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Teleology in Living Beings: A Phenomenological Approach to Intentionality and Intentional Actions

Teleología en los seres vivos: una aproximación fenomenológica a la intencionalidad y las acciones intencionales

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Abstract

This paper makes a phenomenological distinction between *constitutive intentional movements* and *intentional actions*. A phenomenological understanding of embodied and situated relations between living beings and their worlds shows that intentional movements do not imply an implicit or explicit experienced “what for” that organizes and directs what an organism does. We question the immanent teleology of autopoietic enactivism and the agentive semiotics theory. This discussion allows us to separate the idea of intentionality from objectives, goals, and agendas. This yields a different way of understanding the behavior of living beings based on the phenomenological notions of intentional body, intentional movement, animation, and the time-consciousness structure.

Keywords: Constitutive intentionality, immanent teleology, intentional actions, phenomenology, transcendent teleology.

Resumen

En este artículo se discute una distinción fenomenológica entre los *movimientos intencionales constitutivos* y las *acciones intencionales*. Una comprensión fenomenológica de las relaciones corporalizadas y situadas entre los seres vivos y sus mundos muestra que los movimientos intencionales no implican un “por qué” experienciado, implícito o explícito, que organiza y dirige lo que hace un organismo. Cuestionamos la teleología immanente del enactivismo autopoietico y de la semiótica agentiva. Esta discusión nos permite separar la idea de intencionalidad de la de objetivos, metas y agendas. Con esto, se plantea una forma distinta de entender el comportamiento de los seres vivos basada en las nociones fenomenológicas de cuerpo intencional, movimiento intencional, animación y la estructura de la conciencia del tiempo immanente.

Palabras clave: Acciones intencionales, fenomenología, intencionalidad constitutiva, teleología immanente, teleología trascendente.

Any impartial researcher who pursues the history of the eye, along with the forms it takes among the lower creatures and who demonstrates the entire step-by-step evolution of the eye, inevitably reaches the grand conclusion that sight was not the intention behind the origin of the eye. [...] One single such example and “purposes” fall away like scales from our eyes!

Nietzsche
Aurora, § 122

Introduction

Darwinism, the prevailing theory on contemporary research in evolution, implies the rejection of biological explanations based on a transcendent teleology, according to which some aim or preestablished design guided the evolution of species. In Darwinism, *homo sapiens* is not pre-determined as the final purpose of natural evolution; *pre-hominid primates* are not failed steps in some “divine plan”; and *homo erectus* is not an intermediate phase of a process that has *homo sapiens* as the ultimate end. For Darwinism, every evolutionary step, including the current one, is a product of the actual interaction of the organism with its environmental conditions (Ghiselin in Darwin, 1984: xiii). Darwinism seeks to replace a teleological theory of evolution with a more mechanistic theory in which natural laws have the status of physical laws. Namely, laws that rule the material world, that do not invoke purposes, and that are as universal and necessary as, for instance, the Law of Gravity (Lennox, 1993).

However, even though some scientists have explicitly denied that a transcendent teleology can explain the biological, they talk about goals and purposes when describing biological behavior. For example, an ethologist would say that the movements of a lion chasing a gazelle respond to the goal of catching prey (Nagel, 1977). The same biological sciences accept that current limitations in the understanding of certain phenomena justify the tendency to understand

organisms' evolution and behaviors in terms of purposes, by saying that this vocabulary will be overcome to the extent to which we reached a more mechanistic and factual understanding of biological behavior. This methodological position is called *teleonomy* (a Pittendrigh 1958's concept).¹

Some authors, such as A. Weber and F. Varela, have considered teleonomy paradoxical: although it is an alternative to teleology, it uses teleological terms (2002: 98). According to them, the tendency to use teleological terminology in explaining the living demands a reconsideration of what teleology means. Weber and Varela propose the idea of an *immanent teleology* for explaining the living: organisms' behavior and molecular dynamics that constitute them aim to guarantee their emergence and perseveration.

Are Darwinist mechanism and the theory of immanent teleology so dissimilar that disagreeing with one means agreeing with the other? For us, the answer is no. Although we disagree with the mechanistic dimension of Darwinism (and therefore, we disagree with teleonomy), we hold that a thorough description of animals' first-person experience would discover that such an experience is non-teleological at all. In other words, we will show that questions such as "why is that lion chasing the gazelle?", that are addressed to find aims that the organism intentionally strives for, do not have a place in any biological description if we place ourselves in the organism's

1 It is possible to find a parallelism between teleonomy and the philosophy of mind's eliminative materialism, which distinguishes between *extensional* and *intensional descriptions* of the mind. In other words, eliminative materialism distinguishes descriptions of the kind "a cheetah reaches a speed of 120 kilometers per hour" that are transparent, from descriptions of the kind "John believes P. French wrote *Lucky Starr and the Pirates of the Asteroids*" that are opaque. While some equivalent or extensional propositions can replace the first description without changing their truth value (for instance, "a cheetah reaches 120.000 meters in 60 minutes"), the second description cannot be merely replaced for other terms, even though they have the same referent. (Although P. French and I. Asimov are the same people, it does not follow that it is also true the proposition "John believes Isaac Asimov wrote *Lucky Starr and the Pirates of the Asteroids*"). Philosophers such as Churchland consider intentional descriptions inherently false due to their opacity. Therefore, they should be dismissed in our descriptions of the world and human phenomena, and we should favor extensional descriptions (Thomson, 1993: 18). Likewise, in teleonomy, teleological descriptions should be eschewed in favor of mechanistic descriptions, as the relevant descriptions in the scientific field.

perspective. Here we intend to understand the experience of each organism as a being-in-the-world from a first-person perspective.² To this end, we adopt a phenomenological perspective in which we put ourselves in a first-person perceptual mode of dealing with the world, which means to “bracket” (Husserl, 1962: 282) an observer’s perspective of both immanent and transcendent teleology.

This paper has two parts. In the first one, we analyze immanent teleology according to Weber and Varela’s autopoietic enactivism. There, we explore how enactivism explains teleology through concepts such as sense-making experience, autonomy, and adaptability. In the second part, we distinguish *constitutive intentionality* (according to a phenomenological approach) from *teleological intentionality* (according to an immanent teleology). Using this distinction, we hold that teleological theories confuse a phenomenological definition of intentionality with a psychological perspective of intentions; this has important implications for understanding movement as part of an explanation of what it is to be alive. We propose that *animation* understood as the meaningful experience of the living being-in-the-world (Sheets-Johnstone, 2011) is not equivalent to action that implies purposes and objectives.

We hold that the first-person experience of the lion chasing the gazelle is of a different order of description from a third-person explanation of that movement seen in terms of actor, action, and purpose. Adopting the terminology of “agentive semiotics theory” (*semiótica agentiva*; Niño, 2015), we can say that the first-person experience is not described satisfactorily in terms of agent, agency, and agenda. As we will show in section “Intentions and Intentionality”,

2 In the Husserlian tradition, a researcher uses the phenomenological method to describe her own first-person experience, her consciousness’ structures, and her constitutive dynamics (1913: 56–66). Experiences of another living being, like an amoeba, a lion, a psychopathological patient, or an infant do not seem to fit in this method. Recently, Sheets-Johnstone (2011) and Villamil-Lozano (2022) propose to approach experiences of different living forms through a particular phenomenological method, namely, *constructive phenomenology*. Adapting this concept from the Husserlian method (see Fink, 1995: 60–62), they look for a way of approaching and phenomenally describing what is not directly given to phenomenological intuition (2011: 193–233); namely, the experience of another living being. We will return to this point in section “Animation and Action”.

these concepts do not capture the meaningful experience that emerges from organisms' coupling with their world. This coupling between organisms and the world must be understood as an intentional and animated phenomenon. For instance, the interoceptive feeling that we call "hunger" and the movements related to acquiring food (chasing prey or going to the fridge) are not two different phenomena: they belong to the same unitary experience that includes saliva production, the feeling of involuntary stomach movements, irritability, the emergence of the prey or a fridge in the visual field, and the movements of chasing prey or going to the kitchen. Accordingly, to understand this type of phenomenon, it is not necessary to use a teleological terminology but to recognize the meaningful experiences inside of what we call the living body-world unity.

Discussing intentionality is not only a matter of differing points of view on the living. For instance, it is not only a matter of differentiating the scientific description as a third-person perspective from the phenomenological description as a first-person perspective. Through discussing intentionality, we hold that being alive means constituting meanings of the world, oneself, and other living beings. This constitution is not the same as acting towards self-persevering as an ultimate end, as an immanent teleology would have it. To live is to be *in the world*, to navigate in it. To be a moving body is to be one with that world, in a constitutive way.

On Immanent Teleology

We find the grounds of immanent teleology (and teleonomy) in Kant's *Critique of Judgment*. In this book, Kant adopts Aristotle's distinction between *efficient* and *final causes* (*Phys.* II.2, 194b, 17-20; *Metaph.* I.2, 983a, 25 – 984b, 20). While the first kind of causes immediately foregoes the movement or change that occurs to an object (for instance, the movement of a billiard ball *causes* the movement of another ball after both make contact), the second one is the goals toward which the object, the movement, or the change occur. Thus, the final causes are not present but they are expected to be. For

example, in *EN* X.8, 1178b, 28-31, Aristotle says the philosopher has the *goal* of reaching a contemplative life, which implies that the philosopher has not materialized the contemplative life yet.

Contrary to Aristotle, who holds that final causes effectively operate in nature and are transcendent to the organisms (the goals were not deliberately followed, but imposed by fate), Kant holds that the biological researcher posits final causes. According to this author, we cannot explain nature in terms of some efficient causal chain. Therefore, we posit an ulterior goal that connects natural phenomena. However, as every organism must be seen as a mean and an end to itself (2007: 374), final causes should not be considered as transcendent but as immanent to organisms. In Kant's terms, every organism is a *natural purpose*.³

According to Weber and Varela, "for Kant, things that organize themselves are—in opposition to purposes of nature— called *natural purposes*" (2002: 106). As a natural purpose, every organism carries out some internal or immanent processes that guarantee its existence and permanence. So, natural purposes are related to self-organization. Some teleological theories develop this Kantian proposal. Here we approach one of them: the perspective of autopoietic enactivism.

❖ An Autopoietic Perspective

The autopoietic perspective characterized the internal organization of unicellular organisms and, subsequently, established a new vision of the organization of multicellular organisms. The idea of autopoiesis emerges from Maturana and Varela's two concerns. First, they disagree with the characterization of living beings as defined by their variety of molecular or genetic components (Maturana & Varela,

3 The concept of a natural purpose is unrelated to the classic concept of *causa sui*. *Causa sui* refers to that which is a cause of itself, to that whose concept implies its own existence, namely, God (see Spinoza, 2002: 217). The Kantian concept of natural purpose is not based on the idea of essence. A natural purpose implies that, when living beings come into existence, they carry out the necessary processes to perpetuate themselves. Kant does not argue that the concept of a "living being" implies existence in itself: existence is contingent for organisms because no *a priori* laws or principles make their existence necessary.

1973: 67). Second, they disapprove the *computational paradigm* that, for some decades, had guided our perspective on cognition, according to which the mind would be equivalent to an information processor (Varela in Maturana & Varela, 1973: 38-39).

A computational paradigm implies a passive view of living and cognitive beings: organisms merely respond mechanistically to changes in their environment. In this sense, organic movements, muscle reflexes and the interaction between two billiard balls are not qualitatively different. A way of differentiating the living from the non-living is to compare their molecular components. However, for Maturana and Varela, molecular components do not allow us to satisfactorily characterize the living because they are not stable during the life span of an organism. They deteriorate and replace easily. If molecules neither define living beings nor explain their organizations, what defines life should be the type of relations that occurs among those molecules.

Autopoiesis is a particular kind of organization that produces the necessary conditions for maintaining an organism's existence. According to Weber and Varela,

An autopoietic system is organized (defined as unity) as a network of processes of production (synthesis and destruction) of components such that these components:

1. continuously regenerate the network that is producing them, and
2. constitute the system as a distinguishable unity in the domain in which they exist (2002: 115).

An organism lives thanks to the immanent organization that materially creates both itself and the processes that maintain itself. These processes run without the need for external coordination. Consequently, *autonomy* is a fundamental feature of an organism's constitution. An individual that differentiates itself from its environment emerges from those self-producing and self-referential

processes. The surroundings, as “what-is-not-oneself”, alternatively permit or prevent self-preservation. In some sense, this means that every organism has *cognitive abilities*: it produces complex networks of meanings in its relations with surroundings.

Those meanings are neither cognitive nor representational abstractions but first-personal experiences, immediate ways in which organisms experience their surroundings.⁴ Therefore, “a world without organisms would be a world without meaning” (Weber & Varela, 2002: 119). For instance, from each organism’s perspective, the world is composed of food (if it helps its preservation), obstacles (that threaten its existence or its access to food), and indifferent elements. All these meanings depend on self-movement: *an organism makes a world for itself to the extent of moving in its surroundings*.

Moreover, Maturana and Varela (1973) insist on the autonomy of autopoietic systems: “They subordinate all changes to the maintenance of their organization” (80), but this perseverance in its organization is not a *telos* for the organism. In other words, they do not define autopoietic organisms in terms of goals: “Thus, the notions of purpose and function have no explanatory value in the phenomenological domain which they pretend to illuminate because they do not refer to processes indeed operating in the generation of any of its phenomena” (86).

However, Weber & Varela (2002: 102) agree that autopoietic organisms organize themselves teleologically. So, while Maturana and Varela (1973: 75) insist that their autopoietic theory is not a teleological theory, Weber and Varela say that self-organization implies self-persevering as the purpose of living beings: the organism’s

4 To explore how organisms deal with their worlds in meaningful ways implies reconciling the biological and the first-person perspectives. The theory of autopoiesis includes a view of organisms as they experience themselves, which contrasts with the scientist’s third-person perspective (Maturana, in Maturana & Varela, 1973: 11-13) and which is close to a phenomenological first-person perspective of the experience of being alive. However, as we will show throughout this paper, when the theory of immanent teleology (inspired by Maturana and Varela’s autopoietic enactivism) transfers phenomenological concepts (such as intentionality and sense-making) to the study of the living, it sometimes confuses the phenomenological intentionality involved in sense-making with psychological intentionality, that is, actions with intentions, goals, or agendas.

behavior is intentionally guided since it always seeks to perpetuate its existence. Self-constitution means that *telos* structures autopoietic processes (Weber & Varela, 2002: 100). An ameba moves through a sucrose gradient and avoids concentrations of sodium chloride because *it seeks to maintain its existence* (Garavito & Villamil, 2017: 147).

In this sense, autopoiesis implies *real teleology* (Weber & Varela, 2002: 102), since autopoiesis is an immanent purpose of organisms. The idea of an immanent purpose overcomes both an abstract *telos* coming from a fate that externally affects living creatures (i.e., transcendental *teleology*) and the idea of living beings as merely following physical laws (i.e., *teleonomy*). However, using the concept of *telos* (even as an immanent *telos*) raises some issues, which we tackle in what follows. Di Paolo's comment on Weber and Varela's approach addressed one of these issues.

❖ Sense-Making and Adaptivity

In his paper "Autopoiesis, adaptivity, teleology, agency", Di Paolo describes the link that Weber and Varela establish between autopoiesis, intrinsic teleology and the constitution of meaningful experiences or *sense-making* (2005: 430). According to Di Paolo, enriching the conceptual framework that describes the biological is necessary to understand its different dimensions. He holds that *adaptivity* helps to understand the bond between autopoiesis and sense-making.

For Di Paolo, autopoiesis, as a self-productive and self-perseverative process, explains why every organism is concerned with affirming life; it is, therefore, intrinsically teleological. However, autopoiesis does not thoroughly explain the experience of constituting a meaningful world. Organisms do not only signify that which guarantees their immediate self-preservation (as food or obstacle). What they experience as the surrounding world also includes more mediate elements. For instance, marks in the snow mean footprints for some animals. Even though footprints do not immediately affect the animal, to experience them as signs is part of the animal's whole experience of the world.

Autopoiesis is seen as a minimal concept to explain behavior, leading to a description of the life that does not consider how the organisms adjust to their surroundings. Consequently, autopoiesis seems a principle of all or nothing: “Being partially autopoietic is senseless” (Di Paolo, 2005: 436). According to this perspective, organisms would be in trouble when adapting to a new environment. Either they maintain their autopoietic organization and live, or they lose that organization and die (2005: 437-438). There is no room for intermediate processes in which an organism alters itself concerning new surroundings.

According to Di Paolo, adaptivity better explains the behavior of an ameba moving through a sucrose gradient. Although the ameba looks for higher concentrations of sucrose, from an autopoietic perspective this would be unnecessary because a minimal concentration already guarantees autopoiesis. Di Paolo explains that behavior: the ameba monitors and regulates its inner changes following changes in its surroundings. By doing so, it *values* its world. In that way, the ameba would “be capable of appreciating not just sugar as nutritive, but the direction where the concentration grows as useful, and swimming in that direction as the right thing to do in some circumstances” (2005: 437).

The idea of the world as a “surplus of signification” (Varela, 1997: 79), as a landscape full of values and meanings, depends on the organism’s homeostasis and its repertory of active mechanisms that can deal with changes in the environment. In a nutshell, it *adapts*, which means that the organism experiences the world according to its condition (Di Paolo, 2005: 439). Hence, it seems imperative to rethink what *purpose* means in adaptive organisms because *telos* is no longer conceived in terms of conservation. While conservation, as an immanent teleology, is at the basis of autopoiesis, adaptivity “reflects the organism’s capability —necessary for sense-making— of evaluating the needs and expanding the means towards that purpose” (Di Paolo, 2005: 445).

In this sense, the organism’s *telos* is variable and depends on the meaningful, intentional relations between body and world. Meaningful experiences emerge when the organism navigates the world in

perceptual-motoric coordination with the surroundings. From this coordination emerge new meanings that persevere if they agree with the organism's self-constitution. Di Paolo understands this coordination and its perseverance in the light of the process of *adaptivity*. An adapted organism is both a *self-sustaining* and a *self-generating dynamic form*. If conservation is not the ultimate purpose of the biological, behavior must be understood in terms of inner dynamics that constitute the form of living beings.

Following Di Paolo (2005: 446), the idea of a *dynamic form* mainly comes from Merleau-Ponty's work. According to our reading, Di Paolo approaches the idea of *dynamic form* using Merleau-Ponty's concept of *body schema*. This statement of linking the dynamic constitution of a body with the meaning of being an organism is attractive since we can explore the living through the experience of a body that constitutes itself in its encounters with the world, a topic suited to phenomenological considerations. However, we think that the idea of a dynamic form is antagonistic to a teleological conception of the living. While for Di Paolo, a dynamic form explains motor intentionality (namely, the experience of the body as moving towards some goals), for us, a lived form and a body schema are related to non-teleological experiences of the *lived body* and a *constitutive intentionality*.

To understand intentionality in terms of a body that constitutes its surroundings, we use the same framework that inspires Maturana and Varela's autopoietic enactivism, i.e., the phenomenological tradition. As we will see, we are particularly interested in Husserl, Merleau-Ponty, and Sheets-Johnstone's approaches to bodily intentionality, which inspires an embodied phenomenology.⁵

5 Intentional consciousness as sense-making appears in the framework of Husserl's transcendental phenomenology; embodied phenomenology takes this idea with the proviso that intentional consciousness corresponds to an intentional body. So, although phenomenology cannot be seen as a homogeneous doctrine, since there are substantial differences between phenomenologists' proposals, we follow Zahavi (2010), who sees unity and transit between the different phenomenological positions, such as the intentional consciousness case show. The fact that phenomenology is plastic, subject to methodological changes that would obey each phenomenologist's research interests, will guarantee its unity and transit (see section "Observaciones fenomenológicas" of Villamil-Lozano 2021 for this topic).

Intentions and Intentionality

Although researchers recognize a distinction between having an intention or a goal and the phenomenological concept of intentionality (see, for example, Niño, 2015), sometimes intentions and intentionality are used interchangeably. We insist that a *teleological intentionality* is psychological intentionality based on explicit goals, interests, or objectives that guide actions. On the contrary, *constitutive experience*, as a phenomenological concept, is the activity by which both the world and the lived body are signified. In this case, intentionality is the *aboutness* of the consciousness—as the result of constitutive activity—rather than some teleological experience.

Different intentional movements and different ways of opening to the world with different qualitative features constitute the experiential flow (Husserl, 1980). Still, any state of consciousness is *about* something (Husserl, 1962: 279-280). To imagine is to imagine something, to be happy is to be happy for something, and every perception is a perception of something. Experientially speaking, what is conscious is what one is imagining, perceiving, or emoting, rather than the intentional movement or process of imagining, perceiving, or emoting. We are conscious of the book over the desk instead of the process of perceiving that book. This fact is a relevant phenomenological difference between teleological intentionality and constitutive intentionality. While the latter is about objects, the former is about objectives or goals. While objects are what is there, including the organism that experiences them, objectives imply something to be accomplished. Therefore, objects and objectives do not have the same ontological status in the experiential flow, which reinforces our claim that intentionality and intentional actions are not phenomenologically equivalent.

From both a psychological and a naturalistic point of view, this phenomenological difference between experienced objects and pursued goals is related to the structural organization of the living. Without a brain, an ameba has no imagination. Without an amygdala, a paramecium cannot experience joy or fear about some situation, at least not in the sense that humans do. Similarly, some organisms

cannot experience *telos* or *aims* in their actions (even implicitly) if they lack basic neural structures that permit them to experience aims.

The *first-personal experience of a goal* seems very particular to some living structures. However, experiencing the world is what is common among living beings. So, the first-personal experience of a goal differs from the experience of *constituting a world*. In phenomenology, as we will see, the world is the fundamental experience of moving around. How is the world experienced from a first-person perspective? For us, a first-person perspective avoids teleological descriptions. The experiences of the world, others, and oneself, depend on having a lived body (even a basic one) that is open to meaning. There is a subtle difference, but an important one, in saying that the body moves *with the aim of* experiencing a world and in saying that being a body (i.e., a moving body) *is* to experience a world. For us, that is the difference between *intentions* in terms of goals and an *intentional body* that constitutes a meaningful world. In what follows, we develop this idea more deeply.

Before going further, we want to point out that the theory of biological teleology, as immanent to the living (from Kant to Di Paolo), assumes that intentionality, as a phenomenal experience, is based on some implicit principle that guides organization. We think this teleological intentionality is a tendency in third-person descriptions, coming, for instance, from the ethologist who affirms that the lion chasing the gazelle has the goal of eating. Also, teleological intentionality helps humans in planning travels, romantic dinners, or a philosophy lesson. In these cases, planning implies a third-person perspective of our future selves. However, explaining a more fundamental stratum of living implies bracketing (*à la* Husserl) this attitude in order to reach a first-person perspective.

❖ Meaning and Agency

We usually think that meanings are inherent to semiotic items, such as linguistic signs and objects in the world. For instance, we think that some object placed on a shelf is a hammer because the meaning of

“hammer” is inherent to that object. Even if nobody has already used the object as a hammer, for us that object is a hammer. However, this view does not explain why a semiotic item has a myriad of meanings; for instance, the syntagma “bark” refers to the canine’s sound and the tree’s outer covering. Also, it does not explain why some objects or signs have contrary meanings, like Frege’s (1892) example of Venus as being both the morning star and the evening star. Lastly, it does not explain why a semiotic item can be considered or used according to meanings that initially do not belong to it; for instance, when we use a stone for hammering or a book for killing a fly.

Following the theory of *agentive semiotics* (Niño, 2015), we can explain these situations, provided we eschew the traditional semiotic, ontological, epistemological, and methodological primacy of semiotic items over the organisms that use them. For that theory, meaning has a place where there is an activity, and activity supposes an entity with the intrinsic capacity of acting. That entity is called an *agent*, and its inherent capacity of acting is called *agency*. To signify is an activity carried out by an agent who has agency. So, objects and signs are meaningful in a derivative way: they are meaningful for the agent that uses them.

It is thanks to the activities of some agents that either some sounds or some visual marks can be recognized as words [...], which means that for an object or a sign to mean something, it must be used by an agent: only in that way, it “has meaning” (Niño, 2015: 18; our translation).

For agentive semiotics, agents only use semiotic items because they expect to reach some goals or purposes. They have *agendas*,⁶ which are the *type of outcome* that mobilizes them.⁷ The agendas

6 Those agendas are the agentive version of Weber and Varela’s immanent teleology.

7 “Type of outcome” is a term of art inspired by Charles Peirce’s pragmatism. Following Peirce, we can divide all worldly processes into two groups (see also Short, 2007): there are processes of “selection by the type of outcome they produce” related with the final causality and processes of “selection based on a specific sample” related to efficient causality. Niño takes evolution as an example: “there is a process of «selection

determine the objects or signs used and their meanings. That fact would explain why, when we have the “hammering agenda”, we could consider a stone as a hammer. In the same way, one word can have different meanings: if the agenda changes, the agent could use the same word but with a different or even a contradictory meaning.

According to this, a meaningful experience depends on agents’ agendas, just as, for an ameba, the meaning of an object placed in its surroundings depends on its adaptative goal. Meaning emerges according to organisms’ objectives. Meaning here is not an original condition for emerging agendas but a first product of the relation (established previously) between an agent and an agenda. This idea of meaning as depending on an agenda has a pragmatist origin: for C. Peirce and W. James there is an intrinsic relationship between meaning and objective, so “meaning will emerge wherever a goal arises or has arisen” (Niño, 2015: 20; see Short, 2007: 90-150).

This discussion of the relation between meaning and the agent/agenda dyad takes us back to the question of whether constitutive intentionality is based on an immanent teleology, now from the point of view of agentive semiotics. Following this theory, the world appears according to goals that emerge in the agent’s activity. However, for actions and goals to emerge, the world must be previously constituted and experienced as a world in which those goals take place. The action of going to the kitchen emerges as part of the goal of making a sandwich just because such things as a subject, a kitchen, and food are previously given. This contradicts an agentive semiotics according to which meaning is a product of agendas. However, it seems meaning is a precondition to any agentive semiotics’ assumption. How can an agent develop an agenda without previously experiencing a world? Is it possible for goal-oriented actions (i.e., intentional actions) to exist without phenomenological intentionality,

by» the type of outcomes they generate (phenotype or the classes of manifested features), which allows [the organism] adjusting to the environment with certain degree of fitness; also, and concomitantly, there are processes of «selection from» a sample, in this example, an available group of genes (genotype)” (2015: 37, n. 4, our translation; see Niño, 2013). Following Niño, agendas would be those processes of “selection by the type of outcomes” that depend on an agent.

that is, a pre-existing substrate of meaning? Therefore, the agent/agenda dyad, rather than clarifying the emergence of meaning, presupposes the presence of minimal meaning.

Ironically, according to Niño, the agentive semiotics theory is based on a phenomenological perspective. In fact, the phenomenological concept of intentionality inspired the concept of agency (2015: 39, n. 6). According to this, if meaning emerges from agents forming agendas, the experience of being-in-the-world would have a teleological structure. For us, this is not what intentionality means in phenomenological terms. Constitutive intentionality is not based on teleological intentions: to be an organism *is* to have a world. As we have said, it is phenomenally impossible to experience a lived body separated from a constitutive experience. In other words, to explicitly (or even implicitly) have a goal, and to move towards it, is an abstraction and simplification of the constitutive experience of the lived body, and of constituted space, time, and objects. Goals do not reflect the complex experience of being-in-the-world.

Finally, although the relationship between agent/agenda seems close to the noetic/noematic relationship, namely, the I-pole and the Object-pole of an intentional act,⁸ they are very different. According to Husserl, a noesis (the I-pole) without a noema (the Object-pole) or vice versa is a contradiction in terms (Husserl, 1913: 307-308). These poles are the basis of an idea of the unity of self and world in constitutive experience. Moreover, in phenomenology, the intentional relationship between noesis and noema does not have a teleological structure as it is the most basic meaningful relationship. On the contrary, the agent/agenda dyad does imply teleology.⁹

8 Husserl (1913) replaces the subject/object dyad with the noetic-noematic relationship to avoid prejudices settled by tradition. Clearly, avoiding these prejudices is necessary to achieve greater clarity on the issues explored by phenomenologists. We thank the reviewer who calls our attention to this point.

9 Within agentive semiotics, the emergence of meaning is guaranteed by the agent/agenda relationship, while “the subject/object relationship is dependent (epistemologically and methodologically) on the agent/agenda relationship” (Niño, 2015: 39, n. 6; our translation).

For these reasons, we believe it is inaccurate to affirm that the agent/agency dyad is based on the concept of intentionality in phenomenology. Agenda is related to the concept of *purpose*, which inevitably evokes teleological, rather than constitutive intentionality. This is an important issue to consider when we discuss agency: we do not see how a perspective that bases an agent's experiences on agendas or purposes escapes from teleological conceptions.

In summary, any attempt to understand agency in terms of intentionality as *the aboutness of consciousness* suffers from an ontological misunderstanding: it is important to distinguish between what is given as a goal and the world as the result of constitutive experiences. The problem lies in confusing goal-oriented activity with the constitutive experience of being in the world. The latter is based on movement, not on purposes. In what follows, we will describe the unity of movement and constitutive activity using the concepts of *intentional body* and *intentional movement*.

❖ Intentional Body and Intentional Movement

Consciousness is not merely the explicit awareness of the cognitive process, but the complete experience of the givenness of a world, others and ourselves (which includes implicit experiences). Intentionality, on the other hand, refers to the *aboutness* of conscious life while we are navigating the world. Intentionality comprises the relationship between experience and meaning, in at least two ways: first, in phenomenology, intentionality implies a *meaningful experience* (Husserl, 1962; Heidegger, 1927). Second, phenomenologically speaking, to say “meaningful experience” is redundant because to experience the world, others, and ourselves is to endow them with meaning.

This statement has an important consequence: meaning emerges in the experience of an organism. For instance, three organisms experience the same liquid in a Petri dish differently: the ameba inside the dish experiences as food some parts of the liquid (the sucrose compounds); the chemistry teacher perceives the substance as a chemical mixture, and an absent-minded teenager in class sees some

liquid in a funny glass. Why do three different organisms experience the same thing in the world differently? As we have said, this does not depend on either goals or agendas, but on different experiences of being-in-the-world (e.g., the teenager does not necessarily have particular goals concerning the liquid). They are living bodies, and the phenomenological concept of *intentionality* describes the kinetic/kinesthetic, perceptual, and affective phenomena of the three of them as they move in the world (see Sheets-Johnstone, 2011).

In other words, an organism *is* in its experiences. To be alive is to be aware of the world, oneself, and others (Garavito & Villamil, 2018). To be aware is to move, which implies that intentionality is better understood as bodily intentionality (Merleau-Ponty, 1945; Sheets-Johnstone, 2011). Movements themselves are intentional (that is, they are meaningful experiences) because through them organisms constitute and capture meanings of the world. Therefore, we understand movements as intentional experiences or *intentional movements*. With this, we hold that even movements that appear as reflexes, or that are based on reflexes, could be intentional movements because through them there is some openness to the world. Then, we differentiate *intentional movements* from *intentional actions*.

Intentional actions (understood as movements directed to a goal) frequently are distinguished from unintended movements (movements that are not directed to a purpose and are therefore involuntary). According to Hanna and Maiese (2009), only intentional actions count as cognitive experiences for an organism (namely, only these actions participate of the perceptive processing of the surroundings). Therefore, only movements directed to a goal are intentional. Unintended movements occur (for instance, someone can move our bodies) but they do not have any participation in cognitive processes.

On the other hand, the idea of movements as intentional experiences agrees with a perspective in which every bodily movement has to do with the whole experience of being-in-the-world. Take an example from a cognitive-developmental perspective. Piaget (1936) realizes that even though reflexes are mechanistic movements arranged for survival, they are the point of departure for understanding

the world. Consider, for instance, the reflex of pressure. When someone places an object (such as a finger) in a newborn's palm, the hand automatically closes around that object. Although we could say that the hand's reflex movements do not constitute an intentional act, since the subject does not have the purpose of grabbing the object, the experience of some properties of the grabbed object, such as texture and shape, are given through those movements.

At the same time, by grabbing the object, the baby has a kinaesthetic experience that helps her to understand her body as a whole (Sheets-Johnstone, 2011). Even though Piaget does not think in phenomenological terms, and he agrees that the reflex is involuntary, he does not deny that in reflex movements you find the origin of a cognitive experience. He describes how reflexes are the point of departure of generalization and recognition of things in the world. Through reflexes, we start to distinguish between things that can be grabbable in a particular way and those that cannot be grabbed in this way.

According to genetic phenomenology, which studies how intentional consciousness emerges (i.e., its transcendental genesis; Donohoe, 2004), if movements are understood as meaningful experiences, there is no difference between the meaning of something and the history of movements in relation to that something. For instance, the complete set of movements involved in sucking mother's milk (which initially includes reflex movements of mouth and tongue) causes the infant to constitute the milk and the breast as parts of the whole experience of being fed. Those movements also have a qualitative experience related to hunger. Hunger makes movements eager, which affects how the breast is given in the experience. Then, the whole body (even the affective dimension of the experience) prepares for a feeding experience just by looking at the breast.¹⁰

¹⁰ We are not considering a lot of phenomenological implications of the relation between meaning and movement. For instance, when we say that movement and meaning are linked, we are not saying that, to experience something, it is necessary to contemporaneously move in some way. Movement is also implicit in the way things are passively given (Husserl, 1989: 60-95). Namely, when the cup in the table is given to us as a tridimensional object, a history of constitutive experiences is being synthesized in that perception. Situations in which we grabbed the cup, rotated it, put it upside down, and so on, are condensed in this whole givenness of the cup, even when we are only

Likewise, when hunger emerges as the feeling that invades the whole body, the wish to have a burger is related to a basic and global experience of the situation. It is related to what hunger means for us at a given time of day, as well as the affective meanings attached to the situation (whether it is Sunday and we are waiting for our friends to arrive at the restaurant, or whether we are at work, and wish to finish a task before heading out for a quick lunch). Also, hunger is linked with an experience of ourselves in a social situation, which includes an experience of ourselves as being seen by others (e.g., we may abstain from a meal we desire because it is too smelly to eat at our desk in a shared office). To buy or not to buy a given meal is not a mere agenda, but a collection of actions in the myriad of meanings that constitute our whole relationship with a situation. All these meanings are not necessarily explicit but are included in the way we navigate the world.

To distinguish between meaning, goal, and movement only has value for an external observer who is describing the behavior of a living being, but that distinction does not operate for the organism itself. Although theories based on autopoietic processes or agentive descriptions claim to be inspired by phenomenological points of view, their descriptions sometimes lack an approach to a first-person perspective of organisms dealing with their worlds.

Thus, from a phenomenological perspective, it is problematic to say that the ameba follows a sucrose gradient because it seeks either to survive or adapt. Similarly, it is problematic to affirm that an infant seeks her mother's breast *because* she is hungry. In a first-person perspective, hunger and looking for the breast are part of the same phenomenon. All feelings, perceptions and kinetic/kinesthetic experiences involved in being hungry are also part of the meaning of what happens next, when the baby finally gets the breast. Moreover,

seeing one of its sides. Also, the experience of the cup means we distinguish it from a background (e.g., it is not seen as part of the table). That distinction is a sensory-motoric experience. This condensation of meaningful experiences is understood as a *habit* related to that object (Husserl, 2001). In the case of the baby being fed, the perception of the breast is linked to those historical movements (first reflexes, then intentional) and affective experiences that constitute it as a mean of getting food.

emotional states such as surprise, desire, or dislike, should also be seen apart from a teleological perspective. The fetus in the womb does not kick *because* that causes her pleasure but kicking and pleasure are part of the same phenomenon for the organism. In the bigger picture, the mother's pleasure at her baby's kicking is part of the same phenomenon, to the extent it affects the fetus' bodily experience through her resonance with the mother's voice.

In a nutshell, teleological accounts lack an account of the whole experience of being alive and having meaningful experiences. In first-person experiences, there is experience, nothing more. We can articulate this better, following Sheets-Johnstone (2011), by distinguishing *intentional action* from *animation*.

❖ Animation and Action

For starters, consider again the case of an infant looking for his mother's breast. If we describe this intentional experience as a collection of actions, we will dissociate that experience from other intentional movements that constitute the experiential flow of the baby (e.g., looking at the mother and then at something besides her and smiling, grabbing her mother's shirt, and so on). The atomistic way of seeing experience as a collection of independent actions (connected in terms of causal chains) lacks the existential flow that we experience from the moment we wake up. To explain our example, let's use Aristotle's distinction between *efficient* and *final causes*.

An explanation in terms of efficient causes would address only external relationships, e.g., based on instincts, common to all living beings. It seems that we are not confronting a meaningful experience but a mechanistic phenomenon. The second alternative confronts us with the idea that such action is carried out to fulfil a goal. What could be that goal? There are many possible answers. The infant seeks the pleasure of quieting his hunger; or the pleasure of nursing; or, following Maturana and Varela, she is following her autopoietic drive; we might even say that she is seeking to enhance her cognitive and affective experiences related to her mother. In fact,

according to theories such as agential semiotics, the infant could be fulfilling all these agendas at the same time.

As we can see, there is more than one answer to this question. Hence, we would have more reasons to suspect the perspective adopted by the researcher when she defines the experiential flow as a set of teleological actions: is she describing the experience from a first-person perspective, from the lived body itself, or is she describing it from a third-person perspective?

Even a perspective of an immanent teleology in biology insists on a third-person perspective that finds goals in the meaningful experiences of each organism. That is why we ascribe to a contemporary and more phenomenological perspective that describes what it means to be alive, even in a very basic way. We are aware of the limits of approaching, from a first-person perspective, what it is not intuitively given to us; paraphrasing Nagel, we cannot truly know what it is like to be a bat. Despite this, there is a field of research in phenomenology that has some insights about how to deal with limitations concerning our own position when we approach the inner life of organisms that are different from us (see our footnote 2).

Phenomenology is not restricted to studying what is given in the researcher's experience. The phenomenological method, at least as has been developed from a Husserlian tradition (see Fink, 1995; Merleau-Ponty, 1945; Zahavi, 2010), can approach the experiences of other beings, including the experiences of infants or non-human animals. How does the phenomenologist access alien experiences? Following Sheets-Johnstone, the phenomenologist will use her own experience (described with the phenomenological method), the second-person observation of the organism to be described, and a transcendental clue. This clue will allow us to unveil the movements of consciousness within a transcendental phenomenology. With all those resources, the phenomenologist can reconstruct an alien first-person perspective.

The work of M. Sheets-Johnstone (e.g., 2009, 2010, 2011) is a good example of a phenomenological perspective of basic beings' first-person experience. Here we find some insights for supporting our idea of a biology that avoids teleological approaches.

What do an ameba, a lion, a baby, and an academic observer have in common? They move. When an observer looks at the Petri dish, she sees something with which she resonates: the ameba is moving. From a phenomenological perspective, the observer is experiencing how the world is given to the ameba, through its movements before any observer's conceptualization of what happens (see Garavito, 2019). When the ameba moves according to a sucrose gradient and avoids sodium chloride concentrations, the observer experiences some meanings of the world given to the animal (the sucrose as food, the chloride as danger). That observer's personal experience is the basis of her later understanding, from a third-person point of view, of organic movements as goals, agendas or autopoietic phenomena.

Sheets-Johnstone uses the observer's resonating with the organism experience as a starting point for proposing *animation* as a descriptive concept to understand the living. According to her, animation is what differentiates lived movement from the movement of objects. Unlike the distinction between intentional action and unintended movement (see section "Intentional Body and Intentional Movement"), the difference between animation and movement of inert entities does not lie on the animated beings' explicit experiences of agency.

Animation is not the reflective experience of movement but the relation of the movement with the givenness of some meaning.¹¹ While a stone rolls down a hill it does not experience itself or the surroundings. In contrast, each movement of an organic body, even an unintended one, is a constitutive part of its lived world and of itself (an unfelt movement does not correspond to the lived body as

11 Animation is not only a concept for understanding the living. It also describes the experience of the phenomenologist that resonates with the organism's self and world as are given to it while moving. Other researchers understand their observation in accordance with previous concepts such as agenda, autopoiesis, intentional actions, and so on. In a first-personal experience all those concepts are suspended to describe the resonant experience of observing moving selves, to whom we project some descriptions of our own conscious life to experience them as living beings. Rather than a cognitive process, in which the observer compares her mind with another, the resonant, second-person perspective is an experiential projection. An approach to that second-person perspective in phenomenology appears in Depraz (2012).

a whole).¹² Animation constitutes a unitary experiential flow with no beginning or end. By contrast, the concept of *action* gives us an atomistic view of the same experiential flow.

Every organism lives in an experiential flow, and in this flow, it emerges as a lived body; namely, as a body that is moving, and in that moving is having experiences of itself and of a meaningful world to which it conforms a unity. And its experiential flow constitutes a temporal unity. That temporal unity of the first-person experience of every animated being was conceptualized by Husserl (1966) under the *time-consciousness structure*. This structure consists of a continuous flow of *retentions-primordial impressions-protentions*.¹³ For instance, while someone walks, she does not experience every movement of her limbs, but she experiences walking as a whole. From a phenomenological perspective, that experience is first based on her current impression: a punctual experience of her walking at present. But the immediate impression comes after another immediate impression, and she cannot think about the current impression as independent from the previous one. Moreover, she experiences how that immediate impression is linked to the next movement, in anticipation. Retention describes the link between the current impression and the past experience, and protention the link with the next experience.

12 An unfelt movement (a movement with no kinetic/kinesthetic experience) is not an unintended movement (that is, a movement without sense of agency; see section "Intentional Body and Intentional Movement"). If we cannot feel our leg, it simply is experienced as an object attached to our body. In contrast, when someone lifts our arm and moves it (an unintended movement), we have a kinetic/kinesthetic experience of what is happening. Therefore, and according to Sheets-Johnstone (2011), it is part of our experience of the body and its surroundings.

13 This phenomenal structure differs from a perspective of time as composed of the past, the present, and the future. Whereas this tripartite vision agrees with an atomic view of time, in navigating the world we are not aware of such separation. Rather, as a continuous flux, time is experienced in the link between what is lived now (impression) with what has happened (retention) and with what is going to happen (protention). This temporal unity does not imply that the primordial impression is a *substantial* moment of the time structure. Instead of *reifying* the primordial impression, we must consider time as a general form of being of consciousness, such that primordial impression, retention, and protention are not real entities but qualitative features of our temporal experience. We thank the reviewer who encouraged us to elaborate on this point.

Primal impressions, retentions, and protentions are not discrete phenomena located in the past or the future, respectively. On the contrary, we experience them as *original qualitative characters of the ongoing experience*. In personal experiences even to perceive someone walking implies experiencing the current movement in terms of that structure. We are not experiencing the goal or purpose of the movement, but the waking itself as it is given in the present, as we experience it when we are moving. Moreover, this time structure describes meanings as they are given to that movement.

Remember that animation is meaningful movement: we do not experience the future as something to which we tend to, but as a quality of our own movement and as the quality of what is given in the present. Although we may think explicitly about walking to the kitchen, it is not that goal itself but the whole structure of the unified experience (even some emotion that accompanies our walking that is not related to the explicit goal, e.g., if we are angry at someone) which determines the meaning of the whole “intended” experience, and even what follows when we reach the kitchen.

When we look at the glass in front of us while our hand directs toward it, the experience of that movement includes, in each moment, a retentive quality (the quality of the previous movement). It also has a protentive quality linked to the experience of our movement: movements of our hand, arm, and whole body anticipate the object itself (e.g., the hand’s opening according to the object’s diameter, the measure of force included in the movements for grasping and lifting the object). They anticipate the glass as a tridimensional and quite light object, even though we are looking at only one of the glass’s faces. In other words, my movements testify to a constitutive activity in which the glass is given to us in some way. This experience is not translatable in terms of goals and purposes. Otherwise, we would have to say that every time we lift a glass, we have the goal of confirming that it is not heavy. To imply that is against our intuitions about the relation between our movements and the givenness of the world. As a quality of the experience, protention is not a teleological phenomenon, it is, rather, the base upon which we may explicitly form agendas and purposes.

The experiential flow, consequently, includes qualitative characters given by retentions and protentions (Husserl, 1991: 40-42), in a unity where meanings about oneself, the world, and others emerge through constitutive activity. In the experiential flow these meanings are *sedimented*. Sedimentation is another concept close to the idea of *animation*. It is the way in which phenomenology understands the stability of experiential flow. *Sedimentation* is a synthetic activity through which stability is experienced. Through time and while a subject is dealing with her surroundings, some stable meanings emerge because they become habits in repetitive constitutive activity. For instance, a particular object is given to us as a cup because of an habituality we acquired as living bodies, since infancy, through historical relations with similar objects; first as tridimensional and solid objects, and then as cups (see Merleau-Ponty, 1945).

Sedimentation is a synthetic activity through which stability is given. Moreover, it explains the link between body and world: an arrangement of movements anticipates and follows the emergence of some meanings because of a historical link. The baby's back and forth movement of his head anticipates and follows the appearance of a visual array. The professional soccer player "corporally anticipates" the relation between a perspective of the ball in the air and his running to kick it. While traditionally, in a third-person perspective, we could relate those movements with premeditated goals, we hold that in both cases movements are only one side of the constitutive activity (the other side being the world).

The experience of oneself is also a part of that unity. While the meanings of the world are given through movement, an experience of oneself is given as a sedimented habituality. As a glass is given, an experience of ourselves emerges (e.g., as competent glass-holders, in a specific situation). That experience is also flexible and situated, and the feeling of unity is also related to the fluidity and the qualitative character that retentions and protentions give to the experience of ourselves here and now. The stability of the world is constituted in the stability of the experienced self, and the given world is the condition for the experience of a stable self to which that world is given (Byers, 2002: 125).

Similarly, an ameba moves according to a sucrose gradient and avoids sodium chloride concentrations because of the meanings of sucrose and sodium chloride that have been constituted historically. For instance, the quality of the movements of avoidance could be related to previous experiences of being poisoned for taking chloride. *Meaning* is obviously not to be understood as some kind of conceptualization of what food or danger is but as a kind of bodily experience that depends on, or is linked to, some previous experiences of the world. This means that some intentional movements concern the anticipation and the following of a sucrose gradient, while different movements accompany the presence of sodium chloride. These differences in intentional movements, however, do not respond to the fact that the ameba is obeying an immanent teleology, seeking to achieve a particular agenda, or its “concern to affirm life” (Weber & Varela, 2002: 116; Di Paolo, 2005). The ameba is just thrown into the world, being part of a series of sedimented networks of meanings.

The lion chasing a gazelle, on the other hand, does not have the *purpose* of avoiding pain or seeking pleasure. This animal does not *plan* to feed itself. Instead, its sedimented networks of meaning form a unit of signification together with the gazelle, in such a way that the stomach movements and the saliva production are phenomena that include protentive qualities related to the perception of the prey. Unlike a lion, a human’s production of saliva and stomach movements includes protentions related to going to the kitchen or the taco truck. Both the lion’s and the human’s meanings involve their historical constitutions of the world and themselves. Hunger is part of a set of complex and flexible intentional movements, through which world and self are historically given.

Conclusions

In a broad sense, what we have aimed to do is to question the old Aristotelian schema of *efficient* and *final causes*, both conceived as transcendent. Arthur Schopenhauer (1958: 160-187) held that the question “why” is problematic since it is not conducive to an

understanding of the essence of things. We follow in his wake. Rather than asking “why” or “what for”, we seek to provide a description, from a first-person perspective, on the processes that constitute our experience. In Wittgensteinian terms, asking “why” is an illegitimate strategy in the study of intentional phenomena, which only hinders our understanding of the phenomena. It is an *unanswered question* (hence the eternal rivalry between mechanistic theories and teleological theories) that arises from *entanglements of language* (Wittgenstein, 1921: 6.5; 1953: 133).

Intentionality is not related to any teleological or mechanistic organization. Intentional movements are neither organized nor directed by ends, purposes, or agendas. Their structure, coherence, and fluidity emerge from the dynamics of meaning established between an organism and its environment. We have described phenomenological concepts of constitutive intentionality, animation, intentional movements, time’s protentional quality, and sedimentation as constituting a conceptual framework to both explain and describe the phenomena of giving meaning to the world and ourselves in a first-person perspective.

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