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The Autonomy of the Symbolic: Cognitive Approaches to Ideology and the Unconscious

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Podpis



Abstract

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Abstract (900 characters): This thesis introduces the major ideas from cognitive science that are useful in this exploration, pointing the way toward later integration with approaches from semiotics, phenomenology, and psychoanalysis to define the ‘autonomy of the symbolic’, which is this propensity for conceptual structures to sometimes outlive their usefulness. Additionally, we will discover why some authors avoid talking about unconscious and ideology, because of the outcome of their notion; concretely speaking, their connotation and association in common sense and today’s paradigm.

Keywords: Unconscious, psychoanalysis, enactivism, autonomy of the symbolic, embodiment, conceptual metaphors, image-schemas, cognitive science, cognitive semantics, philosophy of science, philosophy of language, epistemology, paradigm shift, semiotics, scientism

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Introduction

Contemporary cognitive science research varies in its approach to representation, between a reductionist account of the qualia of first-person experience and a more semiotic and/or phenomenological account, which would seek to integrate the perceiving subject into the very model of cognition and information. In this thesis, we explore how the latter account also tends to highlight how symbolic tools of representation (particularly verbal language)—while affording indisputable advantages in processing power, memory storage, and retrieval—sometimes interfere with communication and signification processes through the decontextualizing effects of their abstraction. Thus, the thesis is mostly interested in embodied cognition, and it overlaps with some strains of continental philosophy and linguistics, which have traditionally monopolized the area of ideology critique and the study of the unconscious.

The mathematization of the world leads to our modern scientific conception of a completely objective world distinguished strictly from the human spirit. The best contribution to this might be devoted to Husserl (Husserl, Biemel, & Carr, 1936). The idea that natural science can also bring strict, objective, mathematical principles to bear on the explanation of the psyche threatens that spirit (Gallagher, 2017), as Husserl (Husserl et al., 1936) gave birth to these concerns. It can be said that their association with psychoanalysis leads us to the core of the humanities, where there is nothing but ‘speculation’, as it was a non-productive work, so to speak, because of their nature. The main reason for this comes from our broader argument, because the unconscious (by its subjective virtue) is accounted for as non-scientific by the main authorities. However, our main authors’ (Brier, Deacon, Gare, and Lakoff) effort is to

find the middle ground between what is ‘scientific’ and what is ‘non-scientific’. By the end of this thesis, we discover that neither the notion of sole objectivity nor the subjective is purely productive to tackle these issues because both are insufficient for our case. Indeed, we have opted to act against this movement. That is why Gare (2016) explains this clash of natural sciences and humanities very well, and while he is aligning these opposite poles of today, he subsequently offers a philosophy called speculative philosophy that is mainly interested in ecology to tackle real-world problems of today in his well-known book, *The Philosophical Foundations of Ecological Civilisation: A Manifesto for the Future*. However, the latter will not be included since it is outside of our scope of research.

Our ultimate purpose in this thesis is to illustrate the reader with an exhaustive scale of alternative ideas that are developed in parallel with what we define as mainstream cognitive science rather than proposing an antithesis. Therefore, the goal of this thesis is to include these theories in the context of cognitive schools, together with Gare’s notion of common sense (as defined by Gare) while addressing some of the fallbacks of some of the established frameworks that are conventionally accepted.

Traditional cognitive science or objectivist cognition

According to what Lakoff (1998) calls ‘objectivist cognition’, rational thought is the manipulation of arbitrary symbols that convey no meaning whatsoever. However, those signs become significant as soon as they are associated with external objects. Therefore, one may conclude that signs themselves and their individual interpretations are *meaningless*. They merely constitute a language of thought, or representational system, as Deacon (1997) puts it, where it is solely the syntax of the language and its structures that are important and relevant without considering their meaning. However, it is important to remember that without the subject, “nothing is ever

functional, significant, or adaptive for sodium chloride, snowflakes, mountains, fried chicken, or even computers” (Sherman & Deacon., 2017, p. 25). This is an outcome of an information misconception. Information is now noted as subject-independent in science disciplines, particularly in physics and computer science. Accordingly, only the signal itself and the sign medium are what matter because of their very virtue of objectivity. That is also what our author Brier thinks by expressing the following:

The weaknesses of traditional information and communication analysis based on data or information-flow theories are raising fundamental problems concerning how knowledge systems are constructed and organized. (Brier, 2008, p. 20)

We just reduce the possibilities of what-to-dos with that content when such a thing is given. However, any content given, or a concept perceived, turns out to be information exclusively after processing this information and having a fruitful product of it within a living being. For Sherman (Sherman & Deacon., 2017), it is merely a reductivist approach, if not equivocal—in other words, we tend to use the terms in the natural sciences or informatics that are exclusively attributed to living beings. There are prerequisites for the terms, such as meaning-making, information, decision-making, cognition, and neural networks that are only devised in themselves (organisms). Giving that loophole within the expansion of these terms indeed leads us to confuse, and include the inanimate objects (the best example today could be computers) in cognitive science as they were thinking and self-sufficient, self-devised, self-purposeful beings, whereas originally these features were the characteristics of living beings. According to Sherman (Sherman & Deacon., 2017), the effort is to get rid of entire means-to-end acts and replace them with cause-and-effect phenomena. If we are capable of doing this, we automatically remove the

subject from its original place because we no longer need its purpose. This is an issue that is as crucial as unrecognized today.

Cognitive semantics and conceptual metaphor theory of Lakoff

George Philip Lakoff is a renowned cognitive linguist and philosopher. He studied at both Indiana University and the Massachusetts Institute of Technology. He worked as a linguistics professor at the University of Berkeley, California, until 2016. His main interests are cognitive science and cognitive linguistics. Lakoff is influenced by and has contributed remarkably to contemporary embodied cognitive science and is known for his theorization of conceptual metaphors. He is politically active, and he applies his framework to social and political issues as well as mathematics and philosophy.

Lakoff and Johnson propose ‘Experientialist Cognition’ as an alternative to ‘Objectivist Cognition’ (Lakoff & Johnson, 2003 [1980]). They seek an explanation for the shortcomings of (at that time) mainstream cognitive science. They invite us to take ‘experience’ in a broader sense, with consideration of first-person experience, without segregating it into purely sensory-motor, emotional, or social. It is crucial to comprehend that, although the label might be associated with positivism or empiricism, their focus, in contrast, is first-person experience itself, which we unavoidably tend to neglect. In this chapter we are going to discuss how the product of his collaboration with Johnson (conceptual metaphor theory) sheds light on and pioneers the field of this virtue in this chapter.

But firstly, the above description of traditional cognitive science was originally captured by the so-called ‘correspondence theory’. Lakoff’s (1998, p. 119) formal definition follows: “The symbols function as internal representations of external reality, and the rules that manipulate the symbols do not make use of what the symbols mean”. The critique of this thought might be found in *Philosophy in the Flesh*, whose overall goal is to re-contextualize modern Western philosophy, considering cognitive semantics and conceptual metaphor theory. Lakoff’s critique of correspondence theory can be expressed below:

No countable sequence of symbols can be satisfied uniquely; that is, no sequence of sentences in a formal language is true in one and only one model. Other models always exist, which can make any countable collection of sentences true. ... There is always more than one pairing of symbols and model elements that will satisfy the sentences of any purported theory of reference. (Lakoff, 1988, pp. 128–129)

Correspondence theory and objectivist cognition exclusively count on what is absolute and objective, the overall reference, and this sort of thought imposes binary truth conditions on *anything possible*. However, it is acknowledged that the *real world* is far from being ruled by two sides of a coin. Lakoff’s point is that this approach excludes the qualia of first-person experience from the outset. It is acutely reductionist for the reality in which we are living. To overcome this, experientialist cognition introduces image-schemas. These cover the imaginative, *enactive*, and *embodied* meaning-making process, including the involvement of our bodily and social experience as well as our capacity to influence external events, even if it turns it upside down. It is a bounded mechanism and works spontaneously and constantly.

This mechanism is the greatest part of our cognition, which is ironically placed in our ‘unconscious.’

In other words, a large part of our decision-making is *not* conscious. On this matter, according to Varela et al. (2017), cognitive science has influenced psychoanalytic theory extremely.

Today, much of cognitive science is interested in exterminating the notion of unconscious processing, in other words, while realizing the pre-conscious, much in the way that the received version of Freud proposes the possibility of overcoming and moving beyond repression. In this respect, the current research aligns more closely with post-Freudian psychoanalytic theory. We can also see in Brier (2018) that he believes that most animal behavior (not exclusively humankind) is controlled at the unconscious level, and those behavioral patterns are a product of our decision-making mechanisms. He further claims that motivation is not considered a physiological concept nor has it to do with emotions but is connected to perception and behavior on an instinctive basis, which could also be considered in agreement with Deacon and Schumann regarding the self and Bier’s notion of *living systems*. Supporting Brier’s (2018) argument, Pross (2012) claims that there has been less or no interest in problems of purpose that today’s scientists are neglecting or simply ignoring, while with a ready answer that they were emergent. This later becomes the starting point of Deacon’s renowned book, *Incomplete Nature: How Mind Emerged from Matter* (2011).

We should also conclude that syntax is an indication of the relationships formed by structure and meaning. Furthermore, constructions are made from grammatical categories and are motivated by semantics. Syntax is a device of grammatical

categories and those constructions, and it is the instrument of semantic and functional dimensions that are directed to its users. (Lakoff, 1998)

Mainstream cognitive theory also neglects the so-called ‘secondary properties.’ It is only concerned with the primary properties, to which we never have indirect access. The error occurs when we realize that the tools that we use are human-made, with human flaws. In combination with the fact that the observation mechanism itself is completely limited by our defective perceptual spectrum and affected by our worldview built from our past experiences, language, and culture, we have no choice but to reject this exclusion of the secondary categories. The best and most practical example of the secondary categories is color. Colors play a tremendous role in our modeling of the world. Assorted colors have different meanings for different cultures and different individuals. They are usually named in diverse ways. They come with multiple connotations. Nevertheless, we receive colors as the length of waves reflected from surrounding and interacting objects, not because they stand for something. They are significant because from them arises some cognitive impact and reaction in receivers. If we are to accept their significance as a traditional scientist, we might say, respectively, that colors have arbitrary associations, hence meanings, and that is true.

On the other hand, if we look to the subordinate levels of their indication and penetrate the symbolic meanings they have today (see Deacon 1997 (p. 70–71) for subordinate levels), they have indexical and symbolic meanings as well; their cognitive impact in our body is a primitive one, as seen in the case of plentiful non-human animals. Red might indicate blood; thus, it might alert us and lead to an increase in blood pressure and speed of metabolism and may lead to eyestrain; yellow

might give us the feeling of warmth because it is somehow an index of the sun. The same goes for other colors.

Regarding the problematic linguistic side of objectivist cognition, how can we explain simple cognitive schemas like 'Friday', 'extravagant', or 'bachelor', given the assumption that they are mere reflections of external reality? The meanings of such concepts vary widely between distinct cultures. There is no homogenous referent for these concepts. They signify only through the meanings we give them within a localized socio-cultural milieu, not employing any independent pre-existing structure. This is problematic for the understanding of the cognitive tradition.

Another example of this pre-existing structure happens when we perceive a face, and that is not only constrained by recognition because we may immediately realize a big pack of emotions given by that, considering that this effect may drastically differ depending on the experience we have with it. We tend to be more engaged with living beings and humankind than with objects, and that is not again limited to pure recognition. The lived experience of somebody's sight and the perception of that person's emotions may well affect us evidently but unconsciously in the virtue of our motor and mirror neurons, which have an impact on our hormonal values and transmitter values with a given impulse.

These little processes are also observed in the heart rate and on the effects of respiration, but very minimally. These factors that lead to these changes are, however, non-representational (Gallagher, 2015). For this very reason, Zlatev (2009) does not count the shifts on that level as signs. He further claims that these cannot go beyond the metaphorical basis and declares, with a little imagination, that we project our understanding of signs to the biochemical world.

Image-schemas are fundamental to our understanding. They shape our daily experience pre-conceptually and lead to metaphors that are raised from experience. Again, metaphors are not arbitrary, but they are motivated by this apparatus of experience. Therefore, the turning point of our reasoning is our experience. These structures of cognitive perception are heavily grounded and developed in the initial stages of individual development and are still in the later ages, but slightly. They are implied within the semantic aspects of natural languages. They are all about how we conceptualize the entities that we receive through mental images, visual perception, and motor action.

A more convenient example of the early development process is explained by Lakoff and Johnson:

For young children, subjective (non-sensorimotor) experiences and judgments, on the one hand, and sensori-motor experiences, on the other, are so regularly conflated—undifferentiated in experience—that for a time children do not distinguish between the two when they occur together. For example, for an infant, the subjective experience of affection is typically correlated with the sensory experience of warmth—the warmth of being held. During the period of conflation, associations are automatically built up between the two domains. Later, during a period of differentiation, children are able to separate out the domains, but the cross-domain associations persist. These persisting associations are the mappings of conceptual metaphors that will lead the same infant, later in life, to speak of ‘a warm smile’, ‘a big problem’, and ‘a close friend’. (Lakoff & Johnson, 1999, p. 46)

What is remarkable is that the same neural circuitry used to run our bodies physically also structures our reasoning processes about all events and actions, not just physical ones, but abstract actions and events as well, such as abstract discourse about international economics (Narayanan, 1997a, b). Another way to put this is that our neural networks are synchronized with the environment we live in. Whatever is received will undoubtedly affect our current state in the visual cortex, and it will change into a metaphor associated with other stimuli, these metaphors will eventually alter our current state and constrain it, creating a response to that. Particularly in the early ages.

Conceptual metaphors—abstract topics indeed—are the by-products of multiple primitive metaphors we build. This so-called ‘neural circuitry’ is established through lived experience but on a subconscious level. It is this phenomenon that is called ‘primitive metaphor,’ without conscious interference and based on the stimuli in our biological apparatus. Different associations, synonyms, and hyponyms with these concepts melt with each other and yield an ultimate but ever-changing concept that is called a ‘conceptual metaphor’ (Lakoff, 2012). One way to put this is with Pelkey’s quotation:

Primary metaphors are more immediately embodied than conceptual metaphors (compare, e.g., ‘a cold decision’ with ‘a costly decision’). Overtly image-schematic constructions are more directly embodied than their grammaticalized counterparts (compare, e.g., ‘going to Seattle’ with ‘going to sneeze’). (Pelkey, 2017, p. 142)

The ultimate consequence of this interaction is its process. The current research brings light to our understanding of perception through mirror- and canonical neurons

pointing to joint action-perception circuitry. Thus, the same mechanism for acting and perceiving corresponds with the same neural circuitry that is used for acting and perceiving. There seems to be no better and more admissible explanation for this phenomenon. We conclude that, indeed, acting and imagining share the same dimension and are bound to each other. We are, at least minimally, active all the time, regardless of how the state might be 'passive', e.g., sleeping.

That is what is emphasized by *enactive* perception: that even the most passive action is still an action and loads a minimal input into our minds that is created and transmitted by our neural synapses. Therefore, triggering these circuits may activate some behavioral patterns in individuals, even though there seems to be no action in the first place. A great deal of exposure to this implication yields a denser neural circuitry at the unconscious level, without awareness. Therefore, those primary conceptual metaphors are more vital than is allowed for by objectivist cognition. This is the inspiration for the title of Lakoff's most well-known book, *Metaphors We Live By* (Lakoff & Johnson, 2003 [1980]). Lakoff (2012) mentions in his journal article, *Explaining embodied cognition results*. Then it becomes apparent that the authors' spotlight is on behalf of the perception.

However, these notions are extremely dangerous for Zlatev and other authors. This interest in them leads to anti-representationalism by confronting traditional cognitive science. None of the authors (except Shaun Gallagher in his book *Enactivist Interventions: Rethinking the Mind*) explicitly declares this statement, and they even use the same frameworks and/or structures of semiotics on the contrary. The same could be observed in his preferred focus on the conscious above the unconscious, and ideology has a notorious reputation, whereas these notions are annotated with these authors and different ideologies that were radical because of these annotations, which

is why some authorities feel reluctant to use them. We will enlarge our argument later in the next chapter.

Eventually, the entirety of conceptual metaphors makes us biased on certain topics. Those biases are also called *cognitive biases* in general. However, with a unique perspective, Lakoff calls them *neural filters*. (Lakoff, 1999). These neural filters, or cognitive biases, are the superordinate step of our circuitry in a multiple facade of concepts that are forged together, and they indeed carve our worldview. This may also be called *ideology*, according to Eagleton's (1991) discourse. The downside of this term is that it is associated with several disconnected and sometimes discredited discourses, as we see in the case of the unconscious today. However, these worldviews remain ever-changing, and this is where the cognitive semiotic approach is important for the traditional study of both ideology and the unconscious. Although we do not have any data to demonstrate why the notion of the unconscious is denied in research, Eagleton shed light on the absence of ideology in texts. These two terms are not only abandoned by the natural sciences but also significantly expelled from the human sciences. Eagleton (1991) suggests that the new postmodern and post-structuralist paradigm of the humanities does not yield an empiricist model of representation or ideology. Realizing some form of ideological consciousness would also bring up an absolute truth that is unfavorable for Sceptics. Consequently, the current historical associations of ideology application within nationalism, Marxism, Nazism, communism, and alike schools of ideology, interests, and power shaped the meaning of it, making people reluctant to use the term as it was outdated, superfluous, and redundant for today.

Nowadays, it has become a cardinal problem in the situation of online information bombardment. The reliability of news is one of the biggest issues today, and every

narrative has a starting point. The neural filter selects only those narratives whose anchor matches the user's repertoire of judgments. Then it becomes stronger with every repetition. In general, its export includes an extensive amount of emotion because of the vast amount of circuitry and association. Once again, we face the integration of body and brain for this mechanism. Pieces are epitomized in the brain and body. In the process, with sufficient time, the user becomes cognitively isolated in a bubble that is reinforced by the information-silo effect of online newsfeeds generated by pre-established user preferences. It is completely isolated and does not address the other side of the problem. It is in this way that the problem of cognitive bias is compounded by information and communication technologies, and the reason we emphasize this issue is because of these real-life consequences.

Terrence Deacon's emergent dynamics

Terrence William Deacon (born 1950) is an American neuro-anthropologist. He received his PhD from Harvard University. His research focuses on multiple layers of evolutionary processes. In addition to biology, anatomy, and cognitive neural science, his research includes the impact of evolution on language origins and communication. Currently, he is a member of the Cognitive Science Faculty and Professor of Anthropology at the University of California, Berkeley.

Deacon's first major work, *The Symbolic Species: The Co-evolution of Language and the Brain* (1997), is a comprehensive treatment of brain and language evolution. He is extremely critical of the Neo-Darwinist explanation of evolution and adopts a descriptive semiotic hierarchy grounded in the philosophy of Charles Sanders Peirce to describe the precursors of language and how the symbolic nature of language is inextricable from its pre-symbolic infrastructure, described as icons and indexes. It is

this choice of vocabulary and philosophical framework that has positioned the work of Deacon at the center of the current discourse on what is called *biosemiotics*. Deacon persuasively rejects the Chomskyan language organ (Chomsky, 1957). Deacon refuses to believe that nonhumans possess only qualitatively inferior modes of communication and that humans' communications are different from their evolutionary precursors.

How speech is far more rapid and precise than any other communication behavior, how the underlying rules for constructing sentences are so complicated and curious that it's hard to explain how they could ever be learned, and how no other form of animal communication has the logical structure and open-ended possibilities that all languages have. (Deacon, 1997, p. 12)

The denial of this possibility, as Deacon (1997) says, is a product of the *anthropocentric* perspective of our current civilization. The assumption goes to the extent of claiming that in a given sufficient time, other fairly intelligent species that possess an already language-like mechanism will develop similarly symbolic capacities as humans on the planet Earth or other planets. That repeatedly says substantially about our notion of natural language evolution, as we were thought to have it as a superior feature and as proof of our advancement among the other species. A major thrust of the argument of this research is that what has been described above as objectivist cognition is complicit in this anthropocentrism; the revelation of this complicity confers regarding the research important normative implications (which are incidentally better addressed in the parallel fields of the study of the unconscious, ideology critique, phenomenology, and the other continental philosophy-inspired approaches that are not normally considered to be compatible with cognitive science).

One way to answer this issue is that our vocal proficiency is exceptional; our language facility has nothing to do with any kind of evolutionary trend. On top of everything, civilization proceeds throughout technological ontogenesis under the guise of some anthropocentric notion of linear and accumulative progress, but this notion contrasts with the findings of contemporary evolutionary theory. Biological evolution, in contrast to technological evolution, develops itself distributively through hordes of branches and utilizing the diversification of existing organs to accommodate the needs of the organism. One of the anchors of this argument is that, if we are so qualitatively different, given the fact that we possess the highest ratio of brain size divided by body size, why then do we not outnumber the less-developed, prokaryotic organisms that overpopulate us strikingly? (Deacon, 1997). Deacon clarifies his view of language in the following:

My answer has everything to do with language and the absence of it in other species. The doorway into this world was opened to us alone by the evolution of language because language is not merely a mode of communication; it is also the outward expression of an unusual mode of thought—symbolic representation. ... Species that have not acquired the ability to communicate symbolically cannot have acquired the ability to think this way either. ... It entirely shapes our thinking and the ways we know the physical world. (Deacon, 1997, p. 22).

Symbolic representation is the highest ordinate system of sign networks that enable us to economize a high load of information. It also allows us to think abstractly, although it shapes our reasoning and the domains provided to us through information acquired from the outside world (Deacon, 1997).

But what makes natural language so peculiar? Deacon (1997) compares it with other ways of communication such as whale song, variations of birdsong, and vervet monkeys. There are also numerous complex ways of communication that octopuses, parrots, dolphins, bats, and other animals use, and they are still the subject of research. Some of that research also regards primates and their language acquisition. Nevertheless, each single one of these practices is far from being a natural language; they do not necessarily correlate with the properties of human language.

These and many other examples like them only exhibit a superficial resemblance to language learning, word reference, or syntax, respectively; even if we were to grant these parallels, no nonhuman species appears to put these facets of language together into a coordinated, rule-governed system. ... Could we have missed recognizing nonhuman languages because they are as alien to us as our speech is to them? (Deacon, 1997, p. 31)

If we survey the content, we may realize that the foremost characteristic of human language is its arbitrariness in the Saussurean sense. We use certain sounds correlating with distinct lexicons to attain speech, but there is no motivation, either by similarity or by contiguity, behind these connections. The arbitrariness implies a dimension of freedom between signifier, signified, and referent, which is not found in other forms of communication. In Deacon's parlance, significant sound units are symbols. What makes a symbol distinct, roughly speaking, is that we do not need to ground our reference temporally, similarly, geographically, or habitually (as in the case of icons and indexes); symbols are freed from the context-dependence of other modes. It is immensely economical, without the plentiful effort or energy needed to recall and produce these sounds and their connotations. But their arbitrariness comes with certain side effects. We may creatively coin various words out of other words or

use them in a comprehensible context that is grammatically correct but independent of local constraints. Expressive creativity entails heightened degrees of ambiguity. We have plenty of hyponyms and synonyms that lead to noise in our communication, although their usage also enriches our modes of expression in language, which may be considered aesthetic. Furthermore, one lexicon most likely has multiple meanings and interpretations, since it is not enough to merely construct phrases and sentences for meaning-making in a broader picture, but the larger units of discourse. The units of speech are divided into phonemes, which are the concrete and isolated pieces of the utterances we produce. In their essence, however, these sound units are contingent. We are also constrained by anatomical structure, mostly the involvement of the mouth, teeth, palate, tongue, diaphragm, vocal folds, glottis, and larynx, in their shape and function, although they are fabricated very specifically for us. Natural language is remarkably easy to acquire and sustain for us, but this process seems also extraordinarily complex and hard to grasp in its virtue of direction. As Deacon (1997, p. 26) puts it, “Is language imposed from the outside or does it reflect what is already inside?”. This issue has always been a fierce debate in academic circles. One popular assumption (as seen in Chomsky [1957] or Pinker [1994]) is that language relies on some hypothetical and abstract *language instinct*, *language organ*, or *language device*. This notion explicitly discriminates against other species; it contributes to the anthropocentric and superior perspective. Deacon claims that if this theory is true, then we must have acquired exhaustive learning and memory skills from our evolutionary path, as in the case of *mentalese*. The reverse of this theory would hold: language is absorbed wholly from the outside world by simple associations with instinctual knowledge. (Deacon, 1997)

The common sense that proposes the proposition language *has just emerged all of a sudden* and is attractive for many reasons, but above all because it sidesteps many problems that occur with it. If we are in favor of this explanation, then we, probably unconsciously, accept the discontinuity of our advancement from our primate relatives. We ignore our potential connection with them and their cognitive capabilities in the evolutionary frame because it seems to oversimplify the transformation. This mindset undermines our ability to recognize possible alternatives to verbal language as a communication phenomenon. It is very dull and univocal. Why even struggle to find this *Homo sapiens* threshold, where this radical discontinuity has arisen? We are obliged to uncover this seemingly instantaneous shake-up in biology and human behavior. So far, we do not have enough evidence to even establish this jump. It seems like we are stuck in a cognitive blind spot that forecloses the possibility of other perspectives (Deacon, 1997). This argument is related to our course of mind because, according to Deacon, if we can track the development of the brain, we may understand the mind and the utmost effects of language. Despite all these challenges, Deacon begins to theorize his solution by defining language:

Language is a mode of communication-based upon symbolic reference (the way words refer to things) and involving combinatorial rules that comprise a system for representing synthetic logical relationships among these symbols. ... More importantly, no more than a tiny 'vocabulary' of meaningful units and only two or three types of combinatorial rules would be necessary to fulfill these criteria. A five- or ten-word vocabulary and syntax as simple as a toddler's two- and three-word combinations would suffice. Reducing the definition of language to such minimal conditions allows us to conceive of language-like systems that are far

simpler even than the communicative repertoires found to occur in the social interactions of many other species. (Deacon, 1997, p. 41)

Given the reduction of complexity upon simplicity, the only thing we have is the *symbolic* representational nature of language. For Deacon (1997), the key is in the most wide-ranging perspective, when we abandon morphology, phonology, syntax, semantics, and pragmatics and switch our spotlight from language to the notion of those systems: in our case, meaning and reference. This is where the philosophy of Charles Sanders Peirce becomes instrumental in Deacon's thinking. Semiotics is the liberating gizmo we have now in our hands. In other words, Deacon (1997) claims that if we curtail the intricacy of natural language into its essence (which is the symbolic representation for him), we can better assess our predisposition for it.

The reflexive element of this inquiry is both its deepest interest as well as its most significant obstacle: because of our *neural filters* and *ideology* (he mentions experience and accumulated knowledge), we may remain blind to every issue and its possible solutions. One can say that each conventional theory might be a fragment of collective biases, leading us to be satisfied with established solutions and see the need to study others. That is to say, once we agree on one view, we disagree with others at the same time. As Deacon puts it:

The evolutionary heritage of a species sets it up to handle some cognitive problems well and others poorly. To the extent that members of a species are innately biased to attend to irrelevant details and to ignore critical elements of a problem, they are maladapted. (Deacon, 1997, p. 50)

According to Deacon (1997), the evolutionary benefit that vocal language offers is derived from symbol use, but it also poses a significant risk or disadvantage—a kind

of double-edged sword that may even be described as a maladaptation. He further argues that symbol use allows humans to operate in ‘ungrounded cognitive constructs’ or ‘virtual realities’ independent of sensory stimuli, allowing them to perceive symbols even when they are absent. One outcome of it might be thinking that we could purely emphasize, but we are conscious since the components we mentioned earlier are believed to be at the unconscious level.

Language is equal to other modes of communication but far more wicked in this respect. This further passage is crucial to understanding how Deacon and Lakoff agreed in their teaching; we assume it was accidentally.

It is probably possible to train almost any intelligent mammal to use a complicated arbitrary sign system, so long as the medium of expression is appropriate to use sensori-motor abilities. (Deacon 1997, p. 65)

Both of them agree that when we use symbolic representation or language in particular, we remain dependent on our sensory-motor capacities. Deacon adds one more layer to this opinion. He argues that if we expose other mammals to the same trigger, then we may also find them making use of higher-order symbolic systems, or even language in particular, if and only if that system is convenient to their sensory, motor, and environmental affordances.

Subsequently, we see in Deacon’s application of Pierce that he considers the Peircean way to be the most successful arrangement of the hierarchy of symbolic systems. In the light of his methodology—*semiotics*—we can establish the scaffold of our approach. Starting from the interpretant of any sign, we understand that the term is used for the inferential message from the receiver. The receiver is actively involved and deciphers its meaning as soon as they interact with it. When there is a sign, there

is an agent. This agent comments on the message with or without consciousness, and the eventual response image or action is called the *interpretant*. Where there is a sign process, there has to be an interpretant. But the problem is identifying this reference process and determining into which category it fits. We have three types of references, ascending from *iconic* to *indexical*, followed by *symbolic*, the sort we consider most complex above all. There are distinct levels of interpretation. Respectively, superordinate to each other to the right and subordinate to the other to the left, from more basic to more complex, from more direct to more indirect. That means the latter may be established right after the previous, and if we make a change in a lower level, we do not necessarily change the upper level, and vice versa. It goes from more tangible to more abstract. The middle level is the indexical level. It is the transitional level. Any one of them in isolation does not affect or alter the other. It is also important to remember that no reference inherently belongs to one of these categories. The classification depends on the interpretant and, thus, on our way of understanding things and our cognitive abilities. That means sometimes there is a blurry border between these sign classes. Thus, an indexical reference may also be considered an iconic or symbolic representation since it is the transition or passage between the two of them. An iconic reference is usually referred to as an outcome of the resemblance between an object and a sign. This phenomenon emerges not because of the resemblance to the object itself but because of our perception that one thing resembles another. We sometimes may not come to terms with the connection of an iconic reference, whether it resembles its object or not. This means everything might be associated with something at some point, especially if we are to accept the theory of *essential properties*, which is one of the cardinal elements of traditional cognitive

science. Umberto Eco (1979) most famously criticizes the notion of iconicity based on this argumentation.

The later version of iconic reference is the indexical phase when we associate the current object using correlation in space and time, or by causation. We need *sensory features* as a mediator between ourselves and the sign so that we may produce an interpretant as a result. These sensory features can include any modality, such as the visual, auditory, gustatory, olfactory, tactile, and maybe other yet-to-be-discovered biological engines. More properly, we may call them *signals*.

Additionally, signals can also be qualified as *proto-signs*. We use them for sign manipulation, and we may accept their usage officially from cybernetics to describe the automated proto-semiotic process we find in programming languages for Brier (2013), but at the same time, we see Sebeok (1972) describing it as an artificially or naturally triggering sign. It is again beneficial to differentiate the syntax that computers and humans produce, as Varela et al. clarify:

The reader should also notice that the cognitivist hypothesis entails a very strong claim about the relations between syntax and semantics. As we mentioned, in a computer program, the syntax of the symbolic code mirrors or encodes its semantics. In the case of human language, it is far from obvious that all of the semantic distinctions relevant in an explanation of behavior can be mirrored syntactically. (Varela et al., 2017, p. 42)

Deacon (1997) says it is possible to associate almost anything with anything else employing temporal or spatial grounds, based on our experience. That is to say, if we perceive any pack of signs synchronically and repeatedly enough, we will eventually develop an association between them, no matter how different the content might be. If

we perceive the sign through our sensory capacities, then we may connect it with one thing or another if they are spontaneously available in the first place (Deacon, 1997); this phenomenon resembles the case of Pavlov's dog and conditioning. It also immensely overlaps with the metaphor theory of Lakoff and Johnson. Subsequently, this might flourish very rapidly if we have the sign and a similar experience present at the moment, and this feature comprises the major disadvantage of symbolic reference and leads to another type of cognitive bias. In this sense, we can summarise Deacon's use of the Peircean modes of icon and index as an attempt to regulate the double edge of the symbolic, incorporating and reasserting the spatio-temporal ground of the sign. The strongest emphasis by Deacon is on the mutual interdependence of the various levels of the semiotic hierarchy. He concludes that indexical reference is *ad hoc* when we have to compensate for the failing nature of iconicity with an indexical reference to separate things (Deacon, 1997).

The usage of words from one context to another is usually considered an indexical process unless we refer to something completely different. In this respect, the earlier association diminishes and makes space for a novel one. This reference is usually abstract. It is conventionally accepted. It is arbitrary in the sense that it has little to no relationship with its icon anymore, yet it is associated just the same.

Words constitute a complex web where each element is, at worst, diffusely related to each other. Thus, one word may refer to more than one reference, and more than one reference may be expressed with one word (as we discussed earlier regarding hyponyms and synonyms). This overly complex essence of our symbolic representation hidden in language ensures its stability and strengthens its associations with a good deal of linkage in comparison with the simply indexical systems (Deacon 1997). Hence, it provides mnemonic assistance for early language acquisition. We

have this predisposition to language because of its nature. It has a vast role as an instrument for a self-conscious human being. As Brier (2018, p. 407-408) puts it, “Human beings are linguistic cyborgs, in that we are natural beings programmed by culture through language and therefore very much cultural products”.

The old-fashioned conception of language as words matching objects fails in the same way that objectivist cognition fails, and it is complicit with the same consequences of anthropocentrism. Language consists of utterances, discourses, or sentences, if you like, but is not built up by individual words as it has been traditionally thought. Nowadays, this notion of language is luckily more endorsed than the initial one because it is now apparent that individual words are not significant enough to determine signification, but some context is needed. Similarly, because of these reasons, the correspondence theory and notion of rigid designators collapse as well, especially when it comes to the analysis of larger blocks of text and discursive unities. Finally, the results of this insight will help to rectify our self-centered thinking toward better consideration of other animals and other human beings while we cherish our capabilities of knowledge again without the need for computers and machines.

Cybersemiotics of Søren Brier

Søren Brier is currently working at the Department of Management Society and Communication at Copenhagen Business School as a professor for Semiotics of Information, Cognitive, and Communication. He finished his master’s in biology and his Ph.D. in philosophy of science at the same municipality. His main research areas consist of the philosophy of biology, the philosophy of cognitive science, the philosophy of computing and information, the philosophy of social science, and the philosophy of physical science. The book referred to here is based on his doctoral

thesis, *Cybersemiotics: Why Information Is Not Enough*. Brier is also the founder of *Cybernetics and Human Knowing*, a journal that was established in 1992 and released. He is a co-founder of *The International Association for Biosemiotics Studies*. He has been rewarded with the Warren McCulloch Award, the System Research Foundation's Distinguished Service Award, and the System Research Foundation Award for his distinguished research in the field of cybernetics. He is in retirement and living in Copenhagen.

According to Brier, the postmodern age requires a different approach to communication and cognition science as a whole. It is time for collaboration and the creation of an interdisciplinary collaborative field for more extensive research. To achieve that, first and foremost, we are obliged to decompose the traditional constraints of professional and credible knowledge. This starts with a paradigm shift in academia. We are now clashing with the new reality and/or a new paradigm of today. This attempt at reform is mainly toward information and communication regarding how they are organized and how they emerged; these concepts are fundamentally important for our understanding of cognition and mind. By proposing a new perspective on this issue, not only he but the previous authors as well aim to cope with the complexity of information theory while not reducing any dimension of it. His criticism is heavily based on a neglect of the human factors that can be collected within the humanities. His efforts are meant to bring about a complete change, which could be considered almost radical. He claims that the concepts he offers could emphasize meaning throughout communication. (Brier, 2008).

Those concepts would instrumentalize our comprehension and develop "social systems as self-organizing and self-producing networks, and a deeper understanding of ethics and aesthetics" (Brier, 2008, p. 20). Our next author, Gare (2016), is also

deeply concerned about ethics and attempts to highlight its role within his philosophical framework. Brier refers to these self-organizing and self-producing systems as *autopoietic*. That is supposed to be the scientific term for systems that are self-organizing and self-producing. Its entire effort is to maintain itself by producing the necessary response or forecasting a sensory input while trying to afford the bare minimum amount of surprise, and it is constantly aware of its environment. For Gallagher (2017), it has a lot to do with his notion of enactivism, where the focal point is the environment and the organism's harmonic interaction with it, or more specifically, the dynamical coupling between them. These snaps of dynamical coupling, or interaction per se, are not processed in the brain but in the whole organism. For this, we may refer to Gallagher again for his findings:

What is typically called sensory input involves neural activations that set off a wide network of activation that is already affective, motoric, and autonomic. ... The fact that face recognition is not just recognition but activates affective areas as well as the dorsal visual pathway, indicating that it is also attuned to social affordances and the possibilities of ongoing interaction. (Gallagher, 2017, p. 162)

If we compare their notion of autopoietic systems, we may find ourselves criticizing Brier and Gallagher because, based on Sherman's notion, we could find bits of *equivocation* within Brier's terminology. However, Brier's pursuit is to be inclusive in all terms, while Sherman tries to discriminate between what is peculiar for living systems and what is not for non-living systems. We may already observe that Brier's approach, on the other hand, is heavily influenced by Deacon and his notion of representational systems. For us, the most compelling side of his framework is that we can now apply the methods of both theorists (George Philip Lakoff and Terrence William Deacon) spontaneously with the perspective of our current author,

and of course with a semiotic meditation as it can be understood from the label. We will further discuss his language and sign games as members of those systems.

Language can be considered a symbolic representational system, whereas sign games could be considered indexical representational systems. One remarkable note is that he wants to achieve this ‘non-ideological’ goal that slightly clashes with Eagleton’s usage. He is in favor of a socio-politically natural format of the establishment. We then see that, for instance, Lakoff uses his pipeline not only academically but politically as an instrument to cope with the worldviews of some communities in cases of crisis or clash of different points of view, mainly ideological (as could be observed in the case of Gare). Instead of worldviews, as in the case of Lakoff, or ideologies, respectively, in Eagleton’s approach, he names this concept the way we think about the world, about society. The reader is further motivated to look at the video of Slugger O’Toole (2017) that is named *George Lakoff on Trump’s moral challenge to liberals*. The video is one of the resources for this essay and might be found in references. This video would be a good insight into the practical use of these so-called theories in daily life. The awareness of these alternatives is very crucial to us because they are all about communication, society, evolution and nature, information, and cognition. In addition to the general paradigm, he offers to consider the human factor, which is the main register. Furthermore, we see their impact on technology, media, social media, and the technology of the new millennium’s so-called human-machine interface and our understanding of this matter (Brier, 2008).

His starting point is again the downsides of traditional cognitive science, where the human factor has been motivated to be surpassed. He denies the objective existence of information by this means; he recognizes information from different domains of scientific branches, and these domains are equally valuable. These domains of

information are biological, cultural, psychological, social, and phenomenological. He created this approach to avoid reductivism at all costs. One of the significant fragments that he mentions is the efforts to objectify information in the external world by Boltzman, Wiener (1961), Schrödinger (1967), and later by Tom Stonier (1990, 1992, 1997). According to him, those authors attempted to prove the information's presence in nature with the inherent entropy of the information. According to Sherman (Sherman & Deacon., 2017), this application of entropy to information is equivalent to equivocation. Thus, misuses the term, which is only supposed to be used for living beings, However, he claims that if we are to prove the presence of entropy in information, we may conclude that information stands itself thanks to the natural dynamics; thus, entropy would be considered the executing power of tangible and independent information because we use a physical term if and only if we want to prove something's presence physically in the real world, which is information in this case. That resembles the efforts of the computer-mind theory to illustrate the broader dimension of the mind or the emergent evolutionary dynamics that were heavily criticized by Deacon earlier. More specifically, he notifies us (Brier, 2008) of the advancement of the theories of feedback, attractors, dissipative structures, and self-organization. Those specific theories surely assist us in understanding the organisms, but they are still far from perfect because of the unavoidable absence of the subject. Sole mathematics, thermodynamics, cybernetics, and similar functionalistic sciences are reportedly not enough because there will always be noise, insufficiency, or a bunch of flaws, which is an unpredictable factor when it comes to complex and non-linear systems because they are, once again, *unembodied*. Therefore, this is a sign of those fields' incompatibility within the real world. At this very moment, we are then

observing the given importance of emotional knowledge and psychology for the first time in our research literature.

The division of error, according to him and many scholars who condemn their research on untraditional cognitive science, starts with Descartes' dualism, where we observe the differentiation of matter and spirit, objectivity and subjectivity, respectively, materialistic and idealistic worlds. However, there have also been opposing theories by Konrad Lorenz and Niko Tinbergen for him (Brier, 2008). Those scholars liquefy cognition and communication concerning evolutionary theory, and he references them to get inspiration to have a new perspective on the very nature of cognition and cognitive systems. Once again, we realize that there are different approaches available to the philosophy of science without making compromises on their 'scientificity'. Our goal is to achieve the scientific threshold while not only using the tools of objectivity but also subjectivity. None of these poles is sufficient for a reasonable comprehension of cognition and the human factor.

Starting with cybernetics, we now notice a different degree of it, which is called 'second-order cybernetics'. It is the moment when we liberate ourselves from the constraints of traditional cybernetics that are being accepted as today's cognitive science's inheritor by many. Here is the broadcast definition and opinion of Brier regarding second-order cybernetics, as follows:

Second-order Cybernetics defines information as something that an observer notes as being internally created in an autopoietic system and that has formed structural couplings in reaction to perturbations from the environment. This account steps away from the objectivistic, denotative, and logical theories of information and language. It moves towards more constructivist theories; it goes

beyond social constructivism by moving into biology, or even beginning with biology and moving from there towards sociology. (Brier, 2008, p. 24)

However, the fundamentals of second-order cybernetics are based on the quantification of differences and logical discrimination. He pursues himself to excavate this definition with his interpretation of the paradigm shift. In contrast to classic cybernetics, second-order cybernetics is heavily concentrated on the observing systems' individuality and the independent systems' interactions, more specifically *their interpenetration*. It is considered the system autopoietic, meaning that the system is self-organizing and self-producing. Brier explains this as it goes:

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Moreover, Brier (2008) explains the term *structural couplings*. This term is used to express an organism's bond to its environment and also its interaction with another system. However, we may find ourselves questioning whether a triadic and mutual connection of different systems is there and, if so, how to call them. This case is unfortunately not mentioned. Evolution yields alternation for structural couplings, and those structural couplings take charge as cognitive devices for autopoietic systems. Further, the collection, accumulation, or world of all these structural couplings is called the 'cognitive domain'. Many authors have mentioned the same term with

different tags. The interior world and exterior worlds of organisms are respectively named *Innerwelt* and *Umwelt* by the renowned father of biosemiotics, Jacob Van Uexküll, as well as Maturana and Varela's joint theory of autopoiesis and their notion of languaging. When Brier talks about languaging, he (2008) goes as follows:

When speaking about communication, they develop a theory of reciprocal and mutual structural couplings they call 'languaging'—that is, the coordination of coordination of behavior. Von Foerster refers to language as constituting a double closure. In his view, every system is closed concerning other systems, and communication only works through mutual structural couplings. Socio-communication establishes its own socially shared *Umwelt*. Consciousness, according to von Foerster, is 'co-science' that establishes mutual knowledge through the co-construction of a world. (Brier, 2008, p. 25)

Languaging is the means of one of the systems, a second-order framework, thus 'the coordination of coordination' of behavior that is recognized by Brier's cybernetics. Furthermore, systems are close to other systems so they can maintain themselves because they tend to be self-organising and self-producing. Living systems, in Brier's sense, are either literal living organisms or systems that have a lot to do with those living systems from historical and practical perspectives; if the system is not *living*, it still has to be very much admissible to them, either practically or historically. The meaning of words and/or language itself is one of the best instances of it. According to Brier, it suggests that:

The meaning of words is created through the cultural-historical background of language and through the social-communicative praxis among individuals, each of whom has a unique subjective historical access to the meanings of a sign. People

are never in complete agreement about all the meanings of a word or concept, but through the development of customs, they may reach an agreement on its meaning in situations experienced jointly. This is significant in various domains of science and the humanities, in which long traditions have fixed the meaning of specific concepts, and in the practice of law, which has also developed its special terminology. The pragmatic-semiotic approach is important because it is these connections that constitute the individual's understanding and ability to:

1. decipher the document's sign,

2. decipher the document as a sign in itself, *and*

3. evaluate the relationship and value of the sign in the actual situation.

(Connotation, association, denotation). (Brier, 2008, p. 285)

Bateson (1973) considered the duo of the organism and the cognitive domain as it is an evolutionary and thinking system. He does not forget to mention those authors to anchor his thinking. He attempts to collect and develop an umbrella for all of his previous thinkers and pioneers' work in related fields. Similar to Deacon, he is also very much influenced by Pierce, not only to the extent of his semiological thinking system but also when it comes to his epistemology and ontology. He further talks about Pierce's triadic systems that are found in and regarding the sign process, cosmogony, cognitive psychology, and ontology. For Pierce, the firstness is bound by the feeling and qualia. He concludes that Pierce himself is also denying the mechanical view of psychism and instead having a hylozoistic view of reality.

Brier repeatedly claims that his attempts at the establishment of this field (cybersemiotics) were attempts to create a crossroad between the humanities and

sciences. His second-order cybernetics differentiate from traditional, first-order cybernetics exceedingly. He mentions that one of the reasons is that it recognizes the humanities; hence, the observer is the meaning-maker. The information (difference) is not there, standing by itself, but it is received and processed, therefore expressed, embodied, and exhibited by the subject, which is the observer. The observer is the key factor. The observer is a sculpture of all of this. More formally, the interpretant yields signification and, thus, the entire sign process, with the meaning of means-to-end projection. According to Bateson (1973), the information is a difference that makes a difference. The idea is entirely about the relationship of relationships, the difference between differences and connections, the order of order, and hence, second-degree signification. The first degree is not regarded as significant because, as we believe from the previous reading, which is hypothetically impossible to access, those are the essential properties of things and basic categories. All that matters for us are the basic level categories that are based on real-life examples and the observations of the subjects. Otherwise, we are destined to drown in a flood of abstractions and ideologically motivated hypotheses. What could be more radical about this perspective is that before, we were attracted to regard object and subject as the source of information and were trying to find an alternative to both of these contrasts. At Brier's, we realize that an object or its presence is no longer regarded as the information source but as pure interpretation in various sociocultural contexts that are existent by the view of Luhmann and his sociocultural communication. Cognition and communication are autopoietic (self-organizing and self-producing) phenomena that could be shared by biological, psychological, and sociological/cultural information. It is non-reductant towards each of these domains because it is inconceivable to reach satisfaction purely using one of these domains (Brier, 2008).

Cognitive dissonance, neutralization of ideology and its bound to worldview

All the teachings of our main authors, divided into chapters, lead us to an entire chapter where we talk about the outcomes of these phenomena, whereas objectivist cognitivism neglects the social effects.

We base the subject and the world so tightly that we cannot even think about or shape them separately. We realize our highest selves as we start to have solid views about the world, and we define ourselves as integrated with it. In this virtue, we do not hold it by only judging the world; we are active and constantly interactive participants in our world and society. That is when the notion of ideology plays a part. According to Eagleton (1991, p. 2), “ideology could be referred to as ‘a body of ideas characteristic of a particular social group or class’”. We then also start to think about how the world is supposed to be, *ideally*. This may also include the premises we shape over time to build a better world or society. It does not necessarily have to be affiliated with any kind of mainstream univocal or mainstream ideological movement such as capitalism, communism, Marxism, etc. It is at a basic level. It is on an individual and subjective level of meaning-making and an active feedback mechanism for the progression of the world and society we live in as a consequence of the metaphors we live by. Therefore, ideology starts at the individual level. Formerly, it might be an individual’s own decision to find themselves in a group of similar-minded people or in a mainstream movement such as described above, but what is highlighted is that the latter is not necessary for the very existence of ideology per se.

In my view, ideologies are presumptions of these individual worldviews. Terry Eagleton (1991, p. 22) expresses this link by claiming “ideological discourse typically displays a certain ratio between empirical propositions and what might be termed a ‘world view’, in which the latter has the edge over the former”. It is undeniable to

admit both immensely overlap if they are not identical cause in common sense and have indeed intervened.

When we experience a clash of these ideologies or are presented with experiences or a pack of information that contradict our biases about the world or the ideal liveable world, whether it be external exposures, events, or feedback from interactions with people, in due course, they conspire to produce cognitive dissonance in us. An opposing fragment of an idea enters our brain but does not fit with what has been there, and it even disrupts the ground we have been building to understand our world better. In this case, we are either forced to change our worldview or to directly attack the source of that uncomfortable information. According to Lakoff (Sluggo O’Toole, 2017), attacking the source is a more common coping strategy because, economically, it is tremendously easier than constructing another or fixing an enormous chunk of the worldview. A tiny bit of change in our worldview is still very disturbing. A daily example of this is shown below by mislabelling the others’ ideas as ideological with the utterance of Eagleton:

To claim in an ordinary conversation that someone is speaking ideologically is surely to mean that they are judging a particular issue through some rigid framework of preconceived ideas that distorts their understanding. I view things as they are; you squint at them through a tunnel vision imposed by such an extraneous system of doctrine. There is usually a suggestion that this involves an oversimplifying view of the world—that to speak or judge ‘ideologically’ is to do so schematically, stereotypically, and perhaps with the faintest hint of fanaticism. The opposite of ideology here, then, would be less ‘absolute truth’ than ‘empirical’ or ‘pragmatic’.

(Eagleton, 1991, p. 3)

Based on this excerpt, when we digest a fragment of any text, we would not be able to conceive it as how it is in itself but as the instrument of our past experiences and judgments with our sensory-motor capabilities. In every meaning-making, there is a minimalistic (if not at maximum length) preconception, which is what Lakoff (Lakoff & Johnson, 2003 [1980]) calls a metaphor. We may somehow conclude that every meaning-making decision is a result of the previous ones. (Eagleton, 1991). For that reason, Eagleton can differentiate between cognitive language and normative and/or perspective language. Later, we might add from Gallagher:

Only focusing on and conducting research on brain and neural networks helps us see a small picture of a landscape. This transformation of the explanatory unit from brain to brain-body-environment is central to the challenge that faces the sciences of the mind. (Gallagher 2017, p. 126)

A more extensive explanation of these components would be if we were to classify the environment and get inspired by Karl Popper's (1992) notion of three worlds. It is good to be cautious about their relationship before we start to extend it. They are not separate worlds from each other but only different regions of the same world we live in, and the world is one and three with them at the same time, from an analogical perspective.

The three worlds initially start with the notion of the physical world, which consists of physical states and bodies, forces, and events. We may even include scaffolds, forms, structures, and many relatable concepts that are purely physical. Subsequently, there is the psychological world that involves unconscious mental events (for example, experience observed from our biological structure), which leads us to the third component, which is the world of conscious mental products, say the

world of ‘culture’ and ‘cultural products’. This is the point when we start to use the symbolic and, thus, start to use abstractions. Under this sequence, each one yields to the next. If there is no physical world, there would not be the unconscious world and therefore the conscious world, considering that the unconscious allows the conscious. Ultimately, we realize once again that our worldview is built on our past experiences, language, and culture in this respect. With the embodied and enactivist approaches above, we can now conclude our argument with Gallagher about our meaning-making:

The human brain not only evolved along with the human body and works the way it does because of that; it’s also not isolated, but rather is dynamically coupled to a body that is dynamically coupled to an environment. The organism (the brain-body system) is operating within the situation itself rather than on a model of the situation inferred by the brain. This coupling of brain-body-environment is structured by the physical aspects of neuronal processes, bodily movements, affects, anatomy and function, and environmental regularities. (Gallagher, 2017, p. 115)

The effect of the human body on cognition could also be seen while children grow up. We know where we can reach with our limbs thanks to our bodily capacities, and these lateral capabilities navigate us when we do any kind of physical activity, whenever we want to reach for an object or food when we mobilize around the surroundings, or while doing sports. These capabilities are ready-to-use, and we accomplish them without thinking. It is a constant change but very obvious during the child’s developmental timescale when there is drastic growth in the body, so our brain adjusts itself to them. Gallagher explains this phenomenon very well:

The physical length of my arm, which changes over the developmental timescale, together with my prior reaching practices, tune brain processes so that neuronal activations... are attuned to my embodied physical possibilities and the physical affordances in a particular environment where something is either within reach or not, graspable or not, of interest or not, etc. I perceive things in terms of these sensory-motor contingencies and in terms of what those things pragmatically afford with a body like mine in the situation, also defined in part, for example, by my gustatory and more general interest conditions. (Gallagher, 2017, p. 115–116)

Moreover, it is even admitted by many that we possess a greater amount of information on bodily communication that is not linguistic. However, we also have a different point of view from Sheets-Johnson (2007). She criticizes the default conceptions of movements that are usually used. She considers them still constraining. Constraining in a way that the theory is still a victim of Western bias where the things and events are static as if they were permanent and settled. On the other hand, in reality, they might be quite the opposite for them. She coined the term ‘kinetic melody’. They are structured, however, kinematically and flexibly. Attuned behaviors that are custom fit to the body are examples of this, so she emphasizes that they are open to change constantly.

Thus, Sheets-Johnson (2007) suggests a new perspective where we categorize the movements based on their spatiality and temporality. We may just mention them and continue our reading:

- 1) Tensional: felt temporal effort
- 2) Projectional: felt temporal force and energy

3) Linear: felt spatial paths and contours

4) Areal-Amplitudinal: felt spatial expansion and contraction (Sheets-Johnstone, 2011, p. 123)

Another way to cope with the illusion of cognitive dissonance is to alter our focus from what we approve to what we do not approve of on the opposing side, and why it may be beneficial to entertain even the most dissonant impression because ideology is rather a 'lived relations' instead of an empirical representation of the *objective* world. Any share of ideas cannot be falsified with Boolean conditions, as they are empirical propositions. Cultivating a stance of openness to cognitive dissonance should be the major goal of any cognitive approach to ideology and the unconscious. We shall come to a middle ground and find a common ground where there is a possibility of a healthier exchange of incompatible ideas for the betterment of society. In my opinion, the best way to start this fruitful conversation is to accept their natural definitions as opposed to the general conventions that are nothing but prejudiced from the very beginning.

Gare's Notions of Scientism and Commonsense

To clarify, all of the arguments discussed above shed light on the rivalry between what is generally considered as 'scientific' and what 'non-scientific'. Further, with Gare (2016), we see him differentiating the main sides as followers of scientism and common sense accordingly. He shed light on the humanities' prospects by claiming that how common sense is *fragmented* is because there are plenty of schools of thought, no matter whether they oppose or support each other, they lead to confusion of meaning and virtues. For him, those common-sense apparatuses are the

interpretative tools we happen to use. However, Gare (2016) claims that they intensify and diversify their branches day by day at such a rapid rate that, because of the contradictions and fuzzy differences between each other, they are no longer credible.

Common sense is perceived as what is common to us or what is granted to the majority as a format of collective information that passes through the generations. These are usually widespread assumptions. In academia, the given paradigm of naturalist and behaviorist approaches toward objects and events that we see in daily life is what we criticize and try to extend. A broader definition of common sense might be given as follows:

Culturally sanctioned mind-as-machine metaphors; widespread assumptions that the mind is the brain; normative pressure to dismiss feelings as chemical events; presuppositions that cognition can be modeled by mirror-representations in which the world is simply given instead of interpreted; the reduction of movement to motor synapses; and the reduction of persons to neural networks. (Pelkey, 2017, p.143)

For these purposes, we do not try to refute (considering the contributions that have been made) but rather complement the findings of the other authors. This entire problem of division is embodied in philosophy, as we may have noticed in the previous chapters. Philosophy is crucial within the other humanistic disciplines with the role of a mirror to reflect the errors in our perspective, cultural-wise, and for Gare (2016), governments and academics, particularly the outstanding figures who fail to fulfill their obligation in this case and are the very responsible ones of this bankruptcy as long as they are not concerned with the real-world situations and challenges to put on their agenda.

Gare is not particularly interested in embodied/enactivist cognitive science or phenomenology. However, he denounces how abstract and impractical philosophy is today, analytical philosophy in particular. Analytical philosophy is concerned with promoting 'scientism' in this sense, being an instrument of science, and betraying the humanities; nevertheless, it originates from the humanities. At the same time, he is also attacking the idealist-poststructuralists for their problematic view of reality, which is nihilistic and skeptical and has no practical use for the meaning of the real world. We also observed the same uprising from Eagleton and Zlatev for these movements of philosophy.

Zlatev (2003) touches on this topic as a phenomenon within a critique of postmodernism. We now face a vigorous fragmented notion of knowledge between the schools that it is pretty compelling, almost impossible, to compromise, come to an agreement, or create a rational debate within the schools since there is not any common ground that connects them in any common sense.

This element matches with the rest of the authors' point of view that we mentioned previously; in other words, they want a more pragmatic, empiric, and human-compassing philosophy with moral obligations for our good. They have also chosen to consider individuals and the environment. With the agreement of Gare and Gallagher, we may consider a more open philosophy where we cease the exploitation of nature and people as commodities. If we think of nature as an inseparable part of ours, which is more than an objective, intact set of entities with its subjects, one way to do this is to examine the agent and its dynamic, continuous integration with the environment. That is why this attempt at embodiment and enactivism movements, specifically

explanations of cognition, perception, and action, could be considered ideological, aiming for the ascendance of the welfare of society and the planet.

Furthermore, he develops his philosophical gizmo to comprehend and cope with these blunders. The following excerpt from *The Philosophical Foundations of Ecological Civilization: A Manifesto for the Future* illustrates Gare's purpose adequately:

Without such ambitious philosophy to relate all domains of culture, other disciplines inevitably fragment into a multiplicity of sub- and sub-sub-disciplines, corrupting the whole of academia and intellectual and cultural life generally. We need new concepts to overcome this fragmentation through which the problems of culture, society, and civilization can be understood and effectively addressed, along with the means to develop and defend them. However, more than this is involved. These problems need to be addressed in such a way that these concepts are appropriated and embodied in practices, institutions, and people's orientation to life. It is in this way that the foundations for a future civilization can be put in place. (Gare, 2016, p. 5–6).

Gare believes that the philosophies that do not match continental thought or idealist schools tend to be decayed and marginalized because people blame them for not being radical enough. Both divisions have biased and tacitly held opinions about reality, and one is supposed to choose their side between them. Both sides are somehow fanatic and reductivist towards each other while denying themselves. They are not completely wrong; however, they are not credible enough to disprove one another either. That is the unseen area of this clash between science and the

humanities, which is that these sides oppose but cannot entirely suffice for the explanation of today's advanced topics, correlating deeply with Brier's ideas.

Conclusions

In this thesis, we have investigated relatively grounded frameworks to shed light on the errors that arose within objectivist cognition and correspondence theory, or, more broadly, the scientism paradigm. Subsequently, we tried to illustrate potential solutions mainly proposed by the four selected scholars : Brier, Deacon, Gare, and Lakoff and some others. The solutions proposed against these problems, concern language and meaning-making comparatively. The findings of each of these main authors had their divisions for better understanding of the role of the science and humanities for today's society; however, the chapters did not have a sharp division. They were not fully isolated from each other because we attempted to align their findings altogether throughout this exploration.

In the end, we extended the argument while targeting the social aspects of these problems and the clash between the humanities and natural sciences. Unfortunately, the social aspects have not been within the scope of our mainstream thoughts. Science, in its pure form, is not enough to tackle them by itself and requires other devices that we may have already accessed from various alternative sources. This

does not mean that the natural sciences are not helpful. On the contrary, they are as crucial as the humanities are. It must now be obvious that the environmental aspects and the effects of these so-called phenomena in our society must be considered for a better future and higher welfare, optimally through the collaboration of the natural sciences and humanities.

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