

Antecipacion and abduction
Antecipação e Abdução

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Abstract: *The aim of this work is to analyze the concept of anticipation that, in accordance with De Tienne's (2005) conception, is a process by means of which the representation of a future state orientates a present semeiotic event and its relation to the abductive reasoning. In such a conception, the anticipation involves a teleological dimension, in the extent that it incorporates signs with the unfolding of its interpretants. In the process of semeiosis, that is to say, in the unfolding of signs, they carry on their own future, for they are laden with intentions, desires, necessities and ideals. We point out that, in the semeiosis, the information is inherently processual, for signs are constituted in a dynamics, and by means of such a dynamics, when they are instantiated, they adopt a conditional form which has the characteristic of enunciating vaguely what may happen in the future. At anticipating an interpretation, semeiosis moves on in two directions in time: first, in the present, the interpretation involves something from the past which, when signalized via intentions, point us to the future; and, second, from the future to the present, when orientating the present events by means of the representation of the future. There is a correlation between these two time directions, in the extent that we can forecast, via semeiotic process, the future happenings, being such a forecast an orientation for the present events. We shall argue in defense of the existence of a fruitful relationship between the process of anticipation and the abductive reasoning, a relation that – when collecting information in the form of an ordered set of propositions of a semeiotic continuum – makes possible the formulation of new hypotheses.*

Keywords: *Anticipation. Abduction.*

Resumo: O objetivo deste trabalho é analisar o conceito de antecipação, que na concepção de De Tienne (2005), é um processo pelo qual a representação de um estado futuro orienta um evento semiótico presente, e a sua relação com o raciocínio abduativo. Nesse sentido, a antecipação envolve uma dimensão teleológica, na medida em que incorpora signos com os desdobramentos de seus novos interpretantes. No processo de semiose, isto é, nos desdobramentos dos signos, estes carregam com eles o futuro, pois estão impregnados de intenções, desejos, necessidades e ideais. Ressaltamos que na semiose a informação é inerentemente processual, pois os signos se constituem numa dinâmica, e por meio dessa dinâmica, ao serem instanciados, adotam uma forma condicional, que tem a característica de enunciar vagamente o que poderá acontecer no futuro. Ao antecipar uma interpretação, a semiose se desloca em duas direções no tempo: no presente, ela envolve algo do passado que, ao sinalizar por meio de intenções, remete ao futuro; e do futuro para o presente, ao orientar os eventos presentes pela representação do futuro. Há uma co-relação entre essas duas direções temporais na medida em que podemos prever, pelo processo semiótico, os acontecimentos futuros, sendo esta previsão uma orientação para os eventos no presente. Argumentaremos em defesa da existência de uma relação frutífera entre esse processo de antecipação e o raciocínio abduativo, relação esta que – ao reunir informação na forma de um conjunto ordenado de proposições de um continuum semiótico – possibilita a formulação de novas hipóteses.

Palavras chave: Abdução. Antecipação.

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This work aims at analyzing the role of semiotic anticipation in the domain of meaningful action. According to De Tienne (2005), anticipation constitutes a process by means of which the representation of a future state guides a present semiotic event. We shall argue in defense of the existence of a fruitful relation between the anticipation and the abductive reasoning. Such a relation puts the information in the form of ordered sets of propositions in a semiotic continuum, and this makes possible the formulation of new hypotheses.

The logic of Peircean semiotics, to which Peirce will refer in his reflection on the nature of information, permits to anticipate, in the semiotic process, future results. Such results would say in respect to the organizing logic of the information available in the world, as a product of the multiplication of a dynamics which is renewed in the semiotic continuum, not only being a summation of quantities. The anticipation of results is found in information obtained from happening and facts which, when evolving at the understanding of an intelligence, modify the reality.

In order to anticipate the results of an action it is necessary to unfold the potential information and to participate in a semiotic context that utilizes commonly shared signs. The hypotheses, which are generated from the amplified inferences that are the extension and informed deepness, demand information.

According to De Tienne (2005), p.156), there are two forms of intentionality and an interpretant as a mediator in the semiotic process which instantiate a triadic dynamics. The first occurs because the interpretant was determined by the sign and will determinate other interpretants. The second occurs because the interpretant must represent the many relations between the sign and the object and present the sign to others who will make its anticipation, and so, will anticipate other signs. De Tienne (2000, apud NADIN, 2005, p.156) points out that 'every sign is an anticipation of its interpretation'. In this way, the semiotic process reveals a double intention in time, that is, in the present, the semeiosis involves something from the past which, when signalized via intentions, points the future; and from the future to the present, when orientating the present events by means of the representation of the future. In the logical process of semeiosis there is an intentionality which is instantiated via a historical path, in relation to something from the past, in function of a future, in the present actions. There is a relation between two directions: from past to present and from the future to the present. In the first we can foresee via semiotic process; the second we can actualize the world, that is, we bring about the future in the present in the extent that we constitute ourselves as in integrating part of the world. In the context from the past to the future, the anticipation is a historical process with which the representation of the future via imagination actualises a semiotic event present in a teleological dimension.

Im sum, we can say that the signs and the symbols are indications of what is going to happen in the future, giving beforehand the anticipated conditions in the present. This implies that the semiotic process is not randomic, for presents a continuous inference taking conclusions as new premises in arguments. The teleological dimension is possible in the extent that the interpretation takes a conditional form pointing to the future. The information unfolded by interpretation, when made explicit by dynamics, takes new meanings that, when instantiated in a context, modify relations and attitudes and, in its turn, modify events. The information has an implicated finality which is perceived only when interpreted. In the same time that is unfolded

revealing the reality of facts, the information permits to show one of the folded layers and to get deeper in the knowledge of reality which, when actualized, alters its final result. The triadic interaction permits the unfolding of the implicate reality, for such reality contains potentially information which can help new discoveries. The intention governed by dispositional states and by the relevance criteria of an agent is capable of anticipating interpretations of things. In the semiotic process, any information needs to be interpreted so that it may anticipate attitudes that modify the final results.

Sings bring the future with them, for they are laden with intentions, desires, necessities and ideals. It will be possible and proper to say that the information is a double way street; there is an information that, if caught, modify attitudes that will reveal other layers of reality. The information, when unfolded, is cause for another actualization departing from a conclusion which becomes a new premise which does not restricted causes and effects, but relate to new possibilities of triads – signs, interpretants and objects – which make easy and amplification of realities described by diagrams. This is an open movement, just like spirals, and we cannot define as going up or down, by as going deep in layers of reality which are superposed without linearity.

The conception of anticipation may be proper to the understanding of teleological nature of information in the web of relations, considering habits. We may say that the information has an end, but is not directed to a fixed end. Its finality is the knowledge that the information carries in itself and, in the extent that the information serves to whom interprets it, may anticipate attitudes and events, modifying the cristalised habits or, inclusive, transforming habits into refined skills. Signs, while self-replicating symbols, are a special type of sensigns, which take the conditional form that is oriented to the future making possible the corrective and evolutive forecast. Sensigns are semiotic events limited by rules that make them be vectorised. The vectors are within an inferential continuum that permits the conclusions of amplified arguments to become premises of new arguments (De Tienne, 2005, p. 157). The discovery of potential information does not occur at random. Even though, many times, the randomness is part of such a discovery, there are paths which presuppose an acquainted knowledge, capable of being actualized by novelties, directing the agents to some solution and not to others.

But, in order to be genuine informations, propositions must transport some truth, that is, to have a connection with reality, like a real event which have references in history, in a way of modifying the consequential attributes of things. Such transported truth are information capable of intervening in well-formed habits by an intelligence or mind, increasing the logical quantity, and will be related to the universe for such mind in way of remembering past experiences which are not obsolete and can be connected to a future in a semiotic continuum. This transported truth must involve a possible reality and, there fore admits of a conditional form, such that will be taken into consideration if there will be an intention of obtaining success in the future events. This conditional state linked to reality is the logic of discovery being events and are hardly perceived and are many times deceively associated to an idea of determinism and, therefore, creating the delusion of state of affairs in which 'things are what they are' by a 'higher force'. On the other hand, beyond the logic of happenings, randomness is necessary in such historical process. Logic, therefore, as a semiotic that has signs as its objects, represents things as they must be for a scientific intelligence and accepts the doctrine of 'quasi-necessary' in the extent that such a semiotic admits of certain fallibilism. As Silveira puts it:

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Signs pertain to the phenomenal universe and they are only reached in their empirical manifestations. It is necessary to observe them where they are manifested and such manifestation, as distinguished from pure production of reason, is independent from reason, and is hidden and dissimulated. Never, therefore, the Logic will have expounded signs totally to their explanation, but needs to reach them in the universe of experience and to construct upon them the hypotheses which explain them. (Silveira, p. 21, 2007)

At treating about a scientific intelligence, Peirce referred to an intelligence that leans with nature and with the capacity of generating stable habits. Signs are systems that learn, alterate and create habits by the means of experience. All nature is scientific, and each being learns by generating habits, but by a process of continuous adjusting, transforming habits into skills. Intelligence creates habits in order to make ease the integration with object that aims to know.

Semiotics uses diagrams as a set of inference relations capable of representing a phenomenon in the best way and to be able to anticipate a determined proceeding that gets the best interaction with the same phenomenon. A diagram is a succession of triads formed by sign, object and interpretant. A diagram will be representing reality as logical inference and will ast on the future reality. The representation anticipates imaginarily a behavior so that it can take place in the future or when the occasion permits. All thought, according to Peirce, exists by a motivation of the desired object. Thinking is always learning that helps in the construction of reality. The diagrammatic form of triad carries on the task of representing the reality, by imagining hypothetical cases. We put mental diagrams, multiplying the cases, until we have a habit instantiated by the case that was obtained as the result of the diagram as a whole. Such a process, when approved, becomes an inductive reasoning. In semiotics, it is not so important to know how sings must be, but is important to understand hypothetically how an intelligence just do as regards its act of thinking, and the more the mind understands this act, the better it will reach what it intends to reach. (Silveira, p.26, 2007).

The scientific intelligence catches the objects form out experience, by means of a dynamics in which the diagram formed by triads is implicit, not by causal relations. A sign is a piece of an object capable of being accessed by a kind of scientific intelligence capable of changing the habits of behavior.

However, for Peirce, what can be perceived cannot be restricted to a purely mental experience, for intelligences have a sense in the experience (Santaella, 2004, p.38-39). The perception of new event, as it is well known, undergoes a process of abduction, as Peirce said. Even though Peirce rejects the idea that an intuition is in the pure plane of the mental, abduction, for Peirce, is linked to what he called 'instinct', creating therefore a polemical paradox about the bipolar and ambivalent aspects of abduction(Santaella, 2004, p.108). In the abduction process, hypotheses are brought about in the human imagination, or in instinct, and other question is how to accommodate abduction as a logical inference. However, we shall see that the term is adequate, for it is not contradicting itself as regards Peirce's rejection of mental states, but it is giving importance to think in the level of action, as well as admitting of the case of breaking of habits and permits to foresee inside the logical probabilities the occurrence of future events unfolded by options taken in a given moment.

Peirce had given to the Cartesian intuition a specific sense, that is, cognition is not preceded by other cognition, that is to say, a premise that has not an anterior conclusion. But

Peirce had not rejected the sense of intuition as a flash of creativity, being absorbed by the notion of abduction as instinct. But it is not the case that such an instinct be grounded in an intuitive theory of mental action (thinking), but be grounded in the field of action, being a result of a collective consciousness, not individual. Also, such an insight does not process and indubitable truth, for the instinct is the most fallible of human powers, always revisable (Santaella, 2004, p.112). For Peirce, instincts are habits that are cristalised as beliefs which become unperceived common sense. IN the process of reasoning, a proposition is inferred from another by habit, that is, instinctively. Given that instincts are habits, they are also interpretants in the process of semiotical translation, and it is possible to say then that, in this case, there is no separation among the insight, the illumination and the mental action, contrary to what is accepted. In the intuition must be a first premise, as a result of illumination. There is a process of abductive reasoning in the perception of something new for the perceiver. Contrary to the individualism of intuition, the instinct of perception is collective and social. (Santaella, 2004, p.113).

The thinking, for Peirce, is only possible with signs, neither as a priori representation, nor as an object/subject relation that foresees an effect linked to a cause, but involves the sign, the object and the interpretant. From one acceptance to another, the reasoning is made, being the term 'acceptance' a synonym of logical inference. According to Peirce, abduction is a kind of judgment of perception, and the result of abduction is a hypothesis or conjecture that can be submitted to criticism. The schema of a primordial premise is developed by an unconscious habit of inference. The judgment of perception is greatly fallible, but has, at the same time, the nature of a hypothetical inference. In the abduction process, the notion of unconscious inference is the point of convergence that explaint that such inferences seem to be original for they are unconscious. The paradox between instinct and logics resides in:

The moment of insight is spontaneous, as the act of adopting a hypothesis suggested by the instinct is equally felt as a flash. But the process of construction and selection of the hypotheses is conscious, deliberated, voluntary and controlled. (Santaella, p.115, apud Fann, 1970, p.41).

Notwithstanding the emphasis that is put in the fallibility of hypothetical inferences, they are viable in the extent that human capacities are fragile and fallible. So, for Peirce, we only trust in our judgments of perception by admitting the theoretical possibility of error in any particular judgment. However, "without abduction no perception would be possible, for, even in the most automated perception there is always the hypothetical component brought by abduction" (CP.5.181, Santaella, 2004, p.121-23). The process of abduction requires a dispositional state for the hypothetical component that it carries in itself. Such state presupposed memory and history. In spite the fact that the hypothesis is out of our control, it has proper logic.

The fruitful relation between abduction and anticipation consists, therefore, in the fact that both admit of fallibility and are within a logical process of inferences that are based in real data. In abduction, we can understand that there will be an instinct that will determine attitudes where randomness will have an important place of the development of true information, that is, of novelty that will make part of the abduction process. On the basis of information that stands before abduction, it is possible to imagine and amplify the diagram made of triads, and so to anticipate and predict future happenings. Such predictions will only occur in the virtue of desires

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and necessities directed to the future. Desire and necessities determine attitudes in the present inferring the final result and, in this sense, there is the teleological nature of information.

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