

The genesis of the creative experience in C. S. Peirce

A gênese da experiência criativa em C.S. Peirce

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Abstract: The aim of this paper is to show the relationship between perceptive experience and abductive reasoning in C. S. Peirce. Furthermore, I present abduction as a logical, practical and creative expression capable of introducing novelty in the realm of knowledge, through a system of graphical signs. The Peircean notion of experience is related with that of an interpretative and creative praxis, that is not limited to receiving or registering pre-constituted data passively. In this sense, abduction is that living logical habit which explains the perceived world as a particular case of a conceivable world, where a general rule or hypothesis is effective. I will present abduction as a type of reasoning that infers the cause from the effect, the antecedent from the consequent, the general order from an “extra-ordinary” and particular perceived fact. Abduction not only devises a singular fact, but it makes the fact visible within a new context of possible relationships. Hence, when we see a figure, we don’t really see a mere figure but a figure “as if” it was the perceived result of a possible general system of relationships. The hand gesture gives existence to the figure and makes it visible for us, because it reveals those relationships that constitute the context of the interpretation of the figure. In this respect, the graphical gesture is that practical accomplishment that allows a possible topological interpretation of the actual perceived world.

Keywords: Abduction. Creativity. Experience. Gesture. Perception.

Resumo: *O propósito deste artigo é mostrar a relação entre a experiência perceptiva e o raciocínio abduutivo em C.S. Peirce. Ademais, apresento a abdução como uma expressão lógica, prática e criativa apta a introduzir uma novidade no reino do conhecimento, através de um sistema de signos gráficos. A noção peirciana de experiência está relacionada com a de uma práxis interpretativa e criativa, que não se limita ao recebimento ou registro de dados pré-constituídos passivamente. Nesse sentido, a abdução é o hábito lógico vivo que explica o mundo percebido como um caso particular de um mundo concebível, no qual uma regra geral ou hipótese é efetivo. Apresentarei a abdução como um raciocínio que infere a causa a partir do efeito, o antecedente a partir do consequente, a ordem geral de um fato percebido particular e um “extra comum”. A abdução não apenas estabelece um fato singular, mas torna o fato visível dentro de um novo contexto de relações possíveis. Assim, quando vemos uma figura, nós não vemos somente uma mera figura, mas uma figura “como se” ela fosse o resultado percebido de um sistema geral de relações possíveis. O gesto da*

mão dá existência à figura e a torna visível para nós, pois ela descobre essas relações que constituem o contexto de interpretação da figura. Nesse aspecto, o gesto gráfico consiste na concretização prática que permite uma interpretação topológica possível do mundo real percebido.

Palavras-chave: *Abdução. Criatividade. Experiência. Gesto. Percepção.*

The topic of creativity has often been confined to aesthetics, even though the creative process is immensely important for any sort of inquiry. From a scientific perspective, explained in Peirce's account of abduction, creativity is part of the path of discovery, the point at which we formulate a new hypothesis. In every sort of art, creativity covers almost the entire body of content. But as Dewey pointed out (1934) in our everyday experience, creativity is what describes our best acts in social relationships, in education, and in jobs of every kind.

Giovanni Maddalena, The philosophy of gesture.

1 Introduction

In this brief paper, I want to show the relationship between perceptual experience and abduction in the work of Charles S. Peirce; that is, the logical reasoning which is able to introduce novelty within the realm of knowledge. The main point of my thesis is that there are certain perceptive phenomena that are “true connecting links between abductions and perceptions” (EP 2:228), as Peirce states in *Pragmatism as the Logic of Abduction*. I'll try to extend this Peircean hypothesis to show some possible phenomenological consequences. First, I will lay out the Peircean concept of experience that underlies abductive reasoning. Then, I will show abduction as a critical and creative form of reasoning, comparing it to a practical gesture.

2 The Peircean concept of experience

For our North American philosopher, experience cannot be reduced to an instantaneous sensation or to a set of feelings, perceptions or reactions. Peirce proposes an example to explain his conception of experience:

I perceive the whistle, if you will. I have, at any rate, a sensation of it. But I cannot be said to have a sensation of the change of note. I have a sensation of the lower note. But the cognition of the change is of a more intellectual kind. That I experience rather than perceive (CP 1.336, 1905).

As Peirce states (1) a whistling locomotive passes at high speed nearby and its whistle produces a sensation of noise. (2) Then, the locomotive moves away from us, the whistle stops, and we have a restored sensation of silence. (3) During the passage from the first sensation of noise to the second sensation of silence, there exists a *state of feeling* that cannot be reduced to either of the two sensations. Now the questions

are: How should we conceive of that change? What kind of experience do we have regarding that change? Could we say that we have any experience regarding the change in sensation or tone? Based on this example, it is possible to say that we directly experience the sensations of noise and silence, but we have no direct perception of the change in tone. Thus, we know, and we have an experience regarding the change in tone, without perceiving it directly. Therefore, according to Peirce, it is possible to affirm that experience is constituted by directly given sensations (the noise and the silence) and indirectly co-given features (the change in tone).

We directly perceive the locomotive's whistle according to a higher or lower tonality (noise or silence), but we indirectly perceive the change in tone between the two sensations. And, furthermore, even if we do not have any direct perception of the change, nevertheless, this change is the condition of possibility for perceiving both the noisy whistle and the silence. The Peircean notion of experience cannot be reduced to the sum of direct and empirical sensations, but also includes those features which are indirectly known rather than directly perceived. The Peircean concept of experience includes perceived and co-perceived elements. Instead of using the image of a chain, in which the sensations follow one another, we could use the image of a cable "whose fibers may be ever so slender, provided they are sufficiently numerous and intimately connected" (CP 5.265, 1868). Every string is given to our direct perception, but the force which weaves them together is co-given. The change in tone is the non-sensitive condition of possibility for the direct experience of the sensitive elements. Having the experience of the whistle or the silence means to consider the given and the co-given features together, as if they were strings intertwined in the same cable. Peirce calls this continuous chiasmus of features an *event*: "We perceive objects brought before us; but that which we especially experience—the kind of thing to which the word 'experience' is more particularly applied—is an event" (CP 1.336, 1905).

Peirce several times states that experience consists in a sense of reaction between ego and non-ego. Experience always involves double-sidedness and takes place through a series of surprises and disappointments. In other words, experience is our great teacher and "it is by surprise that experience teaches all she deigns to teach us" (EP 2:154). Furthermore, existence itself brings out the features of experience: "The existent is that which reacts against other things" (CP 8.191, 1904). In the same sense Peirce describes experience by the category of Secondness:

That hardness, that compulsiveness of experience, is Secondness. [...] These are not two forms of consciousness; they are two aspects of one two-sided consciousness. It is inconceivable that there should be any effort without resistance, or any resistance without a contrary effort. This double-sided consciousness is Secondness. All consciousness, all being awake, consists in a sense of reaction between ego and non-ego (EP 2:268).

In this way the brutality of experience and the awareness of it are distinguishable, but inseparable, features of every phenomenon. In fact, experience as Secondness "is that which is as it is in a second something's being as it is, regardless of any third. Thirdness is that whose being consists in bringing about a Secondness" (EP 2:267).

As Richard Bernstein states in his *The Pragmatic Turn*:

Experience itself is not pure Secondness; it manifests elements of Firstness and Thirdness. We prescind the aspects of Firstness (quality), Secondness (brute compulsion), and Thirdness (the inferential or epistemic character) from experience. Consequently, as soon as we raise the question, "What constrains us?" we are dealing with Thirdness. But there is nothing mysterious here. If we reflect again on Peirce's examples of Secondness, we say that we experience shock, surprise, resistance, constraint. But as soon as we ask what precisely the character of this experience is and seek to describe what constrains us, we are dealing with an epistemic issue (Thirdness) (BERNSTEIN, 2010, p. 278-9).

In the same sense, Sandra Rosenthal states that "all knowledge begins with perception, but perception is not the having of brute givens. Rather, there is a creative element in perceptual awareness, an interpretive creativity brought by the perceiver" (ROSENTHAL, 2004, p. 193).

Now it is important to pose a question: Who recognizes the continuity of the perceptual flow of experience? Who intertwines the given aspects with the co-given aspects, according to the distinctive style of perceiving each? Peirce helps us with a well-known example: "a portrait represents the person for whom it is intended to the conception of recognition, a weathercock represents the direction of the wind to the conception of him who understands it" (EP 1:5). In this example (1) the wind's direction would be an invisible object of experience, if it was not pointed out by the movement of something visible, like a weathercock. (2) It would be invisible without someone (an *Interpretant/interpreter*) who is able to recognize the relationship between the wind and the weathercock. The *Interpretant/interpreter* recognizes the relationship between the given and co-given features and interprets what he/she directly observes, as a sign or a particular case that is part of a wider context. In summary, the *Interpretant* is someone who not only experiences the given sensations directly and the co-given sensations indirectly, but someone who also recognizes the passage from one to the other. Finally, perceptual experience reveals a triadic dynamism (object, sign, *Interpretant*) which has a logical and defined structure. I want to show how experience has a logical structure and how the logic of abduction is based on perceptual and gestural experience, according to Peirce.

3 The structure of abduction

To better understand the logical structure behind the Peircean notion of experience, I have developed the following example. Imagine finding a prehistoric fish fossil on a mountain that is two thousand meters above sea level: (1) it is an extraordinary and surprising fact! Therefore, we would ask: why does this prehistoric fish fossil lie on a mountain that is two thousand meters above sea level? How is it possible? This scenario is plausible (2) if the sea covered this mountain a long time ago, then this might be a prehistoric fish fossil. Finally, we could conceivably infer that (3) the

sea covered that mountain when the fish was alive in the prehistoric age. The line of reasoning we followed seems rather banal, but it is not. In fact, this reasoning is based on the model of abduction formulated by Peirce in 1903:

- [1] The surprising fact, *C*, is observed;
- [2] But if *A* were true, *C* would be a matter of course.
- [3] Hence, there is reason to suspect that *A* is true (EP 2:231).

First of all, a result or an extraordinary fact (the prehistoric fish fossil on a mountain two thousand meters above sea level) is observed. Then, a general rule that hypothetically explains the observed result is introduced (“if the sea covered this mountain a long time ago, this might be a prehistoric fish fossil”). Finally, a possible case or explanation of the observed result is inferred (the sea covered that mountain when the fish was alive in the prehistoric age). So, the *Interpretant/interpreter*, who makes the abductive reasoning, interprets the prehistoric fish fossil perceived *as-if* it was a possible case of a *conceivable* world, where a general hypothesis rules (“if the sea covered this mountain a long time ago, this might be a prehistoric fish fossil”). This reasoning, as Fabbrichesi states, “has an *as-if* cognitive structure” (2005, p. 143). In other words, we interpret the observed result *as-if* it was a particular case of a general cause, or *as-if* it was a consequence of a general antecedent based on a perceptual fact. As *Interpretants/interpreters*, we observe the fact and we interrupt the normal and continuous perceptual flow of experience by taking a *step-back* from the perceived world. Then, we conceive an explanatory hypothesis of that perceived fact and we introduce it in a wider and possible context—that is, a possible world. But how does this introduction happen in practice, making it possible to move beyond the immediate actuality of the perceived world and enter into a new, possible world?

It is important to insert an observation here: the conceivable world is not an alternative to the perceived one. But instead, the possible world is the extrinsic expression of the intrinsic potentiality of the actual and perceived world. Hence, abduction is a logical and regressive form of reasoning that translates¹ the observed facticity to a conceived possibility. Abduction performs a transition from the perceived world to the hypothetical one, ascribing a hypothetical cause to the observed effect. Or, abduction considers this effect *as-if* it was the particular result of a general and hypothetical rule. Abduction is a reasoning that *ab-ducts*,² takes away, plucks out or crops an explanatory hypothesis from the continuous perceptual flow of experience, and transfers it to a conceivable world, through the materiality of a gestural and/or graphical sign. In this regard, we can say that abduction is a critical habit, because it breaks and interrupts the normal and continuous flow of the perceptual experience in order to overturn it. As Maddalena and Zalamea affirm: “creativity is thus a peculiar kind of change that happens within this changing experience. The peculiarity is due to the fact that creativity seems connected to something new, which would be by

1 From the Latin *translat*: “carried across”, past participle of *transfere*, from *trans-* that means “across” and *ferre* that means “to bear.”

2 From the Latin *ab-ducere* that means “leads from.”

definition something that breaks continuity” (MADDALENA y ZALAMEA, 2013, p. 7).

Abduction is also a creative, or rather re-creative, way of reasoning because it enlarges the context of the perceived fact, introduces a new hypothetical explanation of it, and places it within a new interpretative horizon through the materiality of a sign (word, drawing, graph, gesture, etc.). Peirce uses an example to lead us to understand how abduction and our gestures have a similar structure and features: they are both critical and creative habits. If we look at a blackboard:

There are no points on this blackboard. There are no dimensions in that continuum. I draw a chalk line on the board. [...] What I have really drawn there is an oval line. For this white chalk-mark is not a *line*, it is a plane figure in Euclid's sense — a *surface*, and the only line there, is the line which forms the *limit* between the black surface and the white surface. [...] The boundary between the black and white is neither black, nor white, nor neither, nor both. It is the pairedness of the two (CP 6.203, 1898).

In this example, Peirce says that the boundary that distinguishes the white figure and the black background is “neither black, nor white, nor neither, nor both.” But the boundary has the function to delineate the white figure and the black background as identical to themselves and different from one another. The uncolored boundary makes the white figure white and the blackboard black. Besides that, we must say that the same graphical gesture that draws the figure, also *draws* the background, establishing the relationship between them. In other words, the white, oval surface and the blackboard would not be visible as a figure on a background, without the invisible boundary drawn by the gesture of a hand. Hence, the gesture of drawing establishes the invisible topological condition of the existence and knowability of the two visible objects (the figure and the background).

Finally, it is possible to understand that this graphical gesture is a critical and creative habit. The gesture is critical because it breaks the continuity of the blackboard, drawing in and on it a topological discontinuity (the figure). The gesture is creative because, through the practical gesture that draws the oval line surface on the blackboard, it sets up a number of relationships (figure-background, right-left, visible-invisible, in-out, etc.) that were not visible before the gesture. Therefore, this graphical gesture establishes a relationship of existence, rather than a relationship of simple representation: the gesture that draws the figure breaks the topological continuity and creates new topological relationships (figure-background, right-left, visible-invisible, in-out, etc.), rather than merely representing a figure.

4 Conclusion

As we saw before, abduction not only devises a singular fact, but it makes the fact visible within a new context of possible relationships (“if the sea covered this mountain a long time ago, this might be a prehistoric fish fossil”). In the same way, the oval line surface is not a mere figure, but a figure contextualized by the hand gesture that draws it. The figure drawn and observed is a *figure-of* a background. In

other words, the figure exists as-if it was a particular case of a possible context-world where certain relationships rule (figure-background, right-left, visible-invisible, in-out, etc.). Hence, when we see a figure, we don't really see a mere figure but a figure *as-if* it were the perceived result of a possible general system of relationships. The hand gesture gives existence to the figure and makes it visible for us, because it reveals those relationships that constitute the context of interpretation of the figure. In this respect, the graphical gesture is that practical accomplishment that allows a possible topological interpretation of the actual perceived world. Just as the *step-back* of abduction allows us to interpret the prehistoric fish fossil as a particular case of a general law, the graphical gesture that draws the oval line surface allows us to interpret the figure as a particular case of a figure against a general background, where certain topological relationships apply.

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