# Building castles in Spain: Peirce's idea of scientific inquiry and its applications to the Social Sciences and to Ethics

Construindo castelos na Espanha: A ideia de Peirce sobre investigação científica e sua aplicação às Ciências Sociais e à Ética

#### Luis Galanes Valldejuli

Universdad de Puerto Rico en Cayey Luis.galanes@upr.edu

### Jaime Nubiola

Universidad de Navarra jnubiola@unav.es

**Abstract:** Several recent publications attest to a renewed interest, at the dawn of the 21<sup>st</sup> century, in the philosophy of Charles S. Peirce. While agreeing with the relevance of Peirce philosophy for the 21<sup>st</sup> century, we disagree with some interpretations of Peirce as a utilitarian-based pragmatist, or with attempts to extract from Peirce a theory of social justice for 21<sup>st</sup> century societies. A critical exploration of Peirce's philosophy of science, particularly his idea of scientific inquiry as "the study of useless things", serves to illuminate the un-pragmatic and anti-utilitarian dimension of Peirce's thought, as well as to reveal his true ethical relevance for the 21<sup>st</sup> century.

**Keywords:** Pragmatism. Peirce. Utilitarianism. Scientific inquiry. Pluralism. Ethics. Social Sciences.

Resumo: Várias publicações recentes atestam um interesse renovado, no alvorecer do Século XXI, na filosofia de Charles S. Peirce. Embora concordando com a importância da filosofia peirciana para o Século XXI, discordamos com algumas interpretações de Peirce como um pragmatista utilitarista, ou com tentativas de extrair dele uma teoria de justiça social para as sociedades do Século XXI. Uma exploração crítica da filosofia da ciência de Peirce, particularmente sua ideia de investigação científica como o "estudo de coisas inúteis", serve para iluminar a dimensão não-pragmática e não-utilitária do pensamento peirciano, como também para revelar sua verdadeira relevância ética para o Século XXI.

**Palavras-chave:** Pragmatismo. Peirce. Utilitarismo. Investigação científica. Pluralismo. Ética. Ciências Sociais.

#### Introduction

Several recent publications attest to a renewed interest, at the dawn of the 21st century, in the works of 19th-century philosopher Charles S. Peirce. Some of these

interventions (LANE, 2007; TROUT, 2008; BERTILSSON, 2009; CANTEÑS, 2009; DILWORTH, 2011; BOERO, 2013; CAMPOS, 2014; HERDY, 2014), while agreeing on the idea that Peirce's philosophy is relevant to contemporary philosophical concerns, also reveal marked disagreements over the possible applicability of Peirce to the social sciences, and, at a broader level, to social and ethical life in general. The disagreements, we will argue, emerge in the last analysis from a widespread confusion over Peirce's position within the pragmatist tradition or, more specifically, from the common-but-erroneous tendency to associate pragmatism with the production of knowledge that is useful, practical, capable of offering solutions to problems of vital importance to human life.

The tendency to equate pragmatism with utilitarianism, to be sure, bears its roots in the early origins of pragmatism, and is more prevalent in the North-American context, where pragmatism is often conceived as "a philosophical expression of the American go-getter spirit with its success oriented ideology," and as "a quintessentially American philosophy" (RESCHER, 2007, p. 129); associated with authors like William James, John Dewey, or Richard Rorty. In Peirce's pragmatism, though, the equation with utilitarianism cannot be sustained. In fact, it was in an attempt to clarify his position on this issue, and with the interest of establishing a distance between himself and the other more utilitarian-based pragmatists, that Peirce called his own philosophy "pragmaticism."

A critical exploration of Peirce's philosophy of science, particularly his idea of scientific inquiry as "the study of useless things" (or, as he metaphorically put it, the activity of "castle-building in Spain" (CP 1.76, c.1896), serves to illuminate the instead somewhat un-pragmatic and anti-utilitarian dimension of Peirce's thought, as well as to reveal his true ethical relevance for the  $21^{\text{st}}$  century.

Attempting to interpret Peirce as a utilitarian pragmatist, we will finally argue, not only misconstrues Peirce's philosophical ideas, but also erases with one stroke the basic attractiveness and relevance that his thought may have for 21st century philosophers.

# 1 Unorthodox interpretations of Peirce's pragmatism

In *The Politics of Survival* (2008), Lara Trout puts forward the idea that it is possible to extract from Peirce's philosophy a method for solving disputes related to social injustices, particularly those committed by dominant or hegemonic groups against minority or subaltern groups. In a highly unorthodox and extremely utopian manner, Trout will claim to have devised, out of Peirce's pragmatist philosophy, a method capable of producing a catharsis-like, enlightening process in the mind of dominant/hegemonic groups, by which they can come to recognize their own complicity (intentional or unintentional) in producing and perpetuating the injustice, and the motivation to act in ways that help reverse the injustice. In Trout's view, three critical tools devised by Peirce (i.e. scientific inquiry, agapic love and critical common-sensism) are capable of combining to produce, in the mind of the dominant or hegemonic group, an empathic understanding of the social group upon whom an injustice is being committed. The utopianism behind Trout's work can be evidenced from the following paragraph:

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The strands of science, agape, and Critical Common-sensism weave into a tapestry of loving reasonableness, where the embrace of diverse perspectives promotes growth in knowledge and self-control. Thus Critical Common-sensism provides those in hegemonic groups with consciousness-raising tools that can help them address their blind spots towards discrimination faced by those in non-hegemonic groups. Scientific method and agape provide the epistemological and loving motivation to put this awareness into practice by resisting exclusionary instinctive beliefs despite how strong their influence can be. (TROUT, 2008, p. 229-230; our emphasis).

A comparison of Trout's theory of social justice with that of liberal-philosopher John Rawls can help further illustrate the utopianism behind Trout's proposition. In his A Theory of Justice (1971), Rawls explored the conditions under which rational individuals could consensually agree on the idea of a just society, and on a set of rules that should govern social relations in such society. But, fearing that unequal relations of power could act as an obstacle to agreement and consensus. Rawls was forced to devise a mechanism through which social subjects (particularly those belonging to hegemonic groups) can be brought to elect what is best for society as a whole, even when it runs against their own personal interests. Only when social agents are covered by "a veil of ignorance" (i.e. the ignorance of what position they will occupy in the society they are creating), Rawls reasoned, would they be able to choose rationally and justly. Trout will attempt to reach the same outcome but, unlike Rawls, he would fail to provide a realistic explanation—other than a utopian "tapestry of loving reasonableness"—of how and why social subjects in positions of power would act against their own best interests, or change their position without further justification, just like that! In other words, for Trout the emphatic understanding can be achieved without a veil of ignorance, and without any other tool to take its place. Scientific evidence, critical common-sensism and agapic love "alone" can achieve the desired end.

The idea that the contemporary world urgently needs an important dose of common-sense and agapic love is one everyone should agree with, and we are not the exception. But it is the proposition that they "alone" are capable of "eliminating exclusionary beliefs despite how strong their influence can be" (2008, p. 230), that is, in our view, problematic; and problematic for naïve and utopic. What is still not clear, what still needs to be explained, is how and why a subject would embrace critical common-sensism and agapic love in the first place. The proposition, by the way, would also contradict empirical evidence coming from anthropology and sociology (not to mention the front pages of newspapers daily), that amply document innumerable cases of conflicts between groups, and where multiple calls for common-sense and empathy for the other have proven unsuccessful in preventing confrontation, violence and bloodshed. As these anthropologists and sociologists have shown, ethnocentrism, racism, ideology, prejudice, hegemony, discursive regimes, "banality of evil"—Peirce will add "perversity" (CP 5.408, 1877)—are powerful forces shaping peoples beliefs and actions, and attempting to overcome them through calls for "loving reasonableness" would doubtingly suffice.

Moreover, the interpretation of Peirce arrived at by Trout becomes questionable when one considers some controversial statements made by Peirce in extra-scientific contexts, and which would place him at odds with somebody holding an empathic and "loving-reasonable" view of minority groups. Peirce's apology for slavery, or his derogatory statements produced against other cultural groups like British, Cubans and Spaniards, could all serve as examples. But the issue is particularly relevant regarding extra-academic statements made against Spaniards in the context of the Spanish-American War, and recovered by Jaime Nubiola in his "Peirce v España" (2006). In two personal letters written in 1898 (the year the war exploded). Peirce made some unquestionably prejudicial statements against Spaniards. In a first letter, written to his cousin Henry Cabot Lodge, Peirce described Spaniards as "corrupted" and having "little real manhood left." (L 254, Letter from Charles S. Peirce to Henry Cabot Lodge, 1898; cf. NUBIOLA, 2006, p. 77). Moreover, in a second letter addressed to his brother James, Peirce expressed his personal conviction that "the Spaniards blew up the Maine" although "we cannot produce a formal proof of the fact." Nonetheless, Peirce concludes: "We did right in not making it a formal casus belli but still in going to war because of it." (L 339, Letter from Charles S. Peirce to James Mills Peirce, 7 May 1898; cf. NUBIOLA, 2006: 79).

In commenting on these derogatory statements made by Peirce against Spaniards, David Campos has argued that they betray a contradiction in Peirce between what is said and what is done, and therefore, that the statements can be taken as evidence that Peirce "failed to live up to his own logic of inquiry." "Even though no formal proof of the Spaniard's blowing up the USS Maine existed," says Campos, "Peirce found it safe... to go to war because of this hypothesis" (CAMPOS, 2014, p. 43), or, what is the same, to "support a war on the basis of an extremely fallible abductive inference" (CAMPOS, 2014, p.51). In other words, rather than taking Peirce's derogatory statements against Spaniards as an indication that Trout's interpretation of Peirce was in need of revision, Campos instead decided—against what the evidence suggested—to maintain the idea of a Peircean ethics based on reasonable agapic love. In claiming this, our intention is not to excuse Peirce for his derogatory statements against Spaniards, but rather to point out, as has already been done by Cantens, that "we may criticize Peirce for his prejudiced views about Hispanic culture, but we cannot, as Campos suggests, criticize him for contradicting his own philosophy." (CANTEÑS, 2009, p. 17). Moreover, we agree with David Dilworth's critique of Trout's theory of agapic love: i.e. that it "collides head-on with Peirce's objective idealism," that is, with "his sense of truth and reality that is independent of you, me, or any group or epoch of social persons." (DILWORTH, 2011, p. 524). Thus, like Trout before him, Campos also reaches an interpretation of Peirce as a "vulgar" pragmatist in search for useful knowledge and social justice. And, as we will attempt to show, such interpretation clashes head-on with other (in our view, more accurate) interpretations reached by other authors, like Rachel Herdy (2014), Thora Margareta Bertilsson (2009) or Hedy Boero (2013).

# 2 Peirce's philosophical ethics

In "The Origin and Growth of Peirce's Ethics" (2014), Rachel Herdy has insightfully shown the evolution of Peirce's views on ethics throughout his academic career, with

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a drastic change of position occurring circa 1898—that is, precisely the year when the Spanish-American War began, and when Peirce wrote the two infamous letters making derogatory statements about Spaniards. Herdy's periodization of Peirce's ethical thinking coincides with that put forward by Boero (2013).¹ Thus, for both these authors, in the period before 1898 Peirce sustained the position that the norms that govern scientific inquiry and those that govern social interaction in general, are contradictory between themselves, and irreconcilable. A normative ethical construct, because it must be capable of indicating "the right thing to do," requires for its functioning a conservative and change-avoiding belief system. Science, on the contrary, must proceed following the pragmatic principle that "the meaning of reality can never be exhausted," and that "Reason is in a continual process of improvement [that] never reaches its perfection once and for all." (BOERO, 2013, p. 32). Imposing a conservative ethics on a system requiring continual improvement would be counterproductive.

The 1898 Cambridge Lectures were, according to Herdy, "the last moment Peirce would publicly express his disparaging attitude towards ethics" (2014, p. 272). In his 1902 *Minute Logic*, and later in his 1903 Harvard Lectures, Peirce would evidence a drastic change of position on this issue. Contrary to what he had consistently held up until 1898, Peirce now reasoned that the decision to engage (or not to engage) in the practice of science must be, in its most seminal origins, an ethical decision, precisely because it is based on a deliberate action. Moreover, because the idea of a community (a scientific community in this case, but which is equally true for any other type of community) can only be sustained by reference to a set of agreed-upon normative ethical rules to which all its members would abide, this later period would then also evidence an attempt at formulating the general content and contours of such ethical system, in the form of what he called a "Pure Ethics." But he warns that his pure ethics is not a method for devising the right thing to do on matters of vital importance in the here and now, but "only intended to be pure theory." (CP 5.125, 1903).

Thus, in stark opposition to the views put forward by Trout and Campos, the writings of Bertilsson, Herdy and Boero will instead emphasize the un-pragmatic aspirations of Peirce's pure ethics. Bertilsson, for example, would reach an understanding of Peirce's philosophy as "utterly un-pragmatic."

The theory of meaning of Peirce's pragmatism is, in a very strong sense, a logical-normative one. As such, it frees itself from practical concerns of the here and now, as it was not meant to solve problems but to avoid pseudoproblems [...] As a normative theory of action, as a theory of conduct and general praxis, pragmaticism is however an utterly 'unpragmatic' one. (BERTILSSON, 2009, p. 171).

<sup>1</sup> We are aware there is some disagreement between scholars about the periodization of Peirce's thought and, while we agree with Herdy and Boero on this issue, arguing the opposite would in no way invalidate the general thesis of this work, i.e. that an interpretation of Peirce as a "vulgar" pragmatist cannot be sustained.

In similar fashion, Herdy will point out that Peirce's pure ethics "had no aspiration to guide human conduct," nor to answer "first-order [ethical] questions such as 'Should I give famine relief?' or 'Should I return the wallet I found on the street?'" (HERDY, 2014, p. 274). If one wishes to find general rules of conduct deriving from Peirce's pure ethics, it would be only and exclusively for the scientific community, or for the scientist *qua* scientist. A brief review of Peirce's philosophy of science will help illustrate the point.

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No other Peircean expression invites a more un-pragmatic and anti-utilitarian interpretation of his philosophy than that used by him to describe his idea of scientific inquiry: namely, "the study of useless things."

True science is distinctively the study of useless things. For the useful things will get studied without the aid of scientific men. To employ these rare minds on such work is like running a steam engine by burning diamonds. (CP 1.76, 1896).

Two years later, in 1898, Peirce returns to the same topic:

There are sciences, of course, many of whose results are almost immediately applicable to human life, such as physiology and chemistry. But the true scientific investigator completely loses sight of the utility of what he is about. It never enters his mind. Do you think that the physiologist who cuts up a dog reflects, while doing so, that he may be saving a human life? Nonsense. If he did, it would spoil him for a scientific man; and then the vivisection would become a crime. However, in physiology and in chemistry, the man whose brain is occupied with utilities, though he will not do much for science, may do a great deal for human life. (CP 1.619, 1898).

Peirce would also produce metaphors (e.g. building castles in Spain; CP 6.48, 1908) and provide imaginary examples (e.g. a shining rock buried in the middle of the ocean; CP 5.409, 1877) with the aim of illuminating the meaning behind his idea of "useless things." Among other things, "useless things" makes reference to knowledge of things whose utility remains obscure to us at the present moment, or at the moment of conducting inquiry, but that could very well appear in the future.

I must confess that it makes very little difference whether we say that a stone on the bottom of the ocean, in complete darkness, is brilliant or not—that is to say, that it probably makes no difference, remembering always that that stone may be fished up tomorrow. (CP 5.409, 1877).

A more factual example of this phenomenon would be the compass, whose history captured Peirce's attention for the fact that it was not implemented or regularly employed until almost two hundred years after its invention (CN 2:122, 1896). Like

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the stone on the bottom of the ocean, the compass had to wait around two centuries before its utility could be figured out.

But the idea of "useless things" acquires a truer, deeper meaning when one considers that, within Peirce's pragmatism, utility can never be used as an adequate measure of the truthfulness and veracity of a scientific proposition, because it is perfectly possible for a scientific theory to be useful yet plainly wrong. Guaranteeing the continuity of "true science" requires the existence of a scientific community and of scientific institutions capable of entertaining in a freely and unrestricted manner idealistic and hypothetical constructions of reality, most of which have no known useful application, and even under the awareness that empirical proofs of their truthfulness are close to impossible (if not altogether impossible) to reproduce in experimental settings, or by any other means. In a scientific enterprise interested more in truth than utility, scientific theories are best conceived as "castles built in Spain" (or "castles built in the air" if one wishes to use the English variant of this originally French phrase), than as fixed and corroborated knowledge systems.

In claiming this, Peirce is not suggesting that "building castles in the air" is a sufficient cause for scientific discovery, but merely a necessary one. To claim that scientific inquiry and discovery is always preceded by "castle-building in the air" is different from claiming that all "castle-building in the air" will result in scientific discovery:

People who build castles in the air do not, for the most part, accomplish much, it is true; but every man who does accomplish great things is given to building elaborate castles in the air and then painfully copying them on solid ground. Indeed, the whole business of ratiocination, and all that makes us intellectual beings, is performed in imagination. (CP 6.286, 1893).

Now, if "truly" pragmatic scientific inquiry is "the study of useless things," several conclusions must follow about the proper ethical conduct of the scientist *qua* scientist. The first one, and the most evident, is that knowledge of the utility of something (or more specifically, the lack of it) cannot be used as criteria in deciding whether an inquiry on that something should or should not be carried out, or whether funds should or should not be granted to it.

Sure enough, Peirce's "truly" pragmatist science would be at odds with many of the forms that characterize the way science is practiced in the Western World today. As Winner has suggested, perhaps the thing that makes Peirce so attractive to 21st century philosophers, insofar as his philosophy of science is concerned, is precisely the relevance that his work acquires within the debate over the institutional mechanisms through which funding for scientific inquiry is assigned; dominated as it is by a culture of assessment and the pressure to meet the demands for instant gratification. In Winner's view, Peirce's philosophy of science serves as:

[...] a wonderful weapon against those academic and political bureaucrats, scientistic positivists and pragmatist in the vulgar and not Peircean sense of the word who see value only in those scientific projects that "pay off"! (WINNER, 1994, p. 289).

# 4 Futuristic and evolutionary dimensions of Peirce's philosophy

If, within Peirce's philosophy of science, the scientists must engage in scientific inquiry without taking into consideration the possible uses his or her discoveries may have in terms of satisfying vital human interests or needs, it then follows that the ethics of the scientific community is an altruistic ethics; that is, in the sense that the researcher will most probably not benefit directly, during his lifetime, from the possible advantages that could be derived from his scientific discovery. There is, thus, a future-oriented dimension of Peirce's thought without which his ethical thinking becomes unintelligible—that is, in the sense that the ultimate beneficiaries of a scientific discovery are always located in the future, and probably generations apart from the discoverer's lifetime. In fact, this future-oriented dimension permeates over almost every aspect of his philosophical work. It will feature prominently in his theory of the three categories, and in the names he chose to give them: Firstness, Secondness and Thirdness. His whole philosophy is crossed by the fundamental presupposition that there is a temporal movement of human progress speared into the future, and was convinced that scientific knowledge would someday transform human society. As Bertilsson has put it, Peirce "nourished a hope that logic and science could teach men and women to see 'particulars' from the point of view of a universal community of observers." (BERTILSSON, 2009, p. 199).

But it is the futuristic dimension of his philosophy, its "speculative" character, its insertion within an evolutionary cosmology, what makes Peirce's thought on ethics somewhat unique within the pragmatist tradition. On occasions, Peirce will even suggest the need for a "speciation" process to take place before the desired impact of science on society. In a passage where Peirce reflects on the ill-fated possibility of having a scientific proposition accepted by a universal community of observers, Peirce wrote:

Our perversity and that of others may indefinitely postpone the settlement of opinion; it might even conceivably cause an arbitrary [erroneous] proposition to be universally accepted as long as the human race should last. Yet even that would not change the nature of the belief, which alone could be the result of investigation carried sufficiently far; and if, after the extinction of our race, another should arise with faculties and dispositions for investigation, that true opinion must be the one which they would ultimately come to. 'Truth crushed to earth shall rise again.' (CP 5.408, 1877).

In Peirce, how the world *ought to be* and how it *will be like in the long-term future* are merged: they are the same thing. And the scientific community is a micro-cosmos of what society at large will look like in the future. It was based on this idea that Winner (1994) would establish an analogy between Peirce's philosophical futurism and George Orwell's *1984* novel; that is, given the prophetic or predictive character of both works (although each arriving at different, perhaps opposite, social formations).

Perhaps it would be safe to say that Trout and Campos were right in recognizing the ethical implications for life that are derived from Peirce's philosophy, but without realizing the long-term temporal framework within which Peirce was working, and which all "vulgar" interpretations of Peirce's pragmatism fail to recognize. Trout and Campos pretend to extract out of Peirce's philosophy something which in Peirce is only present in the form of a futuristic projection, whose specific contours he (and we as well) are not yet able to see with absolute clarity, but simply speculate on. Elam and Bertilsson (2003) have given us an idea of how that future society, as envisioned by Peirce, would look like: one characterized by the appearance of a new man, the "scientific citizen."

#### Conclusion

While Peirce's early works show a disparaging attitude towards ethics, his position on ethics changed drastically in the period 1898 and afterwards. It was only in this mature period when Peirce attempted to develop a philosophical ethics, and then only in the form of a "pure" ethics: that is, an ethics interested more in understanding the world as it *ought to be* (or could be in a future evolutionary stage of development) than as it *is* right now.

Nonetheless, important ethical implications are derived from gaining, as Peirce does, critical awareness of our current position in the chain of progress and evolution. In this sense, Peirce's pragmatism serves to warn us of the dangers that lay behind dogmatism, behind theories that promise to bring knowledge to a full closure, or behind the utopia of fixed meanings—in Wartenberg's terms, behind "illusionary feelings of harmonic oneness." (BERTILSSON, 2009, p. 173). In Peirce's pragmatism, reason is plural (at least in its current evolutionary stage), and any attempt to reduce Reason to any of its particular manifestations can be taken as inflicting violence upon such plurality.<sup>2</sup>

But, for anyone wishing to extract from pragmatism a theory of social justice, or to show what is "the right thing to do" on issues of vital importance to social and political life (e.g., Should I return the wallet I found on the street? Should the US declare war to Spain?), Peirce's pragmatism will be of little help. To be sure, other utilitarian pragmatist philosophers would have lent themselves more suitable for the task: e.g. William James, John Dewey or Richard Rorty. But, what makes Peirce unique, what makes him different from these other more utilitarian-based pragmatist philosophers, is also, and precisely, what makes him a 19<sup>th</sup>-century philosopher for the 21<sup>st</sup> century. (cf. DEBROCK, 1992).

## References

ARREGUI, Jorge V. La pluralidad de la razón. Madrid: Síntesis, 2004.

BERTILSSON, Thora Margareta. *Peirce's theory of inquiry and beyond*. Frankfurt au Main: Peter Lang, 2009.

BOERO, Hedy. Peirce's view of the role of ethics in scientific inquiry. *Cognitio*: revista de filosofia, São Paulo, v. 14, n. 1, p. 23-33, 2013.

We are indebted to our colleague and friend Jorge Vicente Arregui for helping us to explore the commonalities between Peirce's pragmatism and a pluralist conception of reason; cf. J. V. Arregui *La pluralidad de la razón*. Madrid: Sintesis, 2004.

CAMPOS, Daniel G. Peirce's Prejudices against hispanics and the ethical scope of his Philosophy. *The Pluralist*, v. 9, n. 2, p. 42-64, 2014.

\_\_\_\_\_. Review of 'Peirce y el mundo hispánico', by Jaime Nubiola and Fernando Zalamea. *Transactions of the Charles S. Peirce Society*, v. 43, n. 4, p. 795-801, 2011.

\_\_\_\_\_. Review of 'The politics of survival: Peirce, affectivity and social criticism', by Lara Trout. *Cognitio*: revista de filosofia, São Paulo, v. 12, n. 1, p. 157-165, 2009.

CANTEÑS, Bernardo J. Comments on Jaime Nubiola's 'Charles Peirce and the Hispanic World.' *APA Newsletter on Hispanic/Latino Issues in Philosophy*, v. 8, n. 2, p. 17-18, 2009.

DEBROCK, Guy. Peirce, a philosopher for the 21st Century. *Transactions of the Charles S. Peirce's Society*, v. 28, n. 1, p. 1-18, 1992.

DILWORTH, David A. Review of 'The politics of survival: Peirce, affectivity and social criticism', by Lara Trout. *Transactions of the Charles S. Peirce Society*, v. 47. n. 4, p. 524-28, 2011.

ELAM, Mark; BERTILSSON, Margareta. Consuming, engaging and confronting science: The emerging dimensions of scientific citizenship. *European Journal of Social Theory*, v. 6, n. 2, p. 233-252, 2003.

HERDY, Rachel. The origin and growth of Peirce's ethics: A categorical analysis. *European Journal of Pragmatism and American Philosophy*, v. VI, n. 2, p. 264-286, 2014.

LANE, Robert. Peirce's modal shift: From set theory to pragmaticism. *Journal of the History of Philosophy*, v. 45, n. 4, p. 551-576, 2007.

NUBIOLA, Jaime. Peirce y España. In: NUBIOLA, Jaime & ZALAMEA, Fernando (orgs.). *Peirce y el mundo bispánico*. Pamplona: Eunsa, 2006.

RAWLS, John. A theory of justice. Cambridge, MA: Belknap Press, 1999 [1971].

RESCHER, Nicholas. Pragmatism. In: BOUNDAS, Constantin V. (ed.). *Columbia companion to Twentieth-Century Philosophies*. New York: Columbia University Press, 2007, p. 128-142.

TROUT, Lara. *The politics of survival*: Peirce, affectivity and social criticism. New York: Fordham University Press, 2008.

WINNER, Thomas G. Peirce and literary studies with special emphasis on the theories of the Prague Linguistic Circle. In: PARRET, Herman (ed.). *Peirce and value theory*: On Peircean ethics and aesthetics. Amsterdam: John Benjamins Publishing Company, 1994, p. 277-299.

References to Peirce's texts are given with the following abbreviations followed by the volume number, the paragraph number and the year of the text:

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CN PEIRCE, Charles S. *Contributions to 'The Nation'*, vols. 1-4. KETNER, K. L. and COOK, J. E. (eds.). Lubbock, TX: Texas Tech Press, 1975-1979.

CP PEIRCE, Charles S. Collected papers of Charles Sanders Peirce, vols. 1-8. HARTSHORNE, C., WEISS, P. and BURKS, A. W. (eds.). Cambridge, MA: Harvard University Press, 1931-1958.

## Endereço / Address

Luis Galanes Valldejuli Departamento de Ciencias Sociales Universidad de Puerto Rico en Cayey Cayey, PR 00736 – Puerto Rico

Jaime Nubiola Dept. Filosofía Universidad de Navarra 31009 Pamplona, Spain

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