

Updating the philosophical concept of *form* (*morphé*) as the embodied structural and teleological informational program in human beings

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ABSTRACT

The contemporary philosophy of mind and neuroethics are two of the liveliest fields of interdisciplinary reflection which deal with the everlasting topic: what/who we *essentially* are. One of the many questions that can be tackled in order to go deep in this knowledge is: *why* man is naturally inclined towards specific tiers for survival which constitute his/her teleological project of flourishing? Two different, but complementary, answers are brought to light in this work. The author argues for an apparently obvious, but relatively underexplored view of the classical hylomorphic concept of *form* (*morphé*), not just as the information that characterizes the organization of human body, but also as the intrinsic final reason *why*, through a specific type of bodily (brain) structure, the human being develops his/her natural inclinations and behaves according to them. The author advances the argument in terms of an *upward* comparison between the threefold levels of Thomas Aquinas' natural human inclinations according to *Summa Theologiae* I-II, question 94, article 2, and the pioneering structural and functional "Triune Brain" model developed from 1949 to 1952 by Paul MacLean. The hylomorphic view sketched is profoundly different from a purely materialistic conception of teleological processes of human behavior, and it is a plausible explanation that motivates and invites further considerations and research.

1. Introduction

The contemporary philosophy of mind is one of the liveliest fields of interdisciplinary reflection dealing with the everlasting topic: what/who we *essentially* are. Developed from the twentieth century's Anglo-Saxon analytical

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tradition, the philosophy of mind is a real ‘hub of activity that intersects with metaphysics, epistemology, and the philosophy of science and language’ (Jaworski, 2011, p. ix), together with the ‘systematic and informed reflection on and interpretation of neuroscience, and related sciences of the mind (psychology in all its many forms, psychiatry, artificial intelligence, and so on)’ known as neuroethics (Clausen & Levy, 2015, p. vi). The aim of this fruitfully interactive and interdisciplinary reflection is improving our self-understanding (Clausen & Levy, 2015, p. vi) through a neuroscientific-based explanation of our *structure* and *function* as human beings.

The aim of this contribution is to argue for an apparently obvious, but relatively underexplored view of the classical hylomorphic concept of *form*, not just as the information that characterizes the organization of human body, but also as the intrinsic final reason *why*, through the type of brain (bodily) structure, the human being develops its natural inclinations and behaves according to them. The main point is summarized by the following question: Why man is naturally inclined towards specific tiers for survival which constitute his/her teleological project of flourishing? Two different, but complementary, answers are brought to light in the essay. I will advance the argument in terms of an *upward* comparison between the threefold levels of Thomas Aquinas’ natural human inclinations according to *Summa Theologiae* I-II, question 94, article 2, and the pioneering structural and functional “Triune Brain” model developed from 1949 to 1952 by Paul D. MacLean. The purpose of this *dual* approach is to start a plausible bringing up-to-date of the philosophical concept of human *form* as both the intrinsic efficient causality of bodily structure, and the teleological project for human flourishing.

2. The mind/body problem

Current introductory textbooks in the philosophy of mind depict the so called mind/body problem as the central core of the discipline. Most researchers in this field seem almost exclusively concerned with the problem of ‘how meaning, rationality, and conscious experience are related to a physical world’ (Lagerlund, 2007, p. 1). According to Herbert Feigl, the mind/body problem could be approached by looking at the two sides of the same coin, that is, the *material* mode and the *formal* mode. The *material* mode is expressed by a question formulated in this way: ‘How are the raw feels related to behavioral (or neurophysiological) states?’; while the *formal* mode of the mind/body problem has the following linguistic expression: ‘What are the logical relations of raw-

feltalk (phenomenal terms, if not phenomenal language) to the terms and statements in the language of behavior (or of neurophysiology)?” (Matson, 1966, p. 93). This *duality* of the dimensions of the same problem is frequently explained in usual terms with questions like: ‘Does the mind affect the body? or body mind? or both? and if so how? What is (how are we to conceive) the relation between the sensation and the brain event?’ (Matson, 1966, pp. 93.96).

3. Genesis of the mind/body problem

As pointed out separately by important authors, the genesis of the mind/body problem, as shortly depicted above, could be synthesized in three steps: (1) the thirteenth century *turn* of the classical debate concerning the soul/body relation in favor of the so called unicity and identity theses between the soul (the principle of life and organization of the living being) and its powers (faculty/capacity/ability or what the medieval usually called in Latin *potentiae animae*) against the distinction thesis developed and defended mainly by Thomas Aquinas. Despite the fact that some authors considered the distinction thesis between the organism’s faculties and its soul ‘the mainstream view’ accepted by almost everyone throughout the Middle Ages (King, 2008), a recent deep analysis put forth evidence that the majority of medieval intellectuals, Richard of Mediavilla, Peter John Olivi, John Duns Scotus, and especially, William of Ockham and John Buridan, accepted the identity thesis according to Henry of Ghent (Wood, 2011); (2) the *disembodiment* of human immanent activities, such as sensation, perception, even cognition and conation, with the conceptual consequence of drawing a virtual line of separation between mind and body in such a way that those immanent activities were put on the mind side, instead on the body counterpart (Matson, 1966, p. 101); (3) the distinction and opposition between primary-quantitative qualities (size, shape, location, speed, direction) and secondary-qualitative qualities, together with the triumph of the mechanistic scientific view of *nature*, produced a sort of *migration* of secondary qualities from the natural world to the mind (King, 2005, p. 204). The result was that ‘once the world was denuded of secondary qualities, their unreal existence in the mind set the stage for the mind-body problem’ (King, 2005, p. 204), which was to take on the following unsolvable interactionist formulation: ‘How does a sensation push or pull, or get pushed or pulled, by a nerve tissue?’ (Matson, 1966, p. 98).

4. Three mind/body problems and the one neglected

There is not just one, but several mind/body problems, that could be classified in four groups according to the nature of the anthropological question they entail. (1) The first hurdle, the *disembodiment* problem, comes immediately from the conclusion of the three steps described above and has to deal with the existence of sensations, perceptions, cognitions, and volitions in the mind, and how to explain that there can be mental activity without a body; (2) the second hitch, the *interaction* problem, tackles the problem of how to explain the fact that the mind and the body could have a bi-directional efficient causal effect; (3) the third obstacle is the *unification* problem, that is, ‘how can the mind and the body, which can exist apart from each other, be united into one single thing; a human being’ (Lagerlund, 2007, p. 2).

(4) The fourth mind/body problem deals with teleology and the concept of final causality. Two simple views mark the extremes: on the one hand, the realm of the material and biological which is governed by efficient causality, and, on the other, the mental and metaphysical world, which is governed by final causality. In the paragraph ahead, Henri Lagerlund clearly points out the genesis of the type of *forma mentis* that thinks of the human being as a juxtaposition of two different kind of ‘things’ (*res*):

This problem it seems to me, as the other three mentioned, grows out of the later Middle Ages. It starts primarily in the early fourteenth century when thinkers like William Ockham and John Buridan start to flirt with a mechanized view of the material world. They explicitly argue that efficient causality is all that is needed to explain movement and change in nature, and hence they limit final causality to immaterial object like minds, angels and God. From their argumentation a mind/body problem follows, namely how is human action and free will, which is governed by final causality, incorporated into a world, which otherwise is solely explicable by efficient causality (Lagerlund, 2007, pp. 2-3)

This contribution will focus on this fourth mind/body problem dealing with teleology and the concept of final causality. In particular, there is a sort of third option to examine that moves from the concrete analysis of the organization of human biology, in particular, of the human brain structure, and tries to ‘read’ inside the biology the direction (*directedness*) of its tendencies (natural inclinations) in order to understand better the nature of the information principle responsible for the intelligibility of the specific structure

configuration, and to give a solid ground for ethical and neuroethical dilemmas. Teleology in human beings is intrinsic, embodied in biology, especially in neurobiology and neuroanatomy, so that by knowing correctly the structure and function of the brain we can deduce the intrinsic final causality, the human ends, responsible for his/her flourishing. This approach has the power to guide education in order to give answers to social and economic problems.

5. A brief premise: the re-discovery of the concept of ‘form’

A central tenet in contemporary neuroethical reflection states that, today neuroscientific research offers us a lot of insights into aspects of human existence by taking philosophical terms related to human constitution and behavior that were introduced in antiquity and renewing the effectiveness of some of those ideas. For this reason, the contribution ahead is inspired by the following premise: ‘Some of the abstractive power of philosophical concepts is required to cope with the crushing complexity of brain anatomy’ (Cherniak, 1994, p. 92). The philosophical concept chosen in this essay is the Aristotelian notion of *form* or formal cause, which is one of the liveliest re-discoveries in current debates that bring to light the philosophical significance of biological discoveries, such as those performed in the fields of genetics, epigenetics, and neuroscience.

First of all, in a dual (not dualistic) ontology, the notion of human *form* corresponds to the principle of life, the very capability to live, the first act that organizes and informs a natural body that has life in potency (Berti, 2013), that is the information as the specific relation of order of matter (mass and energy) – that could be ordered in other ways – in a human configuration (Oleksowicz, 2018, p. 238). This hylomorphic view is profoundly different from a purely materialistic conception of teleological processes. Ernst Mayr’s account, for example, points out that three seemingly teleological processes, that is, teleonomic processes, teleomatic processes, and the achievement of adaptedness by natural selection, are to be strictly considered as material phenomena (Mayr, 1992, p. 134). Contemporary integration between a dual ontology and science, in particular modern quantum physics and neuroscience (Oleksowicz, 2018), reveals that teleonomic processes, as well as the many organic activities that are clearly goal-directed in us, cannot be reduced to mere chemico-physical causes. On the other end, the *telos* is embodied and encoded in the program which directs human activities and inclinations. The nature of this program is fundamentally non-material, but informational. Information is

in itself an immaterial dimension that is able to make sense of the final causality in the human being while avoiding a dual substance worldview.

The equivalence between the function that modern biology attributes to the DNA molecule and the function that Aristotle attributed to form is well characterized in the following way:

According to today's genetics, what distinguishes the human genome from that of other living species, although in a minimal (but important) percentage, is the 'sequence' of the various components that make up genes, i.e. the DNA segments of which the chromosomes contained in the cell nucleus are made. Well, the components of DNA, which are equivalent to what Aristotle called 'matter' are the same for all living beings, while the 'sequence', i.e. the order in which they are arranged, is different. However this order is equivalent to what Aristotle called 'form' and all the characteristics that develop in the living being depend on this order, just as for Aristotle all the characteristics of plants and animals depend on their form, that is, on their 'soul'. (Berti, 2011, p. 39)

So the human *form* is not a sort of strange immaterial efficient cause as a "ghost in the machine", instead it is the intrinsic (immanent) capacity of the living body of self-organization on three levels: vegetative, sensorimotor, and rational (Oleksowicz, 2018, p. 256). 'The soul is nothing but the living body's ability to exercise all its functions' (Berti, 2011, p. 40), or, in neurophilosophical language, it is 'the ability of the brain, or of the entire organism through the brain, to carry out these processes, ranging from the most basic functions, called physical, to the higher and more complex ones, called psychic' (Berti, 2013, p. 45).

6. The rationale of this essay

Since the time of the ancient philosophers, like Aristotle, reflection on the human constitution and behavior has been conducted through an *upward (bottom-up)* theoretical and practical movement starting from evidence at different degrees of complexity of human action and biological organization of the body – according to the development of what nowadays is considered the content of the term 'science' – up to the search for the causes (*principia*) and reasons which make the whole dynamics of the organism intelligible. In the Middle Ages, without leaving behind this *agere sequitur esse leitmotiv*, the great *Summas* dealing with the World, Man, and God, were depicted according to the

opposite, but complementary, *downward (top-down)* approach: man, for example, was seen starting from his/her principle of organization which was called soul or substantial *form* down to his/her physical-bodily constitution. In this *top-down* direction, the way of reasoning can be stated as followed: because the principle of organization (*top*) – the *form* – is of that kind – human – so the physical-body structure is shaped in this human like configuration (*down*).

Nowadays neuroethical reflection moves *bottom-up* and directs its attention starting from the analysis of the physical-nervous system development, structure, and dynamics – especially the brain – *up* to deducing, from this neuro-knowledge, ethical principles and criteria for the sake of human flourishing. Paradigmatically, neuroethics was born in 1973 through an *upward* method that on that occasion moved from neurological evidence (*bottom*) of insufficient myelination – maturation – of the pyramidal tracts of newborns, *up* to the unethical evaluation of the enhanced practice of overstimulation with exercises and walking performed even before 8 weeks of age according to the behaviorism interpretation of human development and action (Pontius, 1973).

With this in mind, in the contribution ahead I present an *upward* comparison between the threefold levels of Thomas Aquinas’ natural human inclinations according to *Summa Theologiae* I-II, question 94, article 2, and the pioneering structural and functional “Triune Brain” model developed from 1949 to 1952 by Paul MacLean.

In doing so, I want to rehabilitate the intrinsic teleological nature of man’s principle of organization, called the *form* or soul, in order to understand that one’s structure is for the sake of a purpose, an end (*finis*), and thus dissipate some of the Cartesian misunderstandings and prejudices that have been spread by many philosophers of the mind. It will become clear along the way how the human *form*, by configuring the structure of the brain, behaves not only as the intrinsic principle of organization of matter (mass and energy) in the living system, but also as the intrinsic final causality incorporated (embodied) in human biology. The human *form* as the intrinsic teleological power appears to be the reason *why* our brain structure is such, and *why* brain functions react in human ways, and in the end, *why* we are human and act in a human-like fashion.

7. The threefold levels of Thomas Aquinas’ natural human inclinations according to *Summa Theologiae* I-II, question 94, article 2

Here is the portion of the text taken from article 2 of question 94 of the *Prima Secundae* of Thomas Aquinas’ *Summa Theologiae* where the great medieval

theologian wanted to solve the question of whether the natural law contains several precepts, or only one:

Because good has the intelligibility of end, and evil has the intelligibility of contrary to end, it follows that reason naturally grasps as goods – in consequence, as things-to-be-pursued by work, and their opposites as evils and things-to-be-avoided – all the objects of man’s natural inclinations. Hence the order of the precepts of the law of nature is according to the order of the natural inclinations (Grisez, 1965, p. 170-171).

Because in man there is first of all an inclination to good in accordance with the nature which he has in common with all substances: inasmuch as every substance seeks the preservation of its own being, according to its nature: and by reason of this inclination, whatever is a means of preserving human life, and of warding off its obstacles, belongs to the natural law.

Secondly, there is in man an inclination to things that pertain to him more specially, according to that nature which he has in common with other animals: and in virtue of this inclination, those things are said to belong to the natural law, “which nature has taught to all animals” [Pandect. Just. I, tit.i], such as sexual intercourse, education of offspring and so forth.

Thirdly, there is in man an inclination to good, according to the nature of his reason, which nature is proper to him: thus man has a natural inclination to know the truth about God, and to live in society: and in this respect, whatever pertains to this inclination belongs to the natural law; for instance, to shun ignorance, to avoid offending those among whom one has to live, and other such things regarding the above inclination.

Thomas Aquinas’ concept of natural inclinations is an example of the application of Aristotelian teleology, which conceived man as structured in a way to possess innate orientations on how to live and behave in this world (Stancienė, 2004, p. 357). Those things to which man is naturally inclined, that is needs of self-preservation, nutrition, reproduction, family life, learning and adoration, have the capability of flourishing and reaching their end through reason’s penetration. Those natural orientations correspond to the ends of the rational human nature (Stancienė, 2004, p. 358), and to understand something as a true human good is to see it as an end toward which man is aimed by nature, a purpose of his being human (Flippen, 1986).

The threefold levels of Thomas Aquinas’ natural human inclinations according to *Summa Theologiae* I-II, question 94, article 2 have to be considered as a sort of intrinsic GPS, a human global project of guidance and

flourishing according to and through reason. Understanding the inclinations of human nature as good, human reason directs them towards corresponding actions. Bearing in mind that man is a natural as well as a rational being, Thomas classifies the natural inclinations according to three levels: two of them are both natural and human, the third is properly human (Stanciené, 2004, p. 366).

- 1) The first natural inclination to preserve one's own being is common to all substances, which corresponds to what we now call the survival instinct (Berti, 2011, p. 28). Man has a natural tendency of self-preservation that he exercises through a plethora of activities: from breathing, to eating (nutrition), etc. At this level, for instance, the teleology is well described as followed: 'With a similar grasp of its own action, it goes toward its own being – that is, its own being that which it is – as a *sine qua non*' (Flannery, 2011, p. 154).
- 2) The second level of natural inclination is directed to the preservation of the species and is common to all animals as the tendency towards procreation and the care of one's offspring, which is the reproductive instinct (Berti, 2011, p. 28). Man has the natural tendency of reproducing himself which is performed by means of different activities: emphatic relations, sexual and family life, and the education of the offspring.
- 3) To the third level of inclinations, proper to men only, belong those which are according to reason. Thomas indicates two of them: "to know the truth about God, and to live in society". This level involves faith, truth and social relations (Stanciené, 2004, p. 367).

All these tendencies were described first by Aristotle, the 'father' of the modernhylomorphism in philosophy of mind, as expressions of human nature. Enrico Berti highlights the Aristotelian roots of this threefold structure of natural human inclinations from passages taken from: *De generatione animalium* II; *De anima* II; *Metaphysica* I; and *Politica* I (Berti, 2011, p. 28).

Now, one may well wonder *why* this is so. In other terms, *why* does a human person strive for self-preservation, seek to live in community, especially in a family, aspire to know, and act according to his/her will?

One *upward* proximal reason can be found in the analysis of how those 'three tiers for survival' (Flannery, 2011, p. 153) are encoded in the structural wiring of the human brain.

8. *Upward(bottom-up)* MacLean's pioneering concept of the Triune Brain

In a period of about 30 years of animal experimentation and studies in humans, the American physician Paul D. MacLean (1913-2007) developed a model of mammalian and human brain anatomical wiring according to a triplex *bottom-up* structural and functional analysis. MacLean's pioneering concept was called "The Triune Brain" (Ploog, 2003). Viewing the brain and behavior from an evolutionary perspective (Lambert, 2003), and based on comparative neuroanatomy, and neurochemistry, MacLean proposed that neural, as well as behavioral, evidence suggests three types of systems in the mammalian/human brain. So he distinguishes a *bottom-up* localization of three evolutionarily distinct components of the brain: (1) the protoreptilian; (2) the paleomammalian; (3) and the neomammalian brain (Ploog, 2003; Lambert 2003). As pointed out by Detlev W. Ploog:

MacLean's sophisticated work culminating in the concept of the triune brain is the single and most useful concept we have for linking evolutionary psychiatry and neuroscience with concepts of the social sciences. The unification of the natural with the social sciences has been due for a long time. (Ploog, 2003, p. 492)

So, bearing in mind the threefold levels of human natural inclinations outlined before, MacLean's hierarchical *bottom-up* stratification proceeds as Detlev W. Ploog summarizes as followed. I underline in the text below the functionalities mediated and sustained by these brain structures that surprisingly overlap with the previous discussion on human natural inclinations:

- 1) 'The protoreptilian brain comprises a particular group of ganglionic structures located at the base of the forebrain in reptiles, birds, and mammals. The group of structures is referred to as striatal complex (reptilian complex, R-complex). It includes the medulla spinalis, parts of the midbrain, diencephalon, and basal ganglia. The R-complex is involved in the regulation of an animal's daily master routines and subroutines, as well as the behavioral manifestations of species-specific types of displays used in intraspecific communication' (Ploog, 2003, p. 489).
- 2) 'The paleomammalian brain corresponds to the limbic system. Just as the R-complex is a basic part of the forebrain in reptiles and birds, so is the limbic

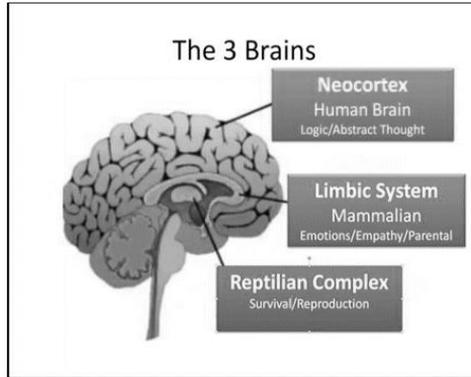
lobe of Broca a common denominator in the brains of all mammals. In the evolutionary transition from reptiles to mammals, the three cardinal behavioral developments were (i) nursing in conjunction with maternal care, (ii) audiovocal communication for maintaining maternal-offspring contact, and (iii) play, which seems to be indispensable for the development of social behavior' (Ploog, 2003, p. 489).

- 3) 'The neomammalian brain applies to the neocortex and the thalamic structures with which it is primarily connected. It is like an expanding numerator, ballooning out progressively in evolution and reaching its greatest proportion in the human brain. On the basis of extensive connections with the visual, auditory, and somatic systems, it appears to be primarily oriented toward the external world. In human beings, it provides the neural substrate for the linguistic translation and communication of subjective states accompanying various forms of mentation' (Ploog, 2003, p. 489).

Of course, the history of "triune" psychophysiology goes back to ancient times and persisted through at least two-and-half-millennia in Western thought, from Plato, Aristotle and Erasistratus (Smith, 2010). But contrary to the thesis outlined by C.U.M. Smith, tripartite classification or schematization is grounded on reality, in particular, on behavioral neuroscience, and it is question of grasping the intelligibility, the teleology, of our biological configuration.

9. A final *upward* comparison

Come to this point, we can overlap the triune human brain structure with the threefold level of human inclinations. What follows is a final graphical representation of this *upward* parallelism.



<i>The Triune Brain</i>	<i>Brain anatomy</i>	<i>Functions</i>	<i>Natural human inclinations according to Summa Theologiae I-II, question 94, article 2</i>
neomammalian brain	applies to the neocortex and the thalamic structures with which it is primarily connected . It is like an expanding numerator, ballooning out progressively in evolution and reaching its greatest proportion in the human brain. On the basis of extensive connections with the visual, auditory, and somatic systems, it appears to be primarily oriented toward the external world	In human beings, it provides the neural substrate for the linguistic translation and communication of subjective states accompanying various forms of mentation	Thirdly, there is in man an inclination to good, according to the nature of his reason, which nature is proper to him: thus man has a natural inclination to know the truth about God, and to live in society: and in this respect, whatever pertains to this inclination belongs to the natural law; for instance, to shun ignorance, to avoid offending those among whom one has to live, and other such things regarding the above inclination
paleomammalian brain	corresponds to the limbic system . Just as the R-complex is a basic part of the forebrain in reptiles and birds, so is the limbic lobe of Broca a common denominator in the brains of all mammals	In the evolutionary transition from reptiles to mammals, the three cardinal behavioral developments were (i) nursing in conjunction with maternal care, (ii) audiovisual communication for maintaining maternal-offspring contact, and (iii) play, which seems to be indispensable for the development of social behavior	Secondly, there is in man an inclination to things that pertain to him more specially, according to that nature which he has in common with other animals: and in virtue of this inclination, those things are said to belong to the natural law, "which nature has taught to all animals", such as sexual intercourse, education of offspring and so forth
protoreptilian brain	comprises a particular group of ganglionic structures located at the base of the forebrain in reptiles, birds, and mammals. The group of structures is referred to as striatal complex (reptilian complex, R-complex). It includes the medulla spinalis, parts of the midbrain, diencephalon, and basal ganglia	involved in the regulation of an animal's daily master routines and subroutines , as well as the behavioral manifestations of species-specific types of displays used in intraspecific communication	Because in man there is first of all an inclination to good in accordance with the nature which he has in common with all substances: inasmuch as every substance seeks the preservation of its own being, according to its nature: and by reason of this inclination, whatever is a means of preserving human life, and of warding off its obstacles, belongs to the natural law

The picture of the brain and the following explanation should be read as if they were on the same line.

10. Conclusion

It is heuristically helpful to categorize this threefold brain structure and to correlate it with human functions. Although from a macroscopic brain anatomy the MacLean's tripartite schematic fits pretty well with physiological evidences,

it goes without saying that we need to consider the brain as a dynamic and systemic organ in which each part of the triune brain is dependent on the combined working of all three systems, each of which makes its own contribution (Ploog, 2003, p. 489).

The analogy between MacLean's pioneering concept of the Triune Brain and the phenomenological threefold classification of the levels of human natural inclinations as pointed out by Aristotle and Thomas Aquinas tells us something very important in current reflection on our constitution as human beings: our intrinsic embodiment condition. Despite the intricate dynamics of our nervous system and our brain, and despite the increasing complexity of the interrelation and interdependence of the brain with other organs and apparatus, we are still able, as humans, to acknowledge the teleological project shaped in our biological structures and functions.

This brief contribution would like to start a plausible contemporary re-evaluation of the philosophical concept of the human *form*, which could help answer not just important questions that concern the *what* and *how*, but that also shed light on the reasons – the *why*. Why is man naturally inclined towards specific tiers for survival which constitute his/her teleological project of flourishing? We have put forth two different, but complementary, answers in this essay:

1) One of the plausible *upward* reasons is that the human being is naturally inclined towards those three tiers *because* his/her brain is wired in a human triplex *bottom-up* anatomy according, for example but not only, to Paul MacLean's Triune Brain structure.

This 'proximate causal reason' is part of the intrinsic efficient causality performed by the human informational program named *form* (or soul). All the things to which man is naturally inclined are structurally wired in brain anatomy by the *form*.

2) The second *downward* plausible explanation follows these lines of thinking: the human being is naturally inclined towards those three tiers *because* his/her form gives *matter* (mass and energy) its intrinsic informational dispositional relation by structuring, organizing, arranging, ordering, configuring,... the nervous system and the brain with a human wiring shape and dynamic. So the 'more removed reason' *why* the human being experiences those inclinations is *because* of his/her *form*. The *form* as the intrinsic human information responsible for the organization of the

organism plays also an intrinsic final causality role by arranging the brain structures that mediate and sustain human natural inclinations.

So, human *form* exercises at the same time both an intrinsic efficient causality, and a teleological project for human flourishing.

The hylomorphic view sketched so far is profoundly different from a purely materialistic conception of teleological human processes, and it is a plausible explanation of human behavior that motivates and invites further considerations and research.

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