



Peirce's open community in light of sentimentalism and normative sciences*

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Abstract: Peirce's idea of an unlimited community has been usually analyzed from its role in science and the normative ideal of truth. However, it is essential to understand the role of the community of inquiry in light of the other normative sciences, aesthetics and ethics, since according to Peirce, any endeavor to know that is not guided by the esthetical ideal of admirable *per se* should not be considered as proper science, but as a power tool to benefit some elite. This article aims to analyze Peirce's idea of community of inquiry in light of sentimentalism and the normative sciences in order to evidence that such community is not elitist, but open, insofar as it is also lured by the *summum bonum* and the admirable *per se*. Finally, we provide a more organic reading of Peirce's work, opening the way to consider possible consequences of this position from an ethical and political perspective.

Keywords: Charles S. Peirce, unlimited community, sentimentalism, normative sciences, science

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La comunidad abierta de Peirce a la luz del sentimentalismo y las ciencias normativas

Resumen: La idea peirceana de una comunidad ilimitada ha sido habitualmente analizada desde su papel en la ciencia y el ideal normativo de la verdad. Sin embargo, esta investigación sostendrá que es esencial comprender el papel de dicha comunidad a partir de las otras ciencias normativas menos exploradas, la estética y la ética, porque, según Peirce, cualquier esfuerzo por saber que no esté guiado por el ideal estético del admirable *per se* debe considerarse como una herramienta de poder para beneficiar a alguna élite, no propiamente como ciencia. El objetivo principal de este artículo es evidenciar que dicha comunidad peirceana no es elitista, sino abierta, y que está atraída también por los ideales del *summum bonum* y el admirable *per se*. Asimismo, se ofrece una lectura más orgánica de la filosofía peirceana en la que se consideren las posibles consecuencias de la comunidad ilimitada para la ética y la política.

Palabras clave: Charles S. Peirce, comunidad ilimitada, sentimentalismo, ciencias normativas, ciencia

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This work aims to clarify Peirce's idea of unlimited community presented in light of normative sciences and sentimentalism, and not only in light of science as it has been traditionally approached. In our opinion, it is necessary to situate oneself in the context of the normative sciences, since these give us the route of what *should be* or the *telos* of the scientific community, from which its concept acquires true meaning: the search for truth (ideal of logic or semiotics that presupposes the aesthetic ideal of reasonableness). Otherwise, it could be mistakenly thought that the scientific community obeys to the sum of the scientists, or the consensus of closed communities. If this were so, we would once again embark on the construction of a rigorous theory of scientific demarcation or eugenics of the sciences, in the manner that epistemological discussion has traditionally done, and which we consider has no place in Peirce's proposal.¹

In light of the normative sciences, it can be established that Peirce's scientific community constitutes a sufficiently vague and open community that includes all those inquirers (past, present and future) who decide to achieve truth and reasonableness in the cosmos through the scientific method in which abduction, deduction and induction are intermingled. This method is not exclusive to the laboratory scientist of the commonly called hard sciences, but is shared by all those who have chosen to establish their beliefs through the teachings of experience and logic, that is, from both the contrast with reality, the social impulse and self-control.

Peirce believes that aesthetics provides the ultimate goal on which ethics and logic are developed. Thus, aesthetics reflects on the admirable in itself; ethics on the *summum bonum*, which according to Peirce is a kind of the *admirable per se*; and logic or semiotics reflects on the truth which is, also a kind of *admirable per se*. In this context the role of science, and with it, the scientific community of inquirers, is to establish the means to achieve the ideals of the *summum bonum* and the *admirable per se*. For this reason, Peirce considers that any investigative exercise that has as its purpose the mere use or selfish interests of an individual or an elite and that does not aspire, in the final analysis, to procure the reasonableness and harmony of the cosmos should not be considered science. In short, the only criteria of scientificity that Peirce promulgates is that it be an exercise based on the scientific method in its broadest sense, which is attracted by the achievement of the ideals established by the normative sciences.

This article will be developed in three sections. First, we will introduce the concept of the scientific community in Peirce; then, we will establish some problems raised by the conception of the community of inquiry in the academic tradition; and finally, we will present our proposal in light of Peirce's concept of sentimentalism, which constitutes the hinge of the scientific exercise in light of the normative sciences.

¹ In this sense, we share the general idea of De Marco (1971) and Mahowald (1973), who state that the concept of community evolves in the course of Peirce's thought. As we will see later on, the incursion of normative sciences is fundamental to understand the continuous development and growth of the idea of community.

The community of inquiry in Pierce

The notion of community in Peirce is mainly linked to logic and its end in truth (See for example, Smith, 1965). But we will try to show that, just as logic understood as a normative science is related to the other two normative sciences —ethics and aesthetics—, there is also a continuity between Peirce's conception of scientific community and reasonableness, and the *summum bonum* of aesthetics and ethics.

Initially, the notion of community emerged as a reaction to the Cartesianism that Peirce wanted to overcome (Haack, 1982; Colapietro, 1989). For Descartes, the cognitive subject, individual and isolated, becomes the ultimate criterion of truth if the concepts are clearly and distinctly manifested to him or her. Peirce, on the other hand, states:

But thus to make single individuals absolute judges of truth is most pernicious. [...] We individually cannot reasonably hope to attain the ultimate philosophy which we pursue; we can only seek it, therefore, for the *community* of philosophers. Hence, if disciplined and candid minds carefully examine a theory and refuse to accept it, this ought to create doubts in the mind of the author of the theory himself (EP1. 29; W2.211).²

An individual, then, cannot find the truth on his or her own; he or she needs to open up and contribute to an unlimited community. The confidence of the Cartesian subject, in the way that concepts manifest themselves, contrasts with a bit of skepticism and mistrust suggested by Peirce. Distrusting one's own beliefs (fallibilism) is more beneficial to science than the selfishness and the logical and epistemological narcissism of thinking one already holds the truth. To think that one already possesses the truth is an obstacle to really find it; it blocks the path of inquiry.

The individual as a criterion of veracity makes science run the risk of falling into relativism. What would be achieved is a diversity of scientists, inquirers, philosophers and metaphysicians who do not agree on anything, but where each one considers to hold the truth. According to Peirce, this has been the history of metaphysics (EP1.119; EP1.29; W2.211).

Instead, it is more beneficial to think that science is always open to the fact that our inquiry, regardless of how rigorous it has been, can be refuted by other inquirers or communities who have detected errors that were overlooked. Rebuttal may happen soon or in the very distant future. The point is to have a *humble* attitude that our beliefs may be wrong according to the fallibilist principle. On the other hand, to consider that my beliefs may be wrong and to be willing to reconsider them if a community of

² References to Peirce's works cited in this article are indicated usually with the following abbreviations:

[[]CP] Charles S. Peirce, Collected Papers (8 vols.), Harvard University Press, 1931-1958.

[[]EP] Charles S. Peirce, Essential Peirce (2 Vols.), Indiana University Press, 1992-1998.

inquirers shows the deficiencies of such beliefs, allows the approach of inquiry towards the truth (Flórez, 2018).

In addition, the generality and complexity of reality, represented in a true opinion, requires that it be revealed by an undefined community. Peirce says:

The real, then, is that which, sooner or later, information and reasoning would finally result in, and which is therefore independent of the vagaries of me and you. Thus, the very origin of the conception of reality shows that this conception essentially involves the notion of COMMUNITY, without defined limits, and capable of an indefinite increase of knowledge (EP1.52).

Peirce defines truth as that opinion destined to be found by the community of inquiry. However, it is important to note that truth does not constitute the fate of humanity, that is, it does not mean that we will all arrive at the revelation of reality without exception. Such a revelation is based on a first choice, namely, choosing to fix our beliefs by the scientific method which explains, for example, that despite the various experiments indicating that the Earth maintains a roughly spherical shape, there are still flat-Earth theorists. Inquiry for truth demands that the inquirer be open to the social impulse.

Truth is accessed gradually and continuously. Scientific inquiry approaches truth infinitesimally, but science does not know when it has arrived because it does not know truth beforehand. That is why it is always possible that, although the inquirer feels safe or his or her irritation of doubt has ceased, he or she still has not reached the ideal of truth that is always beyond.

However, Peirce is careful not to fall into a skeptical attitude or an attitude of distrust in which you never know if you are true or not. Rather, it is an attitude of Hope, Faith and Charity before the community (EP1, 150), the epistemological sentiments that must rule any inquiry. The fact that a particular and limited inquirer or community mistrusts his or her beliefs acquired through inquiry does not mean that there are other scientists or communities in other places or times that may be in doubt due to new or different observations.

We will try to illustrate Peirce's position with the following example: suppose someone wants to have an accurate knowledge about her father, Humberto. According to Peirce's perspective, she can make an analysis of her knowledge about Humberto, the result of which is *a* perspective of him, namely, Humberto as a father. She cannot say this perspective is false, however, can she say from this analysis that she knows Humberto completely? No, because she only knows *one* perspective of Humberto. Now, if she really wants to know Humberto, her second move would be to the community, that is, she would ask about Humberto as a husband, as a friend and as a son, which could give her a better idea of who Humberto is. Even, Humberto's vision of himself would be *one* of many perspectives that can be obtained about him, for Peirce says

that the knowledge of oneself is mediated, just like the knowledge of any other object. Therefore, the knowledge of Humberto on himself has the same value as the knowledge about him as a father or son, etc. insofar as it is a perspective that, although valuable, does not comprise his total knowledge.

Now, let's add another aspect of evolutionary reality which, as Vincent Colapietro (1989) points out, is quite important to Peirce (CP 6.14). Humberto, like the cosmos itself, changes. Thus, for example, if his daughter lived with Humberto for a long time of her life, but left home for several years and then returned, her knowledge about his father would have to adjust to that reality, and she would no longer be able to speak about exactly the same Humberto that she knew when she was twenty years old at the time she left. Although knowledge occurs in a continuum and what she knew at that time should serve as a starting point, undoubtedly her knowledge about Humberto, as with our knowledge of reality, must be continuously adjusted to evolution.

Finally, our knowledge and perception of people can change over time, even if the person, in theory, does not change. In the case of Humberto, let's suppose that he died so his daughter intends to make a book of memoirs in which the most important perspectives of Humberto for a complete knowledge about him are gathered. However, it is important to note that she may have an idea or conception of who he is for her as a father in her 20's, when the book of memoirs was written, but she may have a different conception of him in her 30's, which would mean that, in order to have a reliable writing of Humberto's memories, it would be necessary to adjust her story to the new conditions or conceptions she has of him. The same can happen with our conceptions of the cosmos. For example, one can have a mechanistic idea of the cosmos, as the philosophical tradition had it for a long time, but under the discovery of the theory of relativity one can have a new conception of it, which means that our idea of the cosmos changes, adjusts and expands.

In short, our approach to Truth is always limited. On the one hand, the individual perspective constitutes only a part or perspective of the knowledge that must be complemented by others, the community, in order to have a better or more robust knowledge, but this exercise does not exhaust the reality of what we know. On the other hand, as we live in an evolutionary world, our knowledge will always have to be adjusted to its changes, with the help of an unlimited community in the future. Ultimately, our knowledge of the cosmos can also vary according to the new theories and experimental tools that we acquire, which will give us new conceptions of it.

Hence, the community of inquirers has as its purpose to find truth and promote the growth of reasonableness in the cosmos through the use of the scientific method. The four methods for the fixation of belief that Peirce presents in his article "The Fixation of Belief" (1868 EP1.109-123) proceed from tenacity where the role of the community is null, to the scientific method where the social impulse is indispensable, going through methods of authority and apriorism in which the appeal to the community increases.

The one who assumes the method of authority trusts that another person or social institution is the one who determines what is true and what is not: while the one who assumes the a priori method affirms that there are laws or concepts that are common to all rational beings. On the other hand, science assumes that there is a reality independent of what an individual or social group wishes to think of it and, therefore, it is a reality that will end up being imposed if the inquirers allow it to manifest itself in experience and is questioned with the scientific method. Science also assumes that if this reality is independent —in the sense that it does not depend on what I want to think of it, that is, on my will—other inquirers will be able to replicate the experiments and arrive at the same results. Consequently, science is a communitarian work, in Peirce's words: "The soldier who runs to scale a wall knows that he will probably be shot, but that is not all he cares for. He also knows that if all the regiment, with whom in feeling he identifies himself, rush forward at once, the fort will be taken" (EP1, 150). Similarly, the scientist who is truly committed to achieving the truth knows that his or her inquiry will probably fail, but stands firm in his or her commitment, as he or she is helping the unlimited community of inquirers to finally take hold of the truth.

It should be noted that community and consensus are not the only and sufficient criteria for the acquisition of truth, but they are certainly necessary. Peirce's statements on truth as the final opinion to be reached by the community of inquiry, leads one to believe that this is a consensualist criterion (Crélier, 2007, p. 46), and that it is enough to persuade and convince a scientific community for a theory to be considered true. But this is not the case. Truth is also established from the relationship between theory and reality and, as Douglas Anderson states in "Peirce and the Art of Reasoning" (2005), in order to persuade, not to manipulate, it is important that our reasoning is based on reality.

The community, it is worth repeating, plays an important role because it can indicate to the inquirer the deficiencies of his or her theory, but for that very reason, it is an unlimited and open community. In closed communities, as Thomas Kuhn has shown, the group of scientists who make up the community defend normal science against any attempt at revolution, focus on solving puzzles that fit easily into normal science, and try to hide their anomalies (Cf. Jacobs, 2006).

The open and unlimited community implies that, although a scientific community³ defends a normal state of science, it will always be possible for another scientist or community to reevaluate, refute or delimit the defended theory. Kuhn's analysis of science is descriptive, historical and sociological; in contrast, the Peircean notion of an open and unlimited community is normative, because it also prescribes the best way in which science can reach the truth, and the best way for this is that the scientist never blocks access to experience and social impulse. Peirce states:

³ For a good characterization of the inquirers and the community of inquiry according to Peirce see Liszka's article "Charles Peirce's Rhetoric and the Pedagogy of Active Learning" (2013, 687).

It seems to me that we are driven to this, that logicality inexorably requires that our interests shall not be limited. They must not stop at our own fate, but must embrace the whole community. This community, again, must not be limited, but must extend to all races of beings with whom we can come into immediate or mediate intellectual relation. It must reach, however vaguely, beyond this geological epoch, beyond all bounds. He who would not sacrifice his own soul to save the whole world, is, as it seems to me, illogical in all his inferences, collectively. Logic is rooted in the social principle (EP1.149).

The open community and its detractors

According to Wells Kelley, the origin of the community of inquirers is supported by the idea of Peircean fallibilism, that is, the idea that an individual cannot find the truth by him- or herself and needs others to be able to carry out such a task. However, since we all have different perspectives and ways of assimilating reality, as Peirce himself recognized, it seems unlikely that we can all reach "the only true conclusion" or a unified conception of reality. According to Kelley, a solution to this problem is not possible (2009, p. 210).

Scholars who discuss this topic, such as Barbara Thayer-Bacon (2005), argue that Peirce favors a *single*, *simple idea of truth*; primarily, based on the explanation of reality given by Peirce, namely, that "[t]he opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real" (CP 5.407). However, as Liszka explains, "[t] he word 'fated' is not meant in a superstitious or determinant sense, but rather in the sense of an opinion or belief that cannot be resisted" (1978, p. 311), if the scientific method is followed, of course. Peirce himself clarifies that "[f]ate means merely that which is sure to come true, and can nohow be avoided. It is a superstition to suppose that a certain sort of events are ever fated, and it is another to suppose that the word fate can never be freed from its superstitious taint. We are all fated to die" (Note to CP5.407). Moreover, and according to Peirce (EP2. 253), although this idea of truth must have unity as one of the characteristics it requires in order to be incarnated, it cannot be simple as it must embrace diversity and complexity, which are also characteristic of the growth of every idea (EP2. 254-5, 343-4; CP1.174; EP1.310). In addition, such a critique ignores the normative character of truth and community that we wish to emphasize in this article. It is not necessary to reach absolute truth for this ideal to make sense. As an ideal, truth impels the community to seek the discovery of reality, which is, in turn, complex.

Let us digress into Peirce's appreciation of evolution to explain this point. If the existence of an absolute and invariable final goal for evolution were accepted, then

individuality and plurality would be meaningless. If there were a final objective embodied by the community in spite of the ends of the individuals, then the individual would have no other possibility than to surrender and submit his or her will to the will of the community, and plurality would have no place at all. But Peirce believed that evolution and growth took place through chance, diversity, increasing complexity, and that he was heading towards a relatively vague and *undefined* future ("The Doctrine of Necessity Examined", 1892). These aspects of his theory show that individuals have an important, if limited, role in enabling plurality and creativity in the cosmos. Moreover, since Peirce is a realist, truth evolves in tune with the evolution of the cosmos and, therefore, both ideas share similar characteristics. As a result, the idea of truth should have some kind of unity as stated above, but at the same time it should be complex and growing. Let us analyze these ideas from an example of everyday life, which takes up certain epistemological ideas outlined in Humberto's previous example of knowledge, to see how this is possible.

Some time ago, we were hiking with some colleagues, among whom was a Mexican friend. The journey was quite long and hunger was taking hold of us so, under its effects, we began to increase the pace of our steps to reach an old coffee plantation where lunch was waiting for us. After three hours of hurried pace, we finally reached our destination, but lunch was not ready, so we started to wander around the garden to make some time to distract our empty stomachs. Unexpectedly, a huge cactus of more than two meters high caught our attention, curiously, for different reasons. While most of us were surprised by the beautiful shape and unusual size of the cactus, our Mexican friend was able to recognize its peculiarities. This is not surprising, since Mexicans pride themselves on having many different types of cacti from which they can obtain beautiful baskets and excellent alcoholic beverages, among other interesting things. As it turns out that the cactus in question was edible, you can imagine how different the cactus appeared to our eyes. Even though this was just an "aesthetic object" for us, we could visualize our Mexican friend adding chilies and eggs to that beautiful specimen in his imagination, while a little bit of anxious saliva emerged from his mouth.

Now, the fact that the cactus was an aesthetic object for us and an edible product for our Mexican friend does not make our perceptions of the cactus any less true. In our view, both points of view help to make a more truthful and complex idea of what a cactus is, or better, could be—let's remember that Peirce holds that the truth is found in a future time in the form of what it could be or *would be*. Furthermore, as previously noted, one of the conditions consistent with the scientific method, which makes this method more suitable for finding the truth than others, is that it takes into account the social impulse.

⁴ Pluralism understood here as the possibility that different views or perspectives can help to grow and enrich the idea of truth, not in the irreducible sense by James, abjured by Peirce, in which each individual is separated from the other and pluralism constitutes a sum of these individual perspectives (Cf. Colapietro, 1908, p. xvi) that would never converge in a consensus, and undoubtedly leads us to relativism.

Barbara Thayer-Bacon makes a similar complaint about the impossibility of making room for plurality in the Peircean idea of truth when she states that

we cannot credit Peirce with arguing that fallibilism entails pluralism, both in terms of the need to include outsider views as well as in terms of believing in the impossibility of attaining knowledge that is universal. Peirce still clings to the idea that in the end there will be one Answer upon which we will all agree, he still holds out for Truth, rather than a concept of multiple truths, he just positions that Truth in the future instead of the present or past. Truth is something we are getting closer and closer to obtaining. He also carefully restricts his community of inquirers to scientists who are involved in rational inquiry (2005, p. 321).

In addition to the idea of a single Truth as an objective of the community of inquiry, in her article Thayer-Bacon also questions the concept of reasonableness advocated by Peirce. However, in our view, the idea of rationality pointed out by the interpreter is far from Peirce's, since she seems to forget that, unlike the modern ones and particularly Descartes, of whom he was a great critic, Peirce thinks that rationality, or better, reasonableness arises from feelings, that is, from an education in the self-control of our emotions (Acosta López de Mesa, 2019). Remember that reasonableness is the aesthetic ideal, the *admirable per se*. Reasonableness is not the modern Reason that is split from the body and feelings to guarantee its supposed objectivity. Consequently, the ideal of truth must necessarily include reasonableness.

The interpreter also states that Peirce "seems to argue for a split between theory and practice that his earlier work (The Fixation of Belief) sought to heal" (Thayer-Bacon, 2005, p. 321). While it is true, as Thayer-Bacon states, that Peirce was not at first fully convinced of the relationship between theory and practice, or rather between morality and logic as evidenced in "Philosophy and the Conduct of Life" (1898), it is important to note that after 1902, when he began to develop his theory of the normative sciences—ethics, aesthetics and logic—that alleged gap disappeared. The text that Thayer-Bacon uses to support her argument about the "new gap" dates from 1889, shortly before the development of the normative sciences, and reads as follows:

Only recently we have seen an American man of science and of weight discuss the purpose of education, without once alluding to the only motive that animates the genuine scientific investigator. I am not guiltless in this matter myself, for in my youth I wrote some articles to uphold a doctrine I called Pragmatism, namely, that the meaning and essence of every conception lies in the application that is to be made of it. That is all very well, when properly understood. I do not intend to recant it. But the question arises, what is the ultimate application; at that time I seem to have been inclined to subordinate the conception to the act, knowing to doing (Peirce, 1889/1958, p. 332).

In this reflection, Peirce criticizes his first definition of pragmatism, set forth in "How to Make Our Ideas Clear" (1878), for reasons different from those alleged by Thayer-Bacon in her writing, that is, for the alleged gap between theory and practice. On the contrary, the reason Peirce criticizes his previous view is that he finds it too nominalist, the same reason he criticizes James' pragmatism and changes the name of his theory from pragmatism to pragmaticism. At this point, Peirce no longer believes that the ultimate goal of the theory is action, but self-controlled behavior and habit, which, corresponds to the embodiment of habits that follow reasonableness (Bernstein, 1981). Therefore, we would say, there has not been a new division between theory and practice. Moreover, in view of the assertion that reasonableness and sentimentalism are interdependent and continuous for Peirce, it seems really strange that Thayer-Bacon only quotes Peirce to the point where she mentions reason, while totally neglecting the role of love as she describes it at the end of the quoted paragraph, when he states that "the Law of Love and the Law of Reason are quite at one" (Peirce, 1889/1958, p. 332). Reasonableness, under this perspective, constitutes the self-controlled growth of sensations and emotions into logical feelings, and this is the basis of any type of inquiry, as Peirce states, when recognizing Charity, Faith and Hope as the necessary bases for good reasoning (EP1. 150).

Jakob Liszka, on the other hand, thinks that Peirce has a "very classical view of science" and that "scientific method was strictly the method of the modern natural sciences" (2013, p. 313). Consequently, the interpreter maintains that Peirce's scientific community differs from the general community and finds it very difficult to articulate it. Liszka's article is a good example of the sad consequences that an interpretation of Peirce based on the gap between science and vital matters can produce.

Some of the issues highlighted by Liszka in this regard are the problem of ensuring that the scientist is a good man and the terrible implications of applying "scientific methods" to social problems —such as Franz Joseph Gall's research on Phrenology, to cite one case. However, a different outcome must occur if we think of science as any inquiry that points to the *admirable per se*, follows the teachings of experience, and is founded on feelings of Love, Charity, Hope, and Faith. If one follows the idea of Peircean science as presented here, the scientist or inquirer must become the *phronimos* or prudent Aristotelian human being, as Liszka also recognizes in his article (Liszka, 2013, p. 317-318) and who he describes as follows:

[a]s the scientist's identity of the Self with the ordered motion of the cosmos, theory enters the conduct of life. The scientist, thus, becomes the prototype of the man under the highest stage of self-control, for he has truly and rationally submitted his own Self to the Real. He is the man who is guided by rational principle rather than individual self-interest. The scientist finds virtue, as well as the means for discovery, in almost a Romantic union with the Real [through *il*

lume naturale]. [...] The social role of the scientist, as we may gather from what has preceded, is the guardian of the scientific method and at the same time its procreator (2013, p. 317-318).

In this sense, the case of Gall, concluding that Phrenology could predict the character of an individual was not the result of the application of the scientific method as conceived by Peirce, since it is not the consequence of being open to the signs of nature; on the contrary, in our view, it is the consequence of trying to "prove" our own moral prejudices. Gall, in the strict sense, did not want to learn through experience, he wanted to govern nature according to his own preconceived ideas, and this was not the way a scientist should proceed. Science begins with the aesthetic contemplation of nature, as musement teaches us (A Neglected Argument for the Reality of God, 1908) and ends with the indefinite search for Truth and the *admirable per se.* If inquiry is used with the aim of closing the doors to new knowledge and research —in Peirce's own words, to block the way of inquiry (Cf. CP 1.135)— and to create sharply delimited atomic essentialities, it is of the most suspicious type. When vagueness and continuity are denied, any possibility for the growth of ideas is hindered.

The community in light of sentimentalism

According to Peirce, ethics is a normative science that studies what should be in relation to the suitability of the ideal or *summum bonum* and of conduct in accordance with it, from which one can establish "[w]hat am I deliberately prepared to accept as the statement of what I want to do, what am I to aim at, what am I after? To what is the force of my will to be directed?" (CP 2.218). Peirce maintains that we all have *motives* but we do not all have ideals, since ideals belong to a deliberate line of conduct. Therefore, he affirms that the only moral evil lies precisely in not asking ourselves about the ideal of life (EP 2.202), that is, to live only according to motives and, in this sense, to live our life as a reaction to external causes (teleological life vs. life by efficient causes) without exercising any self-control.

Now, that ultimate goal, according to Peirce, should be something greater than oneself, because if one is to think logically, he says, it is crucial to realize that there is something more important than my personal interests, that is, that the idea of an unlimited community is more important than my selfish motives for wanting, acting or thinking. In this sense, it is fundamental to cultivate and/or educate our emotions until they are transformed into feelings and, particularly, to cultivate love or *agape*, understood as the logical feeling or sentiment *par excellence* (Savan, 1981, p. 331) and from which other feelings that, according to Peirce, are the basis of our logicity emerge or are part, namely, Charity, Faith and Hope. Charity, represents our interest in an undefined community; Faith, establishes the "recognition of the possibility of this

interest being made supreme" (EP 1.150) and Hope, points to "the unlimited continuance of intellectual activity" (EP 1.150).

Now, if one follows this idea of love as the foundation of a reasonable life, which Peirce called sentimentalism in his "Evolutionary Love" (1893), one can infer that the limit of our capacity to understand is also found in our limits to empathize with the other. According to him, all understanding starts with the exercise of musement, an exercise in which I open myself to the other and am receptive to the feelings, emotions and perspectives of others, which includes the cosmos itself. To this extent, I am then able to perceive my insignificance and learn true humility, which Peirce also puts at the basis of scientific aptitude in his work "A Neglected argument for the Reality of God" (1908). Thus, in the same way that we understand other people by putting ourselves in "someone else's shoes" as the popular adage goes, we are able to understand the cosmos and its creatures when we use the scientific method. That is why, for Peirce, the first moment of the scientific method is the abduction or creation of hypotheses that arise from such openness and receptivity. Not surprisingly, he calls our attention to the fact that artists, because of their receptivity, are often better observers than men of science and that we would have much to learn from them in this regard (EP2.193). It could be said then that every great scientist should cultivate a certain artistic soul, but also that, as Lara Trout states: "Taking an infinitely inclusive community of inquiry as its ideal, Peircean science requires social justice. As ideally practiced, it also demonstrates fallibilism, self-control, and agapic love, whereby it embraces new ideas as sources for ongoing growth and self-critique, even and especially when these ideas challenge existing beliefs" (2010, p. 3).

We could then establish that reasonableness and sentimentalism are two sides of the same coin. While sentimentalism expresses the self-controlled development of our emotions, reasonableness expresses the self-controlled development of reason by virtue of the cultivation of our feelings. Let us remember that Peirce considers that logic studies self-controlled thought with a view to the ideals of the *summum bonum* and the *admirable per se*, and that sentimentalism constitutes "the doctrine that great respect should be paid to the natural judgements of the sensible heart" (CP 6.292).

In a sense, sentimentalism establishes the social part of the individual's knowledge as Colapietro rightly points out when he states: "What both the sensible heart and scientific inquiry suggest is that 'man is not whole as long as he is single, that he is essentially a possible member of society. Especially, one man's experience is nothing, if it stands alone. If he sees what others [in principle] cannot, we call it hallucination. It is not 'my' experience, but 'our' experience that has to be thought of; and this 'us' has indefinite possibilities' (5.402 n. 2)" (1989, 122, n. 6).

In addition, sentimentalism points to the openness necessary to open ourselves to the knowledge of others, and with this 'others' we intend to indicate our neighbor, the cosmos and ourselves. In conclusion, it is important to establish once again that

feelings of Humility, Faith, Charity and Hope are at the base of scientific knowledge in general. It is from *musement* that we open up and are receptive to the hypotheses that must serve to explain our genuine doubts and that compound the starting point of scientific knowledge, which constitutes a form of self-control, as it has been presented up to now.

Epilogue

After being dismissed from John Hopkins University, Peirce bought land in Milford, Pennsylvania, (in 1888, at age 48) where he built his home, Arisbe, and where he led a hermit's life until his death (1914, at age 75). In spite of this, or perhaps because of it, the idea of community always played a central role in his philosophy. Although he was alone, he was never a solitary thinker; he read all kinds of texts and was interested in many different fields of knowledge. Peirce knew that he belonged to a broad tradition of thinkers and more than once paid homage to them. Moreover, in his early writings, community played an important role in his idea of reality and truth (CP 8.41 and CP 5.311). According to him, reality is always a social discovery; this is the reason why, for example, when someone doubts about an experience, this person resorts, almost immediately, to someone else's criteria. This is a quite healthy, sensible and commonsense attitude to follow in case of doubt. The role of the community in the construction of truth is directly related to its role in the construction of reality. For Peirce, truth consists in the final agreement that the scientific community would achieve in a distant and undefined future. In part, because if truth is achieved, then all members of the community should be able to be persuaded in some way, insofar as we share a common reality and can understand it because we can put ourselves in each other's place through empathy.

Finally, with this we do not suggest that in order to do science one must be a saint. When we state a continuity between ethics and scientific practice, there are implications such as: First, recognizing that our aesthetic and ethical limits have an impact on our logicity, and that scientific knowledge should have an impact on our attitude towards life. Second, those hypotheses that have as their origin the reaffirmation of our prejudices and not an authentic empathy with the cosmos and our desire to explain it will probably result in poor and limited, if not erroneous, explanations of the cosmos. Third, if science is based on sentimentalism would explain, for example, that if one does not educate a receptive and empathetic capacity with the cosmos, conditions are created for the misuse of both art and science. When science does not serve aesthetic ideals and the reasoning about the cosmos becomes an instrument of power that serves my particular interests or those of a certain elite, science ceases to be science, as the philosopher of Arisbe aspired, and is therefore restricted to an elitist community.

The community of inquirers, on the contrary, cannot be elitist because the scientific method is the only method of fixing beliefs that is really based on the knowledge of something that is in the public domain and to which we can all have access (here the importance of consensus as one of the criteria of truth). We affirm, then, that it is the only non-elitist method because, as Peirce establishes, it is the only one that works in favor of the social impulse we can come to agree, as long as the method is followed and the truth is aspired to. If one aspires to a true democracy, not in the sense of a tyranny of the masses, since what is real does not depend on what you or I want to conceive of it, but on a democracy founded on something that is truly in the public domain, the method of fixation of belief by means of the scientific method is the only one that can give us a guarantee of its true conquest.

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