The Importance of Semiosis for Conscious Experience

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vorgelegt von
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Declaration

I hereby certify that the work reported in this thesis is my own and that work performed by others is appropriately cited.

Signature of the author:

Ich versichere hiermit, diese Dissertation selbständig verfaßt, andere als die angegebenen Quellen und Hilfsmittel nicht benutzt und mich auch sonst keiner unerlaubten Hilfsmittel bedient zu haben.
Abstract

Consciousness is generally regarded as the process of being aware of our actions and of ourselves while performing them. We ascribe awareness its functional role and because of being conscious of objects and states around us we can respond accordingly. Consciousness plays an essential role in the process of thinking. Least to mention in this respect Cartesian distinction between the thinking and extension substance, namely the recognition of the subject [res cogitans] which determines the object in the world [res extensa]. Man, with his mental abilities like consciousness, does not need the world to prove that he exists.

In order to better understand what consciousness is and what its characteristics are there have been developed various approaches which try to figure out its essence. In the thesis we approach consciousness from the semiotic perspective. This means that we start our discussion from explaining the theory of signs and continue with definitions of related to consciousness terms and notions. The key concept in the thesis is semiosis, the sign interaction. The sign cooperation winds through the thesis where it is studied in connection with consciousness. The thesis goes along the thought–word–deed pattern. We consider what a thought and word is basing on the semiotic approach and respectively analyze the action as the consequence of a conscious act.

The thesis analyzes consciousness bringing views on language, memory and remembrance into the discussion. The subject alone puts into question a variety of possible answers which make it necessary to shape them according to the above notions. We also examine collective consciousness and emergence as related to semiosis. The semiotic theory of consciousness demonstrates how consciousness is examined in terms of signs and function. The study presents the signs as applied to perception acts where we are conscious of a certain presentation. We can thus form a function between the subject and a real being; between “I” and “world,” between res cogitans and res extensa.

The thesis briefly touches upon the subject of artificial intelligence when explaining that one of the earliest approaches to artificial intelligence assumed that human intelligence is a matter of processing symbols. Consciousness, being an essential factor in human intelligence, is studied from the semiotic perspective—a method using symbols to explicate the relation between mind and matter. Consciousness is seen as the continuous, dialogic mediation and interaction of the sign with its objects and their expression through a series of interpretants.
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Introduction

The thesis presents the semiotic approach on the conscious experience. By this I mean approaching the subject of consciousness and experience from the standpoint of the theory of sign.

In the first chapter I make a brief overview of the concept of sign quoting in this respect Charles Sanders Peirce, Ferdinand de Saussure, Jacques Derrida and Charles Morris. This explanation of the basics of the theory of sign makes it easier for us to understand subsequent semiotic notions like semiosis or textual cooperation in general. In the sections devoted to text we can find a general idea of the changing status of text’s interpretation. First, we encounter text as a closed space only to find later its deletion of boundaries. All the previous concepts on sign serve us as a help to see the former condition of sign and to realize its progressing status. The progressing status of discourse can be seen in Derrida’s notion of arche-trace. In the section called “Arche-trace” we continue with the explanation of sign but this time catching its origin in trace. However, trace means the vanishing of origin and abolishing thinking about it from the present perspective. Therefore, in “Presence and absence” we take a look on Husserl and Heidegger’s notion of presence in order to better understand Derrida’s notion of deconstruction. Consequently, we prepare the ground for the subsequent discussion on the structure of cognition, seen in the perspective of words’ interaction. We analyze Husserl’s thought experiment of reduction to pure consciousness. The notion of presence and the exclusion of pure Ego will be later helpful to understand the temporal or total absence of conscious experience.

The second chapter starts with the explanation and questions of consciousness. The term “consciousness” is a broad one; therefore, we will focus our attention on so called “the hard problem” of consciousness. We shall regard consciousness within the scope of experience, memory and language among other concepts which ought to bring us closer to the notion of conscious perception; perception seen as a semiotic relation. We shall focus on the intentional content of mind by looking into intentionality. In this way, we shall pass on to causality as an important feature of experience and continue with our semiotic approach in describing conscious human perception. In “Experience and causality” I focus on David Hume’s inquiry into the relation of cause and effect. Because conscious experience relies greatly on causality of the brain we devote some time on explaining its role in the process of experience.

To prove that human experience is able to perceive the world consciously without direct external information we imply the concepts of qualitative feels. We will support our discussion with the zombie, Chinese room and other thought experiments. Another example to support the argument is the presence of collective consciousness. It is an ability to directly experience our union with other individuals through an intuitive felt-sense. This is done by the extension of our individual boundary and, thus, the conscious self arises being independent from the external inputs. Here we can also find a proposal to analyze consciousness not from an individual point of view but from a group of individuals. Ferdinand de Saussure analyzing the language makes observations that the language is a form perceived as a series of related subdivisions on the indefinite map of ideas and sounds. Apart from the notion of language we come across the collective consciousness when discussing the differentiation between synchronic and diachronic aspects of language. We take a close look into the present status of collective consciousness in order to fill the gap and link to Saussure’s language theory.
In the next section we analyze emergence as a complex, self-organizing pattern which produces itself. This is the continuation of thinking in terms of collective consciousness and analyzing the process of semiosis in the emergence pattern. We start with a general overview on the current condition of emergence in nature only to switch later to conscious experience formed by emergence. We will look into Derrida’s implications as well as Nicolai Hartmann’s proposal of *categorial novum*. Hartmann put much light on explaining his ontological system by including this important feature of new category. This category stands to be a core category for the layers which form the whole system of the world. Therefore, we can say that *categorial novum* is an emergent category inherent in Hartmann’s ontology. The analysis of memory follows as the next section. Here we encounter consciousness related to remembrance and considering the time from the ontological perspective.

We conclude the second chapter with the semiotic theory of consciousness. Here we find Max Bense proposal to describe and explain consciousness in terms of the function built on signs. We relate signs to real things in order to determine them and put them into the function of existence which is also treated as a sign. In this respect we do not only analyze what kind of role the sign plays in consciousness but also the sign’s function as the communication (Bense) and sign’s behaving (Sebeok).

In the third chapter, we follow the thought, word and deed pattern. In other words we focus on the overall analysis of the relation between sign, image, meaning and conscious experience. In the first chapter, we have spoken about semiotic relation within signs and in the second chapter we have looked into the characteristics of conscious experience. In the last chapter, I want to briefly gather what we have already spoken about and link the previous analysis under the following pattern: a mind is capable of creating a thought which produces a meaningful word and a word brings out a conscious experience.

We shall bring out the system of infrastructures being an open system due to its lack of one, dominant centre. This system will be compared to the quantum field system in order to supplement our philosophical discussion with a portion of the scientific approach. This comparison is also to prove that the system of infrastructures is not so a vague and abstract thought as it may look like. Therefore, we bring in some theory of quantum mechanics and will try to see the dependencies and relations between the two systems; one being physical and the other metaphysical. The other point made in the section is the transparency of conscious thoughts and conscious experience in general. We will deal with externalists’ point of view in this respect and bring in some oppose arguments to this view. Our next topic in discussion revolves around conscious presentation of being. This point is analyzed in terms of the structure of language which is what comprises of the structure of human cognition. In this chapter we will deal with meaning of words supporting ourselves with Aristotle’s principle of non-contradiction. It is essential to the thesis how the presentations of being is formed and expressed within the structure of cognition.

We will conclude our discussion with Frege’s distinction and clarification of sense and reference with respect to cognitive significance. In this way we will still maintain semiotic approach to the subject, searching this time for a clear answer to what the meaning or sense is and what role it plays in the cognitive experience. We continue with the relation of words and signs and words’ correspondence to sentences. This is also the point in which the meaning of a whole sentence is analyzed. The last sections are devoted to semiosis and its relation to conscious experience and quantum fields. We focus on semiosis as the process of forming the meaning which supports the construction of conscious experience. Therefore, we may assume that conscious
experience acts in the mode of sign interaction. This semiotic interaction forms the meaning and feeds a mind with conscious experience. Summing up, we can say that the theory of sign is also a theory of conscious experience. Thus, the title of the thesis says *The Importance of Semiosis for Conscious Experience.*
CHAPTER I: SIGN

Before discussing Derrida’s concept of sign and the notions which relate to it, let me first evoke some prominent speaker of this subject. Not only will it help us understand the condition of the sign which Derrida had encountered but also it might be useful to see clearly in what way Derrida elaborates on sign. Thus, we will focus on the understanding of a sign.

American philosopher Charles Sanders Peirce writes in his Collected Writings about the theory of sign. He defines a sign and says that ‘we think only in signs.’[^1]

Daniel Chandler is the author of an electronic book Semiotics for Beginners in which he states that ‘we make meanings through our creation and interpretation of “signs”.

Signs take the form of words, images, sounds, odours, flavours, acts or objects, but such things have no intrinsic meaning and become signs only when we invest them with meaning..[^2] Chandler quotes Peirce and writes that ‘nothing is a sign unless it is interpreted as a sign.’[^3]

Saussure and Peirce’s model of sign

The two dominant models of what constitutes a sign are those of the linguist Ferdinand de Saussure and the philosopher and logician Charles Sanders Peirce. Saussure in his Course in General Linguistics offered a ‘dyadic’ or two-part model of a sign. He names these two parts of the sign the “signifier” and the “signified.”[^4]

“Signifier” refers to a meaningful form, while “signified” designates the concept which that form evokes. Within the linguistic system the signifier would be what Saussure calls a “sound-image,” that is, the image of one of those sounds which we shape within our minds when we think, whereas the signified would be the meaning which that sound-image generates.^[^4]

Saussure differentiates between what one can call a thing and a name with his nomenclature and idea. Linguistic sign consists of two essential characters, namely a concept and an acoustic image, also referred to as respectively signifié and significant. Saussure clarifies:

Le signe linguistique unit non une chose et un nom, mais un concept et une image acoustique. Cette dernière n’est pas le son matériel, chose purement physique, mais l’empreinte psychique de ce son, la représentation que nous en donne le témoignage de nos sens ; elle est sensorielle, et s’il nous arrive de l’appeler « matérielle », c’est seulement dans ce sens et par opposition à l’autre terme de l’association, le concept, généralement plus abstrait. […] Nous proposons de conserver le mot signe pour designer le total, et de remplacer concept et image acoustique respectivement par signifié et signifiant ; ces derniers termes ont l’avantage de marquer l’opposition qui les sépare soit entre eux, soit du total dont ils font partie.^[^5]

It is vital here to understand what Saussure meant by a concept. In a linguistic sign the concepts are the facts of awareness [les faits de conscience, que nous appellerons

[^3]: ibidem.
They play an important role together with acoustic images or representations in the process of forming a linguistic sign. On the other hand, an acoustic image is wholly immaterial; it is a psychic imprint [l’empreinte psychique] of the sound. It should be noted however that for Saussure ‘speech represents the realization or manifestation of the linguistic signifier, not the linguistic signifier itself. Writing, in turn, represents the transcription of speech.’ To illustrate what a sign is according to Saussure a clear and simple example could be taken from Chandler’s book: ‘if we take a linguistic example, the word ‘open’ (when it is invested with meaning by someone who encounters it on a shop doorway) is a sign consisting of:

- a signifier: the word ‘open’ [sound-image of the acoustic]
- a signified concept: that the shop is open for business.’

For Saussure, the sign is the whole that results from the association of the signifier with the signified. The relationship between the signifier and the signified is referred to as ‘signification.’ If we could think of day and night as one then the signifier and the signified (or sound and thought) are interconnected alike.

Charles Morris writes about four main uses of signs. “Signs may be used to inform someone of the properties of objects or situations, or to induce in someone preferential behavior toward some objects or situations, or to incite a specific course
of action, or to organize the dispositions to behavior produced by other signs.”

Suffice to say, for the purpose of this paper that for Saussure the concept of the sign was purely psychological. Saussure talks about it when explaining movement of the word **circuit de la parole**:

Supposons qu’un concept donné déclanche dans le cerveau une image acoustique correspondante: c’est un phénomène entièrement **psychique**, suivi à son tour d’un procès **physiologique** : le cerveau transmet aux organes de la phonation une impulsion corrélative à l’image ; puis les ondes sonores se propagent de la bouche de A à l’oreille de B : procès purement **physique**.

Both terms of the linguistic sign are psychological. What is more, as Saussure emphasizes in his book, they are united in our mind, tied with association. Brain transmits an impulse (acoustic image) to the phonation organs. Sound waves are produced in mouth and are being sent from one person to another person’s ear. Chandler analyzes the relation between signifier and signified; signifier being an acoustic image and signified a concept.

A linguistic sign is not a link between a thing and a name, but between a concept and a sound pattern. The sound pattern is not actually a sound; for a sound is something physical. A sound pattern is the hearer’s psychological impression of a sound, as given to him by the evidence of his senses. This sound pattern may be called a ‘material’ element only in that it is the representation of our sensory impressions. The sound pattern may thus be distinguished from the other element associated with it in a linguistic sign.

This chapter serves as a synthesis of relevant concepts rather than a critical evaluation of the concept of sign. Therefore, let us finish Saussure’s theory and bring forth the second thinker here. The pragmatist philosopher and logician Charles Sanders Peirce formulated his own model of the sign. In contrast to Saussure’s model of the sign in the form of a ‘self-contained dyad,’ Peirce offered a triadic model: the ‘sign,’ the ‘interpretant’ and the ‘object.’ Signification is understood as involving all three in a complex interaction. Chandler gives here a clear picture of Peirce’s concept:

- The Representamen: the form which the sign takes (not necessarily material),
- An Interpretant: *not* an interpreter but rather the sense made of the sign,
- An Object: to which the sign refers.

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4 Morris, *Signification and Significance*, p. 15.
2 Saussure, p. 28.
3 Chandler.
Morris’s sign vehicle corresponds closely to Saussure’s signifier and to Peirce’s Representamen. Peirce’s Representamen could be seen as Saussure’s signifier (signifiant)–the form which the sign takes. It is not a material thing but as in Saussure’s dyad—a sound image [image acoustique]. Unlike Saussure’s signifier, however, Peirce’s sign often either resembles or adjoins the object.” We can refer Peirce’s concept of Interpretant to the Saussurean signified (signifié) – the concept, the meaningful form that is being created upon making the sense of the Representamen. ‘The interpretant is the “mental effect” or “thought” generated by the revelation between the other two terms. It is thus virtually synonymous with the signified.” ‘However, the interpretant has a quality unlike that of the signified: it is itself a sign in the mind of the interpreter.’ Chandler gives an example which may put some light on Peirce’s concepts: ‘Within Peirce’s model of the sign, the traffic light sign for ‘stop’ would consist of: a red light facing traffic at an intersection (the representamen); vehicles halting (the object) and the idea that a red light indicates that vehicles must stop (the interpretant).’

Charles Morris regards something as a sign if something is a preparatory-stimulus of informative, valutative, incitive or systematic use.

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5 “There are numerous theories of the triadic sign. A triangle is often used to visually represent this type of sign, known as the "semiotic triangle". The base of the triangle is usually shown as a dotted line, indicating that the relation between the first and last points is less direct than the others.” Here I use an edited chart originally taken from http://www.signosemio.com/klinkenberg/a_signe.asp.
6 Silverman, p.15.
7 Silverman, p. 15.
8 Chandler.
9 Ibidem.
will be called a *significatum* of the sign. A sign will be said to *signify* a significatum; the phrase “to have signification” may be taken as synonymous with “to signify.”

We can see that significatum of a sign corresponds to Saussure’s signified and Peirce’s interpretant. The interpretant of a sign is characterized as a disposition caused by the sign to respond in a certain kind of way.

**Semiosis**

What should be also noted here is that ‘the interaction between the *representamen*, the *object* and the *interpretant* is referred to by Peirce as “semiosis.”’ It is three-part cooperation between a sign, its object and its interpretant. It is a triadic relation involving mediation—also called “thirdness.” If we regard sign in terms of mental processes then we can think of “thirdness” as the factor which forces a stimulus to a response. The factor of mediation conditions a stimulus. Here, we can compare Peirce’s view with behavioral psychology, as Morris observes. In the latter, we can study only two-term relations between stimuli and responses. However, in Peirce’s semiosis we encounter a third factor which reinforces the state of affairs and thus conditions a stimulus.

Peirce writes on semiosis:

> It is important to understand what I mean by *semiosis*. All dynamical action, or action of brute force, physical or psychical, either takes place between two subjects...or at any rate is a resultant of such actions between pairs. But by ‘semiosis’ I mean, on the contrary, an action, or influence, which is, or involves, a cooperation of three subjects, such as a sign, its object, and its interpretant, this trirelative influence not being in any way resolvable into actions between pairs...My definition confers on anything that so acts the title of a ‘sign’.

What is more, Peirce attributes to the interpretant the quality of endless commutability. ‘In other words, the interpretant can become a sign which produces a new interpretant, and the same operation can occur with each subsequent interpretant.’ Umberto Eco uses the phrase ‘unlimited semiosis’ to refer to the ‘infinite series’ to which any given interpretant belongs. To facilitate clarity let us provide an example. When looking up a word in a dictionary we encounter a definition of that word. Within that definition, however, we can spot another word which we do not know and which refers to another explanation in that dictionary. Thus, a signified (first definition encountered) can itself play the role of a signifier (another word we are looking for). Silverman writes: ‘the interpretant can become a sign which produces a new interpretant, and the same operation can occur with each subsequent interpretant.’ Peirce describes this ‘infinite series’ of a sign:

> The meaning of a representation can be nothing but a representation. In fact, it is nothing but the representation itself conceived as stripped of irrelevant clothing. But this clothing never can be completely stripped off; it is only changed for something more diaphanous. So there is an infinite regression here. Finally, the interpretant is nothing but another representation to which the torch of truth is handed along; and as representation, it has its interpretant again. Lo, another infinite series.

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2 Chandler.
5 Silverman, p. 15.
6 Ibidem.
7 Ibidem.
8 Ibidem.
From the concept of ‘endless commutability’ there could be derived the constant reinterpretation of a given text and meaning. The original object of representation and its sense could change when given it a second thought. The constant commutability of interpretant can force on reader different readings.

Let us once again take a closer look into the process of semiosis. Later in the thesis we will analyze this process together with quantum states in physics, therefore it is essential here to define it precisely and understand its function. Charles Morris explains us the process of semiosis on the following example:

A dog responds by the type of behavior (I) involved in the hunting of chipmunks (D) to a certain sound (S); a traveller prepares himself to deal appropriately (I) with the geographical region (D) in virtue of the letter (S) received from a friend. In such cases S is the sign vehicle (and a sign in virtue of its functioning), D the designatum, and I the interpretant of the interpreter. The most effective characterization of a sign is the following: S is a sign of D for I to the degree that I takes account of D in virtue of the presence of S. Thus in semiosis something takes account of something else mediately, i.e., by means of a third something. Semiosis is accordingly a mediated-taking-account-of. The mediators are sign vehicles; the takings-account-of are interpretants; the agents of the process are interpreters; what is taken account of are designata.\(^9\) (Morris 1938: 20-21; 1972: 20-21)

On the above examples the mediators are the sound and the letter, being the sign vehicles. Interpretants are nothing else as certain dispositions because of the sign. A dog reacts in certain behaviour hearing the sound of chipmunks, a traveller prepares himself because of the letter, etc.

The interpretant of a sign is a disposition to react in a certain kind of way because of the sign. Corresponding to the designative dimension of signification, the interpretant would be a disposition to react to the designated object as if it had certain observable properties. Thus if one is told that there is a black object in an adjoining room, one is set for certain visual experiences on entering the room.\(^{10}\)

**Derrida’s concept of sign**

Before even starting with Derrida’s explanation of signification we have to bear in mind what he underlines at the beginning of “La Structure, le signe et le jeu dans les discours des sciences humaines”; namely, the realization of absence of the center within the structure. When thinking in terms of present-being form, the center is not a fixed locus. We cannot find the origin that would be a reference point to another signified. The center, writes Derrida, should be thought of as a function in which an indefinite number of sign-substitutions come into play. Because there is no origin everything becomes a discourse – that is a system in which the central signified (the original or transcendental signified) is never absolutely present outside a system of differences. Derrida writes:

Dès lors on a dû sans doute commencer à penser qu’il n’y avait pas de centre, que le centre ne pouvait être pensé dans la forme d’un étant-présent, que le centre n’avait pas de lieu naturel, qu’il n’était pas un lieu fixe mais une fonction, une sorte de nonlieu dans lequel se jouaient à l’infini des substitutions de signes. C’est alors le moment où le langage envahit le champ problématique universel ; c’est alors le moment où, en l’absence de centre ou d’origine, tout devient discours – à condition de s’entendre sur ce mot – c’est-à-dire système dans lequel le signifié central, originaire ou transcendental, n’est

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\(^{9}\) Charles Morris in http://www.uni-ak.ac.at/culture/withalm/semiotics/SEMIOintro/03-MORRIS_ppt.pdf (May, 2008).

\(^{10}\) Morris, *Signification and Significance*, p. 6.
As mentioned above, in the discourse the transcendental signified is not present outside a system of differences. Thus, we can only refer to the signified only within this system. The system enables us to operate between an infinite number of the signified which are in a constant interaction or, to use Derrida’s word, in a play. As it is stated in the above quote – the absence of the transcendental signified extends the domain and the play of signification infinitely.

Sign disturbs the metaphysics of presence, moreover, there is no transcendental or privileged signified. Therefore, as is stated in Derrida’s work, the domain or play of signification has no limit. This particular position of sign makes it difficult to think of the concept and word ‘sign’ in a classical sense. Namely, ‘for the signification “sign” has always been understood and determined, in its meaning, as sign-of, a signifier referring to a signified, a signifier different from its signified. If one erases the radical difference between signifier and signified, it is the word “signifier” itself which must be abandoned as a metaphysical concept.’ Erasing the difference between the signifier and the signified may be done either by reducing or deriving the signifier ultimately in submitting the sign to thought or by putting into question the system in which the preceding reduction functioned. This results in a changed status of discourse.

Text as a closed space

The second part of this section is devoted to the interpretation of text. The important question here is to ask: what is a text and how can we understand it? The understanding of text should be here considered together with its function within the method of interpretation.

The most wide-spread position captures the text as a closed space. This situation is typical for the Western philosophical thought. It derives from Aristotle’s sanction to treat the text as a complete whole. Maria Renata Mayenowa provides us with such a definition of the text: ‘The text – as an object – is a whole… Every literary text is enclosed in a frame, whose function is, among other things, to tell us exactly that it is a text, to determinate it as text.’ The text here is treated as a whole, it is independent and it does not need anything else to exist. The text acquires certain independence and autonomy of existence. Here we can also see a reification of the text, because it is regarded as an object; it is considered as a concrete thing. Moreover, it is enclosed in a frame, so it possesses certain boundaries which disjoin it from other texts; it is limited and bounded within its structure. Boris Uspenski (from the Tartu School of Semiotics in Estonia) adds and clarifies the notion of the text saying: ‘The importance of the problem of frame, that is, of artistic work, is evident…We must emphasize the general semiotic importance of framing.’

3 Ibidem.
Erasure of text boundaries

The text has undergone a long way from the initial framing. Its bonds split and we could observe erasure of the boundaries. Words come across with other words, like in a dialogue. Words live and carry connotations with other words, providing us with different contexts. Words acquire new meanings that can change previous interpretation of the text. Michel Foucault writes:

The frontiers of a book are never clear-cut: beyond the title, the first lines, and the last full stop, beyond its internal configuration and its autonomous form, it is caught up in a system of references to other books, other texts, other sentences: it is a node within a network... The book is not simply the object that one holds in one’s hands; and it cannot remain within the little parallelepiped that contains it: its unity is variable and relative. As soon as one questions that unity, it loses its self-evidence; it indicates itself, constructs itself, only on the basis of a complex field of discourse.7

The text creates a system of references to other texts. It is no longer an object that one holds in one’s hands. It undergoes constant redefinitions and is inter-dependent, a text is mutually dependent with another texts. Julia Kristeva says: “the text is therefore a productivity and this means...that it is a permutation of texts, an intertextuality: in the space of given text, several utterances, taken from other texts, intersect and neutralize one another.”8

It is by no means clear that examining such concept of a text brings the method of interpretation to a very debatable point. The key questions are: is everything permitted within the method of interpretation, are all interpretations relevant or are there any boundaries of interpretation? Umberto Eco in his book Semiotics and the philosophy of language writes about the text:

The text is a fabric woven from signs. It is open and interpretable, but it must be viewed as a coherent whole. It creates its Model Reader, and it is more than the sum of the author’s words and the reader’s meaning. The text is essentially “a lazy machine that demands the bold cooperation of the reader to fill in a whole series of gaps” of unsaid or already said missing elements (translation of Eco, 1985, 29).9

Quoting Eco, Lucie Guillemette states that a text is therefore open: all interpretations of it are potentially unlimited, but not every act of interpretation has a happy end. By interpretation we mean “the semantic actualisation of everything that the text means, as a strategy, with the cooperation of its Model Reader.”10

According to Eco the text creates a Model Reader capable of actualising the various meanings in order to decode the possible worlds of the narrative. The issue raised by the theory allows this reader to fill in the gaps in the text, which is ambiguous rather than obvious. The Model Reader can use anything from simple linguistic inference to a more complex deductive reasoning that applies to the entire narrative. ‘Although the text is a cloth woven from signs and gaps, the Model Reader, using his encyclopaedia, has ability to fill in the gaps to the best of his knowledge, using his social baggage, his encyclopaedia and cultural conventions.’11 The theory of the

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7 Michel Foucault, The Archaeology of Knowledge & The Discourse on language. Pantheon 1982, p. 23.
10 ibidem.
11 Ibidem.
Model Reader is based on the concept of ‘unlimited semiosis’ developed by C. S. Peirce. It should be noted here that the Model Reader is created by the text, because s/he interprets the text. However, s/he is not the only one that can provide us with a right interpretation. ‘A text may foresee a Model Reader who is capable of trying out several interpretations where he is confronted with several fibula or possible worlds…The Model Reader actualises the meaning of everything that the textual strategy intends to say.’

Eco allows the text to be open for various interpretations. Moreover, he encourages the reader not to close his or her mind on possible conjectures. On the other hand, he is against the statement that the text could have every possible sense. Not everything is permitted.

Describing the concept of Derridiean text, Rodolphe Gasché says that a text is constituted not by external units but it is built by traces. Traces form the system of textual referrals in which they endlessly refer to other texts but, at the same time, not going beyond this unity of intertextuality. Referring beyond the system would mean ceasing the play of referrals and would finally imply an end.

The text is never constituted by what one calls signs or signifiers – that is to say, by units signifying a signified outside the text–but by traces. A text in the infrastructural sense is a fabric of traces, a system of linking of traces, in other words a network of textual referrals (renvois textuels). Because of this differential network, this tissue of traces endlessly referring to something other than itself yet never to an extra-text that would bring its referring function to a clear stop, the general text is by nature heterogeneous.

Arche-trace

Continuing Derrida’s thought on sign one encounters the absence of a centre in discourse. With the removal of the centre and replacing it with a sign we find a new status of discourse. This corresponds to the abandonment of all reference to a centre, to a subject, to a privileged reference, to an origin or to an absolute archia.

There is no text written and present elsewhere which would then be subjected, without being changed in the process, to an operation and a temporalisation (the latter belonging to consciousness if we follow Freud literally) which would be external to it, floating on its surface. There is no present text in general, and there is not even a past present text, a text which is past as having been present. The text is not conceivable in an originary or modified form of presence. The unconscious text is already a wave of pure traces, differences in which meaning and force are united – a text nowhere present, consisting of archives which are always already transcriptions.

A trace cannot be described and summed up in the simplicity of a present. We cannot say that a text is present when there is no centre in discourse. According to Derrida, there is no present text in general. Thinking of a text in the present obliges us to subject it to something which does not change and thus being a form of presence. Talking about abandoning all reference to a centre or origin excludes thinking of a text or trace in the limits of the presence. What is more, there is not even a text which is past as having been present. Thinking of a past text requires us to refer to its present form. Because it does not have any present form, we cannot talk about its past appearance. It would be like thinking about its past but, on the other hand, starting from the present moment.

12 Ibidem.
2 Gasché, p. 289.
3 Derrida, Writing and Difference, p. 362.
4 Ibidem, p. 211.
There is a connection between the concept of trace and the concept of death basing on the notion of presence. This issue will be developed later, now, however, let us explore more our thinking about a trace. The destruction of graphic signs leads Derrida to the concept of trace as the absolute past. The past without any relation to the present, the absolute past that cannot be experienced neither as modified presence nor as in the original form:

[... ] if the trace refers to an absolute past, it is because it obliges us to think a past that no longer be understood in the form of a modified presence, as a present-past. Since past has always signified present-past, the absolute past that is retained in the trace no longer rigorously merits the name “past”... The concepts of present, past, and future, everything in the concepts of time and history which implies evidence of them-the metaphysical concept of time in general—cannot adequately describe the structure of the trace.  

Gasché speaks of the originary trace as the one which designates “the minimal structure required for the existence of any difference (or opposition) of terms (and what they stand for), that is, for any relation to alterity.” Gayatri Chakravorty Spivak says that “Derrida’s trace is the mark of the absence of the presence, an always already absent present, of the lack of the origin that is the condition of thought and experience. For somewhat different yet similar contingencies, both Heidegger and Derrida teach us to use language in terms of a trace-structure, effacing it even as it presents its legibility.” Trace should be considered in terms of a structure or, better said, infrastructure. This structure consists of a system of traces; it is a network which creates a text.

The trace is not only the disappearance of origin-within the discourse that we sustain and according to the path that we follow it means that the origin did not even disappear, that it was never constituted except reciprocally by a nonorigin, the trace, which thus becomes the origin of the origin. From then on, to wrench the concept of the trace from the classical scheme, which would derive it from a presence or from an originary nontrace and which would make of it an empirical mark, one must indeed speak of an originary trace or arche-trace. Yet we know that that concept destroys its name and that, if all begins with the trace, there is above all no originary trace.

Arche-trace appears within a difference or opposition, affecting everything which enters into a relation of difference or opposition, such as oppositions between terms or concepts. It is universal and is necessary for the difference to subsist as such. Gasché turns our attention to thinking in oppositions. It is required to consider arche-trace as a reflection in order to regard it in terms of a dyadic structure:

Consequently, the arch-trace is a reflection on the form that a term or entity of plenitude must take, insofar as it can appear only in oppositions or dyadic structures; it is a meditation upon the indissociable appearing of what comes to the fore with another, lesser term or entity. The arche-trace explains why a concept of plenitude or presence can be thought only within dyadic conceptual structures.

Summing up this chapter, we can tell that a trace stands for the disappearance of origin. However, we have to bear in mind that there was no origin at all because it was never constituted. How should we think of an origin then? This appears more of a thinking game for us because trying to reject the origin we have to first consider any

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5 Derrida, Of Grammatology, p. 66-7.
6 Ibidem, pp. xvii-xviii.
7 Ibidem, p. 61.
8 Gasché, p. 187.
origin as a hypothetical concept. Because it is hypothetical we can now discard it as never being constituted before. The origin never existed because introducing the concept of trace assumes non-existence of origin. Therefore, thinking of an origin is a hypothetical assist in helping us to understand what the nature of trace is. What Derrida tries to omit is thinking in a classical scheme that would presuppose the elements like an origin seen from a present perspective. Once the classical scheme is abolished we can move forward in developing arche-trace and not revolving in a dead loop of, let’s call it, classical thinking. It was stated in the preface to *Of Grammatology* by the translator that “a certain view of the world, of consciousness, and of language has been accepted as the correct one, and, if the minute particulars of that view are examined, a rather different picture […] emerges. That examination involves an enquiry into the “operation” of our most familiar gestures.”

**Presence and absence**

Experience, according to Derrida, “has always designated the relationship with presence, whether that relationship had the form of consciousness or not.” In the movement of play Derrida subordinates the absence and presence as the elements that take part in the discourse. The absence of centre or origin permits the play to take place and disrupt the presence. Here, the sign appears as a replacement of the centre and occurs as a surplus, a supplement, because it is added. Therefore, we can talk about the movement of play or the movement of supplementarity: ‘The movement of signification adds something, which results in the fact that there is always more, but this addition is a floating one because it comes to perform a vicarious function, to supplement a lack on the part of the signified.’

Here, Derrida’s thought on presence strictly corresponds with Husserl and Heidegger’s concepts. In order to see clearly Derrida’s view on the textual operation it is advisable to refer to these two thinkers whom the French philosopher owes greatly. In *Sein und Zeit* Heidegger observed that Being appeared to have been determined in the perspective of one singular mode of time—the mode of the present. This limits the ontological perspective of the question of Being whose nature remains thus concealed. Heidegger proposes a certain means of regaining the original metaphysical experience of Being. He calls it destruction [*Destruktion*]—a retrogression which aims at reversing of the reductive construction of the question of Being in philosophy. In *Sein und Zeit* Heidegger writes on destruction:

We understand this task as one in which by taking the question of Being as our due, we are to destroy [Destruktion] the traditional content of ancient ontology until we arrive at those primordial experiences in which we achieved our first ways of determining the nature of Being—the ways which have guided us ever since.

The task founded by Heidegger is to remove systematically the concealments [*Verdeckungen*] of the meaning of Being by the history of ontology. However, he stresses the positive aspect of this operation of dismantling—‘to bury the past in nullity is not the purpose of this destruction; its aim is positive; its negative function remains

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2 Ibidem, p. 60.
unexpressed and indirect.\textsuperscript{5} Destruction serves not only as a tool of reduction of unnecessary meaning but also it is an essential step in constructing the authentic ontological concepts.

It is for this reason that there necessarily belongs to the conceptual interpretation of being and its structures, that is, to the reductive construction of being, a destruction—a critical process in which the traditional concepts, which at first must necessarily be employed, are de-constructed (kritischer Abbau) down to the sources from which they were drawn. Only by means of this destruction can ontology fully assure itself in a phenomenological way of the genuine character of its concepts.\textsuperscript{2}

In this respect deconstruction shares with destruction the same goal of reaching the ultimate foundation of concepts. It also corresponds with Husserl’s concept of dismantling [Abbau] which we shall now take a brief look at.

In the strategy of phenomenological reduction Husserl underlines the objective world and the original life-world. This distinction is marked by theoretical knowledge built on the objective world in order to determine concepts. The objective world stands to be theoretical with contemporary science building sedimentation of meaning. As oppose to this stands the original life-world. This is the world one has to dismantle through a necessary retrogression in order to achieve the most original self-evidence of experience. Thus, reaching a stratum of experience that is never thematized by either logic or psychology. Husserl proposes double retrogression. One leads from the pregiven and “objective” world to the original life-world. The other way reaches through the life-world toward the transcendental subjectivity constitutive of both life-world and “objective” world. This retrogression to the original life-world (pretheoretical and prepredicative experience) requires a radical dismantling of the theoretical world, an undoing of the idealization out of which it is woven.\textsuperscript{3} Mental destructions [gedankliche Destruktion], such as the forms of reduction, bracketing and \textit{epoche} ought to break through to the concealed foundation of idealizations and sense-sedimentations to the most original experience.

It should be also noted that Husserl’s \textit{Abbau} is not a reflective operation. It is a method of transcendental investigation which acts through the operation of dismantling. This dismantling cannot be performed by psychological reflection because Husserl claims it to be an aspect of “theoretical convictions.” It is a nonreflective turning back.\textsuperscript{4}

In summing up deconstruction, destruction and dismantling Gasché writes:

All three are nonreflective methodological devices; all three are in essence positive movements, never negative in the usual sense, and certainly not “purely negative”; and all three attempt to construct, in a more or less systematic fashion, grounds of greater generality for what is to be accounted for. Yet, although Derrida’s notion of deconstruction continues to address the questions raised by the philosophies of Husserl and Heidegger, his critique of the basic tendencies of their work also touches on their notions of dismantling and destruction. Like Hiedegger, Derrida criticizes Husserl’s phenomenological reduction, but he also questions Heidegger’s interpretation on that method as a method of inquiring into the meaning of Being.\textsuperscript{5}

What can serve here as a distinction between these three approaches one finds in Derrida’s critic. He argues that Heidegger’s break with metaphysics remains, for

\textsuperscript{5} Ibidem, p. 44.
\textsuperscript{2} Heidegger, \textit{The Basic Problems of Phenomenology}, p. 21.
\textsuperscript{3} Rodolphe Gasché, \textit{The Tain of the Mirror}, p. 110.
\textsuperscript{4} Ibidem, p. 111.
\textsuperscript{5} Ibidem, p. 118.
systematic reasons, faithful to metaphysics. Derrida points out that ‘Heidegger’s destruction in *Being and Time* of the metaphysical concept of time borrows uncritically from the discourse of metaphysics itself, the very conceptual resources that he uses to criticize and delimit metaphysics’ naïve concept of time.’ As a consequence, the destruction of the tradition that Heidegger aims at still remains within the grammar and lexicon of metaphysics.

Deconstruction is a nonreflective operation in a sense that ‘reflection can reflect only what is immanent to the logos.’ In *Of Grammatology* Derrida writes:

> The “rationality”–but perhaps that word should be abandoned for reasons that will appear at the end of this sentence – which governs a writing thus enlarged and radicalized, no longer issues from a logos. Further, it inaugurates the destruction, not the demolition but the de-sedimentation, the deconstruction, of all the significations that have their source in that of the logos.

Consequently, the ultimate foundations for which deconstruction reach out are no longer simply part of the grammar and lexicon of metaphysics. They are in a certain way *exterior* to metaphysics.

After Heidegger describes the role of death as an essential factor in our lives, Derrida attempts to show the relation of death and the usage of signs. The relationship with *my death* (my disappearance in general) thus lurks in this [Husserl’s] determination of being as presence, ideality, the absolute possibility of repetition. The possibility of the sign in this relationship with death. The determination and elimination of the sign in metaphysics is the dissimulation of the relationship with death, which yet produced signification.

The issue that arises here concerns mainly death, ideality and presence. Derrida discerns in “being” the presence that intermingles with ideality. He makes it more clear in the following passage: “If the possibility of my disappearance in general must somehow be experienced in order for a relationship with presence in general to be instituted, we can no longer say that the experience of the possibility of my absolute disappearance (my death) affects me, occurs to an I am, and modifies a subject.”

Derrida sees in death a possibility for an opening of the ideal form of presence. This form consequently implies the *différance*. Death is in the constant relationship with presence and ideality. In this sense, death gives birth to signification and the beginning of the truth is in its own death.

The moot point for Derrida is to establish that the relationship with death is implied in the reflective awareness of transcendental, reduced life. Derrida refers to

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6 Ibidem, p. 119.
7 Ibidem, p. 120.
8 Of Grammatology, p.10.
9 The Tain of the Mirror, p. 120.
11 Ibidem.
Husserl’s thought-experiment of the Annihilation of the World [Weltvernichtung] when talking about the meaning of death in relation to objectivity, ideality and presence. He also analyzes Husserl’s Principle of All Principles and the thesis of the immortality of the transcendental ego. According to the Principle of All Principles, a legitimate cognition and explication found in philosophical theory must be based on originary presentive intuitions, on what is intuitively presented in this or that here and now. Husserl focuses on the primordial presence of consciousness which serves as intrinsic factor to those objects that we consider as sensuous or categorial.

Husserl in Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy poses the question of the exclusion of the pure Ego [Ich]. He excludes human being as natural being but also as person in personal association, in that of “society.” On the other hand, he asks about the pure Ego: “Has the phenomenological Ego which we also find become a transcendental nothing because of the phenomenological reduction?”7 He proposes a reduction to the stream of pure consciousness. Husserl is convinced that “after carrying out this reduction we shall not encounter the pure Ego anywhere in the flux of manifold mental process which remains as a transcendental residuum.”8 However, the Ego seems to be there continually and necessarily and “this continualness is obviously not that of a stupidly persistent mental process, a ‘fixed idea.’”9 According to Husserl any cogito can change, come and go-it is necessarily something transitory: “The Ego belongs to each coming and going mental process; its ‘regard’ is directed ‘through’ each actional cogito to the objective something. This ray of regard changes from one cogito to the next, shooting forth anew with each new cogito and vanishing with it.”10

The phenomenological exclusion concerns the world and the empirical subjectivity that is included in it. Answering the question of this exclusion, Husserl retains a pure Ego as a residuum. Assuming this retention Husserl points out a peculiar kind of transcendency. The transcendency that is not constituted-a transcendency within immanency. Husserl retains the pure Ego as a residuum, as a presence that is necessary and intact in its being. He underlines the role that this transcendency plays within any cogitation. Because of that we cannot exclude it together with the world and empirical subjectivity. The pure Ego is treated as a phenomenological datum beyond whose limits all theories about it must be excluded:

Because of the immediately essential role played by this transcendency in the case of any cogitation, we must not undertake its exclusion; though in many investigations the questions concerning the pure Ego can remain in suspenso. But only in so far as its immediate, evidently ascertainable essential peculiarity and its givenness along with pure consciousness extend do we propose to count the pure Ego as a phenomenological datum; all theories about it which exceed those limits undergo exclusion.5

Although a personal consciousness can be annihilated yet the total absence of consciousness is in Husserl’s view inconceivable. What we can think of is a residuum left over by the annihilation. The whole procedure of bracketing and reduction leads to the perception of the world as a relative and the consciousness as absolute. Experience, however, must be disregarded as illusory and no longer bearing a coherent content. On the other hand, Derrida finds in death a possibility for an

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7 Edmund Husserl, Ideas..., p. 132.
8 Ibidem.
9 Ibidem.
10 Ibidem.
5 Husserl, Ideas..., p. 133.
opening of an ideal form of presence. Presence, ideality and death are in constant relationship.

CHAPTER II: CONSCIOUS EXPERIENCE

Before conducting an analysis of concepts pertaining to consciousness we are obliged to ask some questions concerning the current state of knowledge. We are faced with many different issues regarding consciousness and the term itself seems very ambiguous. Therefore, I will first try to put some light on the argument and then move on to explain more deeply the issues of interest. I will start with Chalmers’ summary of consciousness and point to the issues of a need for developing. Then I will come back to some of the proponents in philosophy who directed their attention on the theme of consciousness. We will concentrate on consciousness from the semiotic point of view. Supporting our argument with Max Bense proposal of the semiotic theory, we will analyze consciousness and its sign relevance. Before that we will give attention to conscious experience and focus on the cause and effect relation. Because the term consciousness is a broad and ambiguous one I shall try to be as close to the semiotic and cognitive matter of the thesis as possible. In this chapter, the thesis focuses more on semiotic and epistemological aspects of conscious experience while discussing human perception.

Definition of consciousness

First, let us define consciousness in common sense terms. John Searle proposes this definition of consciousness:

Consciousness consists of inner, qualitative, subjective states and processes of sentience or awareness. Consciousness, so defined, begins when we wake in the morning from a dreamless sleep - and continues until we fall asleep again, die, go into a coma or otherwise become "unconscious." It includes all of the enormous variety of the awareness that we think of as characteristic of our waking life. It includes everything from feeling a pain, to perceiving objects visually, to states of anxiety and depression, to working out cross word puzzles, playing chess, trying to remember your aunt's phone number, arguing about politics, or to just wishing you were somewhere else. Dreams on this definition are a form of consciousness, though of course they are in many respects quite different from waking consciousness.6

What should be observed here is the variety of usage of consciousness. Searle does not give us a scientific definition but instead focuses on a general meaning. Let us follow his definition and bear in mind that there are other significances of consciousness. Searle talks about some authors who use consciousness as self-consciousness—that is consciousness that humans have of themselves as agents; some use it as the second-order mental states about other mental states (a pain is not a conscious state but worrying about a pain is) or consciousness used as to refer to any form of complex intelligent behaviour.

David Chalmers distinguishes between awareness and consciousness. He defines awareness as “a state wherein we have access to some information, and can use that information in the control of behaviour.” He assigns awareness a functional role and sees consciousness as a phenomenal concept which includes awareness. We can be aware of objects around us and draw conclusions which would be helpful to direct our behaviour. We can be aware of our mental states either and in the same manner as with certain objects respond to external world molding our actions.

In general, wherever there is phenomenal consciousness, there seems to be awareness. My phenomenal experience of the yellow book beside me is accompanied by my functional awareness of the book, and indeed by my awareness of the yellow color. My experience of pain is accompanied by an awareness of the presence of something nasty which tends to lead to withdrawal and the like, where possible. The fact that any conscious experience is accompanied by awareness is made clear by the fact that a conscious experience is reportable. If I am having an experience, I can talk about the fact that I am having it. […]

Consciousness is always accompanied by awareness, but awareness as I have described it need not be accompanied by consciousness. One can be aware of a fact without any particular associated phenomenal experience, for instance. In the article on the illusion of conscious will and automaticity the authors give a series of examples proving person’s intention to perform actual actions as an illusion of conscious will. They point to automaticity as an origin of some actions which people would consider as conscious. We will not discuss here the argument of the illusion of conscious will but only mention one of the examples described in the conducted research on human consciousness.

In a study of a group of the Second World War veterans who had their arms or legs amputated, the researchers discovered that ninety-eight per cent could still feel the presence of phantom limbs. They were aware of the fact that they had limbs and they could even “move” them although, in fact, they had their members amputated before. This example shows that amputees were aware of their non-present limbs and at the same time conscious of the amputation. Therefore, they could consciously speak of an experience of being aware of the presence of limbs. Consciousness is accompanied by awareness, as Chalmers says. Now, let us imagine an amputee just after the amputation, lying in bed and not seeing his lost leg or arm. He can be aware of the presence of his leg although in fact he does not have it anymore. He is not conscious of that loss but is aware and convicted that he still owns his arm or leg. Therefore, one can be aware of a fact (having a limb) without a phenomenal experience (being conscious of not having a limb). Later on in the thesis, we will use this example in other case.

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Now, basing on the above example we can draw a conclusion which proves that conscious experience takes place even without the intervention of external data. In general, experience arises from a physical foundation. However, in order a man become aware of his body he does not need to experience an interaction with external world. Thus, conscious experience is present without causal interference. Later, we will focus on the problem of causality and experience in David Hume’s inquiry.

**The hard problem**

David Chalmers proposes to distinguish “easy” and “hard” problems of consciousness. He writes in his article “Facing Up to the Problem of Consciousness”: “The easy problems of consciousness are those that seem directly susceptible to the standard methods of cognitive science, whereby a phenomenon is explained in terms of computational or neural mechanisms. The hard problems are those that seem to resist those methods.” He enumerates the easy problems which refer to the following phenomena: the ability to discriminate, categorize, and react to environmental stimuli; the integration of information by a cognitive system; the reportability of mental states; the ability of a system to access its own internal states; the focus of attention; the deliberate control of behavior; the difference between wakefulness and sleep. We can tell as an example that the easy problem deals with a conscious mental state when it processes information which was previously gained through senses or “an action is conscious precisely when it is deliberate.” Therefore, there is no real issue, Chalmers says, whether we could explain these phenomena scientifically—all of them are straightforwardly vulnerable to explanation in terms of computational or neural mechanisms. For example, to explain the integration of information, we need only exhibit mechanisms by which information is brought together and exploited by later processes. Chalmers uses the term “easy problem” because we have a clear idea of how to explain these phenomena, although it is definitely not an easy task for cognitive science and neuroscience.

The really hard problem of consciousness that Chalmers pulls out is the problem of experience. He stresses the argument of thinking and of the perception accompanied by a subjective aspect. Seeing is experiencing visual sensations, listening and smelling are other senses that take part in sensuous perception. We can be hurt physically, project mental images in our mind or like James Joyce sink into the depth of a stream of thoughts. All of them are states of experience but the hard question remains bewildering:

It is undeniable that some organisms are subjects of experience. But the question of how it is that these systems are subjects of experience is perplexing. Why is it that when our cognitive systems engage in visual and auditory information-processing, we have visual or auditory experience: the quality of deep blue, the sensation of middle C? How can we explain why there is something it is like to entertain a mental image, or to experience an emotion? It is widely agreed that experience arises from a physical basis, but we have no good explanation of why and how it so arises. Why should physical processing give rise to a rich inner life at all? It seems objectively unreasonable that it should, and yet it does.

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4 Chalmers, “Facing Up to the Problem of Consciousness”.
5 Ibidem.
6 Ibidem.
7 Ibidem.
8 Ibidem.
The hard problem is hard precisely because it is not a problem about the performance of functions. The problem persists even when the performance of all the relevant functions is explained, says Chalmers.

The hard problem of consciousness is really tough when it comes to solving the riddle of ‘how’ of consciousness. I believe that answering the issue is and will be difficult to prioritize. Even if firm and definite answers come, one should not expect a resolved issue. Instead, we ought to assume a number of other solutions to the hard problem. The hard problem should be treated like an ontological question whose answers are never finite.

**Intentionality**

G. W. Leibniz already reflected about a thinking machine which could feel and which would be endowed with perception. In *Monadologie* we can find a passage in which he describes a machine similar to a mill. This mill stands for a thinking machine built from parts, in contrary, perception is a simple substance. We cannot find perception in a compound or in a machine. It is only in a simple substance that perception ought to be sought for. Leibniz’s analogy is referred to as “Mühlengleichnis”:

Man muß übrigens zugestehen, daß die Perzeption und was von ihr abhängt durch mechanische Gründe, d. h. durch Figuren und Bewegungen, unerklärbar ist. Angenommen, es gäbe eine Maschine, deren Struktur zu denken, zu fühlen und Perzeptionen zu haben erlaubte, so könnte man sich diese derart proportional vergrößert vorstellen, dass man in sie eintreten könnte wie in eine Mühle. Dies vorausgesetzt, würde man, indem man sie von innen besichtig, nur Teile finden, die sich gegenseitig stoßen, und niemals etwas, das eine Perzeption erklären könnte. Also muß man danach in der einfachen Substanz und nicht im Zusammengesetzten oder in einer Maschine suchen. Es gibt zudem überhaupt nur Perzeptionen und deren Veränderungen in einer einfachen Substanz. Und daraus allein können die inneren Tätigkeiten der einfachen Substanzen bestehen.⁹

Here, in this analogy of the mill we enter the construction of brain but find nothing palpable when it comes to consciousness. We can see all of the mechanical operations of brain and analyze them with a help of neurosciences. Still, Leibniz is doubtful whether consciousness can arise from mere matter. We perceive and understand physical nature and processes that accompany brain’s functioning. On the other hand, we cannot detect conscious mind with the same scientific tool as we can do when analyzing brain waves. Penetrating conscious thoughts demands other methodology. Throughout the whole subject of consciousness we have to bear in mind the opposition between concrete constituents of reality and set of abstract relations.

Franz Brentano stressed the fact that when thinking upon a thing it is always a thought that comes from a person directed to an object of thinking. When, for example, I see a thing it is not only a colour or shape I observe but I also consider myself as a participant in this action. When people feel sadness because they lack something, they realize that they are sad because they need a thing desperately. It is also in other instances of desire that man is aware of his feeling because of a thing that stuck in his mind. In *Deskriptiver Psychologie* Brentano writes:

Jedes Bewußtsein, primär auf was immer für ein Objekt gerichtet, geht nebenher auf sich selbst. Im Vorstellen der Farbe also zugleich ein Vorstellen dieses Vorstellens. Schon Aristoteles betont, dass in dem psychischen Phänomene selbst das Bewusstsein von ihm mitbeschlossen sei. (...) So gewiß es

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Conscious desire to drink a cold glass of beer or a conscious fear of spiders is both intentional. However, a feeling of pain or a sudden sense of anxiety, where there is no object of the anxiety is not intentional. Brentano said that “I can search for him when he is not here, but I cannot hang him when he is not here” (Ich kann ihn suchen, wenn er nicht da ist, aber ihn nicht hängen, wenn er nicht da ist). The first of this activity, as Brentano explains, is intentional; we can have an object which does not exist. The second activity is purely physical (bloß physisch)—we cannot fulfil it because there is no object to deal with. Therefore, Brentano thought of intentionality as a feature of psychology.

We can say that intentionality is a property of mind by which it is directed at, about or of objects and states of affairs in the world. Intentionality includes such mental phenomena as belief, desire, intention, hope, fear, love, hate, lust, disgust and memory as well as perception and intentional action. What is of interest to us among other features of intentionality is the network of intentionality. One intentional state only functions in connection with an indefinite number of other intentional states.

Charles Siewert describes conscious states as states of its seeming somehow to a subject. “To say one has an experience that is conscious (in the phenomenal sense) is to say that one is in a state of its seeming to one some way. In another formulation, to say experience is conscious is to say that there is something it's like for one to have it.” Therefore, conscious states have some phenomenal character which create this peculiar way that it seems to one to have a given experience. This phenomenal character is referred to as a “qualitative” or “subjective” character of experience. Previously we have described these states of something there is like to be together with qualitative feels or qualia. This time let us move in a particular direction while talking about intentionality.

Because of directing our attention on something there must be a mental or intentional content. The content may be described as representational or informational therefore providing some data. Here we come to a conclusion that content is content of a thought. In On Sense and Reference Gottlob Frege makes a distinction between sense [Sinn] and reference [Bedeutung] while discussing intentional or mental content.

The need for a distinction between the sense and reference of an expression became evident to Frege, when he considered that, even if a is identical to b, and you understand both ‘a’ and ‘b’ still, it can be for you a discovery, an addition to your knowledge, that a = b. This is intelligible, Frege thought, only if you have different ways of understanding the expressions ‘a’ and ‘b’ — only if they involve for you distinct ‘modes of presentation’ of the self-same object to which they refer. In Frege's celebrated example: you may understand the expressions 'The Morning Star' and 'The Evening Star' and use them to refer to what is one and the same object — the planet Venus. But this is not sufficient for you to know that the Morning Star is identical with the Evening Star. For the ways in which an object ('the reference') is 'given' to your mind when you employ these expressions (the senses or Sinne you

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‘grasp’ when you use them) may differ in such a manner that ignorance of astronomy would prevent your realizing that they are but two ways in which the same object can be given.  

We signal the distinction between sense and reference here because later in the thesis it will be developed. This division is of value in our discussion because it corresponds with cognitive approach to semiosis. The perception of sign may be further developed in terms of imagery and meaning that Frege explains in his work. Later, this leads us to the acquisition of conscious experience, being the final product of conscious human perception. Throughout the thesis let us think of the outline that is marked by thought, word and deed; all of the elements consist of what a conscious experience is, either being the origin or the final product of it.

**What, how and why questions**

In *The Conscious Mind*, David Chalmers sees no point in defining conscious experience in terms of more primitive notions. What we can do is to “give illustrations and characterizations that lie at the same level.”  

These illustrations will not be definitions but will help us to make the subject matter sharp and precise.

The subject matter is perhaps best characterized as “the subjective quality of experience.” When we perceive, think, and act, there is a whirl of causation and information processing, but this processing does not usually go on in the dark. There is also an internal aspect; there is something it feels like to be a cognitive agent. This internal aspect is conscious experience. Conscious experiences range from vivid color sensations to experiences of the faintest background aromas; from hard-edged pains to the elusive experiences of thoughts on the tip of one’s tongue; from mundane sounds and smells to the encompassing grandeur of musical experience […] All these have a distinct experienced quality. All are prominent parts of the inner life of the mind.

Aside from explaining complex systems like brain with all stimuli and processes that accompany it, the metaphysical question of conscious experience remains mysterious. On the one hand, we know, directly, that there is conscious experience; on the other hand, we do not know why conscious experience exists. The argument also concerns, what Chalmers calls, character of conscious experience. This is to ask about the nature of individual experiences. Why do we perceive things in that way and not in the other? Why do we experience music as a set of sounds through ears and why sad memories cause tears and not provoke a sudden outburst of joy?

Robert Van Gulick introduces three rubrics describing the problems of consciousness. He divides the issue into three questions of what, how and why:

- **The Descriptive Question:** What is consciousness? What are its principal features? And by what means can they be best discovered, described and modeled?
- **The Explanatory Question:** How does consciousness of the relevant sort come to exist? Is it a primitive aspect of reality, and if not how does (or could) consciousness in the relevant respect arise from or be caused by nonconscious entities or processes?
- **The Functional Question:** Why does consciousness of the relevant sort exist? Does it have a function, and if so what is it? Does it act causally and if so with sorts of effects? Does it make a difference to the operation of systems in which it is present, and if so why and how?

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3 Ibidem.  

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The presented three types of questions can stand as a spine in solving ambiguities of consciousness. They focus on the description of the features of consciousness, its role, possible value and try to measure the processes occurring underneath the phenomenon. In order to explain one of these questions we have to take into account the presence of the other. That is, explaining how consciousness comes to existence we need first to define what sort of consciousness we are talking about.

When dealing with the functionality and asking the why question of consciousness I will present the problem of causality of conscious experience. Here, we have to consider consciousness as either significant in cognitive system or it is of no value. By examining causal inference on the example of David Hume’s *An Enquiry Concerning Human Understanding*, I support the view that consciousness takes active part in cognition. While studying causality one has to reflect on effects it brings and difference it makes. Further in this chapter, we will consider the causal potency of some sorts of consciousness bringing in the zombie claim.

In other section of the thesis we see into an integrated representation of reality. By this it is meant that “conscious experience presents us not with isolated properties or features but with objects and events situated in an ongoing independent world, and it does so by embodying in its experiential organization and dynamics the dense network of relations and interconnections that collectively constitute the meaningful structure of a world of objects.” To support this analysis the thesis will focus on works of Husserl, Heidegger and Derrida. It is here that a closer look will be given on objects as independently existing in space and time. Thus, the spatiotemporal approach to consciousness is to provide the thesis with the necessary background.

If we are to relate consciousness to mind, we encounter two concepts of mind: phenomenal and psychological. As Chalmers observes, the phenomenal concept of mind includes conscious experience, that is to say, consciously experienced mental state. The second concept of mind–psychological is concerned with the causal or explanatory basis for behaviour:

A state is mental in this sense if it plays the right sort of causal role in the production of behavior, or at least plays an appropriate role in the explanation of behavior. According to the psychological concept, it matters little whether a conscious state has a mental quality or not. What matters is the role it plays in a cognitive economy […] On the phenomenal concept, mind is characterized by the way it feels; on the psychological concept, mind is characterized by what it does. There should be no question of competition between these two notions of mind. Neither of them is the correct analysis of mind. They cover different phenomena, both of which are quite real.6

With the psychological concept of mind we will deal in the subchapter devoted to Hume’s explanation of causality. Therefore, here we will focus on function and role this concept plays in the conscious explanation of behaviour. Still, the phenomenal concept of mind will be more of more importance in this chapter due to its peculiar perplexity.

**Experience and causality**

The functional question concerning consciousness analyses the particular sort of existence asking us “why does this sort of consciousness and not the other exist?”

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5 Ibidem.
6 Chalmers, p. 11.
Here, we investigate the causality of conscious experience, studying the origin of the relation of cause and effect and bringing relevant notions into our discussion on consciousness. In this part, let us examine Hume’s investigation of causal inference and bring out points of importance to the subject. We will undertake the issue of the relationship between causality and conscious experience. By explaining that I believe to put light on an important condition under which physical processes give rise to conscious experience. However, this will not explain us the hard problem stated by Chalmers nor should we assume that physicalism is the only way for consciousness to exist. Although physical processes take part in giving rise to conscious experience, there must lie another factor which makes the quality of experience subjective. “What it is like to be a cognitive agent” (another short and vague definition of consciousness) does not end up on the physical aspects.

Analyzing the relationship between consciousness and brain, John Searle gives us two proposals to this problem: a philosophical part and a scientific one. Philosophical solution touches upon two features. One of them is the relationship of brain mechanisms to consciousness which is found in causation. Searle comes from the view that consciousness together with other mental phenomena are caused by neurobiological processes in the brain. It is realized within the brain structure, positioning itself on a higher level of the brain. Therefore, processes in the brain cause our conscious experience. Searle underlines at the same time that the higher level of consciousness does not mean duality in brain. Consciousness is a higher level feature, a state of the brain. By saying this, Searle does not surprise us but instead underlines the feature of causality in consciousness. In this part of the thesis, we will look into causality being one of the important features of conscious experience. Our scope of analysis will be mainly connected with passages’ from David Hume’s An Enquiry Concerning Human Understanding together with its contemporary discussion.

If we take into consideration laws of nature, such as ‘water boils at 100 C at standard pressure’ or ‘air resistance is proportional to velocity’ we could expect that these laws are satisfactory to physicians. These general truths, however, must have been differentiated somehow from other physical examples that do not prove a scientific hypothesis. Nonetheless, a philosopher would ponder on a different question that could be described as the grounds of the laws of physics in general. To put the issue differently, “one of the central problems in the philosophy of science is to explain what distinguishes general truths of all these kinds from accidental patterns”\(^8\). David Fate Norton introduces us to the notion of causality by comparing the previous philosophical speculations with what Hume tried to present in his dissertation at that time. It should be also noted that Hume tried to establish the reasonable conjunction between cause and effect taking example from the Newton's work in physics. Norton writes in his publication David Hume: Common Sense Moralist, Sceptical Metaphysician:

This problem arises as a corollary of David Hume's analysis of causality as constant conjunction. Philosophers prior to Hume assumed that causation involves some power by which causes produce their effects, some cement, so to speak, which binds cause and effect together. But Hume argued that there is no such cement. All we observe is first the occurrence of the cause, followed by the occurrence of the effect. There is nothing to bind them together, apart from the fact that they are constantly

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\(^7\) Searle, “Consciousness.”

\(^8\) *The Oxford Companion to Philosophy*, p. 474
MacNabb says that “the relation of cause and effect is of interest to Hume principally because he regards it as the foundation of all factual reasoning.”

Matters of fact—which are the second objects of human reason, apart from relations of ideas—seem to be founded on the relation of cause and effect. Hume provides an example of a man who finds a watch in a desert island. This man would conclude that there had once been men in that island. This example shows how the process of cause and effect works:

All our reasonings concerning fact are of the same nature. And here it is constantly supposed that there is a connection between the present fact and that which is inferred from it. Were there nothing to bind them together, the inference would be entirely precarious. The hearing of an articulate voice and rational discourse in the dark assures us of the presence of some person: Why? Because these are the effects of the human make and fabric and closely connected with it.

MacNabb asks about justification that the premiss that “all inferences to matter of fact not actually observed depend on the relation of cause and effect” has. MacNabb points out after Hume that “the relation of cause and effect is the only relation in which an observed object can be discovered to stand to an unobserved object, whose existence can thus be inferred.” When asking ourselves why certain objects are related to each other we are bound to explain this interaction in the manner of cause and effect. MacNabb provides the justification of this relation in the chapter “Causality”:

In general, whenever we can say of a given object x, that it must be related in a certain way, other than a causal way, to an object y which is not given, we must justify ourselves by saying why it should be so related. And the answer to such a ‘why?’ will always turn out to be some statement about cause and effects. This is Hume’s ground for saying that all factual inferences are founded on the relation of cause and effects.

The essential thing that matters when concerning reasoning and especially the relation among objects is that of cause and effect. This relation among objects, however, cannot be comprehended only by a single instance but it is obvious when analyzing many similar examples.

And what stronger instance can be produced of the surprising ignorance and weakness of the understanding than the present? For surely, if there be any relation among objects which it imports to us to know perfectly, it is that of cause and effect. On this are founded all our reasonings concerning matter of fact or existence. By means of it alone we attain any assurance concerning objects which are removed from the present testimony of our memory and senses. The only immediate utility of all sciences is to teach us, how to control and regulate future events by their causes.

Therefore, basing on experience Hume puts forward the notion of necessary

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2 MacNabb, p. 49.
3 Hume, An Enquiry Concerning Human Understanding.
4 MacNabb, p. 49.
5 Ibidem, p. 49-50.
6 MacNabb, p. 50.
7 Hume.
connection that serves to the operation of bodies or minds as an idea of power. Hume is convinced that only then we can feel “a new sentiment or impression (…) a customary connection in the thought or imagination between one object and its usual attendant; and this sentiment is the original of that idea which we seek for.” Again, Hume stresses the fact that this idea “arises from a number of similar instances, and not from any single instances.” Hume, as Quinton points out, also explains how our inductive inference together with casual beliefs goes beyond present impressions to lively expectations:

His answer is that our experience of constant conjunction, through the influence of association, leads us, as a matter of custom or habit, to have a lively expectation of a window's shattering when we observe a brick flying towards it. The impression from which our idea of necessary connection is derived is not of sensation, but reflection, that of feeling compelled in expecting the broken window on perception of brick flying towards it.

An important question that Hume poses is that of the source of knowledge, namely how we arrive at the knowledge of cause and effect? The answer to that question lies in the very idea of experience. He is certain that knowledge of the relation between cause and effect is not achieved by reasonings a priori but “arises entirely from experience, when we find that any particular objects are constantly conjoined with each other.” When analysing causal relations one has to bear in mind, as MacNabb observes, that the idea of cause derives from the impression or impressions. Hume's task is to examine the idea of cause by searching for these impressions. Hume is convinced that our ideas come from our impressions. What distinguishes both perceptions is that thoughts or ideas are less forcible and less lively than impressions. “All our ideas are nothing but copies of our impressions or, in other words, that it is impossible for us to think of anything, which we have not antecedently felt, either by our external or internal senses (...) Even the idea of God arises from our reflecting on the operation of our minds and augmenting its qualities without limits.” This should sustain Hume's proposition that “causes and effects are discoverable, not by reason but by experience.”

At the beginning of the article The Objective Foundation of the Causal Connection, M. Costa compares two viewpoints of the origin of knowledge. One position is held by Hume and the other refers to that of Immanuel Kant:

In his description of the casual process, Hume admits only three elements whose knowledge derives from external experience. There are two impressions of sensation and the order in which they are given: a temporal order of succession, in which the cause always precedes the effect, and a spatial order of contiguity. Whereas for Kant, external objects, as they affect our sensibility, produce a "chaos" of sensations, for Hume our impressions of sensation are given orderly in space and time. The latter-space and time-are but the manner in which the impressions are given, which seems to suggest an a priori element in sensibility, but Humean texts give no further ground for such an interpretation.
The difference between the two assessments is to be found in the way in which sensations are given. For Kant they constitute a “chaos” of sensation but for Hume they are already put in order. What we can find of interest to us is this order in which the impressions appear to us. Costa mentions this problem writing in his paper: “There must exist a certain sort of relation between some noumenal A and B for the mind to connect them causally, even if we have no right to assert that the relation is in itself causal.” He then explains that “Hume has not made clear what the nature of the intuition or immediate awareness of that order is”, nevertheless, the order in which the impression appear to us we “doubtlessly apprehend and eventually call forth.”

Raising the question of the power or energy in humans' minds as regards to causation, Hume argues that by an act or command of our will give us "no real idea of force or energy." It is here that Hume writes about the importance of experience when mentioning the limits of our command of the mind or body as well as when mentioning the act of volition:

(…) The command of the mind over itself is limited, as well as its command over the body; and these limits are not known by reason, or any acquaintance with the nature of cause and effect, but only by experience and observation, as in all other natural events and in the operation of external objects. (…) This self-command is very different at different times. A man in health possesses more of it than one languishing with sickness. We are more master of our thoughts in the morning than in the evening: Fasting, than after a full meal. Can we give any reason for these variations, except experience? (…)

Volition is surely an act of the mind, with which we are sufficiently acquainted. Reflect upon it. Consider it on all sides. Do you find anything in it like this creative power, by which it raises from nothing this new idea, and with a kind of Fiat, imitates the omnipotence of its Maker, if I may be allowed so to speak, who called forth into existence all the various scenes of nature? So far from being conscious of this energy in the will, it requires as certain experience as that of which we are possessed, to convince us that such extraordinary effects do ever result from a simple act of volition.

It is experience that enables us to infer from a series of instances "a customary connection or transition" because this customary connection or transition of the imagination is the only circumstance in which the number of instances differ. "In every other particular they are alike" adds Hume. A passage earlier Hume speaks that we gain experience by understanding that "similar objects are always conjoined with similar." In the recapitulation of the section VII devoted to the idea of necessary connection Hume supports his reasoning with an example of a movement of a billiard ball:

The first instance which we saw of motion communicated by the shock of two billiard balls (to return to this obvious illustration) is exactly similar to any instance that may, at present, occur to us; except only, that we could not, at first, infer one event from the other; which we are enabled to do at present, after so long a course of uniform experience.

To put it simply, "if the first object had not been, the second never had existed. The appearance of a cause always conveys the mind, by a customary transition, to the idea of the effect."

Simon Blackburn analyzing plausible reasonings in one of the chapters of his
book *Think* draws attention to the limits of experience. He also defines the term "inductive inference", stressing at the same time the "chain of reasoning" that is embedded in inferences:

Experience stretches no further than limited portions of space and time. In particular, all our experience belongs to the past and present. If we make inferences to the future, then these are inferences, and Hume wants to know the "chain of reasoning" that they employ. The inference from what is true of one limited region of space and time to a conclusion true of different parts of space and time is called inductive inference. What Hume is bothered about has become known as the problem of induction.⁹

Talking about the operation of causes, Hume is convinced that it is impossible to find, as he says "in a single instance", in external objects a certain bond that links the effect to the cause. He speaks about discovering a certain power or necessary connection that could explain "the impulse of one billiard-ball". This impulse is the only testimony that our senses can witness-"we only find that the one does actually, in fact, follow the other."

The impulse of one billiard-ball is attended with motion in the second. This is the whole that appears to the outward senses. The mind feels no sentiment or inward impression from this succession of objects: Consequently, there is not, in any single, particular instance of cause and effect, anything which can suggest the idea of power or necessary connection (…) It is impossible, therefore, that the idea of power can be derived from the contemplation of bodies, in single instances of their operation; because no bodies ever discover any power, which can be the original of this idea.¹⁰

Anthony Quinton distinguishes what a cause and effect is. He stresses the fact that these notions do not possess a quality of things but rather we should think of them in terms of a relation. It is also worth mentioning the importance of necessary connection which poses empirical problem (contrary to contiguity and succession) because we can only believe in it and cannot empirically observe it:

Being a cause, or an effect, is not a quality of things, like being red or round. If it were, it would be a property of everything, like existence, and we should have no impression of it. It is, plainly enough, a relation: a complex, threefold one, composed of contiguity in space and time, succession and necessary connection. Neither contiguity nor succession is, in fact, essential to causation. There can be action at a distance and cause and effect can be simultaneous (…) The matter is not important and most straightforward examples of causal relationship do have contiguous and successive terms, anyway. It is not important, since contiguity and succession are empirically unproblematic; we have impressions of both. Necessary connection is the indispensable but irksome ingredient. However closely we examine an alleged instance of causal relationship (the cue ball coming into contact with the red and the red shooting off to the pocket), we observe no necessary connection between them, although we believe there is one.¹¹

MacNabb is aware that there must be some relation among objects since "no quality of any object which we consider a cause can be the origin of the idea. For there is no discoverable quality which is common to all objects, but all objects, we suppose, have their effects."¹² In that sense we arrive to the notion of necessary connection which is the most important element among the priority in time (the cause prior to the effect) and contiguity in time and place:

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¹⁰ Hume.
¹¹ Quinton.
¹² MacNabb, p. 51.
Now plainly it is the necessary connection which is the essential element in the idea. It is the necessary connection between a cause and its effect which justifies us in inferring from the one to the other, and whose presence we express by saying that given (a) the cause, the effect (b) must attend it.\(^{13}\)

Costa also observes this dependence when analysing contiguity which explicitly manifests itself in opposition to the necessary connection:

I have analysed contiguity at length for it is one of those relations which, according to Hume, enter into our idea of cause and effect, although it is not one of its essentially constitutive elements. The element which does not manifest itself through an analysis of perceptual relations nor of the qualities of related objects is the necessary connection, whose "pattern" is an impression of reflection. This is the only factual necessity Hume explicitly admits.\(^{2}\)

Trying to get to the source of the necessary connection David Hume mentions the philosophers who seek the origin of power in the Deity. It is the Supreme Being himself who by "a particular volition" causes every event in the nature, like moving the second billiard-ball "being determined to this operation by the impulse of the first ball, in consequence of those general laws which he has laid down to himself in the government of the universe."\(^{3}\) To put it at its simplest: "the true and direct principle of every effect is not any power or force in nature, but a volition of the Supreme Being, who wills that such particular objects should for ever be conjoined with each other."\(^{4}\)

This thinking seems not to satisfy Hume in his research on a necessary connection. It appears that this force or power by which the cause operates reveals itself in only one event following another. However, what can be stated with certainty is that "this idea of necessary connection among events arises from a number of similar instances which occur of the constant conjunction of these events; nor can that idea ever be suggested by any one of these instances, surveyed in all possible lights and positions."\(^{5}\) On necessary connection Hume also writes: "This connection, therefore, which we feel in the mind, this customary transition of the imagination from one object to its usual attendant, is the sentiment or impression from which we form the idea of power or necessary connection. Nothing farther is in the case."\(^{6}\) To treat this problem in detail, it is of interest to provide a commentary of the translator of Kant's *Critique of Pure Reason*. Kemp Smith whom Costa agrees with "does not accept that causality in Hume is but invariable sequence and remarks that it is the observer who establishes a necessary connection between cause and effect."\(^{7}\)

Anthony Quinton brings to light Hume's question whether we can think that "each particular case must have the effect we take it to have." By referring to this issue, Quinton opens the problem whether cause and effect are "distinct existences" and how the relation between them occurs. Namely, he stresses the self-evidence of the general principle which derives from a number of provable instances taken from experience.

The inference from the limited conjunction that we have observed to the universal conjunction that our causal belief embodies assumes that the unobserved resembles the observed or, more vaguely, that

\(^{13}\) Ibidem.
\(^{2}\) Costa, p. 325.
\(^{3}\) Hume.
\(^{4}\) Ibidem.
\(^{5}\) Hume.
\(^{6}\) Ibidem.
\(^{7}\) Costa, p. 324.
nature is uniform. But this, like the general principle, is neither self-evident nor provable. The unobserved is 'distinct' from the observed; its taking any form whatever is compatible with the observed being the way it is. Nor can it be established inductively on the evidence that hitherto, at any rate, the unobserved has largely resembled the observed. To do that would be to argue in a circle, to assume its validity in its own proof.\textsuperscript{8}

This, as Quinton observes, starts the discussion of probability as a distinction between probable conclusions based on insufficient evidence and that based on contrary evidence.

What can also be of notice is the question of "what alteration has happened to give rise to this new idea of connection."\textsuperscript{2} Hume provides an answer that one can only feel the 'events to be connected in the imagination, and can readily foretell the existence of one from the appearance of the other."\textsuperscript{3} We can read in An Enquiry:

> When we say, therefore, that one object is connected with another, we mean only that they have acquired a connection in our thought, and give rise to this inference, by which they become proofs of each other's existence: A conclusion which is somewhat extraordinary, but which seems founded on sufficient evidence. Nor will its evidence be weakened by any general diffidence of the understanding, or sceptical suspicion concerning every conclusion which is new and extraordinary.\textsuperscript{4}

Since the imagination does not constitute the main topic of this paper, let us not concentrate greatly on this notion. However, it is worth mentioning what position in establishing ideas imagination takes. J. Lenz observes the importance of the imagination when talking about causal inference when establishing ideas. He is convinced that "...the imagination, following definite laws, must, under certain circumstances, give rise to such inferences."\textsuperscript{5} What is worth mentioning here is that Hume differentiates between imagination and fancy. "Fancy is the imagination inasmuch as it is free to combine simple ideas, changing the order in which the original impressions were given, 'compounding, transposing, augmenting or diminishing the materials afforded us by the senses and experience."\textsuperscript{6} The other sense in which Hume uses the term imagination is that it

> may also submit to laws which warrant the objectivity of our knowledge, since those laws, being common to human nature, govern the thoughts of every man and give him a view of the world which we all accept as valid (...) the imagination is a faculty which does not operate arbitrarily but associates ideas in a specific way, according to natural laws.\textsuperscript{7}

Costa adds that Hume "tells us that the imagination associates contiguous ideas, resembling ideas and ideas considered as cause and effect."\textsuperscript{8}

Regarding the operation of habits of causal inference Ralph W. Church writes that "inferences are made concerning irregularities in events."\textsuperscript{9} However, they should not be explained "as the work of repetition in habits of imagination."\textsuperscript{10} Here, Church directs the attention to the probability that is involved in all inferences. He writes about the nature of probable inferences in the chapter devoted to "Causal Inferences":

\textsuperscript{8} Quinton
\textsuperscript{2} Hume.
\textsuperscript{3} Ibidem.
\textsuperscript{4} Ibidem.
\textsuperscript{5} Costa, p. 325.
\textsuperscript{6} Hume, p. 323-4.
\textsuperscript{7} Ibidem, p. 324.
\textsuperscript{8} Ibidem.
\textsuperscript{9} Church, p. 119.
\textsuperscript{10} Ibidem, p. 119-120.
Since these probable inferences are not matters of mnemonic repetition associated with present impressions, they arise from habit not directly but in an "oblique manner." This results from a conflict among associations corresponding to the contrariety in events. All causal inference is controlled by the habit of referring past experience into future. But when past experiences "of a contrary nature" are recalled, the force of that habit is not united on any one object, but is diffused over the variety of images present.\textsuperscript{11}

To sum up, we can say, after Church, that causal inference must be experiential in nature. Therefore, Hume explains the power of causality as a psychological aspect of man. While Hume "proceeds to advance a general description of the experience that is causal inference"\textsuperscript{12} this explains how important experience in establishing our ideas is. The necessary connection, on the other hand, between causes and effects constitutes the foundation of the inference. Respectively, MacNabb writes: "The necessary connexion is that relation between a cause and its effects which enables us to infer the one from the other, and makes us feel justified in doing so."\textsuperscript{13}

However, looking at causality and daily life, social psychologists studying the phenomenon have concluded that, in our daily lives, our conscious will "plays a causal role only [five percent] or so of the time."\textsuperscript{14} Little wonder that the growing popularity of cell phones has made driving generally more dangerous, even for experienced drivers, as we can read in the online journal The Situationist.

**Zombies and qualia**

We will now undertake the issue concerning the zombie phenomenon. Zombies resemble human beings in all physical respects apart from the fact that they lack conscious experience.

Not only do we have Hollywood zombies (taken from American cinema) who are fond of human brain, voodoo zombies from Haiti who lack free will and soul but also there are philosophical or mental zombies. These appear in philosophical articles on consciousness and are defined to act behaviorally and physically identical to humans, however, they do not reveal conscious experience. It is of course the third type of zombies that we are interested in right now, leaving all other types to the scope of cinematography and fiction. Our mental zombie will serve us in this chapter as a guinea-pig for the argument of conscious experience.

According to physicalists all physical events, including human behaviour, are explicable in terms of physical processes. Every physical effect has a physical cause. The physical world is "closed under causation." What is more, consciousness is causally inert by-product and has no effects on the physical world; it means that it is a matter of physical processes–human beings are simply "conscious automata." From this view we may think of a "zombie world" where the whole world undergoes physical processes, closed under causation but lacking conscious experiences. However, physicalists hold that that the mental facts supervene on the physical facts,

\textsuperscript{11} Ibidem, p. 120.
\textsuperscript{12} Ibidem, p. 74.
\textsuperscript{13} MacNabb, p. 66.
therefore zombie worlds are not possible.\textsuperscript{15} We will return to the zombie issue later, after discussing the problem of qualia.

Another aspect which should be raised here concerns qualia. Qualia are those properties of experiences or of whole persons by which we are able to classify experiences according to “what they are like.” Chalmers explains:

We can say that a being is conscious if there is something it is like to be that being, to use a phrase made famous by Thomas Nagel. Similarly, a mental state is conscious if there is something it is like to be in that mental state. To put it another way, we can say that a mental state is conscious if it has a qualitative feel—an associated quality of experience. These qualitative feels are also known as phenomenal qualities, or qualia for short. The problem of explaining these phenomenal qualities is just the problem of explaining consciousness. This is the really hard part of the mind-body problem.\textsuperscript{2}

Michael Tye explicates the term by bringing to the discussion a difference between visual experiences. This difference lies in “phenomenal character” of perceived objects, of which we are aware that they form our experience. He gives a clear definition of the term but at the same time mentions that it is not the only existent one: “qualia are intrinsic, consciously accessible, non-representational features of sense-data and other non-physical phenomenal objects that are responsible for their phenomenal character”.\textsuperscript{3}

I would like to support the idea of the logical possibility of existence of the zombie world. On the other hand, I deny that the actual world is physically closed under causation. Therefore, I will present some arguments against the view that there is an \textit{a priori} entailment from physical facts to mental facts. In the part concerned with the qualia I would like to stress the linguistic view of qualia. My intention is not to present different forms of qualia but show clearly that verbal images play an important role in phenomenological aspects of cognition. This is the reason of combining in the first chapter the theories on sign, meaning and sense. In this chapter, I will try to link the former concepts related to language with the conscious experience. To put it in other way, the instruments of language (meaning, sign) are combined with the elements of conscious experience (qualia, causality).

In order to narrow the investigation down to our scope of interest, let me underline the question on thoughts and qualia. When discussing qualia we have to ask ourselves the whereabouts of qualia within mental states. In other words, which mental states possess qualia? We can find qualia in perceptual experiences, those which refer to our senses, like hearing music, tasting sugar, seeing colours, etc; there are bodily sensations, like feeling pain, being hungry, however, we should not confuse them with felt reactions or emotions – feeling love, hatred, lust or fear. We could mention some other moods to it but what is of interest to us does not really concern the above mentioned states. The issue is whether qualia are always present in thoughts and can thoughts also function without referring to images.

Here let us recall words of Peirce who says that “thought is not necessarily connected with a brain. It appears in the work of bees, of crystals, and throughout the purely physical world.”\textsuperscript{4} We could say that thoughts function without referring to images which are part of the brain process. It seems that if in insects appeared a


\textsuperscript{2} Chalmers, \textit{The Conscious Mind}, p. 4.


\textsuperscript{4} Morris, \textit{Signs, Language and Behavior}, p. 289.
thought it would only be a particular impulse not accompanied by any qualia (below Searle explains how thoughts and qualia are bounded). It is doubtful, on the other hand, that an insect could form a conscious experience based on that sole thought or a series of thoughts. Because of lack of a more developed nervous system, they would not be able to react consciously. However, as later will be said, collective consciousness provides a unique answer to this dilemma which is worth to ponder upon.

John Searle remarks that for some people qualia are characteristic only of perceptual experiences, such as seeing colours and having sensations such as pains, but there is no qualitative character to thinking. He refuses this view on qualia and says that “even conscious thinking has a qualitative feel to it.”\(^5\) Supporting his argument, Searle gives us mathematical example of adding two plus two. There is something it is like to think that two plus two equals four, he says. There is no way to describe it except by saying that it is the character of thinking consciously “two plus two equals four.” Again, in his example we can see how he stresses this moment “it is like to be” when thinking consciously.\(^6\)

But if you believe there is no qualitative character to thinking that, then try to think the same thought in a language you do not know well. If I think in French "deux et deux fait quatre," I find that it feels quite different. Or try thinking, more painfully, “two plus two equals one hundred eighty-seven.” Once again I think you will agree that these conscious thoughts have different characters. However, the point must be trivial; that is, whether or not conscious thoughts are qualia must follow from our definition of qualia. As I am using the term, thoughts definitely are qualia.\(^7\)

In his understanding of qualia, thoughts have this feature “it is like” which characterizes conscious experience. “It is like” feature distinguishes conscious from nonconscious objects. Thoughts being qualia prove that their presence can bring in the question of “how it feels like to be.” This question marks an important attribute which is a conscious thought. An interesting problem in our discussion seems to provide “inverted” qualia. The hypothesis of inverted qualia says that it is possible for some people to experience colours as phenomenally inverted. For example, I can see red but you might see green and vice-versa. I have a visual experience which represents red but your experience tells you that you have green. Therefore, Michael Tye says, we accustom a difference in our patterns of causal interactions with external things and thereby a functional difference.\(^8\)

Galen Strawson has claimed that “there are such things as the experience of understanding a sentence, the experience of suddenly thinking of something, of suddenly remembering something, and so on. Moreover, in his view, experiences of these sorts are not reducible to associated sensory experiences and/or images. Strawson’s position here seems to be that thought-experience is a distinctive experience in its own right.”\(^9\) Michael Tye has an answer to that:

One response is to claim that the phenomenal aspects of understanding derive largely from linguistic (or verbal) images, which have the phonological and syntactic structure of items in the subject’s native

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\(^5\) Searle, “Consciousness.”

\(^6\) Thomas Nagel wrote an article “What it is like to be a bat?” (1974) in which he pointed that if bats are conscious then there is something that “it is like” to be a bat. This feature “it is like to be somebody” makes a difference between other elements of the world which are nonconscious, like a book or toys.

\(^7\) Searle, “Consciousness.”

\(^8\) Ibidem.

\(^9\) Tye.
language. These images frequently even come complete with details of stress and intonation. As we read, it is sometimes phenomenally as if we are speaking to ourselves. (Likewise when we consciously think about something without reading). We often "hear" an inner voice. Depending upon the content of the passage, we may also undergo a variety of emotions and feelings. We may feel tense, bored, excited, uneasy, angry. Once all these reactions are removed, together with the images of an inner voice and the visual sensations produced by reading, some would say (myself included) that no phenomenology remains.

In any event, images and sensations of the above sorts are not always present in thought. They are not essential to thought. Consider, for example, the thoughts involved in everyday visual recognition (or the thoughts of creatures without a natural language).

We can read that some qualia do not have their representation in thoughts. Sometimes they are not needed because of the attention of the mind on a particular thing which is more important at the time than the qualia. For example, when diving in Adriatic Sea, we might observe a school of fish underwater. We are aware that they swim gently in water but we do not pay attention to their skin colour or the temperature of the water. However, we may switch our attention and perceive those qualities. Later on, discussing meaning and conscious experience I will develop this argument.

An interesting proposal is suggested by Tye in the above quotation. All the time during our life we encounter an inner voice which plays an important role in guiding our “bodies” into specific actions. Sometimes we forget about it and are distracted by other emotions or visual/auditory perceptions. Some do not pay attention to inner voice but experience a constant emotional see-saw. However, as Tye proposes, hypothetically removing all impressions of brain’s perception and senses together with images of our inner voice would suggest vanishing of the aspect of phenomenological understanding. We would be as if turned off, perhaps like a food processor in the kitchen. Another important question appears here: what is the status of inner voice within conscious experience and where could we localize it? The answer to this question might be found in the below example on conscious absence.

This state of the erasure of qualia I would position even below the zombie world. Zombies respond to outward world and are able to interact in their own way. Without our conscious actions we are bound to remain in a state of a plant. We could ask now what the difference between this state and termination of all the functions of the body is. In order to picture this issue we provided some thought experiments which I hope have brought us closer to the peculiar state of the conscious absence. This way helped us to localize or manoeuvre on the trace of mental images.

What we have described above in a theoretical way, neuroanatomist Jill Bolte Taylor experienced on herself in praxis. She had a massive stroke in the effect of which her body was not able to function and the brain could not comprehend the reality in an everyday way. She describes her experience as presented in one of the TED.com lectures.

J. B. Taylor example shows the loss of human’s motor and conscious function. We have quoted the definition of qualia (Chalmers) which says that a being is conscious if there is something it is like to be that being. Therefore, a mental state is conscious if it has a qualitative feel, in other words, phenomenal qualities or qualia. Taylor experienced a loss of those qualitative feels; she was not conscious of her body and even of the outward reality. What is more, her inner voice or chatter (as she calls it) ceased to talk to her. She drifted away, encompassing a certain flow energy fluctuating around her body. She thought she felt blissfulness and peace of all the

10 Ibidem.
senses and thoughts. What could we take as a hint for our problem of conscious experience apart from the fact that hypothetical loss of qualia happened to Taylor? Does this example show us that physicalism is right and consciousness does not exist without physical experiences? We oscillate around mind-body problem whose answer is not an easy one.

Non-conscious utterances

We come back to the issue of zombies in order to analyze conscious experience. Let us look now into a specific example. One of the characters, Colonel Kilgore, from Coppoli’s *Apocalypse Now* says that he loves the smell of napalm in the morning. He is stating the fact proving in the same time that his experience of smelling napalm is conscious. He recognizes the data (the smell of napalm) and consciously gives an opinion about it (he loves it). Let us suppose now that there is a zombie-twin of his. This zombie judges the morning in exactly the same way, gives exactly the same utterance. How should we consider the zombie’s utterance to be like? He speaks about the same experience but he cannot be conscious about what he is saying—he is a zombie. Maybe he is mistaken or is he lying?

Another example drives us to similar conclusion. Let us imagine a zombie world which is an exact physical duplicate of our world. In this world, all philosophers have their zombie twins. A zombie philosopher gives a lecture on philosophical zombies for example. Whatever zombie-professor says sounds the same convincing to his students as if an ordinary philosopher would say. However, the problem may arise whenever questions from students appear. Here let us concentrate on the meaningful production of the utterances. When thinking about it, let us use the direction from *thought* to *word*. To answer the questions zombie-professor does not have to use his brains and consciously process the question in order to produce meaningful answer. He does not have to be conscious of his answer either just because from his answer other questions may follow. Therefore, the utterances of these zombie-twin philosophers should not be considered as meaningful to them because zombies lack the conscious factor. They can produce meaningful sentences but their meaning is restricted only to the audience’s perception. Zombies’ interpretation of words stays on the level of producing sentences which acquire their meaning only in receivers’ minds. Here lies the difference between a professor and his zombie-twin.

To support the explanation of the zombie argument in the context of meaningfulness let me bring in the Chinese room example.

The heart of the argument is an imagined human simulation of a computer, similar to Turing's Paper Machine. The human in the Chinese Room follows English instructions for manipulating Chinese symbols, where a computer “follows” a program written in a computing language. The human produces the appearance of understanding Chinese by following the symbol manipulating instructions, but does not thereby come to understand Chinese. Since a computer just does what the human does — manipulate symbols on the basis of their syntax alone - no computer, merely by following a program, comes to genuinely understand Chinese.\(^{12}\)

Here we observe that a human being acts like a zombie. He can rightly put the puzzles which are the Chinese symbols in a correct syntactical order. However, he is not able to understand what the symbols or the whole sentences mean. He only performs meaningful actions based on outward commands. Therefore, as Searle

argues, the example of the Chinese room proves the failure of computers to understand the meaning through words. Searle holds that a computer is like this man; it can respond only to the explicit form of the strings of symbols and not to the meaning of the symbols.

Minds on the other hand have states with meaning, mental contents. We associate meanings with the words or signs in language. We respond to signs because of their meaning, not just their physical appearance. In short, we understand. But, and according to Searle this is the key point, "Syntax is not by itself sufficient for, nor constitutive of, semantics." So although computers may be able to manipulate syntax to produce appropriate responses to natural language input, they do not understand the sentences they receive or output, for they cannot associate meanings with the words.13

Words and grammar are not enough for zombies or computers to understand what the meaning of an utterance is. Not only their understanding of words but also their consciousness remains undetected. With this thought comes another point made by Searle. On the other hand, he holds that brains are machines and they can think. At this point, we approach a concept called “Strong Artificial Intelligence”.

Strong AI is the view that suitably programmed computers (or the programs themselves) can understand natural language and actually have other mental capabilities similar to the humans whose abilities they mimic. According to Strong AI, a computer may play chess intelligently, make a clever move, or understand language. By contrast, "weak AI" is the view that computers are merely useful in psychology, linguistics, and other areas, in part because they can simulate mental abilities. But weak AI makes no claim that computers actually understand or are intelligent.14

Strong AI could be possible if there were phenomenal qualities which constitute a mental state. As previously has been said, a mental state is conscious if it has a qualitative feel, qualia. Strong AI must demonstrate that there is something it is like to be that being in order to be conscious. Weak AI does not have to comply with this requirement. They are computers which serve as useful tools and stimulate intelligent processes. However, they cannot understand utterances and be conscious of themselves. Basing on this view Searle makes a conclusion saying that “syntax by itself is neither constitutive of, nor sufficient for, semantic content.”15 Computer functionalism bases its premises on the strong AI approach. It says that being in a mental state is just being in a certain state of a computer program. The mind is construed as a computer program running in the network of the brain.

A recent example comes from the Internet. Google Company launched a project aimed at developing artificial intelligence. One of the major steps is Google Brain project. The interface of Google Brain is similar to Google search engine except that we can ask questions and conduct a discussion with the brain. It seems to reply intelligently and is able to get the meaning from complex sentences. However, we cannot attribute a conscious element to it. It might be a correct step toward using Internet database to answer Internet users’ questions and thus learn human reasoning. Learning a language is most efficient when being put into a group of people speaking it. Compared with it, Google Brain equipped with specific software could imitate human learning. The question remains whether it is able to achieve the state of being conscious of itself.

13 ibidem.
14 Ibidem.
15 Ibidem.
The Chinese Gym argument gives us a similar answer. Ned Block in “Troubles with Functionalism” envisions the entire population of China implementing the functions of neurons in the brain. The interesting issue for us is whether it is plausible to hold that the population of China might collectively feel a certain mental state, such as pain, while no individual member of the population experiences any pain and whether the whole nation is conscious of this mental state.

We can suppose that every Chinese citizen would be given a call-list of phone numbers, and at a preset time on implementation day, designated “input” citizens would initiate the process by calling those on their call-list. When any citizen's phone rang, he or she would then phone those on his or her list, who would in turn contact yet others. No phone message need be exchanged; all that is required is the pattern of calling. The call-lists would be constructed in such a way that the patterns of calls implemented the same patterns of activation that occur in someone's brain when that person is in a mental state — pain, for example. The phone calls play the same functional role as neurons causing one another to fire. Block was primarily interested in qualia, and in particular, whether it is plausible to hold that the population of China might collectively be in pain, while no individual member of the population experienced any pain.

There is not any message exchanged between the people. What is important are the pattern of calling and its implementation of the same patterns of activation which govern the person’s mental state of brain. Does the whole nation feel something providing none of the individuals does not feel and is not conscious of the mental state? Once again, we have to answer the qualia question: a mental state is conscious if it has a qualitative feel which makes that there is something it is like to be that being.

If considering each individual within the whole nation we would not be able to say that every one of them has a qualitative feel. None of them feels something nor is conscious of a particular mental state. However, we cannot be sure whether the whole nation experiences a particular phenomenon. One element in this jigsaw cannot throw a general non-conscious opinion on the whole nation. The qualitative feel could be achieved on the condition that a group of individuals connect together and execute a certain pattern. This might result in forming a particular mental state called collective consciousness. Taking into account all of the rest examples of zombies, weak AI and

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16 http://www.youtube.com/watch?v=UC5DS0w9mJ4
17 Cole, David.
GoogleBrain we have no choice but to put them under the meaningless and non-conscious category.

**Saussure approach to language**

Considering consciousness we ought to take a look into what the words’ expression is. Whether it is just an abstraction or thinking process is now of secondary importance here. Instead, let’s try to investigate into the conscious features of mind approaching the matter from the language perspective. As previously Chalmers observed conscious experience is *reportable*, it is accompanied by awareness: “If I am having an experience, I can talk about the fact that I am having it”\(^\text{18}\) Our awareness “tells” us that we experience certain phenomena. We experience not only the phenomenon itself but also the fact that we are informed about the experience of the phenomenon. It is like as if our control bridge told us what is happening around us. What is more, we can be aware of a fact (as previously was shown in “Definition of consciousness”) without any particular associated phenomenal experience.

From the psychological point of view we may consider (as Saussure notices) our thoughts as an indistinct and amorphous mass. However, philosophers and linguists incorporate signs to distinguish between the ideas. There are not pre-established ideas; nothing is distinct before the appearance of the language (“Il n’y a pas d’idées préétablies, et rien n’est distinct avant l’apparition de la langue”\(^\text{19}\)). This claim compels us to regard the subject of consciousness within the scope of language. Let us see how Saussure approaches thoughts and sounds in his linguistic theory.

Le rôle caractéristique de la langue vis-à-vis de la pensée n’est pas de créer un moyen phonique matériel pour l’expression des idées, mais de servir d’intermédiaire entre la pensée et le son, dans des conditions telles que leur union aboutit nécessairement à des délimitations réciproques d’unités. La pensée, chaotique de sa nature, est forcée de se préciser en se décomposant. Il n’y a donc ni matérialisation des pensée, ni spiritualisation des sons, mais il s’agit de se fait en quelque sort mystérieux, que la « pensée-son » implique des divisions et que la langue élabore ses unités en se constituant entre deux masses amorphes.\(^\text{20}\)

We see that the language should function as a means between the thought and sound thus defining their unity. We can also read that the thought and sound play the role of the constituents of language which develops this unity of two amorphous masses.

Saussure considers the language as a form and not a substance (“la langue est une forme et non une substance”\(^\text{21}\)). The language possesses complex terms and thus can be formulated in terms of mathematics using a function. If so we find ourselves no longer among indistinct and amorphous masses of psychology but encroach toward a logical path of mathematics (“Autrement dit, on peut exprimer le rapport Nacht: Nächte par une formule algébrique a/b, où a et b ne sont pas des termes simples, mais résultent chacun d’un ensemble de rapports. La langue est pour ainsi dire une algèbre qui n’aurait que des termes complexes »\(^\text{22}\)).

\(^{19}\) Saussure, *Cours de Linguistique Générale*, p. 155.
\(^{20}\) Saussure, *Cours de Linguistique Générale*, p. 156.
\(^{21}\) Saussure, p. 169.
\(^{22}\) Saussure, p. 168.
Summing up Saussure’s view on language we may state that the language is perceived as a series of related subdivisions on the indefinite and indeterminate map of vague ideas and of sounds (« Nous pouvons donc représenter le fait linguistique dans son ensemble, c’est-à-dire la langue, comme une série de subdivisions contiguës dessinées à la fois sur le plan indéfini des idées confuses (A) et sur celui non moins indéterminé des sons (B) »

23). We see that although we talk about indefinite maps of seemingly vague ideas and sounds we can define the language, analyse its constituents and present them in order. Like the brain, the language must work according to certain rules and being a complex system it is at the same time well organized. The essential question is how the order of this complex system arises (the same query concerning the brain is put by S. J. Schmidt

24).

The convincing point of how should consciousness be analysed shows Ernst Florey. Brain’s processes like learning, remembering and perception function without consciousness if they are treated as brain’s performances. On the other hand, consciousness cannot be possible without the brain processes ("Bewußtseinstätigkeiten dagegen sind ohne Gehirntätigkeiten nicht möglich" 23). This assertion brings us closer to the point where we treat the language as the key to open the door of brain processes. Thus, this enables us to regard further learning, perception or memory as related to conscious experience.

Examining the language let us consider its synchronic and diachronic aspect. Synchrony aims at a perspective of the speaking subjects; its method consists of recording people’s testimonies. In order to know to what extend a thing real is, one should treat the reality according to the subject’s awareness. It is the only reality for the speaking people. On the other hand, the diachronic aspect is for the linguist a series of events which modify and it is not something to be recorded, like in the synchronic aspect. We recognize two perspectives in the diachronic field: prospective—which follows the course of time and shows the language from historical point as it occurred through time; retrospective—which backs up the prospective part and divides the method.

La synchronie ne connaît qu’une perspective, celle des sujets parlants, et toute sa méthode consiste à recueillir leur témoignage ; pour savoir dans quelle mesure une chose est une réalité, il faudra et il suffira de rechercher dans quelle mesure elle existe pour la conscience des sujets. La linguistique diachronique, au contraire, doit distinguer deux perspectives, l’une, prospective, qui suit le cours du temps l’autre rétrospective, qui le remonte : d’où un dédoublement de la méthode dont il sera question dans la cinquième partie.

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Synchronic is everything which relates to the static aspect of science, says Saussure; diachronic relates to evolution. Both are used to describe a certain state in which language found itself [un état de langue] (synchronic aspect) and a certain phase of evolution [une phase d’évolution] (diachronic).

The synchronic linguistics form a system based on logic and psychological terms which coexist and are perceived by the shared beliefs or, shall we say, collective consciousness [“La linguistique synchronique s’occupera des rapports logiques et psychologiques reliant des termes coexistant et formant système, tells qu’ils sont

23 Saussure, p. 155-6.
3 Schmidt, p. 15.
4 Saussure, p. 128.
aperçus par la même conscience collective”[5]. The diachronic linguistics bases on the successive terms which are not perceived by the collective consciousness; it substitutes one with another without forming a system [“La linguistique diachronique étudiera au contraire les rapports reliant des termes successifs non aperçus par une même conscience collective, et qui se substituent les uns aux autres sans former système entre eux”[6]].

When considering a word within the diachronic structure we should admit its changeable core. Before it is used, the word circulates among a certain number of people. Saussure gives example of German conjugation of the verb “to be”. Till 16 century people conjugated “ich was, wir waren” compared to today’s “ich war, wir waren”. How to explain this substitution of “was” with “war”? May it be that some people were influenced by “waren” and thus created an analogical form of “war.” This form was repeated many times until it became a fact of language. It must have been accepted by the majority of people. Of course, not every word went through this altering way. However, we can say that the evolution of a word is preceded by a multitude of similar facts from the area of words.

Saussure emphasises two characteristic aspects of all innovations: the one in which it circulates among the individuals and the second aspect in which it becomes a fact of language–identical from outside and adopted by the majority. Thomas A. Sebeok complements our discussion on synchronic and diachronic aspects. Being of a sign is analysed in its enduring status in a synchronic sense while this concerns its structure. “A structural definition of the sign is analytic, intrinsic, and static; it utilizes types of associations inherent, in fact or virtually, in the architecture of the sign itself.”[3] When talking about diachronic approach we have to consider the question of becoming and history which represent cumulative changes in the longitudinal time section—writes Sebeok.

These are of two rather different sorts: those having to do with the evolution of signs in phylogeny, in a word, their ritualization (Huxley 1966); and those having to do with their elaboration in ontogeny. Study of the former requires the collaboration of ethology with semiotics; research of the latter belongs to the advancing field of psycholinguistics.[4]

Sebeok sees synchronic aspect of signs in terms of their architecture and structure; diachronic corresponds with the historical development of a tribe or racial group. He mentions ontogeny as the analysis of the origin and development of an individual organism from embryo to adult. We can notice that the differentiation between synchronic and diachronic revolves around the opposition being and becoming. Once again it should be said that being of a sign refers to its static analysis of the structure while becoming presents the topic of sign within the history and its changes.

What is worth to turn attention on is also the language distinction that Saussure writes about in Cours de Linguistique Générale. The study of language consists of two parts: one which is social in its core and independent from the individual–this part is solely psychic; the second part is psycho-physic and concerns the individual part of the language, the word and its phonation. The first is directed at the language [la langue] while the second studies the word with the utterance of the speech sounds [la parole y compris la phonation]. The two parts work closely together and one assumes the other being in a constant cooperation. What is more, the word makes the

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5 Saussure, p. 140.
6 Saussure, p. 140.
3 Sebeok, Signs: An Introduction to Semiotics, p. 39.
4 Sebeok, p. 39.
language evolve [c’est la parole qui fait évoluer la langue] what gives us the conviction of their interdependency.

Saussure talks about the existence of the language in the mind of individuals. The language is present in the collective, as the form of the sum of footprints deposited in each human brain. It is like a dictionary where all exactly the same copies are shared among the individuals.

La langue existe dans la collectivité sous la forme d’une somme d’empreintes déposées dans chaque cerveau, à peu près comme un dictionnaire dont tous les exemplaires, identiques, seraient répartis entre les individus. [...] C’est donc quelque chose qui est dans chacun d’eux, tout en étant commun à tous et placé en dehors de la volonté des dépositaires. Ce mode d’existence de la langue peut être représenté par la formule :

\[ 1 + 1 + 1 + 1 \ldots = 1 \text{ (modèle collectif).} \]

The language exists in people; it is present in each one of them and is ready to be used at will. Saussure has in mind a mode of existence of the language which shows its collective picture by counting each individual who possesses the same language’s “footprint” in mind. Owning this “dictionary” enables people to take part in linguistic interaction that is using the language. Because of possessing the same dictionary they are limited to thinking within the same frame of vocabulary. The set of words found in the human dictionary corresponds to their consciousness (about the collective consciousness we speak elsewhere in a broader sense). How ought we to understand the collective consciousness that hints here in the form of language? The amount of words in the mind’s dictionary may influence human perception and thus human consciousness. Least to mention the aspect of mind-control that appeared in Orwell’s 1984. In the book, the enslaved society was presented with once in a while published dictionary of the mandatory to learn language, called new-speak. With the newer versions of the dictionary there appeared less and less words to be used by the people. Decreasing the amount of vocabulary helped the authorities to control the minds of the population and thus to curb the potential uprisings. The new dictionaries assisted in slowing down peoples’ thinking processes and prevented them from being conscious of authorities’ manipulation.

The word itself plays a chief role in shaping people’s minds. It is a direct and outward tool in human expression. A word is the sum of what people say. It includes the people’s grouping of words which is dependent on their will and the acts of phonation which are necessary to perform the grouping. We cannot talk about the collective when considering the word alone. We regard the word as individual and instant.

De quelle manière la parole est-elle présente dans cette même collectivité ? Elle est la somme de ce que les gens disent, et elle comprend : a) des combinaisons individuelles, dépendant de la volonté de ceux qui parlent, b) des actes de phonation également volontaires, nécessaires pour l’exécution de ces combinaisons.

Il n’y a donc rien de collectif dans la parole ; les manifestations en sont individuelles et momentanées. Ici il n’y a rien de plus que la somme des cas particuliers selon la formule :

\[ (1 + 1’ + 1’’ + 1’’’ \ldots). \]

5 Saussure, p. 38.
6 Saussure, p. 38.
Taking things all together, we can say that the language does not exist in its entirety but in the group. The group consists of everyone who possesses the grammatical system plus vocabulary and who is able to use it in order to communicate. People acquire their first language passively, that is without being aware of the process of learning. However, when teaching we have to be aware of the language’s grammar system. Let us repeat that if we gather the sum of the verbal images stored in all individuals, we can talk about the social connection which constitutes the language. Each individual or rather the group of individuals own a virtual grammatical system in the brain where the words reside. Therefore, says Saussure, the language is not complete until it is regarded as within the group [la langue n’est complète dans aucun, elle n’existe parfaitement que dans la masse7].

**Collective consciousness**

In the previous section on the language, Saussure talking about the synchronic linguistics has touched upon the perception of the collective beliefs. He pointed out that the synchronic aspect of language forms a system based on logic and psychological terms which coexist and are perceived by the collective consciousness [la conscience collective]2. What Saussure also adds is that the language exists in the group. As we have already said in the previous section, the group is the collection of people using the same grammar system together with sets of vocabulary. The language is not complete in one of us but its perfection ought to be found only in the group.

Taking Saussure’s reflection on the language and collective beliefs let us in this section consider what the present status of collective consciousness is. Collective consciousness, as Robert Kenny defines the term, is a mode of awareness that emerges at the first transpersonal stage of consciousness, when our identities expand beyond our egos. A crucial capacity that accompanies this awareness is the ability to intuitively sense and work with the interactions between our and others’ energy fields, physically, emotionally, mentally and spiritually.3 Further on, he also presents the concept in this way:

> [Collective consciousness -] A mode of awareness, in which we directly experience, through an intuitive felt-sense, our union with the interconnected wholeness of life, and recognize ourselves in others. Our identity extends beyond our individual boundary and embraces the collective, through a free and conscious act of identification, rather than through definition by convention or external authority.4

We have to bear in mind that this mode of awareness resides in an individual and only through individuals’ interaction on the mental level that we can speak of a collective consciousness. If individuals achieve this conscious state of being interdependent and forming a whole, they could better understand the states of their psyche and analyze what consciousness is.

There are no developed theories on collective consciousness so far. In this thesis we shall try not to develop one but only suggest a possibility of its existence derived

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7 Saussure, p. 30.
8 Saussure, p. 140.

4 Kenny.
form the ontological perspective. Let us give some examples of a collective adaptation which exists in nature in order for us to trace what can be called “a source” of a collective consciousness. Ants have the ability to communicate with each other in order to surpass obstacles or create environment for their own purpose. Schools of fish can escape their predators because each individual fish can be a lookout for other compatriots. It is like having a thousand eyes. They exchange their information and react together in case of danger. “Social behavior helps individual species members adapt to their environment, especially by providing individuals with more information than their own senses can gather.”

There is a point made in *Swarm Intelligence* just at the beginning of the book. It is well known that human cognition is found and studied in individuals. When analyzing those processes we focus on a person’s predisposition to comprehend and evaluate information, and perform other functions. However, what one might overlook is that people tend to socialize in groups. This leads to another conclusion regarding analyzing human intelligence, and what is more human consciousness. The early artificial intelligence (AI) researchers modeled an AI program based on single, disconnected individual’s cognition. This seems to be a proper *modus operandi* when it comes to cognition. On the other hand, the authors of *Swarm Intelligence* say that modeling human intelligence requires seeing interaction between individuals, placing them in a group context. What we can draw from this argument is that consciousness may be regarded in a perspective of a group or collective of individuals.

In this regard it will be made clear that we do not mean the kinds of interaction typically seen in multiagent systems, where autonomous subroutines perform specialized functions. Agent subroutines may pass information back and forth, but subroutines are not changed as a result of the interaction, as people are. In real social interaction, information is exchanged, but also something else, perhaps more important: individuals exchange rules, tips, and beliefs about how to process the information. Thus a social interaction typically results in a change in the thinking processes—not just the contents—of the participants.

Here we can see the essential point being made. We may exchange information between ourselves and thus performing functions. More than this happens in social interaction: we also tend to exchange different thoughts that result in beliefs and making us conscious of certain issues, like for example processing information or, simply, being conscious of processing information. It could result in a change of the participants’ thinking and of participants’ self awareness. In short, human interaction does not solely concentrate on information exchange but also on becoming aware of issues not fully recognized before or redirecting thoughts into other areas; as the authors of *Swarm Intelligence* put it: “minds arise from interaction with other minds.”

In previous sections I have given a hint of how collective consciousness could be understood from the ontological perspective. I used Jacques Derrida’s concept of absence and difference in order to redirect the perspective of consciousness, language and sign. Let us just bear in mind the lack of centre in the process of semiosis. Semiosis, constituting a play of interaction within a sign, corresponds with the human cognition, specifically with mental states. Because semiosis is a part of meaning building material, becoming conscious of the meaning is bound to happen within

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5 *Swarm Intelligence*, p. xv.
6 *Swarm Intelligence*, p. xiv.
3 *Swarm Intelligence*, p. xv.
4 *Swarm Intelligence*, p. xvi.
other conscious experiences which affect each other constantly. Now, collective consciousness could be read as an interaction of conscious experiences within one mind. Because of constant play of meaning that we are aware of, we reach the state of conscious experiences with the help of their constant friction of the qualitative feels.

**Conscious experience as emergence**

Kennedy in *Swarm Intelligence* defines emergence as a complex, self-organizing patterns that produce themselves. Emergence is considered to be a defining characteristic of a complex dynamical system. He enumerates examples of it, such as economy and ecology. What we can find in them and what comprises to be a complex system with emergent qualities is their mutual feature. Their mutual feature is that they do not have a central control, they lack the centre. “The stability or consistency of an economy at the large scale emerges from the qualities of the very many person-to-person interactions that make it up.” What also should be noted is that economy of a nation interacts with world’s economy and all ecologies are interconnected.

Predators and prey keep one another in check; trees and underbrush, hosts and parasites, heat and gases and fluids and soils interact incalculably to produce a system that persists very well over time in a kind of dynamic equilibrium. These complex systems are resilient; that is, if they are perturbed, they return to balance. […] Any individual in an economy may experience failure. Any organism in an ecological environment might be uprooted or killed. Whole species may become extinct. Volcanoes, hurricanes, stock market crashes may result in devastation, but the system repairs itself and returns to a stable state—without central control.

These complex systems can achieve equilibrium and function properly after a damage to one of its components without any central control.

In *The Wisdom of Crowds* James Surowiecki enumerates three types of problems that individuals and groups try to solve:

- **Cognition problems:** Problems with one definitive answer that we try to accurately assess after considering available and missing information (e.g. what's a stock worth, who will win an election, or what caused a disaster),
- **Coordination problems:** Where an optimal combined solution is needed for a problem that affects a whole group, and where this optimal solution is usually sought by having each individual act in personal self-interest (e.g. finding buyers and sellers for products, or determining the best route to work in traffic), and
- **Cooperation problems:** Where an optimal combined solution is needed for a problem that affects a whole group, and where this optimal solution usually depends on individuals trusting each other and acting fairly and in what they perceive to be collective self-interest rather than just their own (e.g. how to deal with pollution, devise a tax system, or remunerate employees).

Surowiecki’s answer to these problems is best resolved by engaging a group of people in order to provide a collective answer. The group answer is better than that of individual because group members share qualities like: intellectual diversity (different opinions and perspectives), independence (freedom from the tendency to want to agree automatically with what one or more other group members says) and

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5 *Swarm Intelligence*, p. 19.
6 *Swarm Intelligence*, p. 19.
7 Ibidem.
decentralization with aggregation (individual access to different, specialized knowledge, and a mechanism for effectively sharing that knowledge with the rest of the group). The brief conclusion says that “large groups of diverse individuals will make more intelligent decisions than even the most skilled decision-maker.”

How can we relate it to collective conscious experience? When considering consciousness we ought to regard it as a unity of different elements whose strength lies in a group analysis. Let us consider an example. Based on their pheromone-sniffing ability simple-minded ants can choose collectively a solution which proves to be better to their community.

Research on live ants has shown that when food is placed at some distance from the nest, with two paths of unequal length leading to it, they will end up with the swarm following the shorter path. If a shorter path is introduced, though, for instance, if an obstacle is removed, they are unable to switch to it. If both paths are of equal length, the ants will choose one or the other. If two food sources are offered, with one being a richer source than the other, a swarm of ants will choose the richer source; if a richer source is offered after the choice has been made, most species are unable to switch, but some species are able to change their pattern to the better source. If two equal sources are offered, an ant will choose one or the other arbitrarily.

We can observe a learning process of ants in a particular environment and group intelligence arises because of individual’s passing information to others. Therefore, each individual ant seems to be either programmed or aware of its task and probable obstacles it encounters on its way. The question is whether the ants are conscious of what they are doing? If they can receive external information with qualitative feels (and it is highly probable they can), they are conscious of their obstacles and inform other ants of the problem. Though, they are not conscious of being conscious of their obstacles or of themselves. They could face conscious experiences in their environment and adapt accordingly by communicating in a group. Because of the collective work-interchanging information-the ants are able to consciously choose the best possible way to solve their needs (food, for example). They cooperate and coordinate with each other providing an optimal solution for a collective self-interest. This collective self-interest is also based on their personal self-interest of which they are either conscious or they act automatically.

As previously written in the chapter devoted to the concept of sign, Derrida stresses the fact that there is absence of the center within the structure. In terms of present-being we cannot find a fixed locus. There is no origin which would serve as a referral to another node. The centre does not concentrate only on one point, one signified. There is a system operating within an infinite number of the signified that participate in, what Derrida calls, a play—the disruption of presence. Derrida analyses consciousness through presence. However, we cannot explain it fully through what is present in conscious thoughts. The contents of consciousness are treated as emergent from material properties, they supervene on material properties.

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2 Swann Intelligence, p. 106.
To understand how consciousness is constituted in Derrida’s approach let us first analyze the features which condition it. Consciousness is conditioned by time because of its perception. Like Emanuel Lévinas, Derrida concedes that the self can never be absolute because it is always in connection with what is outside. Time acts as an obstacle in reaching the contents of consciousness. To understand contents or mental acts in relation with time let us see how Franz Brentano referred to the issue. Brentano held the view that mental acts cannot have duration. He explained how we can understand temporally extended objects like a melody. An object toward which we are directed does not immediately vanish from consciousness once the mental act is over. It remains in altered form, modified from “present” to “past.” Wolfgang Huemer writes about Brentano’s mental acts:

Every mental phenomenon triggers an ‘original association’ or ‘proteraesthesis,’ as he [Brentano] calls it later, a kind of memory which is not a full-fledged act of remembering, but rather a part of the act that keeps lively what was experienced a moment ago. When I listen to a melody, for example, I first hear the first tone. In the next moment I hear the second tone, but am still directed towards the first one, which is modified as past, though. Then I hear the third tone, now the second tone is modified as past, the first is pushed back even further into the past. In this way Brentano can explain how we can perceive temporally extended objects and events.³

Husserl, following Brentano’s path of analyzing time, contends with him proposing time-consciousness structure. Retentions are acts of immediate memory of what has been perceived “just a moment ago”–this is what Brentano would call as his original association. Original impressions are acts of awareness of what is perceived “right now” and protentions are immediate anticipations of what will be perceived “in a moment.” It is by means of these momentary structures–retentions, original impressions and protentions that moments of time are continuously constituted (and reconstituted) as past, present and future so that it looks to the experiencing subject as if time were permanently flowing off.⁴

Nicolai Hartmann writes about categorial novum (new category) as a feature of a system of categories. The real world has a certain structure which we cannot explain only through one category because there is not only one method of knowing the world. We approach a system of the world which is understood as a system of categories. In Hartmann’s ontology we can see that “being” is composed of several layers. Taking an example of a human being we can say that we have four layers: material, organic, psychic and spiritual. The material layer is the biggest one in terms of the extension. It is the cosmos on which the next layer is built–the organic one. From the organic layer and from the material one the psychic is constructed. What is now of importance to us is the mode of constructing the layers of Hartmann’s ontological system. The categorial novum is a category which can be described as an emergent category in the system.

The psychic layer builds on the previous two layers: organic and material. It appears as a consciousness. We cannot say that it is already a spiritual layer because, according to Hartmann, consciousness is individual and spirituality does not have this feature. Therefore, the spiritual layer is universal and like the values is unchangeable. We can change our reasoning of the values but the values themselves remain

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invariable. They are ultimate in the sense that they stand as an absolute to human’s outlook on life. The spirit has an objective character and is beyond individuality.

Nicolai Hartmann’s view on transcendental acts brings us closer to the understanding of the way in which we explain the concept of the acts of consciousness. In Vermittlung der Realitäten Max Bense contends that Hartmann succeeded in analyzing the transcendental acts [transzendente Akte] which stand also for the acts of consciousness [Bewußtseinsakte].

Für uns ist wichtig, daß der „transzendente Akt“, der, wie Nicolai Hartmann beschrieb „nicht im Bewusstsein allein spielt–wie Denken, Vorstellen, Phantasieakt–sondern das Bewusstsein überschreitet, aus ihm hinausreicht und es mit dem verbindet, was unabhängig von ihm an sich besteht […] es sind also Akte, die eine Relation herstellen zwischen dem Subjekt und einem Seienden, das nicht erst durch den Akt entsteht, „daß dieser Akt, sofern er auf „ansichseienende Gegenstände gerichtet“ ist, jene Äquivalenzklassen einer Äquivalenzrelation benötigt, d. h. also sich mit Hilfe des Abstraktors auf „Seiendes“ bezieht. 5

I would like to underline in the above statement the relation between the subject [Subjekt] and being [Seienden] which does not result because of the act. Let us remember this relation when talking about the dependence between causality and conscious experience which we explain elsewhere.

John Searle follows the path of our reasoning here. Consciousness is a biological phenomenon caused by brain processes and realized in the structure of the brain, says Searle. Moreover, and this point I would like to stress, consciousness is irreducible because it has a first person ontology.

It is irreducible not because it is ineffable or mysterious, but because it has a first person ontology, and therefore cannot be reduced to phenomena with a third person ontology. The traditional mistake that people have made in both science and philosophy has been to suppose that if we reject dualism, as I believe we must, then we have to embrace materialism. But on the view that I am putting forward, materialism is just as confused as dualism because it denies the existence of ontologically subjective consciousness in the first place. Just to give it a name, the resulting view that denies both dualism and materialism, I call biological naturalism. 6

Both thinkers prove us (although giving different justifications) that consciousness cannot be built only on one layer but it must emerge from the organic and material at the same time (Hartmann) or that analyzing consciousness is not like any other scientific subject (Searle). However, Searle is convinced that although consciousness has first person ontology we can still have an objective science of it—“ontological subjectivity does not prevent us from having epistemic objectivity.” 7

Memory and remembrance

Siegfried J. Schmidt proposes to divide thinking between the memory and remembering, treating them as separate entities. Memory plays neurophysiologic function while remembering is a cognitive and conscious construct, and which is prone to formulate (“Gedächtnis und Erinnerung müssen daher deutlich voneinander unterschieden werden. Gedächtnis ist eine neurophysiologische Funktion, Erinnerung

5 Bense, Vermittlung der Realitäten, p. 28.
6 Searle, “Consciousness.”
7 Searle, ibidem.
eine cognitive Konstruktion, die bewußt werden muß und dann formuliert werden kann). As we can here observe remembering does not belong to memory.

We cannot localise in a concrete manner the whereabouts of the memory in brain. Human memory does not function like a hard-disk in computer. To clarify this term one should take into account that it establishes relevant cognitive structures which are used in further cognition. Memory is linked with brain’s function and their neural system. “Thus, memory is localized in the sense that particular brain systems represent specific aspects of each event, and it is distributed in the sense that many neural systems participate in representing a whole system.” Memory’s function is not to guard the past but to synthesise given impressions of perception in order to work out a coherent relation. The long lasting cognitive structures, on the other hand, are ready to be used as the elements of the repertoire and are different from remembrance.

We are interested here in describing the relation between memory, remembrance and consciousness. Therefore, we will not concentrate on different types of memory corresponding to brain’s function.

When speaking about time and place, remembrance exists right now in the cognitive system; it constitutes the field where also experience resides. It relates to consciousness in the sense that it is associated with the past. It is not the remembrance that comes from the past but the past owes it to the recollection (“Nicht Erinnerungen entstammen der Vergangenheit, sondern die Vergangenheit (im Sinne eines Wirklichkeitsbereiches) verdankt sich der Erinnerung und Erinnerungselaboration”).

We treat remembrance on the same basis as the contents from consciousness because they all bear corresponding conscious elements (“Erinnerungen sind Bewußtseinsphänomene, die deshalb mit der Vergangenheit assoziiert gedacht werden, weil sie von prinzipiell gleicher Art sind wie Bewußtseinsinhalte, in denen vollendete Handlungselemente bewußt sind”).

When discussing remembrance Gebhard Rusch starts from considering it from the constructivist point. The whole world of experience is the effect of the cognitive human performance shared with his living conditions.

Kurzgefaßt bedeutet dies die Grundannahme, daß die Erfahrungswirklichkeit des Menschen in allen ihren Aspekten als Resultat der kognitiven (sensorischen, motorischen, emotiven und intellektuellen) Leistungen des Menschen unter den seinem Leben gestetzten (chemophysikalischen, biologischen, psychologischen und sozialen) Bedingungen anzusehen ist.

It is through the process of assimilation and accommodation that individuals construct new knowledge from their experiences, mental structures and beliefs. They interpret
objects and events in order to learn in an interactive way where multiple perspectives are presented. Because of the unique set of experiences that individuals have, our view of the external world differs from others.

One of the differences that Rusch draws is between remembrance and perception of the senses. Remembering is not an obligatory element in conscious living such as is the faculty of perception. Remembrance can be unclear and vague or acute and very clear; whereas acquiring knowledge through perception can be better described in terms of completeness or incompleteness. The similar point can be shown between dreams, fantasy or ideas and remembrance. These incidences are linked with the senses’ perception and come from remembrance and obtained facts. Therefore, Rusch proposes to treat remembering as conscious phenomena coming from personal experience.

Let us briefly go back to what John Locke had said about memory, perception and ideas related to remembrance. John Locke writes that to remember is to perceive anything with memory; to revive some past knowledge. Therefore, memory is not clear as actual perception.

The senses at first let in particular ideas and furnish the yet empty cabinet; and the mind by degrees growing familiar with some of them, they are lodged in the memory, and names got to them […] To which let me add: if there be any innate ideas, any ideas in the mind which the mind does not actually think on, they must be lodged in memory, and from thence must be brought to view by remembrance […] For to remember is to perceive anything with memory […].

To remember is to make visible and certain the agreement or disagreement of ideas in question.

When reason achieves demonstrative knowledge, there is intuitive knowledge every step of the way concerning the agreement or disagreement of each successive pair of intermediate ideas […] Once the mind has had this intuitive certainty, it needs only to remember it to make visible and certain the agreement or disagreement of those two ideas in question. For a complete demonstration the mind must perceive the immediate agreement of each pair of ideas in the sequence […] and carry with it a memory of the entire procedure, with no part being left out.

Ideas are stored in memory when we do not think about them. Residing in memory they can be revived from it without reaching for any external impressions. Whenever they are brought into the mind, they bring with them a perception of their not being wholly new to it, says Locke. As a proof of his deductions he is convinced that there is no man who is capable of remembering any such ideas and who never in his life experienced them as new.

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7 Schmidt, p. 269.
8 Locke, *An Essay Concerning Human Understanding*, p. 27.
If there are any ideas - innate or not - in a mind at a time when it doesn’t actually think on them, they must be lodged in the memory. That’s the only way something can be ‘in the mind’ without being involved in thoughts that the mind is consciously having. For such an idea to be brought into view “in the conscious mind” it must be remembered, and to remember something is to perceive it with a consciousness that one has known or perceived it before. Without this, whatever idea comes into the mind is new and not remembered, for this consciousness of its having been in the mind before is what distinguishes remembering from every other kind of mental event.¹⁰

Locke accentuates the importance of consciousness when remembering ideas. Any ideas stored in mind are evoked by the conscious mind. If we are not aware of them they are lodged in mind; it is up to our consciousness that we pick this or that idea out of the memory and perform a thinking process.

Remembrance belongs to the past and is preserved in itself. Deleuze emphasises the distinction between being and being-present. The present should be thought of as “pure becoming.” It is dynamic and acts. Whereas the past is static and is—it is identical with being in itself.

We have great difficulty in understanding a survival of the past in itself because we believe that the past is no longer, that it ceases to be. We have confused Being with being-present. Nevertheless, the present is not; rather, it is pure becoming, always outside itself. It is not, but is acts. Its proper element is not being but the active or the useful. The past, on the other hand, has ceased to act or to be useful. But it has not ceased to be. Useless and inactive, impassive, it is, in the full sense of the word: It is identical with being in itself. It should not be said that it “was,” since it is the in-itself of being […] of present, we must say at every instant that it “was,” and of the past, that it “is,” that is eternally, for all time.²

The present is described in the past tense as something that has already passed and therefore Deleuze uses the verb “was.” But it only functions while describing the present because it constantly changes and instead of marking the present with the “to be” verb Deleuze consciously stresses its “becoming” process. Because of this to describe the present we have to describe it in the past form of the verb “to be.” On the other hand, the past “is” and it does not change because it has already gone.

Deleuze makes use of Bergson’s thoughts on the subject of recollection and memory. Bergson writes in Matter and Memory about the present and past as key conditions to understand the process of recollection. He stresses the fact that the past survives only by linking it with the present; that is to say, the past relates to the present in order to be described as existing with the “is” form of verb. Therefore, we can reach for the collection of memories from the past and recollect them in the present by describing them. However, this description is possible only to illustrate the past; the present is untouchable because it dynamic and resides in the process of becoming.

This survival of the past per se forces itself upon philosophers, then, under one form or another; and the difficulty that we have in conceiving it comes simply from the fact that we extend to the series of memories, in time, that obligation of containing and being contained which applies only to collection of bodies instantaneously perceived in space. […] Nothing is less than the present moment, if you understand by it that invisible limit which divides the past from the future. When we think this present as going to be, it exists not yet; and when we think it as existing, it is already past.³

Deleuze explains that what Bergson calls “pure recollection” has no psychological existence. This is the reason for calling itself virtual, inactive and unconscious.

¹⁰ Locke, p. 16.
² Deleuze, Bergsonism, p. 55.
³ Bergson, Matter and Memory, p. 193.
Deleuze, after Bergson, treats recollecting as a leap into being to its source in the past. At the same time, we make a separation between psychology and ontology. Referring into ontology means arriving to the structure of being, whereas the psychological survival is possible only in being in the actual state. Ontological state of recollection is virtual and unconscious; its psychological dimension is the next step of analysis, being active and conscious.

[…] we first put ourselves back into the past in general: He describes in this way the leap into ontology. We really leap into being, into being-in-itself, into the being in itself of the past. It is the case of leaving psychology altogether. It is a case of immemorial or ontological Memory. It is only then, once the leap has been made, that recollection will gradually take on psychological existence: “from the virtual it passes into the actual state.”

Thinking in synchronic aspect, the past refers to it because it is static and can be perceive as a point in history ready for an analysis. The present is diachronic in this respect because it refers to evolution and to the constant process of becoming. The diachronic present shows us a series of events that modify.

Summing up, Rusch writes that remembrance is a type of the sensual perception. Remembering is to get the knowledge but with certain limit. It resembles looking back at thoughts and being aware of the past context. We have to include in remembrance the factor of a constraint put on by the past. This is why, for example, we can vaguely remember former events and while experiencing instant incidences we perceive them with incredible acuteness.

Whitrow observes that longdistance remembering is “an imaginative reconstruction dependent upon ones attitude at the time of recall in using only a few striking details which are actually remembered being determined by our interest.” We can, therefore, say that the constraint which limits us when recalling certain events is put by our mind. We tend to remember the things which hit our perception more that anything else at the specific time of action. What is more, we tend to think about striking events and this often includes the conscious perception. We can be aware of their impact and wonder about the meaning behind a series of occurrences.

The cognitive processes are accompanied by conscious elements which appear as thinking, imagining and among others remembering. Taking into account the natural sciences we can separate remembrance from neuropsychological and psychological functions and say that remembrance is a complex game of cognitive structures. These structures are formed by the perception of senses and human ideas. Remembrance is a particular kind of conscious phenomena. As Rusch notices memory is the ability to learn, to know, to remember by heart and to reproduce the memories’ performance.


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Erinnerungen sind (in der Form, in der sie im Bewußtsein auftreten) nicht Elemente des Gedächtnises als einer neurophysiologischen und psychologischen Funktion. Sie werden vielmehr ebenso wie

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4 Deleuze, p. 124.
6 Schmidt, p. 279.
Rusch suggests not treating remembrance as an access [Zugriff] to memory but as an elaborated process to grasp sensual appearances in the form of recollection. He stresses the temporal aspect of conscious phenomena which correspond with the cognitive structures. The temporal stability [die zeitliche Stabilität] plays here an essential role, thus, memory can carry on with the performance of remembrance.

In the process of learning memory consolidates in the course of time. It is hard to measure the time factors of memory’s consolidation when learning occurs. As Squire writes: “Memory is not fixed at the moment of learning but continues to stabilize (or consolidate) with the passage of time. […] memory consolidation is neither an automatic process with a fixed lifetime nor a process that is determined entirely at the time of learning.” The relation between learning and memory is so close connected that it is very hard to make a definite and doubtless point in this argument. Whether it is of structural or functional nature one can provide believes for both points of view.

**The semiotic theory of consciousness**

We have already talked about consciousness and its intentionality which arises from Husserl’s phenomenology. We can compare this view with Melchior Palagyi’s analysis of consciousness as a relation of the symbolic acts to perception acts (in *Naturphilosophische Vorlesungen über die Grundprobleme des Bewusstseins und des Lebens*). In *Vermittlung der Realitäten*, Max Bense introduces the concept of function to analyse the theory of consciousness. This approach is a consequence of thinking about consciousness which started form Kant’s proposal to consider consciousness within the frame of his transcendental philosophy.

Analysing consciousness as a function of existence we describe the fact that there is “something” or, better said, some signs which relate to real things and determine them. Considering the function of existence as a sign we define this thing which becomes a subject, an existent entity. What results from this is the ontological typology which relates to the function. Below we can see the arrangement of the object, sign, consciousness and communication:

- **Object**–stands for a zero-argument function of existence,
- **Sign**–stands for a one-argument function of existence which relates only to one real entity,
- **Consciousness**–is a two-argument function of existence which relates to the subject and object or to any two data in order to be fulfilled,
- **Communication**–is a three-argument function of existence which must be filled with a sign, sender and receiver in order the function to work.

What Bense observes is the difference between talking about a sign and sign’s function. Sign is one-argument function of existence whereas sign’s function is the communication’s function and it is a three-argument function of existence (it relates to three arguments: sign, object and interpretant).

The dyadic nature of consciousness allows us to talk about intentionality as consciousness of something, being able to grasp and relate to any outside object. Bense also refers to iteration and abstraction thanks to which consciousness refers to

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7 Schmidt, p. 284.
3 Max Bense, *Vermittlung der Realitäten*, p. 53-4.
“I” and to “the being in itself”. They both work as a one-argument function of existence—as a sign process. Perception through iteration means that we can be aware of being conscious of a certain presentation. Each consciousness of something is repeated, thus, it is called iterative.

Abstraction allows us to create consciously new groups of objects, created by the equivalence classes of the equivalence relation [Äquivalenzklassen einer Äquivalenzrelation]. As we noticed elsewhere after Nicolai Hartmann, it is important to see that this transcendental act does not happen only in consciousness like thinking, representing or imagining but goes beyond consciousness. It forms a relation between the subject [Subjekt] and real being [Seiende]. It is possible thanks to the abstractor [Abstarktor] whose application we find in abstraction.

Max Bense described the theory of consciousness relating to Peirce’s triadic construction of the sign. We could see how consciousness is connected to the subject and object, a real being which does not result because of this certain act but exists in reality. Therefore, it corresponds to “the being in itself” and the transcendental act can relate to it forming in this way a sign process. We could, thus, say that Kant’s proposals to consider the theory of consciousness were focused on consciousness as determining its substance or being; whereas from semiotic perspective we analyse consciousness from functional approach looking at signs.

I would like to develop the concept of the theory of consciousness basing on Max Bense’s proposal of introducing the semiotic approach to the theory of consciousness. Bense puts forward a relational concept of consciousness. As we have explained before the triadic relation of consciousness is rooted in the function. Therefore, the triadic relation will prove the semiotic theory of consciousness.

We present the triadic relation by introducing the formal description of variables (x, y, z). We can now describe the relation as R, x as “I” and y as “the world”. The relation stands for consciousness which encompasses “I” and “the world”.

\[
\text{consciousness} \\
\text{I 1 world}
\]

which is mirrored by the triadic relation of consciousness

\[
\text{R} \\
x \rightarrow y
\]

Describing the real triadic relation Bense includes three functions of consciousness. First, a given selection of phenomena presented by empiric perception which is can be described as repertoire. The process of its selection can be depicted as an increasing semiosis. Second, reference to the object and third to the interpretant which is focused in the meaning.
We could surely expand our discussion about the relational concept of consciousness by quoting Fichte, Brentano, Husserl or William James in this respect. However, because we have started our thesis from the sign analysis in the first chapter, we concentrate in the thesis on the coherent continuation and pass the weight of discussion to such thinkers as Saussure and Peirce.

It is when talking about the behaving of sign that Thomas A. Sebeok refers to its function. The function is here presented as “a repetitive perturbation along a secular trend. A functional definition of the sign is pragmatic, extrinsic, but dynamic; it is based upon variations at different nodal points of an expanded model of the communicative process [...].” Earlier we could see that being of a sign is static in it analysis of the structure; here having in mind the function of a sign we witness its dynamic development because of the communicative process. Sebeok adds:

In sum, although semiotics is most commonly regarded as a branch of the communication disciplines, the criteria that must be integrated when working toward even a reasonably holistic comprehension of signs derive from studies of both signification and communication (noumena and phenomena), and they must also be in good conformity with research findings in ethology and developmental psychology.²

There are many possible relations between the two parts of a sign—the signifier and the signified. This resulted in classification of sign systems, as we can read in Sebeok’s Signs: Introduction to Semiotics. While explaining the six species of signs Sebeok states that they are discussed in anthroposemiotic and zoosemiotic system in order to show that none of the signs presented is unique only to humans. For our purpose here let’s recapitulate what Sebeok has written about relations of signs. He observes that aspects of signs co-occur in “an environment-sensitive hierarchy.” It is also apparent that signs enter into complex syntagmatic, paradigmatic contrasts and oppositions.

[...] it is their place both in the web of a concrete text and the network of an abstract system that is decisive as to which aspect will predominate in a given context at a particular moment, a fact which leads directly to the problem of levels, so familiar to linguistics—being an absolute prerequisite for any typology—but as yet far from developed in the other branches of semiotics.³

Let’s demonstrate how the hierarchic principle is present in any species of signs on the example of the icon. A sign is said to be iconic when there is “a topological similarity between a signifier and its denotata.”⁴ In the designs of the Australian Walbiri, the iconic bond between the forms of the sign vehicles and the referents assigned is said to be central.

“[...] there is no systematic subordination of the iconic element to a second abstract ordering system,” in contrast to heraldry, where, as in a pictorial writing system, “the iconic qualities linking the visual forms to their meanings tend to be attenuated,” that is to become stepwise symbolic, “because of the overall adjustment of the visual forms to another underlying socio-cultural system for which the former constitutes a communication code.”⁵

Before concluding this section it is interesting to note the feature of repetition which runs through the discussed subjects of language, learning, remembering and

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⁴ Sebeok, p. 39.
⁵ Sebeok, p. 21.
consciousness. In this way we may turn our attention on repetition and thus reveal its consolidation function of knowledge. Repetition plays a significant role in the constructivist theory applied for learning. In Saussure’s example repetition appeared when describing the creation of form of words. We mentioned the diachronic aspect of language. In it we saw how the German form of the word “was” changed to “war” due to its circulation within a group of people. They repeated the new form of “war” making an analogy to “waren”. Thus, as the consequence we use the form “war” when speaking in the past tense. Repetition played a creative role which derived from an analogy and won the palm by existing till today. In learning, due to the repetition we base most of exercises practised to expand our knowledge and to retain the facts we once have acquired. The same could be said with remembering as a part of the learning process.

CHAPTER III: THOUGHT–WORD–DEED

In this chapter we come to the conclusion of the whole thesis’ arguments. We will try to follow the thought-word-deed pattern here as a means of directing our attention to the thesis’ spinal cord of argument. This scheme could also be read as a starting point from the concept of sign with its relation with text and its characteristics, like trace or presence. Whether it is a word or sign we shall come to the analysis of its meaning. We shall also analyze the system of infrastructures found in Derrida’s interpretation of the pluralization of origin. This thought will later be connected with quantum field theory in which we find similarities that cannot pass unnoticed. We shall also investigate transparency of conscious thoughts and the relation of meaning to transparent conscious experience. We finally arrive to the core of human perception in terms of language, that is meaning and thought. At the start of that chapter we focus on the structure of language as conscious cognition and end with the principle of non-contradiction. Only then we come to the analysis of Frege’s distinction between sense and reference as is presented in his work Sinn und Bedeutung. In this way we continue our discussion on meaning and sense with respect to cognitive significance.

One of the earliest approaches to artificial intelligence assumed that human intelligence is a matter of processing symbols.

Symbol processing means that a problem is embedded in a universe of symbols, which are like algebraic variables; that is, a symbol is a discrete unit of knowledge (a woefully underdefined term!) that can be manipulated according to some rules of logic. Further, the same rules of logic were expected to apply to all subject-matter domains.\(^6\)

\(^6\) Swarm Intelligence, p. 36.
Here we can refer to syllogism and build algorithm on symbols where variables consist of a set of signs (we have discussed the concept of sign in the previous chapter). Therefore, for example, we might see words of a language as a set of signs which produce images in our minds.

However, natural language is only one of the examples of treating it as a group of signs. Chaim Perelman, in his book about rhetoric, focuses the attention on the distinction between mathematical and natural language. For years rational thinkers have treated mathematical language as a model for a natural language, primarily for the language used by philosophers. Earlier, the problem of misinterpretation did not exist because it was assumed that words are generally clear and obvious. Multiplicity of interpretation would be the cause of ill-mannered authors or of bad intentions of interpreters. Today, however, the mathematical language is much formalized. It is artificial language that has undergone many restrictions for the sake of elimination any ambiguities. On the other hand, ambiguity and the possibility of numerous interpretations could be considered as the constant feature of the natural languages. Especially the language of philosophers can hardly be comprehended without the use of metaphor. And it is typical to the metaphor that it lacks the clarity and precision.\(^7\) In *An Essay Concerning Human Understanding* John Locke writes in the chapter titled ‘Of the Abuse of Words’: ‘Words are often employed without any, or without clear ideas. First, in this kind first and most palpable abuse is, the using of words without clear and distinct ideas; or, which is worse, signs without anything signified.’\(^8\) Aristotle convinces us that it is impossible to think of anything if we do not think of one thing. Focusing on one thing will render a precise idea and thus we are able to avoid ambiguity.

**Deconstructive interpretation of totality and system**

Derrida once again points to the center which arrests and grounds the play of substitutions. Deconstruction is an attempt to shake totality, to make it tremble in its entirety, as Gasché observes. However, this does not mean that deconstruction sets itself in the opposition to totality. It should not be thought of as something impossible on account of man’s finitude. Derrida’s undertaking is to broach “the deconstruction of the greatest totality—the concept of the episteme and logocentric metaphysics.”\(^3\) How should it be understood then? Derrida’s objection to the possibility of totalization is based on making the totality insecure in its most assured evidences, making it tremble and approaching it from within and not from the opposite corner.

Nontotalization can also be determined in another way: no longer from the standpoint of a concept of finitude as relegation to the empirical, but from the standpoint of the concept of play. If totalization no longer has any meaning, it is not because the infiniteness of a field cannot be covered by a finite glance or a finite discourse, but because the nature of the field—that is, language and finite language—excludes totalization. This field is in effect that of play, that is to say, a field of infinite substitutions only because it is finite, that is to say, because instead of being an inexhaustible field, as in the classical hypothesis, instead of being too large, there is something missing from it: a center which arrests and grounds the play of substitutions.\(^4\)  

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\(^7\) Perelman, p. 59.  
\(^3\) Derrida, *Of Grammatology*, p. 46.  
\(^4\) Derrida, *Writing and Difference*, p. 289.
What is now opened in front of us is a space of the infrastructures. Moving further on, we can see that the deconstructed space has also its structure, forms a certain system. As Gasché observes the infrastructures link themselves in chains; they can and must be systematized, up to a certain point. However, it finds itself beyond the common opposition of structure, the opposition of system and fragment. Although it lies beyond the whole and part, infinity and the finite it also constitutes the systematicity of systems.5

How can we conceive the phenomenon of consciousness as not existent in a one but in many? Let us evoke here the concept of an organized multiplicity of origins. The pluralization of the origin is the main step toward the deconstruction of the value of origin. What must be differentiated from the absence of origin is the multiplicity of origins formulated by Derrida. Before him Heidegger and Husserl spoke about equiprimordiality (Gleichursprünglichkeit). According to German thinkers it was simultaneity of equally original instances or structures, as Gasché writes.2 These two concepts relate to each other. They have both similar elements like, for example, that they cannot be derived and that the elements that enter their composition cannot be derived from one another.

What should else be noticed is that the system of infrastructures is an open system. It is not a closed or finite system because these are not atoms but rather “focal points of economic condensation.”3 Each infrastructure takes part in a continuous chain. It is an open system because it cannot be gathered upon one, dominant center. The infrastructures’ system can never become formalized and even the notion of ‘a system’ is inadequate to describe the space occupied by infrastructures. Later on in the thesis we will be talking about quantum mechanics. There, we will refer to the system of infrastructures, finding similarities between Derrida’s description of a system and a quantum field in physics.

Transparency of conscious thoughts

Analyzing abstract concepts one is forced to use some examples that serve as a description and imaginary tool to comprehend concepts. Coming into details within philosophical discussions we may accustom difficulties because of not properly understanding the notions. Our brain often requires some images in order to memorize given data. We tend to imagine abstract concepts in the very simple forms; we think of the Absolute and draw a mental picture of a circle or another simple yet clear geometrical figure that would show its completeness and unity. When discussing ontological notions we may often fall into the abyss of ambiguities. Our natural language has its vague meanings and it is often the case of referring to logics that we tend to keep the trace of what is going on in philosophical discussions.

Throughout this thesis it is vital that we keep the track of the essential questions in order to answer them without losing a grip of what was previously said. Therefore, let us use as many examples as it is required to get the broadest picture of the narrowest concepts. We should not hesitate to cross the boundaries of so-called “philosophical discourse” and only meddle within the crème de la crème of philosophy. It is essential, to my mind, to provide examples from daily life, other fields of science and being up to date with the technological titbits. However, all things concerned, this mixture should remain at its base primarily philosophical. In

5 Gasché.
2 Gasché.
3 Derrida, Positions, p. 40.
short, the analysis of the concepts must be taken from ontological or epistemological perspective, whereas supported discussion is not necessarily concerned with examples taken from the field of philosophy. Our scope of further readings revolves around science and daily life.

As David Chalmers observed we have no independent language for describing phenomenal qualities. Phenomenal qualities are ineffable—greenness comes to us as a sensation with a rich intrinsic character.

Although greenness is a distinct sort of sensation with a rich intrinsic character, there is very little that one can say about it other than that it is green. In talking about phenomenal qualities, we generally have to specify the qualities in question in terms of associated external properties, or in terms of associated causal roles. Our language for phenomenal qualities is derivative on our nonphenomenal language. As Ryle said, there are no “neat” sensation words.4

Conscious experience is often said to be transparent. “We transparently ‘look through’ our sensory experience in so far as we seem directly aware of external objects and events present to us rather than being aware of any properties of experience by which it presents or represents such objects to us.”5 Let us take an example of an undulating green grass on the wind-blown meadow; “it is the undulating green grass of which I am aware not of any green property of my visual experience.”6

Figure 3.1: Undulating green grass7

It might be a question of redirecting our attention to become aware of other present qualities. For example, as I am writing I concentrate on my thoughts and subsequent letters that are being typed. However, I am able to shift my attention to other aspects that surround me or revolve in my head (i.e. the music playing in the background, the feeling of hunger or my anticipation of a friend to come).

In the semantic sense we approach transparency of conscious thoughts as well. Meanings seem immediately known to us in the very act of thinking them. Van Gulick speaks of intrinsically meanings that are present in our conscious mental states as in opposition to “externalist theories of mental content that ground meaning in causal, counterfactual or informational relations between bearers of intentionality and

4 Chalmers, p. 22.
6 Ibidem.
7 A screenshot from the film Solaris by Andrei Tarkovsky, 1972.
their semantic or referential objects." All in all, semantic and sensory transparency—says van Gulick—"obviously concern the representational or intentional aspects of consciousness, but they are also experiential aspects of our conscious life. They are part of what it’s like or how it feels phenomenally to be conscious. They also both have functional aspects, in so far conscious experiences interact with each other in richly content-appropriate ways that manifest our transparent understanding of their contents."

Summing up, we have externalists’ point of view which says that there is nothing to the meaning of our mental concepts beyond the associated causal criteria. Wittgenstein and Ryle are fond of this perspective which aims at phenomenal concepts which are dependent on causal criteria. I will maintain the view that causal effects may be many, however, consciousness does not only require causality to be present. Therefore, the meaning can occur beyond the causality. This view is supported with the example of the Second World War veterans who lost their limbs. These amputees were conscious of their lost legs and arms and they were even convinced of the ability to move their limbs. This example (which is analyzed more elsewhere in the thesis) proves the argument that there is something more to the meaning of mental concepts than the associated causal criteria.

**Thinking of a perceptive subject**

We shall now approach in our analysis the ontological status of reality which has been based on language. We will look briefly into the issue of forming thoughts out of substantial reality. This should only serve us as a helping tool in order to mark and subsequently incise the amalgamation between causal and non-causal experience. Later on, I shall provide a handful of examples showing and proving in certain areas that there is a thought before reality. That is to say, causality does not have to be the main factor in forming thoughts and thus enabling our experience to be conscious. In this way, analyzing this issue we shall concentrate on the previously spoken subject—existence of consciousness without causality. In the antecedent chapters we have dealt with this issue applying its theory into scientific and other examples. In this chapter, on the other hand, we focus on the closest to mind and most direct grasp of human consciousness—thought and meaning. Within the scope of this thesis I will try to present relevant theories and accompany them with detailed examples.

First, let us put the attention on conscious discovery of the world around us in terms of language. According to Adolf Szołtysiek, we can say that the structure of cognition is nearly what the structure of language is. This structure of language consists of a subject and predicative. The structure of cognition and language comes down to conscious presentation of being. We can express this in existential statements (which point to the existence of a particular thing) and essence statements (revealing the core of a particular thing). These statements are set in the principle of identity. We create and discover the language reality (as the world of signs) from the physical world. Thus, our language should be true to what we draw from the world. However, we can also think of a unicorn or flying, pink elephants—these are determined by the principle of non-contradiction. According to Aristotle, the principle of non-contradiction is a principle of scientific inquiry, reasoning and communication. It lies at the core of human thinking and determines the division between false and true. However we

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8 Van Gulick.
9 Ibidem.
We could conclude that Aristotle thinks that each name, and therefore sign, ought to be in accordance with the principle of non-contradiction. He points to ambiguity in interpreting the language of reality. It is obvious for us that a name can have more than one meaning but its meanings are limited. If it is not the case, says Aristotle, and we had an unbounded number of significances we could not reason at all; or we could not provide a reasonable outcome.

If we do not have one meaning (or a finite number of meanings), we do not have any meaning at all. Therefore, if words have not any meanings our reasoning with one another is impossible. What is more interesting for us that the understanding “with ourselves”, as Aristotle writes, is also annihilated. Thus, we could argue that any reasoning with ourselves occurs with the help of language. It is through language that we reason and become conscious of things. The Hanuoo peoples of New Guinea have a different name for 92 varieties of rice. The Inuit named differently many types of snow, whether it is used to build, drink or used in other ways. Words do not have their meanings rooted in themselves at the very start of their origin; it is up to people who name things and endow them with certain meanings. Not knowing a word in Mandarin I do not understand the language. Thus, for me this chain of pronounced syllables is incomprehensible. The words do not say anything but we can learn the code which hides behind it—that is the meanings which have been embedded by people.

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Aristotle, apart from explaining the non-contradictory principle, mentions in the above quote the signification of word. He writes that “man” signifies something about one subject and has one significance. We can refer to the sign theory and complement Aristotle’s thought. This subject would be a thing or object to which this significance refers to; whereas, the significance is a mental image, meaning or interpretant—a state of mind.

**Bedeutung**

For the purpose of our discussion on the topic of meaning let us evoke Gottlob Frege’s distinction between sense and reference, only to return after that to the concept of sign. As Richard Mendelsohn shrewdly comments on Frege’s work *Sinn und Bedeutung* the reference [Bedeutung] of a singular term is the object [Gegenstand] for which it stands, either by having been assigned to that object or by uniquely describing it. Umberto Eco examines the subject of sign and says that Frege distinguishes between the object of a sign and the object of a clause. However, let us bear in mind that the notion of object is broader than the class of concrete objects. Frege’s object stands for the subject of judgment (“L’oggetto di Frege è dunque qualsiasi soggetto di giudizio”). Therefore, reference of a clause has a truth value.

Let us also observe that Bedeutung refers to real objects, fictitious entities and mathematical notions however abundant with meanings. Eco observes that Bedeutung bears more similarity with the notion of significance than a reference—it is an object constituted of a possible reference. Later, the notion reference is analyzed as too ambiguous and a notion of denotation is consequently introduced by Lyons.

It is advisable to use the word Bedeutung (instead of “reference” or “denotation”) in order to avoid miscomprehension in translation of Frege’s key word in the discussion. Let’s see how Bedeutung works on a particular example: “Johnny Cash”, “The Man in Black” or “American country singer-songwriter”, they all refer to the same person–Johnny Cash. However, they do not have the same sense. The sense of a singular term, as Mendelsohn writes, is that “wherein the mode of presentation is contained,” and it thus carries the burden of introducing, presenting, or picking out the referent. Therefore, “The Man in Black” briefly describes the colour Johnny Cash dressed himself and the mood of his songs, whereas “American country singer-songwriter” picks him out as an American born artist and composer of the country music. Although all these descriptions refer to Cash, they do not have the same sense. Frege writes:

In the case of an actual proper name such as ‘Aristotle’ opinions as to the sense may differ. It might, for instance, be taken to be the following: the pupil of Plato and teacher of Alexander the Great. Anybody who does this will attach another sense to the sentence ‘Aristotle was born in Stagira’ than will someone who takes as the sense of the name: the teacher of Alexander the Great who was born in

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6 Ibidem, p. 62.
7 Mendelsohn, *The Philosophy of Gottlob Frege*, p. 34.
Stagira. So long as the Bedeutung remains the same, such variations of sense may be tolerated, although they are to be avoided in the theoretical structure of a demonstrative science and ought not to occur in a perfect language.\(^5\)

A statement like “Johnny Cash is Johnny Cash” can take the form of a=a; whereas a statement “Johnny Cash is the Man in Black” constitutes a=b. The statement a=b is true if and only if the object a is identical to the b. Therefore, the statement “Johnny Cash is the Man in Black” is true if and only if the person Johnny Cash is the person the Man in Black.

What could we tell about the meaning of these sentences? The statement a=a must have a different meaning (or cognitive significance) than that of a=b. However, “Johnny Cash=Johnny Cash” is true just in case: the person Johnny Cash is identical with the person Johnny Cash. And “Johnny Cash=the Man in Black” is true just in case: the person Johnny Cash is identical with the person the Man in Black. However, given that Johnny Cash is the Man in Black the two cases are the same case and that does not explain the difference in meaning between the two identity sentences. Therefore is it required to ask: “how do we account for the difference in cognitive significance between ‘a=b’ and ‘a=a’ when they are true?”\(^2\) In order to answer it we have to explain what sense in its relations is.

What would form the sense of expression? Mendelsohn writes that the sense of expression is “that which is conveyed or communicated by the expression, the information it contains. The sense of an expression is not material, nor is it perceptible, but it is an objective entity nonetheless that exists independent of any individual’s consciousness.”\(^3\)

The sense of an expression accounts for its cognitive significance—it is the way by which one conceives of the denotation of the term. The expressions ‘4’ and ‘8/2’ have the same denotation but express different senses, different ways of conceiving the same number. The descriptions ‘the morning star’ and ‘the evening star’ denote the same planet, namely Venus, but express different ways of conceiving of Venus and so have different senses. The name ‘Pegasus’ and the description ‘the most powerful Greek god’ both have a sense (and their senses are distinct), but neither has a denotation. However, even though the names ‘Mark Twain’ and ‘Samuel Clemens’ denote the same individual, they express different senses.\(^4\)

We have to distinguish senses which are objective from ideas [Vorstellungen] which are private, they belong to individuals. Here ideas are psychological rather than constituting outer laws, like that of Plato’s thought. Ideas belong to the contents of consciousness and are different from other people’s ideas [“It is so much of the essence of any one of my ideas to be a content of my consciousness, that any idea someone else has is, just as such, different from mine. (Frege 1918: 335)].\(^5\) This could speak for the relativity of perception because what we perceive gives us an idea which is totally subjective and deprived of universal understanding. Therefore, we may surely encounter diversity of thought and hence lack of comprehension. However, what saves us from this confusion is sense which is objective and to which all should look up as a principle or grounds for further discourse:

\(^5\) Mendelsohn, p. 34.
\(^3\) Mendelsohn, p. 35.
\(^4\) Zalta.
\(^5\) Ibidem.
If every man designated something different by the name “moon”, namely, one of his own ideas, . . . an argument about the properties of the moon would be pointless: one person could perfectly well assert of his moon the opposite of what the other person, with equal right, said of his. If we could not grasp anything but what was within our own selves, then a conflict of opinions [based on] a mutual understanding would be impossible, because a common ground would be lacking, and no idea in the psychological sense can afford us such a ground. (Frege 1893: 17)

Frege says that sense determines reference and the reference, because of being determined by sense in this way, is therefore unique (any two terms having the same sense refer to the same object). Sense ought to be objective then and it is, otherwise we could not operate on it with relation to reference and ideas. Frege established “sense determines reference” principle to show it: $r(n) = r(s(n))$, where $n$ is an expression, $r$ is reference and $s(n)$ be the sense of $n$.

With the concept of sense comes the relation to consciousness and Frege’s Third Realm. So far we have discussed on the distinction between sense, reference and ideas. What is now important in linking these concepts to consciousness is Frege’s notion of Third Realm. We agreed that sense is objective; Frege adds to this thought saying that there is a domain of objectivity, which is distinct from that of what is actual.

When a person grasps [fassen] a sense, “there must be something in his consciousness that is aimed at [it]” (Frege 1918: 342). Nevertheless, “he does not create it but only comes to stand in a certain relation to what already existed – a different relation from seeing a thing or having an idea” (Frege 1918: 337). Senses, then, belong neither in the outer world of material entities nor in the many private inner worlds of psychological entities, but in a specially designated Third Realm [dritte Reich].

Senses belong to Third Realm which is neither mental nor physical. What is the connection of Third Realm with one’s conscious aiming at sense? It should be clear that when a person, let his name be Zed, is aware of the meaningful situation he anticipates the overall sense behind it. We can use a simple example of a hypothetical situation: a foreigner enters a pub where he is served. Providing he has a limited knowledge about the foreign language, he would concentrate immediately on the background knowledge. This background knowledge has been already acquired almost automatically by brain and is now used to fish for current meaning in the given situation. Zed already knows that usually in a pub they serve alcohol. Thus, waiters or barmen have a limited area of vocabulary with which they form the meaning of the sentences used in conversation. Zed already knows what he can except from the utterances hold by the staff–they will probably expect a drink to be ordered. They will very unlikely try to develop a long discussion on Wittgenstein’s nature of language. Therefore, conscious aiming at sense would mean its anticipation. A sense would, as a result, be manifested by speakers in a given situation. However, as Frege says in the above quote, we come to stand in a relation to a sense which already existed in Third Realm. Having said all this let us once again summarize what Frege says about sense. Edward Zalta recapitulates:

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6 Ibidem.
2 Mendelsohn, p. 36.
Using the distinction between sense and denotation, Frege can account for the difference in cognitive significance between identity statements of the form ‘\(a=a\)’ and those of the form ‘\(a=b\)’. Since the sense of ‘\(a\)’ differs from the sense of ‘\(b\)’, the components of the sense of ‘\(a=a\)’ and the sense of ‘\(a=b\)’ are different. Frege can claim that the sense of the whole expression is different in the two cases. Since the sense of an expression accounts for its cognitive significance, Frege has an explanation of the difference in cognitive significance between ‘\(a=a\)’ and ‘\(a=b\)’ [...].

What also does matter here is the concept of sign. We can see that the perception of seeing a thing and having an idea relates to the theory of sign. I will use an example basing on the explanation provided by Mendelsohn. There is a person Zed by name. Zed’s idea of the sun is not the reference of the expression “the sun”, but presumably that which Zed associates with the expression; on the other hand, Zed’s idea of the sun is the reference of the expression “Zed’s idea of the sun”. Zed might associate another idea with this expression. For example, the idea of the god of sun Horus or the NASA documentary about the space travels on the Sun which Zed recently has seen on the Discovery Channel. Therefore, there is a difference between Zed’s idea of the sun referring to the expression “the sun” and “Zed’s idea of the sun”.

Frege, explaining what a sign is, says that it must have a sense. However, the reference is not necessarily needed. A name, for example, which refers to an abstract thing or thought, has its sense but its reference remains unknown. “Nondesignating singular terms have a sense but no reference: corresponding to such an expression is a criterion for recognizing whether a given object is the reference, and although there is no object satisfying the conditions laid down, the ‘way of recognizing’ gives the term the stability in discourse necessary for communication.”

**Word/Sign interaction**

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2 Mendelsohn, p. 37.
In the chapter devoted to the words and signs ("Segni vs parole") Umberto Eco briefly explains the essential characteristics of both concepts. It is worth mentioning that the today’s term “sign” was known for the ancients as “signum” [sēmeion]. Parmenides uses the notion of “sign” whenever he speaks of a principle of inference, of an evident proof [prova evidente]. On the other hand, the words were considered as names. However, the name establishes pseudo-equivalence with the reality and is, thus, vulnerable to the illusion of opinions or the fallacy of sensations. Plato and Aristotle point to a difference between signifier and signified when talking about the words; in particular, between signification and reference. Signification would mean the functions that also execute the singular terms, whereas, reference carries out only complete statements. Aristotle shuns from using the term “sign” as a word. In On Interpretation Aristotle says that the words are the symbols of soul’s affection in the same way as the letters of alphabet are the symbols of the words (“Egli [Aristotele] dice anzitutto che le parole sono simboli delle affezioni dell’anima, così come le lettere alfabetiche sono simboli delle parole”). He adds that the words and letters are not equal for all, that is to say, they are placed by convention. Summing up, for Aristotle the sign seems as exact as the principle of inference as he writes in Rhetoric.

Apart from a particular definition, a given word can be defined with a series of synonyms. We acquire a general meaning of the word either basing on its own reference or on its synonyms.

![Figure 3.3: Meaning formation within a sentence.](image)

We are also obliged to compare a word with a sentence. A sentence can give us sense alone but also its parts (words) bear their own sense. Therefore, to make a precise sense of a sentence one has to use a group of precise words with reference. Frege observed certain relations between words and thoughts. This corresponds to what we have covered in the previous chapter on the sign, especially what we have told about semiosis. Frege writes:

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It is astonishing what language can do. With a few syllables it can express an incalculable number of thoughts, so that even a thought grasped by a human being for the very first time can be put into a form of words which will be understood by someone to whom the thought is entirely new. This would be impossible, were we not able to distinguish parts in the thought corresponding to the parts of a sentence, so that the structure of the sentence serves as an image of the structure of the thought. . . . If, then, we look upon thoughts as composed of simple parts, and take these, in turn, to correspond to the simple parts of sentences, we can understand how a few parts of sentences can go to make up a great multitude of sentences, to which, in turn, there correspond a great multitude of thoughts.²

Here, we can read that a thought corresponds to a sentence. The structure of the sentence reflects the structure of the thought. Frege also observes how few parts of sentence can increase its volume because of its relations with each other. Therefore, what we achieve is abundance of thoughts which are realized through associations in our mind. This directs us to another lead closely related with conscious experience; that is an aspect of thought, word and deed put together and analysed in the area of cognitive semiotics.

### Semiosis and conscious experience.

Patrizia Violi puts forward an argument that consciousness and semiosis are different aspects of one and the same phenomenon. They interact, so to say, with each other. Consciousness always includes what we might define as a semiotic function. Therefore, we cannot have consciousness without semiosis.³ This leads us to formulate one of the last assumptions of the thesis. Namely, sign or interaction between signs serves as a bottom-up phenomenon for conscious experience. In the last part of the thesis, I will try to support this assumption with a series of examples which show this particular connection in process.

Semiosis as a constituent part of conscious experience is to be understood here as the process of forming the meaning which support the construction of conscious experience. Previously we have talked about the concept of sign and its interaction with other signs. We have also seen to what extend external data influences our perception of reality and how causality contributes to conscious experience. We have also touched upon the meaning, reference and idea relations in Frege’s work. Here, however, we are to make things clear with semiotic function seen in a conscious experience. In *International Journal of Applied Semiotics* the researchers analyse Peircean semiotics in relation to conscious insight and the world:

The interpretant defines a second state of the sign, a plus. It is in the interpretant that semiotic consciousness is revealed as an active process through creative link-making and the perception of causation. The relationship between conscious insight and the world has been studied in Peircean semiotics as the building of a representamen within a given semiotic triad. Peirce’s theory describes the relationship between the representamen and the object as serial and unidirectional […] the building of the representamen is a highly parallel process and a dynamic feature of consciousness.⁴

Peirce refers to semiosis as a continuous interchanging of representament, object and interpretant. Conscious experience, within our frame of semiosis, could be defined as the process of mutation of signs. Because of the “endless commutability” of the

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² Mendelsohn, p. 38.
interpretant we are given an infinite series of sign. Linking that with conscious experience we may say that semiosis and consciousness interplay with each other. It is not only due to sign that we can perceive objects and acquire meaning but also our conscious experience interact “live” with what happens around us. Senses provide us with data but consciousness does not require only external data to function. It gives feedback to what is happening by linking recent images with another images already acquired. It is could be said that conscious experience elicits some information from what it has already gathered and enters a sort of a play with the acquired data. On the other hand, it is in a constant relation with outer influences. What we can also find of interest here is:

There are no non-semiotic places for consciousness: Its transformational process is based upon the interpretive reflection of the possible links between grounds and objects. Thus semiotic consciousness is (1) perceptual of diverse grounds, (2) representational of objects, and (3) interpretive of possible causal links between perceptions and representations.5

Interpretation of meaning plays significant role when looking at number three from the list above. Perception and representation are bound in an inevitable relation and leave to interpretation based on the background knowledge and the ability to estimate coherently the given facts. Let us stress this twofold interaction which takes place between sign and conscious experience:

If the creation of meaning is a dynamic process with bijective power from and to each of the three poles of each sign (ground, object, and interpretant), then the links created among these poles are creative, for consciousness and for material phenomena. Things can be perceived from inside or from outside. From outside you call them matter, from inside you call them consciousness; but those two ways of knowing are combined and laws of nature are laws of the mind.6

The dynamic of inference process that Peirce signalled and subsequent dynamic consciousness directs to creative processes. External data not only affects representations but representations can also become active in creating the world. It seems that for most people snow is the effect of precipitation in the form of crystalline water ice, consisting of a multitude of snowflakes that fall from clouds and it melts when it becomes hotter. On the other hand, the Inuit would consider different types of snow depending on its quality; there is snow for eating, building igloos, etc. We can, therefore, state that the representation given by external stimulus can be reciprocated with “inside” representation that is creating or naming by the outside objects.

Let us see how Peirce’s interpretant is connected with conscious experience. Louis Francouer says that “[s]ince all messages lie in signs we can deduce that the theory of the sign is also a theory of experience, and first and foremost a theory of consciousness, or better still a theory of conscious being.”7 Before going into details let us present what immediate and dynamical object is. According to Jorgen Johansen immediate objects are found within a sign and dynamical outside of it. “Immediate object means the object as it is represented in and by a given sign, whereas, the dynamical object is the object which in some way determines the sign.”8

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5 Ibidem.
6 Ibidem.
8 Ibidem.
Bakhtin writes in *Discourse in the Novel* about internal dialogism of the word. Microdialogue, which is a dialogical relation within a sign, occurs between the immediate object and the new experience presented by the dynamical object. Moreover, Peirce writes that “the Dynamoid Object determines the Immediate Object”––the external experience (dynamic object) calls and the immediate object (the idea of the experience) answers, rendering the sign intelligible. Here, we can observe the interaction within the sign between qualitative feels of experience which are rendered in dynamic object and the representation of experience found in immediate object. Hence, Peirce links the idea of the object with experience and perception.

Semiosis in Peirce’s triadic process refers to Bakhtin “living conversation.” This conversation takes place within the object of the sign and between other signs. Consciousness might be seen as the continuous, dialogic mediation and interaction of the word with its objects and their expression through a series of interpretants. Bakhtin argues that the interpretant is the essential ingredient for living conversation. “Living conversation exists both in the past context of a speech (a semiotic) event as well as in its future. This relationship of past meaning to present meaning to future meaning is the exact function of the interpretant.” Francouer adds: “[I]n the end, consciousness is maybe no more than a continuum of interpretants.”

**Quantum state and semiosis**

This section is a proposal to study the theory of sign in the context of the quantum theory. Therefore, below we can find an outline of the concept of semiosis considered within the quantum states.

We have already talked about qualia being the qualitative feels of experience. Now let us turn toward quanta being the elementary particles in quantum mechanics. In this chapter we will analyse quantum state in terms of its density and mixed nature. This shall be considered as the bridge between conscious experience and semiosis seen this time as a quantum state. Here, we will explain some features of quantum theory in physics, mainly concentrating on its parallels with cognitive semiotics. In the 1950s the physicist David Bohm observed that there is a “close analogy between quantum processes and our own inner experiences and thought processes.”

“Quantum” is an indivisible entity of a quantity related to energy and momentum of elementary particles of matter. Quantum mechanics is regarded by the majority of physicists as the most fundamental framework for understanding and describing nature. In short, we can explain quantum state as a mathematical object that describes a quantum system. As we can read in Bowman’s book, the quantum state contains information about the system in the form of wavefunctions or state vectors. It is “spread out” or distributed in space and from which we obtain probabilities. Quantum states can be statistically mixed, corresponding to an experiment involving a random change of the parameters. States obtained in this way are called mixed states, as opposed to pure states. Now our question in the discussion is: how is a quantum state related to semiosis?

In a quantum state a random change of experiments’ parameters results in mixed states. Mixed quantum states are described by density matrices. These are self-adjoint
positive-semidefinite matrices which describe the statistical state of a quantum system. Another measurement describing a quantum state is a probability distribution. It describes the values and probabilities that a random event can take place on a quantum state. In order to describe a quantum state one uses measurable quantities, called observables. The result of such measurement is determined probabilistically because the relation between the system state and the value of an observable is more subtle; unlike in the systems governed by classical mechanics. These measurable quantities do not give specific results but, on the other hand, are properties of a system state which describe the measurement of a quantum state.

We can read that dynamical particle properties, like energy, momentum and position are poorly defined. As Gary E. Bowman writes “their values seem to depend not only on the particle itself but also on the measurement we perform on it.” If we considered a particle to be a sign, we could think of a particle’s measurement as a sign’s interpretation. Signs’ reading depends not only on a sign itself but also on the man’s interpretation of it. In quantum physics the dynamical particle properties are not properly defined (we cannot simply specify unique coordinates and velocities of a quantum particle). It is only the probability function that “allows us to calculate the “chance” of finding a particle with a certain value for a dynamical property upon measurement.” On the other hand, a words’ interpretation can become very vague because of their abundance in meanings and man’s inability to use them correctly. We should not think of particle trajectories as of a well-defined motion of the particles in space as a function of time. The same could be said of the process of semiosis. We cannot specify exactly how the signs’ interact with each other in order to produce a given text.

In *Spiritual Intelligence* the authors mention quantum physics as an implication in the further development of the conscious factor of brain. They ask the questions related to what we have slightly touched in the chapter on Samadhi—the view on proto-consciousness.

Quantum physics becomes necessary when we ask why it is that brains have the special capacity to turn proto-conscious bits into full-blown consciousness. Our consciousness is a particularly unified phenomenon. All the single neurons involved in a conscious experience oscillate coherently at 40 Hz. That is, they behave as many individual voices that have become one voice in a choir. No known classical phenomenon can generate this kind of coherence, but it is the rule in quantum processes. If the quantum tunnelling postulated in ion-channel activity can become coherent through close proximity in the brain’s strong (at close range) electrical fields, then a mechanism exists for the coherent binding of a single neurone proto-conscious bits into multi-neurone, across-the-brain, full-blown consciousness.

This section stands only as a proposal to analyze the quantum states in terms of the sign theory. Due to this broad discipline we only draw a small portion of what could be considered as an introduction of semiotic discussion of the quantum state.

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6 ibidem, p. 3.
7 Bowman, p. 3.
Conclusion

Before going into the core of the discussion on consciousness we have examined the theory of sing, explained its nature and described the process of semiosis. We have examined the interpretation of text and sign’s relation to trace and presence. Husserl’s thought experiment showed us the possibility of the reduction to the stream of pure consciousness. We stressed the significance of the concept of play of signs and the absence of centre.

We have also analyzed the role of experience which plays in our conscious perception and how mind operates on the process of cause and effect. We marked the difference between causality and conscious absence, thus, proving a possibility of being conscious without gathering external data. With respect to conscious absence we have referred to emergence and collective consciousness. The notion of emergency supported our discussion on self-organizing patterns that are able to produce themselves. Here, we approached a view on self-emerging contents of consciousness, being the result of material and organic properties and linked with presence. There was also a discussion on synchronic and diachronic aspects of language and the perfect language seen only within a group of speakers. We included memory as a necessary component of consciousness and analyzed the perception of the present and past. We summarized the discussion with the semiotic theory of consciousness by bringing in the functional approach of sign as applied to consciousness.

In the third chapter we have analyzed the significance of meaning, sign, word and their interactions. We have quoted Gottlob Frege and Jacques Derrida in this respect. The thesis also discussed the transparency of conscious experience where semantic and sensory transparency was exemplified. Once again the thesis returns to the language standpoint where the world is analyzed in terms of language. This time we raise the argument that the structure of cognition is nearly what the structure of language is. We have also focused on semiosis in relation to conscious experience (semiosis understood as the process of forming the meaning which support the construction of conscious experience) and looked briefly on quantum field theory as a proposal of another interpretation on the subject. All in all, one has to admit apart from semiotic approach of the thesis its holistic character as well. Whether it is by referring to emergence, collective consciousness, semiosis or quantum theory they all point to a full integration in order to behave as a single unified whole.
Summing up, we have come to the conclusion that consciousness is seen as the continuous, dialogic mediation and interaction of the word with its objects and their expression through a series of interpretants.

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