latter is to be taken as property of some matter or in some other way dependent on it. Nor is this problem avoided by taking both form and the relevant matter to be defined in terms of each other (a position I shall call 'two-way inextricabilism'). How then can the form be definitionally prior to this type of matter?"

From Aristotle's viewpoint, our experiences – including the perception of color, feelings of pain and pleasure, and desires – are inextricably intertwined with our mental and physical states. These experiences, rooted in psycho-physical activities, cannot be fully understood without considering their ties to physical activities, abilities, and properties. Likewise, these physical elements cannot be fully comprehended without recognizing their fundamental links to psychological activities such as perception or the conscious experience of the world.

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[31] Charles, *The history of Hylomorphism*, 9.

[32] Charles, *The history of Hylomorphism*, 9. In his text *The Undivided Self: Aristotle and the 'Mind-Body Problem'*, 1-2, David Charles lists a number of other possibilities for the intrinsic relationship between mind and body. (a) Reductionist materialism: the psychological is explained through a reduction that identifies the mental with the physical. Therefore, mental events, states, and properties = physical events, states, and properties. (b) Non-reductionist materialism: the psychological emerge out of the physical, is based upon the physical, but there is no juxtaposition between both horizons. (c) functionalism: the psychological is immediately expressed in physical events or states (d) Pan-psychism or spiritualism: is a counterpart to (a) an irreductionist materialism or reductionist spiritualism, primitively disposed to have conscious experience. (e) Neutral monism: both the physical and the psychological emerge from "a more basic type of stuff which is neither physical nor psychological but neutral between them."

Aristotle argues that it is misleading to simplify phenomena into two distinct categories: one solely mental, defined without reference to the physical, and one solely physical, defined without reference to the psychological. He believes that the foundational assumptions of most post-Cartesian philosophy of mind originate from these flawed conceptualizations of the mental and physical realms.

Aristotle's approach, as interpreted by David Charles, does not simplify or deny the complexity of mental states, nor does it radically redefine the physical realm, as some panpsychists propose. Instead, it acknowledges the inextricable interconnectedness of psycho-physical aspects and proposes a re-evaluation of our understanding of these concepts. This perspective encourages us to explore the complex interaction between the mental and physical realms and how this interaction influences our experience and perception of the world. It challenges us to move beyond traditional dichotomies and adopt a more holistic view of our psycho-physical existence.[33]

In the debate between purists and impurists, variations range from an absolute panpsychism where form does not interact with matter, to a material reductionism so extreme that it cannot engage with form. Meanwhile, some combinations attempt to mitigate the shortcomings of one perspective with the strengths of another. This raises questions: Do different entities like living beings, artefacts, natural objects, means of production, art, plants, and humans experience different outcomes from these philosophical applications? Is the application of these ideas rigid or adaptable? Is it a profound error, or has Aristotle offered a solution that remains unseen by his interpreters, who may view his ideas through an anachronistic lens? Both a **'one size fits all'** approach and a **'mix and match'** strategy may present challenges, with the former being too purist and the latter possibly overly flexible.

Which interpretative approach most accurately reflects Aristotle's own understanding of hylomorphism? Did he successfully develop a coherent theory that addresses the complexities of form and matter, as previously described? Or did his efforts result in a fascinating but ultimately flawed attempt? Aristotle was attracted to several ideas that are difficult to reconcile into a cohesive and convincing theory.

These questions remain debated in scholarly interpretations. David Charles has previously argued that Aristotle was an impurist who effectively

[33] Charles, *The Undivided Self: Aristotle and the 'Mind-Body Problem'*, 3: "Nor, in his view, can the latter be adequately defined without essential reference in their definition to psychological activities, such as perception or conscious experience of the world. The phenomena at issue cannot be defined by decomposition into two definitionally separable components, one purely psychological (defined without explicit reference to the physical), the other purely physical (defined without reference to the psychological)."

affirmed the definitional precedence of form in living beings and the unity of the resultant composite, without relying on panpsychism or brute emergentism. Panpsychism would essentially idealize reality to such an extent that matter would lose its inherent qualities, transforming into a 'minded' or 'ensouled' entity that is virtually intangible. Conversely, emergentism suggests that complex entities, like wetness in water from hydrogen and oxygen, arise from simpler components but cannot be wholly explained by the properties of these components. This would imply that complex phenomena like the 'mind' emerge in a way that is not predictable from their simpler parts, similar to the creation of Frankenstein or a homunculus.

David Charles' approach navigates the intricate relationship between form and matter, and mind and body, what he terms the 'inextricability relation psychē-sōma'. He envisions the mind as self-referential, yet always in context with the body and its specific circumstances. Conversely, he conceives of the body as mentally embodied or 'mentalised'.

Hence, while maintaining focus on the mind, we can revert to an elementary analysis that foregrounds the physical, or hyletic, elements. Rather than abstracting or excluding it, we can effectively 'anaesthetise' the mind. Simultaneously, we can 'neutralise' the body, analysing the mind's formal aspects without detaching it from the body or physiology. This foundational dual inextricability serves as the launching point for a collection of essays exploring two millennia of interpretations of hylomorphism. Yet, it's important to note that the contributors to this volume hold widely varying views, which significantly impact the interpretation of how Aristotle's perspectives may have evolved over time. There are philosophers who are of the opinion that matter is independent of form, like Epicurus.[34] Others for whom form is prior to matter, like Plotinus, that accentuated the form.[35] Epicurus, the Stoics, Alexander of Aphrodisias, Galen, Plotinus, Philiponus, Averroes, Aquinas, and Suárez each offered their interpretations of hylomorphism, influencing its progression or decline.

What led to this decline or transformation? Ideological choices seem to have played a crucial role. Aristotelian hylomorphism evolved into a dualistic framework consisting of two components (substance dualism with

[34] Charles, *The history of Hylomorphism,* 10: "The first came from philosophers who envisaged – and sought to develop – a fuller and more robust upwards story, which took as its starting point a determinate material level defined independently of form (at least at the top level) and aimed to explain all the features of higher levels on its basis."

[35] Charles, *The history of Hylomorphism,* 11: "The forms of human beings are to be treated as definitionally prior to matter and to composite bodies. […] Some maintained that the entire human soul is prior to, and defined independently of, matter; others that only some part of it is, such as our capacity for thought."

res cogitans and res extensa, or property dualism). This evolution sparked deeper philosophical inquiry and led to more radical positions. As a result, one aspect of hylomorphism was overlooked, eventually allowing both components to be perceived as independent entities.

4. Purism in the making

The tendency towards the isolation of the horizon of the human mind was an early one.[36] Wasn't it because its being was not apparent? But if its way of being is witnessed in a different way, does this mean that the mind or the soul is different from the body or the sōma? Is our contemporary experience different from the ancient experience of the mind and body composite? Or was the ancients' experience of the mind different from ours, at least to the extent that they had a view that there was an anteriority and independence of the horizon of the mind in its totality from matter in general? Some thinkers, at least, thought that our faculty or capacity to think allowed us to make such a distinction.

> The major second challenge, perhaps most clearly articulated by Plotinus, came from those who insisted that the forms of human beings are to be treated as definitionally prior to matter and to composite bodies. […] Some [sc. philosophers] maintained that the entire human soul is prior to, and defined independently of, matter; others that only some part of it is, such as our capacity for thought[37].

"The philosophers who developed the second challenge had independent motivations for offering a purist account of the relevant forms, or parts of them."[38] 1) The immortality of the soul, the survival of the soul after the destruction of the body. 2) The Construction of the figure of the sage in a composite of Plato's and Aristotle's works: The Platotle. 3) The transcendence of freedom beyond the determinism of the material world. 4) The metaphysical gap between form and the maximum that matter can offer as an insufficient explanation of itself is at the root of the 1) -3).

> When these two challenges were combined, a highly compelling picture gripped the philosophical imagination, one with which we all are now thoroughly familiar. There is a robust 'bottom up' story, beginning with matter defined

[36] Julia Annas. "Forms and First Principles", *Phronesis* 19, no. 3, 1974, 257-83; Eugene E. Ryan. "Pure Form in Aristotle", *Phronesis* 18, no. 3,1973, 209-24.

[37] Charles, *The history of Hylomorphism*, 11.

[38] Charles, *The history of Hylomorphism*, 11.

> independently of life or consciousness, which explains many features of the world but not the nature and continued existence of (at least) some parts of the human soul or its distinctive psychological features[39].

Thus, from the very beginning of the history of the interpretation of hylomorphism, its two "inextricably" inseparable components seem to be forced apart for the reasons mentioned above: 1. the prenatal anteriority of the soul, 2. the paradigmatic configuration of the *Platotle* sage, 3. the liberation from material determinism, 4. post-mortem immortality.

What is thus constituted are two completely different kinds of entities or beings or qualities or substances. One entity is "hyletic", material, and therefore defined in a pure way. "Pure" means that matter is determined independently of what belongs to the mind (*psychē*), what we might loosely call "psychological". The other substance is strictly speaking "morphic", it belongs to psychē, to what we might loosely call mind or lucidity. It is also determined in a pure way, because it doesn't allow any mixture of material or somatic "ingredients".

Thus, we might conceive of two distinct substances in their purest forms: one physical, the other psychic; one somatic, the other mental. In essence, form and matter remain uncontaminated by each other. Consequently, within the framework of mind-body relations and applying the same concept of purity, there is no intermingling of mind and body. The characteristics of mental properties or qualities differ fundamentally from those of physical properties or qualities. The categories applicable to one domain cannot be transferred to the other. For instance, one cannot define perceptions, desires, or emotions in the same terms as one would define concave shapes, H2O, boiling blood, or the concept of nasal concavity, water one wishes to drink, or a desire for revenge. We could imagine an 'upward narrative' that originates from flesh and cartilage or a water molecule, or the physiology of revenge. Conversely, we might consider the morphology of the nose, of thirst, and of anger, thereby constructing a 'downward narrative'.

> There are, it appears, two radically different kinds of entity, whether these be substances or properties: one purely material, defined independently of the psychological, the other purely psychological, defined independently of matter. In some accounts, the latter can exist independently of the material body. However, in all there are, in the human case, two definitionally independent components: a purely psychological component, defined independently of body or matter, and a purely material component, defined independently of the psychological. If both components are understood as substances, we have a version of Descartes' substance dualism. There is a pure subject, the

[39] Charles, *The history of Hylomorphism*, 11.

> thinking substance, which thinks and perceives; and another distinct entity, the body, a material substance fully explicable in terms of a matter-based upwards story. If the two components are understood as properties, we are led to property dualism. Either way, there is, as a consequence, a major, and so far unsolved, problem: the mind-body problem, which has been central in western philosophy of mind since Descartes. How are these two fundamentally different types of component, whether substances or properties, connected? What type of entity are we?[40]

Though it has been 2000 years since Descartes, his ideas appear strikingly immediate. We seem to retrospectively discern the seeds of Cartesianism woven through historical discourse. Thought is inherently subjective, while extension pertains to the body that either supports or carries this thinking substance. The narrative ascends from matter – from 'res extensa', 'res materialis', 'res corporea' – to 'res cogitans'.[41]

Nevertheless, there is a narrative descending from the cogito, offering a perspective that moves from the mind towards the body. How is it possible to perceive one's own body internally (such as a headache or heartbeat) and externally (like toes in cold water)?

The question to be asked is: what is the relationship between the mind or interior, and the exterior of the body in its entirety? This involves thinking not just extrinsically about the relationship between the mental interior and a somatic exterior, but also about the relationship between mind and body as a whole. It leads us to ask: what is the nature of this compound of substances that we fundamentally are? Who are we if we are entities composed of two fundamentally different kinds of substances? What is the nature of this connection?

5. Perceiving Descartes's wax candle burning

The difference between *res extensa* and *res cogitans* is so extreme that understanding a human being composed of both would be as difficult as "squaring the circle". [42] Since the definition of *cogitatio*[43] is contrary to that

[40] Charles, *The history of Hylomorphism*, 11-12.

[41] We will see in the discussion of the chapter dedicated to Descartes how the common element is still the reality of the res, the substantiality of the substance. The difference is adjectival.

[42] Since Descartes is often considered one of the key figures, or perhaps radical interpreters, of hylomorphism, I will allocate more space to discussing the final essay on this author: Essay 16, "Descartes' Mind-Body Holism and the Primacy of Experience" by Lilli Alanen.

[43] Peter R. Anstey "'De Anima' and Descartes: Making up Aristotle's Mind", *History of Philosophy Quarterly* 17, no. 3 (2000), 237-60; Marleen Rozemond, "Descartes,

of extension – being inextensive, incorporeal, and immaterial – how are we to understand the relationship between non-X and X, a non-extended perception and an extended perceivable content, such as a triangle?

> In confronting objections to his dualism, he fell back on hylomorphic language, arguing that mind and body although complete substances in themselves are incomplete with respect to the human being they compose through a real or substantial union, describing the mind (the rational soul) as a substantial form and as informing the body[44].

The author moves away from the extreme radicalisation of the insurmountable differences between *extensio* and *cogitatio*, favouring instead a holistic understanding of the relationship between mind and body, "accepting a strong form of mind-body holism with deflated notions both of substance and dualism." The author states, "Descartes has no metaphysical solution to his problem with strong mind-body unity but points instead to incontrovertible experience of it." I strongly support this "incontrovertible experience of it"[45]. This perspective aligns well with David Charles's interpretation of Aristotle.

Alanen refers to this as "the strong version of hylomorphism". She asserts that "most affections of the soul can be described as 'inextricably psychophysical'", meaning they are "non-decomposable into separate types of activity". If this is to be held true, "it also represents the clearest contrast to Descartes' doctrine, where the soul or mind in general is defined in terms of thinking without reference to matter, and matter in terms of extension without reference to soul, and where both are seen as mutually separable"[46].

You need to wait for section 6 ("From Metaphysics to Phenomenology: Taking the Mind-Body Experience Seriously") to read about the "real" experience of the third kind of hylomorphic substance that unites both res extensa and res cogitans. I would like to take this "experience" seriously, transitioning from a metaphysical formal approach to a phenomenological interpretation of Descartes.

Mind-Body Union, and Holenmerism", *Philosophical Topics* 31, no. 1/2 (2003), 343--67. Theodore Tracy, "Two Views of Soul: Aristotle and Descartes", *Illinois Classical Studies* 11, no. 1/2 (1986), 247-64. Paul Hoffman, "The Unity of Descartes's Man", *The Philosophical Review* 95, no. 3 (1986), 339-70.

[44] Alanen "Descartes' Mind-Body Holism and the Primacy of Experience", 377

[45] Alanen, "Descartes' Mind-Body Holism and the Primacy of Experience", 377.

[46] Alanen, "Descartes' Mind-Body Holism and the Primacy of Experience", 378.

Let us analyse Descartes'[47]wax candle to better understand the relationship between mind and body. The different ways in which the mind perceives the candle and the corresponding correlations are discussed. The result is perplexing because the relationship between cogitatio and the wax candle is based on the existence of both, rather than on the mental correlation of mental access to the physical nature of the wax candle.

> Let us take, for example, this piece of wax: it has been taken quite freshly from the hive, and it has not yet lost the sweetness of the honey which it contains; it still retains somewhat of the odor of the flowers from which it has been culled; its color, its figure, its size is apparent; it is hard, cold, easily handled, and if you strike it with the finger, it will emit a sound. Finally, all the things which are requisite to cause us distinctly to recognize a body, are met within it. But notice that while I speak and approach the fire what remained of the taste is exhaled, the smell evaporates, the color alters, the figure is destroyed, the size increases, it becomes liquid, it heats, scarcely can one handle it, and when one strikes it, no sound is emitted. Does the same wax remain after this change? We must confess that it remains; none would judge otherwise. What then did I know so distinctly in this piece of wax? It could certainly be nothing of all that the senses brought to my notice, since all these things which fall under taste, smell, sight, touch, and hearing, are found to be changed, and yet the same wax remains.[48]

The wax candle is defined in all its reality by what the sensations provide. The wax retains the taste of the honey, the sweetness perceived through gustatory sensation. It also retains the scent of the flowers from which the bees collected it, present in the olfactory sensation. Colour, shape, and size are perceived through visual sensation, along with much more. There are tactile sensations: the candle feels cold when touched with the knuckle of your index finger, and the acoustic sensation detects a sound. There is an inseparable relationship between the sensation and the content of the sensa-

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[47] Rozemond, "Descartes, Mind-Body Union, and Holenmerism", 343-67.

[48] Descartes, AT VII 25-26: "Sumamus, exempli causa, hanc ceram; nuperrime ex favis fuit educta, nondum amisit omnem saporem sui mellis, nonnihil retinet odoris florum ex quibus collecta est; ejus co|lor, [26] figura, magnitudo, manifesta sunt: dura est, frigida est, facile tangitur, ac si articulo ferias emittet sonum; omnia denique illi adsunt, quae requiri videntur ut corpus aliquod possit quam distinctissime cognosci. Sed ecce, dum loquor, igni admovetur, saporis reliquiae purgantur, odor expirat, color mutatur, figura tollitur, crescit magnitudo, fit liquida, fit calida, vix tangi potest, nec jam si pulses emittet sonum. Remanetne adhuc eadem cera? remanere fatendum est, nemo negat; nemo aliter putat. Quid erat igitur in ea quod tam distincte comprehendebatur? certe nihil eorum quae sensibus attingebam, nam quaecunque sub gustum, vel odoratum, vel visum, vel tactum, vel auditum veniebant, mutata jam sunt: remanet cera."

tion. Sensation depends on the mind, while the content of the sensation exists in the object, the wax candle. We do not see sensations; we see the material, corporeal content extended by the candle.

But what happens when the burning candle starts to melt? The hyletic material changes. The taste and smell disappear [purgatur, expirat], the colour changes, the shape is destroyed, the size increases, it becomes liquid, it gets hot, and it is difficult to touch. It doesn't make a sound when you touch it with the knuckle of your finger. Isn't the question obvious? Is it still the same wax candle [remanetne adhuc eadem cera]? You must acknowledge that it is still the same. No one denies it, no one thinks otherwise [nemo negat; nemo aliter putat]. But it's not the same for the senses, nor for the impressions. Now I can't have a sensation of the wax in the candle as it was first seen, still intact. And yet, somehow, I have access to the sensory past. What was it then that I understood so well about the qualities in it? [Quid erat igitur in ea quod tam distincte comprehendabatur?]

> But what is this piece of wax which cannot be understood excepting by the mind [mente percipitur]? It is certainly the same [eadem] that I see, touch, imagine, and finally it is the same which I have always believed it to be from the beginning. But what must particularly be observed is that its perception [perceptio] is neither an act of vision, nor of touch, nor of imagination, and has never been such although it may have appeared formerly to be so, but only an intuition of the mind, which may be imperfect and confused as it was formerly, or clear and distinct as it is at present, according as my attention is more or less directed to the elements which are found in it, and of which it is composed.[49]

The form of the mind is cogitatio, not any form of sensation (sight, hearing, touch, taste, smell), nor fantasy or imagination, nor memory or anticipation, but perception in its most radical, clear, and distinct form. Perception catches a diachronic identity of the wax, not only beyond the metamorphosis of its qualities and hyletic states but also as an integration of the opposites within the substance that comprises it[50].

What is necessary for wax to remain wax is precisely the potential to integrate the qualities it possesses at one time and, under changed circumstances, to exhibit opposite qualities at another time.

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[49] Descartes, AT VII 28: "Quaenam vero est haec cera quae non nisi mente percipitur? Nempe ea|dem quam video, quam tango, quam imaginor, eadem denique quam ab initio esse arbitrabar: atqui, quod notandum est, ejus perceptio non visio, non tactio, non imaginatio est, nec unquam fuit, quamvis prius ita videretur, sed solius mentis inspectio quae vel imperfecta esse potest et confusa, ut prius erat, vel clara et distincta, ut nunc est, prout minus vel magis ad illa ex quibus constat attendo."

[50] Anstey, "'De Anima' and Descartes: Making up Aristotle's Mind".

The same applies to the perceiving agent. It is not necessary for the subject of perception to follow the heating process step by step. He can observe the final thermal effect and still perceive that it is the same wax. He also perceives his own identity. It is the same person who perceived the wax as a candle, who witnessed the bees collecting pollen and producing the wax, and who now sees the melted wax. The temporal persistence or diachronic identity of the subject who is the agent of perception is crucial for recognising the mental capacity to trigger clear and distinct perceptions.

> He (sc. Descartes) goes on to explain that what pertains to the soul considered in itself depends on the notion of thought, while what pertains to the soul as embodied depends on the third primitive notion, that of the mind-body union. The first is discovered through metaphysical meditations, the second through experience. Yet like the first, thought, the notion of the mind-body union is said to be natural to the soul or innate, which indicates that the experience Descartes here appeals to cannot be acquired by sensory perception alone, but involves the intellect[51].

Every *cogitatio* can only have cogitabilia as its object without any *metabasis eis allo genos: cogito me cogitare cogitata* (I think that I think thoughts of mine). The form of clear and distinct perception involves objects perceived clearly and distinctly, here and now. The radicalisation of Descartes' analysis would lead him to say at the end of his first meditation:

> I shall consider that the heavens, the earth, colours, figures, sound, and all other external things are nought but the illusions and dreams of which this genius has availed himself in order to lay traps for my credulity; I shall consider myself as having no hands, no eyes, no flesh, no blood, nor any senses, yet falsely believing myself to possess all these things.[52]

What underlies the *realitas* of the *res* is the correspondence between the[53] substance of thought and the substance of extension. *Extensio* is *materialis, corporea, diuisibilis*. *Cogitatio* is *inextensa, incorporea, indisuisibilis*. Both are "res", though. They have a common ground. Both are substances. They subsist, they last.[54]

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[51] Alanen, "Descartes' Mind-Body Holism and the Primacy of Experience", 394.

[52] Descartes, AT VII 15: "[P]utabo caelum, aërem, terram, colores, figuras, sonos, cunctaque externa nihil aliud esse quam ludificationes somniorum, quibus insidias credulitati meae tetendit: considerabo me ipsum tanquam manus non habentem, non oculos, non carnem, non sanguinem, non aliquem sensum, sed haec omnia me habere falso opinantem."

[53] Broackes & Hacker, 2004.

[54] Descartes, AT VIII 55: Per substantiam nihil aliud intelligere possumus, quam rem quae ita existit, ut nulla alia re indigeat ad existendum. Principia Philosophiae, AT VIII

> relationship between mental substance and extended substances (other bodies of other minds, and other bodies without minds). What is the meaning of a duration with lucidity (*lumen naturale*) that each of us possesses? We attest to the passage of time, but who makes time pass or who creates time? Could this be the third 'primitive notion' after those of thought and extension? For
>
> the mind-body union is not an object of distinct or evident intellectual perception on its own, and cannot be explained through the other two notions of the natures that compose it. We are said instead to know the union and what depends on it clearly through sensory experience[55].

There is still a common element between cogitatio and extensio. Descartes' substance is the common element between cogitatio and extensio. Substance, which needs nothing to exist is duration [duratio][56]. Without duration, no substance exists, because it doesn't subsist.

> "Let us think that the duration of each thing is only the mode under which we conceive that thing, in so far as it persisted to exist."[57]

Can a substance be duration and not that which endures? Perhaps to be a substance = to endure… but does that the thing which endures (the substance) be duration (*duratio*)?

Thinking about your discussion and Lilli Alanen's again: one question that arises concerns primacy. Is the enduring hylomorphic substance more basic than the res cogitans and res extensa at issue OR is the order the other one (the latter are more basic and the composite is derived from them)? And- in what ways - more basic? Metaphysically/epistemologically? Phenomenologically etc?

OR is the question of PRIMACY in some way misconceived?

It seems to me that Descartes is aiming at the necessary condition without which there is no substance, or no substance exists for us *qua res cogitantes*. The necessary condition doesn't seem to be a sufficient condition, though, in

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51. How do we think of substance if not from duration? Without duration, no substance exists, because it doesn't subsist. "putemus durationem rei cuiusque esse tantum modum, sub quo concipimus rem istam, quatenus esse perseuerat." The duration of anything is only the mode in which we conceive of that thing while it remains in existence

[55] Alanen, "Descartes' Mind-Body Holism and the Primacy of Experience", 381.

[56] AT VIII 1.051: "Per substantiam nihil aliud intelligere possumus, quam rem quae ita existit, ut nulla alia re indigeat ad exitendum".

[57] AT VIII 1.055: "Putemus durationem rei cuiusque esse tantum modum, sub quo concipimus rem istam, quatenus esse perseuerat."

order to understand what the essence of a substance is or what it takes for x, y and materially to be the beings they are. There is a difference between, on the one hand, x persisting during the time it lasts and, on the other hand, x persisting as the essentially (or definitionally) substance x is.

Let x, y and z to be substances naturally compound: sun, moon, earth. As substances they are what they are, identified intuitively in our experiencing them. Ontologically the natural compounds presuppose duration. Without duration x, y and z do not exist. "Existentia" is a modal concept without which no "real" content can be?

If substantia is the Aristotelian substratum (hupokeimenon), then this is true for both *res extensae* and *res cogitantes*. And yet it says nothing about the substances being "extensae" or "cogitantes". For António and David to be the res they are they need to be recognised as substances. But there's a difference between A and D and x, y and z, or we need to attribute some psychic or mental properties to planets and stars. Or the other way around we need to attribute "worldly" predicates to A and D. On the other hand, the sun and the sky and António and David are substances, having different essences. For Descartes what it takes for António and David to be res extensae and res cogitans is that both have the capacity of thinking, to getting access to things through their minds either outside or inside their minds.

X is understood as extension and as 'accessed' by perceptio. Only perceptio accesses duration, whereas other forms of mental access do not get it. Sensation, memory, expectation, imagination, phantasy etc. get access to the same naturally compound reality, but as existing in different times. Do they presuppose "perceptio" in order to "exist"? Is sensation, impression, memory, expectations, imagination, phantasia, specifications of our lucidity? For instance, sensation presupposes perception. Perception gets access to present elements of anything imprinted in our minds. Perception, though, has also access both to past elements retained and to future elements expected.

The difference between dreaming and waking, reality and fantasy, and various forms of fiction – painting, photography, film – does not negate x, y, and z being the essences that they are. I see the same things in a dream as when I am awake. But it doesn't seem the same to me. Or rather, I have the possibility of waking up from a dream. It's more difficult to wake up from reality. David is the same: in memory, in anticipation of picking him up at the airport. I'm writing these words for David, I'm consciously seeing him, he'll read them, he'll reply, he's outside the field of perception. He's David on YouTube, in photographs, etc. What's the difference? The way David appears.

What I believe Descartes highlights are the problems that arise from modalisation. Thus, particular and general, simple and complex realities appear on the oneiric horizon. The same is true for the various horizons of fiction. The horizon of waking reality is not constituted by any metabasis eis allo genos. The variation from the oneiric horizon to the waking horizon, and between the different horizons of fiction, exists within the horizontal possibility. When we are awake, we are in a horizon no less than when we are asleep, imagining, fantasising, or envisioning possible scenarios, weather forecasts, and so on.

> So therefore we be dreaming. Neither would these particular things [*particularia ista*] be true – that we open the eyes, move the head, extend the hands –, nor perhaps would it even be true that we have such hands or such a whole body. It is in fact still to be conceded that the things that are seen during sleep are like a kind of pictured images which cannot have been feigned except according to the similitude of true things. [tamen profecto fatendum est *visa per quietem* esse veluti quasdam pictas imagines, quae *non nisi ad similitudinem rerum verarum fingi potuerunt*][58].

When we put a helmet on our head to virtualise reality, we interact with the reality that manifests there in the same way as when we dream, whether asleep or awake. The status of x, y, and z is different when we predicate x, y, and z as being oneiric, fictional, or hallucinatory. Or when we predicate that they are truly real, that they are genuinely happening.

> "And hence it is in fact to be conceded that at least these general things [*generalia haec*] – eyes, head, hands and the whole body – exist as a kind of things that are not imaginary, but rather true." [ideoque saltern generalia haec, oculos, caput, manus, totumque corpus, res quasdam non imaginarias, sed veras existere.]

The reality accessed by the senses, within the framework of time, is predicated on each general or particular thing, regardless of whether it appears in the dream or waking horizon. Each of us exists entirely within this horizon, although there are variations in clarity. We can ask if we are dreaming when awake or if we are awake when dreaming, and we can question if something is really happening at any given moment. Yet, each particular thing is the substance that it is: eyes, head, hands, the body. It is my whole body, with hands, head, and eyes, that dives into the horizon of dreaming and waking.

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[58] AT VII, 19, Meditatio I.

Hyletic content cannot be changed. It is reduced to elementary structures: colours, shapes, figures, the optical relationship between certain things, and sensory access. From an optical point of view, let's consider colours (hues, saturation, brightness) and shapes (structure, configuration, two- or three--dimensional representation, distance, orientation). These hyletic contents cannot be erased. They exist in dreams (fiction) and in reality, in waking life.

> For indeed painters themselves, even when they try to feign sirens and satyrs with maximally unusual forms, cannot then assign to them natures new with respect to every part, but rather can they only mix together the members of different animals. [Nam sane pictores ipsi, *ne* tum *quidem*, cùm Sirenas & Satyriscos *maxime inusitatis formis fingere student*, *naturas* omni ex parte *novas* iis possunt assignare, sed *tantummodo* diversorum animalium membra *permiscent*.][59]

When painters try to feign [fingere] their "subject-matter" with maximally unusual forms [maxime inusitatis formis] the natures they forge are not entirely new [non novas omni ex parte naturas]. They mix the members of different animals into one feigned creature.

> Or if these painters were perhaps to excogitate something so very new that nothing at all similar to it had ever been seen – and it would thus be completely fictitious and false – , at a minimum the colors out of which they would compose it must certainly still be true. [vel si forte aliquid excogitent adeo novum, ut nihil omnino ei simile fuerit visum, atque ita plane fictitium sit & falsum, certe tamen ad minimum veri colores esse debent, ex quibus illud componant.] AT VII, Meditatio I, 11

Even when a painter creates a form so radically new that it doesn't even seem to contain parts of known animals, the colours are not invented; they are not the subject of fiction. Colour, in its essence, is irreducible. Descartes uses not fingere but excogitare. The object of excogitare is "something so very new at all", "never seen," at least the colors out of which they would compose it must certainly be true [ad minimum colores, ex quibus illud componant (sc. [pictores])].

By not dissimilar reasoning, although these general things too – eyes, head, hands and similar things – could be imaginary, it is still necessarily to be conceded that at least certain other things even more simple and universal are true: things even more simple and universal out of which – as from true colors – are feigned all those images of things which, whether true or false, are in our cogitation.

[59] AT VII, *Meditatio* I, 19-20.

The contents of fiction, cogitation and imagination are irreducible, if I'm not mistaken. Fingere, ex-fingere, cogitare, ex-cogitare, as percipere all have hiletic content which is even more simple and universal.

And their morphē?

1) Of which kind seem to be *corporeal nature in general* [*natura corporea in communi*],
2) and its extension [ejusque ***extensio***];
3) also, the figure of extended things [item ***figura*** rerum extensarum];
4) also, the quantity [***quantitas***], or the
5) magnitude [***magnitudo***]
6) and the number of the same things [earumdem ***numerus***];
7) also, the place in which they may exist [item ***locus*** **in** quo ***existant***]
8) and the time through which they may endure [***tempus*** **per** quod ***durent***],
9) and similar things [& similia.]

1)-8) is the morphological structure of things which apply to all horizons, persist through dreaming, imagining, fantasising, perceiving.

Epistemological consequences:

> Therefore we will perhaps well conclude from these things that physics, astronomy, medicine and all the other disciplines that depend on the consideration of composite things [res compositae] are indeed dubious, but that arithmetic, geometry and the others of this kind – which treat only of the simplest and maximally general things and which care little about whether these would be in the nature of things or not – contain something certain and indubitable. For whether I would be awake or sleeping, two and three added together are five, and a square has no more than four sides. Nor does it seem that it can happen that truths so perspicuous would incur the suspicion of falsity. [atqui Arithmeticam, Geometriam, aliasque ejusmodi, quae *nonnisi de simplicissimis & maxime generalibus rebus tractant*, atque utrum eae sint in rerum natura necne, parum curant, aliquid certi atque indubitati continere. Nam sive vigilem, sive dormiam, duo & tria simul juncta sunt quinque, quadratumque non plura habet latera quàm quatuor; nec fieri posse videtur ut tam perspicuae veritates in suspicionem falsitatis incurrant.] AT VII, Meditatio I, 12.

Descartes wants to emphasise the modal aspect of certainty obtained through clear and distinct perception. There is a connection between obtaining evidence, demonstrative proof, and the content thus obtained. Physics,

astronomy, and medicine have composite things (res compositae) as their object of study. Arithmetic and geometry deal with things that are absolutely simple and maximally general (res simplicissimae et maxime generales). A square has four sides; three plus two equals five. These judgments are true in dreams and in reality, says Descartes. Although it's possible for queens to think of six impossible things before breakfast.[60]

First reduction: x, y and z, sun, moon and earth are "res extensae". Abstraction from their "matter" (res materiales), being bodies (res corporae). Extension ("extensio") only cannot be cancelled out. X, y and z exist even without weight, but not without being extended in space.

The second reduction: extension does not exist spatially unless and only if there is in reality a temporal subsistence of x, y and z.

The third reductive move: x, y and z depend on the perception of x, y and z. Perception depends on duration. The perception of the duration of x, y and z depends on the duration of perception.

To the question: Quid vero ex iis quae animae tribuebam [what kind of attributes from those considered do I predicate of my soul?]

> And finally, although these ideas might proceed from things different from me, it does not from thence follow that those ideas must be similar to these things. Indeed, I seem to have often found a great discrepancy in many things: just as I find within me, for example, two different ideas of the sun, the one, as though derived from the senses, which is maximally to be reckoned among those ideas which I think are adventitious, and through which the sun appears to me to be very small, but the other, derived from the reasoning of astronomy, that is, elicited from certain notions innate to me or made by me in some other manner, and through which the sun is exhibited as being several times greater than the earth. Both these ideas cannot in fact be similar to the same sun existing outside me, and reason persuades me that that one which seems to have emanated from it most proximally is maximally dissimilar to it. AT VII, Meditatio I, 39-40.

Let's break down this passage.

1. two different ideas of the sun, the one, as though derived from the senses, which is maximally to be reckoned among those ideas which I think are adventitious, and through which the sun appears to me to be very small, but
2. the other, derived from the reasoning of astronomy, that is, elicited from certain notions innate to me or made by me in some other man-

[60] Lewis Carroll, *Through the Looking Glass.*

ner, and through which the sun is exhibited as being several times greater than the earth.

3. Both these ideas cannot in fact be similar to the same sun existing outside me, and reason persuades me that that one which seems to have emanated from it most proximally is maximally dissimilar to it.

Descartes assumes that ideas (representations) of things are different from the things themselves. Does Frege's equation apply to Descartes? a = b if and only if 'a' is 'b'. I find two ideas of the sun within myself. One is how the senses present the sun; according to this representation, the sun appears quite small: *valde pravus apparet*. The other idea (representation) of the sun comes from the foundations of astronomy, that is to say, from a priori (innate) ideas, and shows me the sun as many times larger than the planet Earth.

In fact, neither of these ideas resembles the sun, which exists "outside" of me. Indeed, reason convinces me that the "representation" I have of the sun, which seems to come from seeing the sun close to me, is in the highest degree dissimilar to the sun that exists outside of me.

What happens on the surface of objects? On one hand, there is a physical representation of objects such that the surface points to an interior. Every point on the surface corresponds to a point beneath it that is not visible. The layers inside the object beyond the surface are mostly invisible. On the other hand, the surface points to a terminus ad quem, which allows for the reflection of the viewpoint from which I observe the surface of the object in its contours, at this distance, oriented by it, directed towards it, paying attention to it. If I move away, the surface appears to shrink. If I move closer, the surface appears to enlarge. However, the object itself remains the same size; it does not actually get bigger or smaller. It is the apparent size of the object that increases or decreases as I move closer or further away.

On the other hand, there is a virtual dimension alongside the real one. What goes on beyond the surface of the object is not visible; it is a matter of imagination or conjecture. What is inside the objects? Where do the plumbing and electricity run in the house? What does people's flesh look like beyond the appearance of the epidermis? What lies on the inner horizon of objects is not only spatially hidden; it is modally a possibility. Representation is not only the perception of reality but also the imagination of what goes on beyond reality. Even if I perceive the sun from this distance, what happens when I realise that it will be extinguished in five billion years? This amount of time only serves to remind me of my own temporal finiteness.

Descartes answers:

> [What of thinking? I find here that thought is an attribute that belongs to me; it alone cannot be separated from me. I am, I exist, that is certain. But how often? Just when I think; for it might possibly be the case if I ceased entirely to think, that I should likewise cease altogether to exist. I do not now admit anything which is not necessarily true: to speak accurately I am not more than a thing which thinks, that is to say a mind or a soul, or an understanding, or a reason, which are terms whose significance was formerly unknown to me. I am, however, a real thing and really exist; but what thing? I have answered: a thing which thinks.]
> Cogitare? Hic invenio, cogitatio est, haec sola a me divelli nequit; ego sum, ego existo, certum est. Quandiu autem? nempe quandiu cogito; nam forte etiam fieri posset si cessarem ab omni cogitatione, ut illico totus esse desinerem: nihil nunc admitto nisi quod necessario sit verum: sum igitur praecise tantum res cogitans, id est, mens, sive animus, sive intellectus, sive ratio, voces mihi prius significationis ignotae. Sum autem res vera, et vere existens, sed qualis res? dixi, cogitans[61].

I underline: "nam forte etiam fieri posset si cessarem ab omni cogitatione, ut illico totus esse desinerem" [for it might possibly be the case if I ceased entirely to think, that I should likewise cease altogether to exist.]

It thus seems that Descartes bases the existence of x, y and z on the duration of x, y and z, so that x, y and z are the beings they are.

The difference between x, y and z, on the one hand, and D and A, on the other, is access both to x, y and z and access (perception) to access (perception as object of the first perception).

It seems that *Reflexio*, *inspectio sui* (Insight) has lost direct contact with x, y and z.

Duration is a sine qua non condition for perceptio to extend temporally. But that's not all. The duration of access is a condition for the possibility of access to duration.

6. Kant's Interpretation of the Sigma Structure in the Doctrine of Schematism

The issue of the subsistence of substance is addressed by Kant as a problem of synthesis. Here, we aim to explore one aspect of how hylomorphism might be interpreted in Kant's philosophy. Although this is merely a sugges-

[61] Descartes, *Meditatio* II, 21.

tion and extends beyond the scope of the book, I accepted David Charles' challenge to examine the reception of this problem in the works of Kant and Husserl. Thus, we shall first consider how addresses the connection between the mind and extra-mental objects in his doctrine of schematism.[62]

> In all subsumptions of an object under a concept the representations of the former must be homogeneous with the latter, i.e., the concept must contain that which is represented in the object that is to be subsumed under it, for that is just what is meant by the expression "an object is contained under a concept." Thus, the empirical concept of a plate has homogeneity with the pure geometrical concept of a circle, for the roundness that is thought in the former can be intuited in the latter[63].

At this point I'd like to emphasise the problematic relationship between concept and representation [Vorstellung] in Kant, because they are two "forms" or structures of relation to the "object". The matter of sensation (Empfindung) would not be determined by any category, but requires intuition: (white, smooth, cold, hard). On the other hand, the properties inherent in a thing are not sufficient to say what that thing is.[64] What is at stake is the relationship between three notions: intuition, concept and object.

What happens in the mind (after the contact with the object) is a connection (Kant calls it a synthesis) between representation and concept. The object is an extra-mental entity. Part of the extramental entity is "being able to

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[62] Peter Krausser. "Kant's Schematism of the Categories and the Problem of Pattern Recognition." *Synthese* 33, no. 1 (1976): 175-92, Gualtiero Lorini, "The Doctrine of Transcendental Schematism as Clarification of Kant's 'I think'." *Rivista Di Filosofia Neo-Scolastica* 108, no. 2 (2016): 429-44. Michael Pendlebury. "Making Sense of Kant's Schematism." *Philosophy and Phenomenological Research* 55, no. 4 (1995): 777-97; Nathan Rotenstreich. "Kant's Schematism in its Context," *Dialectica* 10, no. 1 (1956): 9-30; Eva Schaper. "Kant's Schematism Reconsidered", *The Review of Metaphysics* 18, no. 2 (1964): 267-92.

[63] KrV A137/B177.

[64] Oliver Sacks, *The Man Who Mistook His Wife for a Hat and Other Clinical Tales* (New York: Simon & Schuster, 1998),19-20: 'May I examine it?' he asked, and, taking it from me, he proceeded to examine it as he had examined the geometrical shapes. 'A continuous surface,' he announced at last, 'infolded on itself. It appears to have' – he hesitated – 'five outpouchings, if this is the word.' 'Yes,' I said cautiously. You have given me a description. Now tell me what it is.' 'A container of some sort?' Yes,' I said, 'and what would it contain?' 'It would contain its contents!' said Dr P., with a laugh. 'There are many possibilities. It could be a change purse, for example, for coins of five sizes. It could ...' I interrupted the barmy flow. 'Does it not look familiar? Do you think it might contain, might fit, a part of your body?'No light of recognition dawned on his face. (Later, by accident, he got it on, and exclaimed, 'My God, it's a glove!' (14-15).

appear to the mind". Being able to appear to the mind is not a "real quality" or "inherent property" of the object. But Kant starts from the fact of empirical knowledge. As he says, "an object falls under a concept". The technical term for this is subsumption. An object is subsumed under a concept. There is a *distinctio rationis* at work. The composite whole (intuition and category) and the composite whole of real elements, point, plane, volume, physico-chemical composition, mineral, are already synthesised. Kant's question is how? That's our question.

There are two types of synthesis or subsumption. On the one hand, between concepts and representations that have homogeneous objects. On the other hand, those that require a synthesis of heterogeneous diversity and require schemata to link concepts and conceptualised objects.

The example he gives in this step is that of a plate and the concept of a circle. Very similar to the what David Charles calls the sigma structure in its 2021 Book.

> We can grasp somewhat more precisely what is involved in Aristotle's claim [A] by considering his discussion of **snubness**, which he defined, I shall suggest, **as nasal-concavity**: **a type of concavity** which **cannot** be defined **without essential reference to the nose**. **Snubness is not**, in his view, **a type of concavity, defined independently of noses**, which is realized by or related (in some way) to noses. It is, instead, **an essential (de re) aspect** of the nature of the relevant type of concavity that it is nasal-concavity. This type of concavity is, we might say, in itself or intrinsically, nasal. The form in question contains, in Aristotle's own terminology, **being nasal 'as a part'.** […] Snubness is to be defined in ways which explicitly refer in its definition to a distinctively nasal way of being concave. It is because snubness is, in its nature, this specific type of concavity that it can only be realized in noses[65].

Simotēs is a nasal concavity and not a formal description of a geometric shape that doesn't necessarily apply to noses but could be applied to anything concave, for example, bowls, certain types of legs, cavities, and so on.

In Kant's case, Nobody goes to the cupboard to get a porcelain circle for their cup of tea or coffee, or a larger circle for eating, nor glass cylinders for drinking water, etc, etc. The distinction between geometric configurations and the shapes of empirical objects allows a homogeneity of figures, but not of concepts.

> Now it is clear that there must be a third thing, which must stand in homogeneity with the category, on the one hand and the appearance on the other and makes possible the application of the former to the latter. This mediating

[65] Charles, *The Undivided Self: Aristotle and the 'Mind-Body Problem',* 7.

> representation must be pure (without anything empirical) and yet intellectual on the one hand and sensible on the other. Such a representation is the transcendental schema.[66]

In the case of numbers, triangles, dogs and natural compounds, the connection between a morphological structure and the definable hyletic seems explicit[67].

> Thus, if I place five points in 2 row, ….. this is an image of the number five. On the contrary, if I only think a number in general, which could be five or a hundred, this thinking is more the representation of a method for representing a multitude (e.g., a thousand) in accordance with a certain concept than the image itself, which in this case I could survey and compare with the concept only with difficulty. Now this representation of a general procedure of the imagination for providing a concept with its image is what I call the schema for this concept. (KrV B179-180)

The different things that are five, not just the symbolic representations "5", "V", the different languages in which the number can be said, but the rule according to which, in set theory, one thinks of five in intension and extension. The same for any number.

> In fact, it is not images of objects but schemata that ground our pure sensible concepts. No image of a triangle would ever be adequate to the concept of it. For it would not attain the generality of the concept, which makes this valid for all triangles, right or acute, etc., but would always be limited to one part of this sphere. The schema of the triangle can never exist anywhere except in thought and signifies a rule of the synthesis of the imagination with regard to pure shapes in space.

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[66] "Now pure concepts of the understanding, however, in comparison with empirical (indeed in general sensible) intuitions, are entirely unhomogeneous [ungleichartig], and can never be encountered in any intuition. Now how is the subsumption of the latter under the former, thus the application of the category, e.g., causality, could be also be intuited through the senses and is contained in the appearance? This question, so natural and important, is really the cause which makes a transcendental doctrine of the power of judgment necessary, in order, namely, to show the possibility of applying pure concepts of the understanding to appearances in general." (KrV B175/A137-A177/A138). Trans.: 1. Kant I, *Critique of Pure Reason*, P Guyer and AW Wood (eds.) (UK: Cambridge University Press 1998).

[67] Nathan Rotenstreich, "Kant's Schematism in its Context", *Dialectica* 10, no. 1, 1956, 9-30.

What appears implies a rule that allows the shape of the triangle (schema) to be identified as an anticipation of Gestalt. The many shapes of the triangle: isosceles, equilateral, scalene, but also the configurations of triangular objects that we all have in our cars to indicate a breakdown, a kite or whatever. The same is true of any polyhedral geometric shape.

> The concept of a dog signifies a rule in accordance with which my imagination can specify the shape of a four-footed animal in general, without being restricted to any single particular shape that experience offers me or any possible image that I can exhibit in concrete.

When we think of the dog, we think of the Chihuahua to the Grand Danois, the quadruped is not just the dog, it can be a cat and a horse. There is a schematic link between the morphological concept of the dog and the representation of each dog.

> The schema of a pure concept of the understanding, on the contrary? is something that Can never be brought to an image at all. (B 181) […] The schemata are therefore nothing but a priori time-determinations in accordance with rules, and these concern, according to the order of the categories, the time-series, the content of time, the order of time, and finally the sum total of time, in regard to all possible objects. (B185)

The schema is the hinge between category and appearance. It is an interface of double value and double complexity. On the one hand it is "intellectual" and on the other it is "sensual". It is both morphological and hyletic. What is this third element linking intellectual and sensual?[68]

> Time […] contains an a priori manifold in pure intuition. […] But it is on the other hand homogeneous with the appearance insofar as time is contained in every empirical representation of the manifold. (B 178/A139)

Kant is interested in understanding the relationship between the pure forms of understanding – the categories – and the intuitions, which are the pure forms of sensibility: space and time. These elements constitute the organisation of sensations and, therefore, the matter of sensation. The succession of 'nows' can be reduced to the form of intuition. However, if the category of causality is applied to A preceding B, then A precedes B not only temporally but also causally. The same applies to permanence. Temporal permanence is not just temporal; it is categorical. Similarly, coexistence,

[68] Krausser, "Kant's Schematism of the Categories and the Problem of Pattern Recognition", *Synthese* 33, no. 1, 1976, 175-92.

which situates simultaneity at different points in space and involves reciprocal actions between entities that are either dependent or independent of each other, implies a categorical understanding. For each category, Kant identifies a schema.

In any case, the morphology of representation cannot be applied at the categorical level. We can only verify sequences, simultaneities, coexistences, or simultaneities of sequences without causal connection or mere coincidences. Therefore, we cannot apply the heterogeneity of the categorical level.

In this sense, on the one hand every appearance has content. It could be whatever each of us emphasizes as a particular content of a given representation, like an object in our workspace, for instance, a laptop, or a part of an object, the screen, a part of a part, the color, and so on. Conversely, it can also be the moment in time "when" I pay attention to it. This "now" is a moment in the day, after waking up, just after coffee, within my biography. My ability to perceive the laptop, my workspace, my flat, my home, my street, is also given by my ability to perceive that particular moment not isolated from the time of my life. However, understanding a sequence of nows does not necessitate specific content to be conceived. It requires a schema or rule that does not permit instantiation but rather a particular way of thinking about the sequence.[69]

7. Husserl's "brown bottle of beer"

One of the possible historical developments of Kant's doctrine of schematism can be found in Husserl's phenomenology, particularly in the operator concept called "phenomenological reduction."[70] In at least one version,

[69] Are there questions of PRIMACY here also? Are the enmattered ideas grapsed (of dogs / snubness) more basic than the PURE ideas of space + geometrical objects…...and the latter abstracted from them (as Aristotle might say)

OR is the reverse true and ideas of snubness / great danes etc are the result of conjoining pure ideas of space and geometry with experience (conceived of as like matter waiting to be enformed) as in 2 component pictures? From the critical point of view Kant's the bathos of experience works out the end result. There are different synthetical moments at the level of sensation, perception, categorization involved in producing this dog here of this species and this nose here that is snub.

[70] Husserl refers to this as phenomenological reduction (Phänomenologische Reduktion or Rückführung). A hyletic content, such as white, is present in chalk or snow, it is chalk--white or snow-white. When reduced, it is perceived as a sensory content morphologically given as white, spread over the mountain surface or on a cylindric object. The hylectic content of the sensation corresponds to varying degrees of whiteness, different shades

this involves the explicit reconstitution of a sensible fact of any extra-mental object into the temporal form of the living present.[71]

[1] The awareness of the present implies the presence of awareness.
[2] Presence grants access to both awareness (mental) and extra-mental content."
[3] The present becomes conscious through self-consciousness.
[4] Self-consciousness is consciousness of something: Self and extra--mental beings.

Husserl aims for his analyses to elucidate these equations and strip them of their content as mere A=A tautologies.

In Kant's view, the perception of reality corresponds to the fulfilment of sensation, while the concept of negation corresponds to the absence of sensation. In "schematic" terms, reality is time fulfilling presence, and negation is the absence of time. However, the presence or absence of sensation does not necessarily imply the presence or absence of an object, nor the existence or non-existence of objects. There are objects nearby within the field of perception that are not seen, and there are objects outside our field of perception that exist but are not currently perceived; yet we do not believe they do not exist. People yet to be born and those already dead are outside the field of perception. Therefore, sensation fills time, and the absence of sensation is the emptiness of fulfilment in time.[72]

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of whiteness, and extensions of surfaces that differ in whiteness. There is a difference in interpretation between the whiteness of chalk or plaster, the whiteness of a mountain or snow, and the whiteness experienced as a sensation. The whiteness that gives rise to sensation results from a psychic element; it is abstracted from other tactile qualities, for example. It is purely an optical determination. It lies in the problematic space between perception and the surface of objects.

[71] Nicola Zippel, "Die Phänomenologische Reduktion Und Ihre Zeitlichen Bedingungen", *Phänomenologische Forschungen*, 2008, 71-88.

[72] Reality is in the pure concept of the understanding that to which a sensation in general corresponds, that, therefore, the concept of which in itself indicates a being (in time). Negation is that the concept of which represents a non-being (in time). The opposition of the two thus takes place in the distinction of one and the same time as either a filled or an empty time. Since time is only the form of intuition, thus of objects as appearances, that which corresponds to the sensation in these is the transcendental matter of all objects, as things in themselves (Thinghood, reality). Now every sensation has a degree or magnitude, through which it can more or less fill the same time, i.e., the inner sense in regard to the same representation of an object, until it ceases in nothingness (=0=negatio). Hence there is a relation and connection between, or rather a transition from

Husserl will phenomenologically reduce or reconduct every hyletic data to a "morphologic" noetic form of access to the world. This falls outside the analysis of this book both systematically and historically. We are, of course, in a very different world. Husserl is not taking as basic the hylomorphic nature of substances, but rather the complex structure of our thinking of them. He focuses on what we are doing when we connect or in Kant's terms) schematise perceived objects in the world with our sensations of them to from the concept of properties of enduring properties.[73]

What type of subjects are we who are capable of doing this? The relationship between mind-dependent perception and the perceived object in the world is as complex as the relationship between a sensation (as a property of the mind) and the qualities of the object it reveals. The S-structure lies between the self and the world, between the res cogitans and the res extensa.

> "In" the reduced perception (in the phenomenologically pure mental process [im phänomenologisch reinen Erlebnis]), we find, as indefeasibly [unaufhebbar] belonging to its essence, the perceived as perceived, to be expressed as "material thing," "plant," "tree," "blossoming;" and so forth. […] The tree simplicity, the physical thing belonging to Nature, is nothing less than this perceived tree as perceived which, as perceptual sense, inseparably belongs to the perception. The tree simpliciter can burn up, be resolved into its chemical elements, etc. But the sense [Sinn] – the sense of this perception, something

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reality to negation, that makes every reality representable as a quantum, and the schema of reality, as the quantity of something insofar as it fills time, is just this continuous and uniform generation of that quantity in time, as one descends in time form the sensation that has a certain degree to its disappearance or gradually ascends from negation to its magnitude. B 181 / A 142 – B 183 / A 143 [Realität ist im reinen Verstandesbegriffe das, was einer Empfindung überhaupt korrespondiert; dasjenige also, dessen Begriff an sich selbst ein Sein (in der Zeit) anzeigt. Negation, dessen Begriff ein Nichtsein (in der Zeit) vorstellt. Die Entgegensetzung beider geschieht also in dem Unterschiede derselben Zeit, als einer erfülleten, oder leeren Zeit. Da die Zeit nur die Form der Anschauung, mithin der Gegenstände, als Erscheinungen , ist, so ist das, was an diesen der Empfindung entspricht, die transzendentale Materie aller Gegenstände, als Dinge an sich (die Sachheit, Realität). Nun hat jede Empfindung einen Grad oder Größe, wodurch sie dieselbe Zeit, d. i. den inneren Sinn in Ansehung derselben Vorstellung eines Gegenstandes, mehr oder weniger erfüllen kann, bis sie in Nichts (= 0 = negatio) aufhört. Daher ist ein Verhältnis und Zusammenhang, oder viel|mehr ein Übergang von Realität zur Negation, welcher jede Realität als ein Quantum vorstellig macht, und das Schema einer Realität, als der Quantität von Etwas, so fern es die Zeit erfüllt, ist eben diese kontinuierliche und gleichförmige Erzeugung derselben in der Zeit, indem man von der Empfindung, die einen gewissen Grad hat, in der Zeit bis zum Verschwinden derselben hinabgeht, oder von der Negation zu der Größe derselben allmählich aufsteigt.]

[73] Pace David Charles.

belonging to its essence – cannot burn up; it has no chemical elements, no forces, no real properties[74].

We find a similar formulation in Aristotle when we read that "the stone is not in the mind, but the form of the stone is" (οὐ γὰρ ὁ λίθος ἐν τῇ ψυχῇ, ἀλλὰ τὸ εἶδος, Arist. De An. III. 8. 431b29. What is in the mind is the eidos of the stone. In this sense, it is about understanding the relationship between the stone and the mind through the eidos. Does the eidos hold the same status as the Kantian schema? Furthermore, is it the eidos that differentiates geometric concavity from nasal concavity? In any case, it seems we can assert that the eidos lies between the mind and the stone. We perceive the stone from a distance, from a certain point of view (from above), cutting out its silhouette with our gaze, the outline defined by the encounter between perspective and the stone.[75]

Husserl uses sensual hylē and intentional morphē[76] as correlates of various possibilities, including: matter without form (formless matter) and form without matter (formless form). From the intentional point of view, consciousness is always consciousness of something, so a morphē is always a morphē of a hylē, and a hylē always belongs to a morphē. Husserl uses the term 'entanglement' [Verflechtung] to describe the intricate or interwoven character of one structure within another. As we shall see, he also uses noēsis and noēma in other instances: nomen agentis nous, noein, noesis, and nomen rei actae, the result of nous: the thought as such. But we will address that later.

Husserl tries to pinpoint a difference between the tree we 'see' in an unprepared, pre-philosophical, pre-phenomenological way, in the natural, 'physical' attitude [natürliche Einstellung], and the tree in perception [wahrgenommener Baum]: the eidos tree. There is no transition from the physical tree to the psychological tree. One is already within the other. You don't even have to burn the tree to realise that the tree remains in memory, or that we anticipate the shadow of the grown tree when we plant it. The tree in perception is the result of metabasis eis allo genos. It is the tree 'in' perception.

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[74] Ideen §89, 184 (Trans. F. Kersten).

[75] One can ask if the eidos of the stone is grasped by the soul or if the eidos of the stone is itself in the soul. David Charles pointed to me the ambiguity in taking on the form without the matter: 1) Taking on the form without taking on its matter and 2) Taking on the form without matter as a separate internal object. My guess is that Kant's problem of constitution aims at distinguishing two ways of knowledge (Erkenntnisart) in which we can understand the unproblematic way a stone is seen by us, outside of the soul, and a second way where the stone is constituted by the subjectivity. It's the same stone but rooted upon the understanding and sensibility through schematism.

[76] Ideen I §85, 172.

> In this way the unity of one perception can include a great multiplicity of modifications which we, as observers in the natural attitude, sometimes ascribe to the actual object as its changes, sometimes toa areal and actual relationships to our real psychophysical subjectivity and sometimes, finally, to the latter itself. But now we must describe what is left of that as phenomenological residuum if we reduce it to its "pure immanence" and what therefore may or may not hold good for the really inherent component of the pure mental process[77].

Descartes provides a similar formulation. There is confusion, for example, between "colors in objects", "lying outside our minds" and "in sensation". The question is always one of eidetic reduction. Each "physical", "hyletic" material point of the tree corresponds to a point in perception. The size of the tree doesn't change, but the apparent size changes in relation to the distance. When I approach it as I enter the garden, when I sit in its shade, when I look at it from the dining room, when I climb it to catch the cat or when I descend it, when I see its black form under the dark night sky or its brown trunk and green branches under the blue summer sky.[78]

Many of Husserl's analyses focus on form [Gestalt], image [Bild], size, sensory content, proximity and distance, the contours of objects, the perception of movement, and proprioception. A house can have the same content and appear completely different on various days of the week, without us being able to say what this difference "really" consists of from a "hyletic" point of view.[79]

> The color of the tree trunk, pure as the color of which we are perceptually conscious, is precisely the "same" as the one which, before the phenomenological reduction, we took to be the colo of the actual tree (at least as "natural" human beings and prior to intervention of information provided by physics). Now, this color, put into parenthesis, belongs to the noema. But it does not belong to the mental process of perception as really inherent component piece, although we can also find in it "something like color:" namely, the "sensed color," that phyletic moment of the concrete mental process by which the nematic, or "objective," color is "adumbrated". […] We see a tree unchanged with respect to color - its color, the color of the tree - while the

[77] *Ideen* I, §97, 202.

[78] Cf. Descartes AT VIII 1. 1070, 1066: "Adeo ut videntes, exempli gratia, colorem, putaverimus nos videre rem quandam extra nos positam, et plane similem ideae illi coloris, quam in nobis tunc experiebamur; idque ob consuetudinem ita iudicandi, tam clare et distincte videre nobis videbamur, ut pro certo et indubitato haberemus."

[79] Bertrand Bouckaert,"La Signification „autre" de La Phénoménologie. Notes Propédeutiques Sur Quelques Aspects Paradoxaux Dans La Théorie Husserlienne de l'intentionnalité", *Phänomenologische Forschungen*, 2002, 163-81.

> positions of thees and our relative orientations are changing and our regard is incessantly moving over the trunk and branches, *and while, at the same time, we come closer and thus, in various ways, bring the mental process of perception into a flow* [und so in verschiedener Weise das Wahrnehmungserlebnis in Fluss bringen][80].

What is happening here? The perception of perception implies that any apparently non-temporal content becomes temporally expanded. Every sensory content, in its heterogeneity, is both the content of the sensation and the real content of the object. The brown in the bark of the tree and the brown in the sensation are phenomenologically distinguished. I perceive the tree without conscious effort. Phenomenological reduction provides me with the perception of the sensation of brown. There is a flow that synchronises my sensation of brown with the brown in the tree. The duration of the sensation and the duration of the brown are not the same, but there is a transgression. When I say it is the brown in the tree, it is a content that lasts beyond the duration of the sensation of brown within the duration of my perception of the tree.

This looks as if there are two objects: a sensational object (in the mind) + one in the tree?

That is Husserls way of identifying "object surface" as an interface between what lies beyond intentionality. H's take is that any hyletic content can be both real (Gehalt) and consciousness content (Inhalt). So that the brightness spotted in black shoes is painted in white. There is a different sense, although the same referent. Brightness is not whiteness. The color "rose" taken from the flower and applied in any Rosie object. White in snow, milk, cloud is different when snowed white, milky white, cloudy white and the white extensions, brighter or darker, abstracted from snow, mild, cloud.

Husserl goes even deeper into this aspect of time. In the Seefelder manuscripts, we read:

> I see a beer bottle that is brown, I hold on to the brown colour in its spreading, 'as it is really given' ['so wie es wirklich gegeben ist'], I exclude everything that's only meant and not given. I make a distinction between appearances [Erscheinungen], of the beer bottle and the bottle that appears. I find the connection between these appearances; I find the consciousness of identity that runs through them. [...] The beer bottle appears again and again, appears as always, the same and as always equally determined. And there are different appearances; the appearances are not the beer bottle that appears to me. They are different, the bottle is the same[81].

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[80] Husserl, *Ideen* I, 203.

[81] *Husserliana X*, 237, Manuscripts of Seefeld on individuation, nº 35. The unity of the sign as the identical of change or unchangeability. "Ich sehe eine Bierflasche, die

Here we are in the midst of a phenomenological reduction. The duration of perception and the duration of the content of perception are distinguished by the temporal expansion of the phases of appearance of the "brown" of the beer bottle. The brown is spread over the surface of the entire bottle, but we only see the part facing us, captured by our perspective, created by our point of view, during the time we are looking at the brown. We may not be focusing on the shape of the bottle. In this case, it is a beer bottle, but it could be a soft drink bottle, slim or round, etc.

The appearances are spread out over time. I can always see the beer in the same place, at the same distance on the table, in the afternoon, after someone has drunk it. The duration of the perception of brown does not coincide with the duration of the brown in the beer bottle. The duration of perceiving a content does not coincide with the possibility of perceiving my own duration.

> I perceive – this brown content. It's durable. This is always the same. It encompasses some phenomenological range. I saw it yesterday, so I remember it today. It has lasted until today. Transcendence. Of course I can't bring today and yesterday together.[82]

Phenomenologically given, we have:

> the brown seen "now" in its duration, the brown. It lasts. It always covers the same area. Now this brown changes, it becomes darker, it changes its spread, the spread it covers. [83]

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braun ist, ich halte mich an das Braun in seiner Ausbreitung, "so wie es wirklich gegeben ist", ich schliesse alles, was im Phänomen bloss gemeint und nicht gegeben ist, aus. […] Ich unterscheide die Bierflaschen-Erscheinungen, ich mache sie zu Gegenständen. Ich finde den Zusammenhang dieser Erscheinungen, ich finde das Bewusstsein der Identität, das durch sie hindurchgeht. […] Die Bierflasche erscheint immer, erscheint als dauernd dieselbe und als immerfort gleich bestimmte. Und dabei sind verschiedene Erscheinungen; die Erscheinungen sind nicht die Bierflasche, die in ihnen erscheint. Sie sind verschieden, die Flasche ist dieselbe." Cf.: Edmund Husserl, *Zur Phänomenologie des inneren Zeitbewusstseins* (1893-1917), ed. Rudolf Boehm, *Husserliana* X (The Hague: Martinus Nijhoff, 1966), 137.

[82] *Husserliana* X, 240: "Ich nehme wahr - diesen braunen Inhalt. Er ist ein Dauerndes. Er ist immerfort derselbe. Er bedeckt eine gewisse phänomenologische Ausbreitung. Ich habe ihn gestern gesehen, seiner erinnere ich mich also heite. Er hat bis heute angedauert. Transzendenz. Das Heute und Gestern dar ich natürlich nciht hereinbringen."

[83] *Husserliana* X, 241: Beschränken wir uns auf das in der Wahrnehmung Gegebene, phänomenologisch Gegeben: das "jetzt" gesehene Braun in seine Dauer, Das Braun. Es dauert. Es bedeckt immerfort dieselbe Ausbreitung. Nun veränd ert sich dieses Braun, es wird dunkler, es verändert seine Ausbreitung, die Ausbreitung, die es bedeckt."

We can ask

a) did consider the possibility that I see the same brown bottle [+ same brownness in the bottle] from different points of view/ under different guises?
b) Is my experience of its brownness an experience of the brownness of the object ...as seen from here….
c) NOT the experience of a brown sensation (psychological brownness) distinct from the brownness of the object?

In Husserl's point of view, we get the same brownness in the bottle from different points of view, under different guises. From the pre-philosophical or pre-reflective point of view, in the "natural attitude", we have the tree, the beer bottle, the house, the garden[84]. From the phenomenological attitude as from the "Copernican" point of view (Kant) we perceive the brownness as accessed through consciousness (Bewusstsein) and dependent on the access. Note that for Kant the thing in itself is the meaning (Bedeutung) upon which in any given moment the bottle presented is the same bottle. Each moment of perception "produces" one aspect of the bottle. An aspect is not the thing itself, though.

From a temporal point of view, the bottle seen in the morning time, under the hot summer sun shows different chromatic characteristics than when the sun goes down: brightness, for instance. The bottle seen at a distance I can fetch it, upon the table, appears to be different to when it was seen at a distance, from above, etc.

The two texts exhibit temporal morphological differences and corresponding hyletic changes depending on phenomenological perception. The nature of phenomenological perception differs from that of psychological perception and the way we view beer bottles. The hylomorphic correlation cannot be considered solely in terms of temporal duration or in the strict physical sense of non-mental or mental distinctions. What is happening occurs in a realm where the very meaning of the duration of perception and the perception of duration undergoes a transformation, and it seems that this is where Husserl is directing our attention.

The hylomorphic psycho-physiological noetic correlation undergoes a transformation with the formula "consciousness is consciousness of..." in the sense that the world as an object presents contents that point to morphological structures, which explain natural phenomena as a desideratum, if not causally, at least fundamentally. On the other hand, in a reciprocal and intertwined manner (Verflochten), consciousness does not have an independent

[84] Rotenstreich, 1956.

existence, as it is inexorably related to the world. It externalises itself in the world, if we can say so, and expresses itself within it. An intention of meaning, even in disappointment, testifies to its presence.

8. One brief final remark

Although Kant could be classified as purist, his theory of schematism presupposes an inextricable link between what he calls reason and any empirical object. For Husserl, there is no form without matter and no matter without form. His task is to identify form and matter in isolation, while assuming that neither exists structurally without the other. There is an inseparable connection between consciousness and the object of which consciousness is aware. In this sense, Husserl's hylomorphic relation tends to be studied in the "of" that connects consciousness to the world, an "of" that is fundamental to this connection, the so called noetic-noematic relationship, which depends on consciousness.

On these remarks one can ask if the inseparable connection in H's account between consciousness of the object and the object of which we are conscious

a) Inseparability in existence or in being/ definition?
b) Do we begin in Husserl's view with two definitionally separate components (sensational consciousness and the object sensed) and then come to realize that they are inseparable in existence? Or is the consciousness of the brown bottle the definitionally basic phenomenon from which we can abstract 2 definitionally separate components? [The question of priority again] Or did he think that the issue of PRIORITY is in some way misguided/ unanswerable?

My guess is that, once the (operational) concept of Erlebnis (life experience) is introduced or discovered, Husserl tries to connect (K's synthesis) perception as a consciousness phenomenon with irreducible matter. Husserl's puzzling question is how can we "de iure" understand the fact that the material world is a content of consciousness (Bewusstseinsinhalt)? Note: this is not pan-psychism. Not all matter is intentional. But for an object to be "for" me, it takes a consciousness. Somehow world and life belong inextricably to one another. Those questions arise after the phenomenological dimension being discovered. Therefore, the abstraction comes later. The intention is constituting the inextricability form and matter.

What is the status of the object? The eidos and the schema are interfaces that facilitate interaction in both directions. A radicalisation of the question

admits the inaccessibility of the thing itself without be somehow schematized or eidetic reduced.

Both could affirmatively answer the question:

> Does the inextricabilist version of hylomorphism, independently of questions about its historical credentials, offer a better way to think of natural substances, humans included, than the now standard two component account?[85]

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