

THE GENERATIVE DIMENSION, IN THE LIGHT OF ARISTOTLE'S SUBSTANCE (*HYPOKEIMENON*) THEORY

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ABSTRACT: The paper is dedicated to the analysis of Aristotle's substance theory within the overall Organicist perception of the universe as a living organism. The suggested analytical pathway begins with the generative substance (in Stagirite's original term – generative *hypokeimenon*) and leads to the primary causes, prompted by the constant movement of the “thing”. We argue that Aristotle's analysis of “matter and form” (in his original texts: “ὕλη – *hyle*” and “μορφή – *morphe*”)² leads to the generative function, reaffirming its dynamism and process expression.

KEYWORDS: Aristotle, *hypokeimenon*, *hyle*, *morphe*, potential, reality, dynamism, universe, organism, process, generative function

Contents

Introduction

1. From the studying of Aristotle's theory of substance (*hypokeimenon*) – to realizing the generative dimension
2. From Aristotle's analysis of “*hyle*” and “*morphe*” – to examining the generative potentials that are their natural essences

Conclusion

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² Following the approach of the BCnA-journal, we consider it essential to apply the genuine terms and notions, used by the Stagirite in his original works, in expressing the authentic (and our own – neo-Aristotelian) conceptual constructions. Thus, we use (adding *Italics*); *hyle* – instead of “matter”; *morphe* – instead of “form”; *hypokeimenon* – instead of “substance”, etc.

ГЕНЕРАТИВНОЕ ИЗМЕРЕНИЕ, В СВЕТЕ АРИСТОТЕЛЕВСКОЙ ТЕОРИИ СУБСТАНЦИИ (*ГИПОКЕЙМЕНОНА*)

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АБСТРАКТ: Статья посвящена анализу теории субстанции (*гипокейменона*) Аристотеля в общем восприятии органической вселенной как живого организма. Предлагаемый аналитический путь начинается с порождающего вещества (в первоначальном выражении Стагирита – порождающего *гипокейменона*) и приводит к основным причинам, побуждающим постоянное движение «вещи». Мы утверждаем, что анализ Аристотелем «материи и формы» (в его оригинальных текстах: «ὕλη» – *гиле* и «μορφή» – *морфэ*) означает появление генеративной функции, с ее динамизмом и процессуальным характером.

КЛЮЧЕВЫЕ СЛОВА: Аристотель, гипокейменон, *гиле*, *морфэ*, потенциал, динамизм, вселенная, организм, процесс, генеративная функция

Содержание статьи

Введение

1. От изучения Аристотелевской теории субстанции (*гипокейменона*) – к реализации генеративного измерения
2. От анализа Аристотелевских «*гиле*» и «*морфэ*» – к изучению генеративных потенциалов, которые являются их природными существами

Заключение

Introduction

The Aristotelian science (and philosophy) is the science of the thing's (subject's) substances-qualities, and all this is based on his cornerstone bipolar potentiality/actuality theoretical principle. The term “dimension” implies the two main aspects: of generalizing meaning (referring to a scope or importance, or direction); and of measurement the material (but not hyletic) aspects: in length, width, thickness, or energy levels and efficiency indicators, etc., referring to the results of generative activity. Therefore, the synonyms to “generative dimension” could be: the generative (δυναμική) potential (substance-*hypokeimenon*, essence-ουσία, subject, entity, nature, backbone, etc.), and the dimension of its (ενέργειας) results of activity. Thus, other adequate synonyms (for the “generative dimension”) could be (and are, in the text) ‘generative *hypokeimenon*’, ‘generative subject’, ‘generative capacity’, etc., together with the objective study of the results of their

effective (Dynamic, Functionalist) activity. Or using the term “prehension” (which is a key notion in A.N. Whitehead’s Process philosophy³ and within his general attempt of speculative building a comprehensive cosmology and worldview, of the truly Holistic essence), then we have – ‘generative prehension’ and the study of the organ(ism)’s effective functional activity (or, broadly, ‘*hypokeimenon* functionalist prehension’); or even in a more extensive version – ‘*hypokeimenon* grasping and its morpho-functional study’. However, we prefer chiefly to use ‘generative dimension’ because of its bipolar (polysemic, ambivalent) meaning.

Thus, Aristotle’s substance (*hypokeimenon*) theory includes (all the more, in our contemporary time of the 21st century challenges) the task of generative dimension. From the evolution of the concept of *hypokeimenon* to realizing the generative grasping of the subject’s essence and studying the functionalist results generated *from within*, we find that, Aristotle gradually sees *morphe* as the primary *hypokeimenon*, and that is the primary cause of the thing’s generative changeability, including its entire range: movement-*kinesis* in the space, growth and development, with qualitative transition, shift alteration, transformation-*metabole*.

Through the analysis of *hypokeimenon*, the Stagirite points out that the universe is constantly undergoing a process of ascending (and corrupting) transformation – its origination and alteration shift from the absolute *hyle* to the absolute (but which is inherent in the Functionalist meaning) *morphe*. Thus Aristotle admits the universality of the evolving process of the thing, which is greatly different from our typical interpretation of Aristotle only paying attention to the everlasting eternity. From his analysis of the *hyle* and the *morphe* to examine the generative *hypokeimenon* included within it, we find that with the use of the explanation of generative potencies, we can overcome the dilemmas of component explanation, such as how can two combine into one, and this kind of explanation is not an analysis of the static components of individual’s *hypokeimenon* at a given time, but the analysis of the causes of the individual’s *hypokeimenon* formation.

In conclusion, the existence of *hypokeimenon* is not empty and bare, but it is “dynamic”. If we really want to understand the existence of individual *hypokeimenon*, to understand *hypokeimenon* itself, we must delve deeply into the cause of their generation and existence and into the production and movement of the whole world, using the generative capacity to comprehend the conclusion of Aristotle’s theory of *hypokeimenon* (theory of substance). Aristotle’s concept of *hypokeimenon* is often interpreted as describing *hypokeimenon* as independent existence without the need for anything else, therefore *hypokeimenon* is abstract, static, and eternal. But his *hypokeimenon* theory includes the generative prehension.

1. From the studying of Aristotle’s theory of substance (*hypokeimenon*) – to realizing the generative dimension

The theory of *hypokeimenon* is one of Aristotle’s core concepts, which establishment is traced in the research process from *Categories* to *Physics* and then to

³ See: Whitehead, A.N. (1978). *Process and Reality*, corrected ed. prepared by David R. Griffin and Donald W. Sherburne. New York: The Free Press.

Metaphysics. In *Categories*, Aristotle insists that an individual thing is *hypokeimenon*, the latter is the “underlying thing” is something which can be predicated by other things, but cannot be a predicate of others. *Hypokeimenon* is a concrete and individual thing. Aristotle points out that universality is a concept which is only used to distinguish one kind of *hypokeimenon* from another. Compared to other characteristics of *hypokeimenon*, the concept of Organicist universality is introduced. The “secondary *hypokeimenon*” (“secondary substance”) is attached to the “primary *hypokeimenon*” (“primary substance”) of the specific individual. In this stipulation of the *hypokeimenon*, generative connotation does not exist, or in another word it has not emerged.

Aristotle is the Father of aetiology. With our fully supporting the approach and statement of colleagues in the recent BCnA-issue (in the joint article on the “Challenging Integralism” [2017, p. 19]⁴), we strongly uphold the use of Aristotle’s authentic terms for the designation of four (generally recognized) causes, which are their substantiated authentic designation as Hyletic (instead of material), Generative (instead of Efficient), Organic (instead of Formal), and Telic (instead of Final), and they all are basically generative and telic (i.e. focused at the *telos* – the effective needed result of life activity).

In *Physics*, Aristotle makes a supplement to the standpoint that only individual thing is “primary *hypokeimenon*”. He attributes it to the four original principles of sensible *hypokeimenon* – *Hyletic* cause, *Generative* cause, *Organic* cause, and *Telic* cause. He further condenses this into *Organic* cause and *Hyletic* cause, because the *Generative* cause, the *Organic* cause, and *Telic* cause are always overlapping with each other. He believes that individual’s *hypokeimenon* is a Generative process, which is *hyle*, *morphe* and shortages determine the “coming-to-be” and development of the thing. In *Physics*, Aristotle begins to give *hypokeimenon* a generative prehension. He analyzes *hypokeimenon* as a substantial basis for the process of a thing’s changing; he states that the “coming-to-be” of the thing is a continuous process that on the basis of immutable carrier, namely *hyle*, which shifts from one *morphe* to another *morphe*. *Morphe* itself also contains shortages, yet these shortages gradually perish driven by the thing’s own provision, and with the help of the *hyle*; one *morphe* would then be transformed into another. *Hyle* is the more fundamental element because it is “close to the *hypokeimenon* and in some sense it is *hypokeimenon*.” [Aristotle, *Physics*, 189b20-27]

Aristotle, in the seventh volume of the *Metaphysics*, explicitly states that “what is it from” is the *hypokeimenon*, which changes his view of the idea of “*hyle* is *hypokeimenon*” in *Physics*. For Aristotle, *morphe* is more qualified to act as *hypokeimenon* because *morphe*, as a specific stipulation of the thing, would be defined explicitly in essence. “So the question, ‘what is it from,’ is appropriate for

⁴ See: Bremer, Josef; Khroustski, Konstantin S.; Klimek, Rudolf and Tadeusiewicz, Ryszard. “Challenging integralism, Aristotelian entelecheia, hyle and morphe (form), and contemporary concepts of information, touching upon the aetiological issues of carcinogenesis (with reflecting feedbacks of Paul Beaulieu, Ana Bazac, Anna Makolkin, Leonardo Chiatti, Milan Tasić and Dariusz Szkutnik),” *Biocosmology – Neo-Aristotelism* Vol. 7, No. 1 (Winter 2017): 8–111.

hypokeimenon in a primitive and pure sense, and then it is appropriate for others,” [Aristotle, *Metaphysics*, 1030a30-35] according to Aristotle.

In conclusion, the evolution of Aristotle’s concept of *hypokeimenon* progresses from what is “being,” to the first “being” that is the *hypokeimenon*, which is then layered into three substrata: *hyle*, *morphe*, and the specific things produced by the above two. He confirms that the *morphe* is the first and the primary *hypokeimenon* as it is the essence of a thing, it is the thing as it is, and it is the primary cause of the thing’s generative changeability, including its entire range: movement-kinesis in the space, growth and development, with qualitative transition, shift alteration, transformation-*metabole*. Consequently, Aristotle’s concept of *hypokeimenon* has realized the ego of *hypokeimenon* itself through making of itself though movement from concreteness to abstraction and then to concreteness. Through the analysis of *hypokeimenon*, he points out that the universe is a constantly undergoing and a transforming movement process of ascending (and corrupting) transformation – its origination and alteration shift from the absolute *hyle* to the absolute (but which is inherent in the Functionalist meaning) *morphe*.

Thus, Aristotle admits the universality of the evolving process of the thing, which is greatly different from our typical interpretation of Aristotle, which is paying attention only to the everlasting eternity. Aristotle establishes a generative dimension within the concept of *hypokeimenon*, while developing this concept. However, even if Aristotle establishes “what is it from” as *hypokeimenon* in *Metaphysics*, he still do not abandon the concept of the “*hyle-morphe*” framework of *hypokeimenon*. As a consequence we can use both categories, “*hyle* and *morphe*”, aiming at understanding and clarification of Aristotle’s *hypokeimenon* theory.

2. From Aristotle’s analysis of “*hyle*” and “*morphe*” – to examining the generative potentials that are their natural essences

Philosophers before Aristotle, including the Milesian School – they consider *hyle* exclusively as the cause of sensible objects; or like Plato, who believes that *morphe* is the cause of sensible objects. However, Aristotle thinks that both *hyle* and *morphe* are the causes and constituents of *hypokeimena* of sensible objects. In turn, *hyle* and the *morphe* are a pair of interrelating concepts; thus their relationship between each other can be discussed in pair of values: one is component, and the other is generative.

If we merely comprehend *morphe* and *hyle* and their relationship from the non-generative *hypokeimenon* (namely, the component *hypokeimenon*), we would insist that the generation of specific *hypokeimenon* is a process for permanent *hyle* to work from lacking a substantive *morphe* to generating the substantive *morphe*. In this framework, any generative *hypokeimenon* should be understood as organ of the permanent *hyle* and its inclusive *morphe*. The basic idea of this explanation is that the relationship between *hyle* and *morphe* should be seen as the relationship between the stuff (matter) and self-organization of the *hypokeimenon*⁵. Therefore, the boundaries between *hyle* and *morphe* are clear until the *hyle* is independent of the *morphe*.

⁵ Herein, the *hyle* and *morphe* are regarded as the “composition” of compound *hypokeimenon*.

In general, we need to introduce the notion (concept) of generative dimension. Indeed, *hyle* is “something from which a *hypokeimenon* comes from,” [Aristotle, *Metaphysics*, 1032a17] and *morphe* is intrinsically interrelated with *hypokeimenon*. All the more, *hyle* is indefinite, and it is not associated with any particular thing; but *hyle* is organized by the *hypokeimenon*, and is the cause of the tangible aspect of everything. In turn, *morphe* is the concrete, functionally effective organ of life activity, which reveals essentially what the thing is in reality, so the definitions of “*hyle*” and “*morphe*” naturally are first formed in the analysis of the generative *hypokeimenon*.

The individual’s generative *hypokeimenon* is a telic complex entity that realizes the emergence (organization) of the *morphe* that has the effective structure and which functionally (inherently) effective (generating the needed results of activity, in its turn). All this precisely relates to the Aristotelian *Hyletic* cause *Organic* cause as well. Therefore, Aristotle’s theory of *hyle* and the *morphe* is merely not the analysis of the individual’s *hypokeimenon* static components at a given time, but it is the analysis of all the *Organicist* causes of the individual’s *hypokeimenon* origination.⁶ Hence, *hyle* is essential *morphe* while the *morphe* is already generated or finished *hyle*. The *hyle* and the *morphe* generation –in the continuous process generative transformations. Hence, *hyle* is no longer opposed to *morphe*, but the relationship between *hyle* and *morphe* is mutually interdependent.

Studying the generative relationship between *morphe* and *hyle*, Aristotle introduces a pair of fundamental concepts: potentiality and actuality. Any sensible *hypokeimenon* is generative, but not *morphe* and *hyle*, which serve as the generative carriers. Hence, what is generative is only the concrete and sensible *hypokeimenon*. Thus, we have the process of “antecedent *hyle*” natural transformation into the actual (functionally potential) *morphe*.

Now we can say that the potential *hyle* turns into reality by virtue of the natural generative process and essentially contributes to the telic (functionally effective) *morphe* emergence. Therefore, as far as the self-actualization of *hypokeimenon* concerned (which is primarily sensible, but, eventually, which is exercised in the *morphe*’s functionalist success), one can say that “*morphe* is *hyle*”, and “*hyle* is *morphe*”. In this “in-in” structure, the *morphe* and the *hyle* depend on each other, relate to each other, and *hyle* (potential) becomes reality in virtue of generative *hypokeimenon*. *Morphe* predominates (but is based on) *hyle*, and *hyle* self-actualizes its inherent potency by constituting the effective *morphe*. Thus, a sensible *hypokeimenon* has one essence, which is single and inseparable at the level of ontology, and this is the meaning of the sensible *hypokeimenon* as a strict unity. Explained more precisely, this is when we take the sensible *hypokeimenon* as a “unity”. Attention should be paid to the meaning of its realistic (functional) existence, but when we take it as a “compound *hypokeimenon*,” we may discern its meaning of generative dimension.

⁶ *Organicist* causes (of the Aristotelian aetiology) do not refer to the time priority and exteriority characteristics in the modern sense, but they are reduced to the inherent potencies that are organized on the needed results of effective life activities.

Aristotle's thought stresses the bipolar (potentiality/actuality) unity and the relationship between potential and actual constituents of the thing, including the relationship between *hyle* and *morphe*. It can be deduced that *hyle* is a potential the foundation for building up a *morphe*. With this interpretation, *hyle* is driven by its own (inherent) potentiality and, gradually (and eventually) emerges into a reality, or the *morphe*. There is a continuous process between *hyle* and *morphe* during the transition from potentiality to actuality. Aristotle argues that the thing's *morphe* is in a ladder between the reality and potentiality, and it occupies the lowest level wherein the *hypokeimenon* is entirely realistic. For example, an acorn is just an oak tree's potency (*hypokeimenon*) – of its future *morphe*, grown by accepting a due *hyle*.

In Aristotle's opinion, the universe itself can be seen as a generative process that realizes transition and organization from the potential *hyle* to the actual *morphe*. The pure *hyle* is in a state where the definition of the universe has not yet been realized, it has no definition, but it has sufficient potential to be actualized in a resultant *morphe*. In turn, the pure *morphe* itself is in a state that has fully evolved and, therefore, it is the end of the generative process.

However, in this internal relationship, the question that has to be answered is: How exactly pure *hyle* starts its own movement towards a pure *morphe*? Aristotle resolves this issue by introducing the notion of "Unmoved Mover" (Kosmic Nous). Nous is essential for the existence of the Aristotelian whole Organicist universe (Kosmos), including its natural processes of all things self-evolvement. It is significant that Aristotle's Nous permanently exercises the universal attractive (that releases the intrinsic activities) forces and causes; while Plato's God-Demiurge (as a polar opposite) governs the world 'from without'. Essentially, Aristotle's "unmoved mover" (Nous) realizes precisely the processes of self-existence and self-evolution in the Noetic (Noospheric) Universe – for all things and their *hypokeimena* (for all subjects of the real world) – but which (all the results of their life activities) lead to the natural harmony and the safe and successful Kosmic (Organicist) self-ascending evolution, in the generative manner and developing life processes toward the potential future.

Conclusion

The existence of natural (hence, sensible) *hypokeimenon* is not empty and static, but it is "dynamic" and can be expressed by its own inherent functions and activities. What we encounter in the empirical world is, in reality – is the manifestation (self-actualization) of the natural *hypokeimena*. And, if we wish to advance in understanding the individual *hypokeimena* and their generated effective functionalist activities – we then need to start from understanding the *hypokeimenon* itself, and further going deeper into its natural existence and generative activity, and, thus, advancing and developing the notion and approach of generative dimension. In this way, we are to rely on (but, firstly, to come closer to a true understanding of) the Aristotelian authentic theory of substance (*hypokeimenon*).

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