

Roundtable:

The future of culture in more-than-human worlds of being

A Peircean transcendental framework for conceiving human and non-human culture

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The semiotic realism of the American philosopher and scientist Charles S. Peirce (1839-1914) originally emerged out of a systematic critique of Kant's transcendental philosophy. As such, it does not only offer numerous notions that can be and have been, fruitfully applied to a large variety of cultural phenomena, but it also requires rethinking and reconceiving the concept of culture itself, especially as regards its relation to the concept of nature and its anthropocentric premises and biases. Accordingly, this essay aims to explore how to reconceive culture in a Peircean transcendental framework. I first describe that framework itself, sketching how Peirce's semiotic realism can be understood as the result of the attempt to realize Kant's project of a transcendental philosophy more consistently than Kant himself had done. On this basis, I then explore how the relation between culture and nature, and between culture and humanity can be conceived within Peirce's semiotic paradigm. It is suggested that the relation between culture and nature cannot be sufficiently accounted for in terms of the distinction between symbolic and non-symbolic semiosis, and that various forms of non-human culture, including non-animal and cross-species cultures, are conceivable.



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Introduction

The work of the American philosopher and scientist Charles S. Peirce (1839-1914) has been fruitfully received in virtually all fields of cultural science. Typically, cultural scientists focus on specific aspects of Peirce's philosophy such as his system of categories, his triadic concept of sign, and his classification of signs, applying them to various phenomena that are supposed to be cultural in kind. However, such an understandably instrumental reception of Peirce's ideas tends to disregard the original philosophical project and the resulting philosophical paradigm within which these aspects acquire and unfold their proper and full meaning, and within which the concept of culture itself needs to be conceived. It, therefore, involves the risk of missing the full implications of these ideas and of uncritically supposing some traditional concept of culture without questioning its underlying ontological and epistemological assumptions concerning, for example, the relation between culture and nature and between culture and humanity.

Against this background, this essay aims to conceive essential characteristics of culture in the context of a Peircean framework defined in terms of both an original philosophical project and the resulting philosophical paradigm. In the following, I will first sketch the Peircean framework itself, illustrating how the attempt to realize Kant's project of a 'transcendental philosophy' more consistently than Kant himself had done results in a semiotic realism characterized by Peirce's system of categories, his triadic concept of sign, and his classification of signs. On this basis, I will then explore how the relation between culture and nature, and between culture and humanity can be conceived within Peirce's semiotic paradigm.

A Peircean transcendental framework

It is generally recognized that the early Peirce was deeply impressed and influenced by Kant's transcendental philosophy, especially by the *Critique of Pure Reason*. As a matter of fact, Peirce himself emphasized the intensity and impact of his early engagement with Kant on various occasions throughout his life (e.g., CP1.560f [1907]).¹ There are different opinions, however, about how Peirce's philosophy relates to Kant's. Some interpreters hold that Peirce basically misunderstood Kant (e.g., Murphy 1961), whereas many others would probably agree with Apel (1973) that Peirce's philosophy amounts to a 'reconstruction of the Kantian aim in a new medium' (ibid, p. 165). I, by contrast, suggest that this supposedly 'new medium' can itself be understood as the result of a critical 'deconstruction' aimed at realizing the philosophical project associated with Kant's idea of a 'transcendental philosophy' more consistently than Kant himself had done (Hünefeldt 2002, 2003). In the context of this essay, I am not interested in defending this philosophic-historical thesis, but I will simply illustrate the critical philosophical steps that lead from Kant's project of a 'transcendental philosophy' to Peirce's semiotic realism. Accordingly, I prefer to label the transcendental framework constituted by these steps as 'a Peircean' rather than as 'Peirce's' transcendental framework.

The starting point is Kant's idea of 'transcendental philosophy', which Kant himself defined as the project to identify the system of all '*a priori* cognitions' (A 1-16; B 24-30).² More precisely, Kant's project is to identify this system non-dogmatically, i.e., without uncritically recurring to established philosophical presuppositions of any kind (A VII-XII; B XXXV). Strictly, therefore, it requires the

¹ The abbreviation CP refers to the *Collected Papers of Charles Sanders Peirce* (Peirce 1931-1958), followed by numbers referring to the volume and the paragraph(s) in that volume.

² The letters A and B refer to the first and second edition of Kant's *Critique of Pure Reason* (Kant 1998 [1781/1789]), the Arabic or Roman numerals to the page numbers in those editions.

suspension of any ontological and epistemological presuppositions, resulting in a 'phenomenological epoché' ante litteram. It thus requires starting from nothing but the mere *definition* of the concepts referred to in its formulation.

Now, Kant defined a 'cognition a priori' as a cognition that is 'independent of all experience' (A 2; B 2), indicating 'necessity' and 'universality' as criteria by means of which 'cognitions a priori' can be distinguished from 'cognitions a posteriori' (B 3). In introducing this definition as well as in subsequently defining the distinction between two basic kinds of 'cognitions a priori', namely principles a priori of 'sensibility' and 'understanding', Kant refers to an epistemological model which he seems to presuppose uncritically, and which suggests that a 'cognition a priori' is defined as a cognition about what the mind contributes to any possible experience. Critically abstracting from the ontological presuppositions of that model, a 'cognition a priori' is simply defined as a cognition about the characteristics of any possible experience, and the distinction between 'cognitions a priori' of 'understanding' and 'cognitions a priori' of 'sensibility' is reduced to the distinction between cognitions about the characteristics of any possible object of experience, and cognitions about the characteristics of the dimensions wherein possible objects of experience must be located. Notably, the subsequent identification of cognitions that match the definition of a 'cognition a priori', or of different kinds of 'cognition a priori', need not, and indeed must not, supposed to be infallible. In other words, any supposed 'cognition a priori' is a *hypothesis* about what is the case in any possible experience. Moreover, identifying 'cognitions a priori' does not imply any supposition concerning the ontological status or origin of what is supposed to be the case in any possible experience. The 'phenomenological epoché' required by Kant's transcendental project and the resulting phenomenological paradigm are thus maintained until further argument on that matter.

Given the 'phenomenological epoché' required by Kant's transcendental project, a method for identifying what is the case for any possible object of experience should start from nothing but the concept of an object of experience in general. From this starting point, the system of characteristics of any possible object of experience can be identified by what I call a 'recursively-transcendental' procedure, which in Peirce's own words consists in identifying the 'condition of validity', or 'immediate justification and condition of the introduction', of the concept identified before.³ The characteristics that can be identified with this procedure, and the relationships between them, can be illustrated as follows:

- Any possible object of experience has some 'Quality' with respect to which it can be identified.
- Any possible object of experience stands in a dyadic relationship of 'Relation' to a second (its 'correlate'), with respect to which it has its 'Quality'.
- Any possible object of experience stands in a triadic relationship of 'Representation' to a third (i.e., it is a 'sign' representing an 'object' with respect to an 'interpretant'), with respect to which it stands in 'Relation' to the second.

With this third characteristic, the 'recursively-transcendental' procedure comes to an end, because what renders possible the triadic relationship of 'Representation' is a connection between the three relates that is not itself due to the mediation by another relate. Such an original connection has, in fact, already been supposed at the outset in terms of the universal applicability of the concept of an object of experience in general to any object of experience.⁴

³ See W1:332f [1865] and W1:520 [1866], respectively. The abbreviation W refers to the *Writings of Charles S. Peirce* (Peirce 1982ff), followed by numbers referring to the volume, the page number, and the year of authorship or publication.

⁴ In the context of the 'phenomenological epoché' required by Kant's transcendental project, it can be considered as a 'purely impersonal', non-psychologistic equivalent of the 'original connection' that Kant

Based on the system of categories ‘Quality’, ‘Relation’, and ‘Representation’, several other important phenomenological and semiotic concepts can be derived. By abstracting the characteristics referred to in terms of the three categories from the objects which they characterize, it is possible to distinguish three ‘modes of being’: ‘firstness’, ‘secondness’, and ‘thirdness’, which can be phenomenologically described as pure qualitative possibility, pure actuality or brute facticity, and regularity or lawlike generality. On this basis, it is furthermore possible to distinguish between different kinds of ‘signs’ by applying the three ‘modes of being’ to the sign in itself, in relation to its object, and in relation to its ‘interpretant’ (Table 1).

Mode of being	as applied to ...		
	the sign in itself	the sign in relation to its object	the sign in relation to its interpretant
<i>Firstness</i>	<i>Qualisign</i>	<i>Icon</i>	<i>Rheme</i>
<i>Secondness</i>	<i>Sinsign</i>	<i>Index</i>	<i>Dicent</i>
<i>Thirdness</i>	<i>Legisign</i>	<i>Symbol</i>	<i>Delome</i>

Table 1. Peirce’s basic distinctions between kinds of ‘signs’.

The possible combinations between these different kinds of ‘signs’ give rise to Peirce’s ten major types of ‘signs’ (Table 2).

	Modes of being as applied to ...			Examples (from CP2.254–263, 1903)
	the sign itself	the sign in relation to its object	the sign in relation to its interpretant	
(I)	<i>Qualisign</i>	<i>Icon</i>	<i>Rheme</i>	‘A feeling of red’
(II)	<i>Sinsign</i>	<i>Icon</i>	<i>Rheme</i>	‘An Individual Diagram’
(III)		<i>Index</i>	<i>Rheme</i>	‘A spontaneous cry’
(IV)			<i>Dicent</i>	‘A Weather Cock’
(V)	<i>Legisign</i>	<i>Icon</i>	<i>Rheme</i>	‘A diagram [type]’
(VI)		<i>Index</i>	<i>Rheme</i>	‘A demonstrative pronoun’
(VII)			<i>Dicent</i>	‘A street cry’
(VIII)		<i>Symbol</i>	<i>Rheme</i>	‘A common noun’
(IX)			<i>Dicent</i>	‘Ordinary proposition’
(X)			<i>Delome</i>	‘An argument’

Table 2. Peirce’s ten basic classes of signs.

So far, the ‘phenomenological epoché’ required by Kant’s transcendental project has not been abandoned. Accordingly, the system of categories, the modes of being, and the semiotics obtained

identified as the ‘originally synthetic unity of apperception’, i.e. as the unity of the ‘I think’ that ‘must be able to accompany all my representations’ (Kant 1998 [1781/1789], B 130ff). Peirce therefore prefers to call it ‘unity of consistency’ or ‘unity of being’ (e.g., Peirce 1982, W1:352f [1866]) and refers to it in terms of the universal applicability of the categories of ‘substance’ (understood as ‘the conception of the present, in general’) and ‘being’. See Hünefeldt (2002, 2003) for details on Peirce’s view of Kant’s ‘unity of apperception’ and its role for his method of identifying the categories.

as results of the first steps to realize that project more consistently than Kant had done, are grounded in, and apply first and foremost to, a phenomenological paradigm. However, the transcendental framework sketched so far has ontological implications if we suppose – as both Kant and Peirce do,⁵ and as the non-dogmatic stance of Kant's transcendental project indeed requires us to do until evidence to the contrary – that whatever we can conceive or imagine is eventually based on experience. In fact, under this additional premise the basic characteristics of any possible experience, in general, and of any possible object of experience, in particular, must also be the basic characteristics of any conceivable world, including not only any other experiential world or subjective life-world, but also the mind-independent objective world wherein all experiential subjects are supposed to coexist. The originally phenomenological paradigm thus turns into a semiotic realism according to which any conceivable being, including the experiential subjects themselves, is characterized by the three categories 'Quality', 'Relation', and 'Representation' and is thus a 'sign' in the sense defined by the category of 'Representation'.⁶

Conceiving culture within a Peircean transcendental framework

The Peircean transcendental framework sketched above does not only provide conceptual tools that may be helpful in describing and analyzing cultural phenomena, but it also has implications for possible conceptualizations of culture as such. These implications concern primarily two different, though related, questions: 1) the relation between culture and nature, and 2) the relation between culture and humanity. In the following, I will briefly and tentatively sketch some implications concerning these two questions.

Culture and nature

Within the Peircean transcendental framework sketched above, not only any subjective world but also the objective world wherein all experiential subjects are supposed to coexist is a semiotic world in which all beings, including the experiential subjects themselves, are 'signs' in the sense defined by the category of 'Representation'. Accordingly, the relation between culture and nature cannot be conceived in terms of the opposition between a realm of meaning and a realm of blind physical mechanism, but it must be conceived in some other way that recognizes the semiotic character of all reality.

Any attempt to make sense of the distinction between culture and nature within the Peircean transcendental framework needs to refer in some way to the distinction between the plurality of subjective worlds and the one objective world wherein all experiential subjects are supposed to coexist. In fact, this distinction is necessary to introduce the plurality of subjective perspectives on, and interpretations of, reality that are supposed in the concept of culture in so far as culture is generally conceived as something that is shared by groups of individuals and that involves, among others, group-specific representations of how things are (e.g., perceptions, knowledges, and beliefs) or should be (e.g., values). However, this distinction by itself is insufficient to account for the distinction between culture and nature because it does not allow distinguishing between diversity due to natural (e.g., species-specific) differences and cultural differences in interpreting reality. For example, the subjective worlds of bats are quite different from those of human beings (Nagel 1980), but this difference is clearly not due to cultural but to natural, namely biological, conditions. By

⁵ See Kant (1998 [1789]), B1f, and Peirce (1982ff), W1:246f [1865].

⁶ See Peirce (1982ff), W2:242 [1868], where Peirce explicitly holds that 'man is a sign'.

contrast, the subjective worlds of people from different 'cultures' may differ even if they share the same natural conditions, i.e. the same biology and the same physical environment. To account for the distinction between culture and nature, it is therefore necessary to refer to some further factors related to the distinction between cultural transmission (i.e., transmission of information through social learning) and genetic transmission (i.e., transmission of information through inheritance).

Within the Peircean transcendental framework, the distinction between genetic transmission and cultural transmission would need to be conceived as a distinction concerning processes of semiosis, i.e. processes in which information is transmitted by means of 'signs'. Accordingly, the distinction between genetic transmission and cultural transmission would need to be conceived as a distinction between processes of semiosis concerning different kinds of 'signs'. Therefore, the question arises as to whether the distinction between genetic transmission and cultural transmission can be accounted for in terms of the ten different types of 'signs' distinguished on the basis of Peirce's three categories (see Table 1 and 2). More specifically, both genes (units of genetic information) and memes (units of cultural information) would need to be conceived as 'legisigns', i.e. general types of objects or events, that transmit information through 'signsigns', i.e. their single instantiations (e.g., in cells or minds, respectively). Therefore, the question is whether the distinction between genetic transmission and cultural transmission can be accounted for in terms of Peirce's distinction between different kinds of 'legisigns'. Given that Peirce defined an 'index' as a sign that 'refers to its object in a quasi-physical way, independently of whether there is an interpretant or not', while he defined a 'symbol' as 'a sign which would lose the character which renders it a sign if there were no interpretant',⁷ it might seem that the distinction between genetic transmission and cultural transmission can be conceived as a distinction between processes of semiosis concerning specific kinds of 'indexical legisigns', on the one hand, and specific kinds of 'symbolic legisigns', on the other. However, Peirce's examples of these two kinds of 'legisigns' do not support this thesis. On the one hand, in fact, examples of 'indexical legisigns' include culturally variable items such as 'a demonstrative pronoun' (CP 2.259) or 'a street cry' (CP 2.260) such as 'this shout "Hullo!" in general' (CP 2.265). On the other hand, Peirce repeatedly claimed that there may be 'natural symbols', i.e. 'symbols' based on 'natural dispositions' or 'habits' that are 'inherited' or 'inborn'.⁸ Thus, within Peirce's semiotic paradigm, 'symbols' appear to be neither necessary nor sufficient characteristics of culture.

Regardless of how the distinction between nature and culture is otherwise conceived within the Peircean transcendental framework, the apparent impossibility of accounting for that distinction in terms of Peirce's distinctions between basic types of 'signs' implies that any definition of that distinction is relative to some specific subjective perspective and is thus intrinsically cultural. Furthermore, the identification of nature with objective reality implies that any identification of natural as opposed to cultural phenomena is provisional, approximate, and itself intrinsically cultural. It is provisional in so far as knowledge about objective reality is fallible and liable to future revision. It is approximate, in so far as knowledge about objective reality is, at any finite point in time, based on a limited number of subjective perspectives of specific kinds (e.g., human), whose communication is limited in various ways, whereas perfect knowledge of objective reality requires an unlimited community of inquiry. And it is itself intrinsically cultural, in so far as knowledge about objective reality is always from a specific kind of subjective perspective that is informed by communication with a finite number of individuals of mainly the same kind (e.g., humans).

⁷ See Peirce's various definitions of the terms 'index' and 'symbol' listed in Bergman & Paavola (2014), <http://www.commens.org/dictionary>, especially Peirce's definitions for *Baldwin's Dictionary* and for the *Dictionary of Philosophy and Psychology*.

⁸ See *ibid.*, <http://www.commens.org/dictionary/term/symbol>

Culture and humanity

Culture is usually defined in reference to humanity.⁹ In fact, many definitions conceive culture as something that is shared by groups of humans, and even those definitions that do not explicitly refer to humans in some way, often involve concepts that are usually applied exclusively to humans. This anthropocentric bias in defining culture mirrors the fact that culture was once considered to be specific to humans. Since the mid-20th century, however, there has been an increasing tendency to recognize non-human forms of culture, including not only animal culture (e.g., Laland & Galef 2009; Whiten 2021) but also machine or robot culture (e.g., Brinkmann et al. 2023; Dunstan et al. 2016, 2023; Ornelas et al. 2023). This tendency goes along with attempts to reconceive culture, freeing it from its anthropocentric connotations.

Within the Peircean transcendental framework sketched above it might be possible to account for such a basic and broad concept of culture that allows for both human and non-human, including non-animal, forms of culture.¹⁰ In fact, within that framework, culture might be conceived as a set of specific kinds of acquired subjective interpretations of objective reality, which are stably shared by specific groups of individuals and which are transmitted by processes of semiosis. This tentative non-anthropocentric conception of culture has several implications concerning the characteristics of individuals capable of culture.

First, individuals capable of culture must be capable of subjective interpretations of objective reality. This requirement may be understood in two radically different ways, with crucial implications for the concept of culture and for the characteristics of individuals capable of culture. In fact, one's own subjective interpretations of objective reality may appear as one's conscious experiences of and interactions with reality, whereas those of all other individuals only appear as their internal (e.g., neurophysiological) or external (i.e., behavioral) responses to reality. Nevertheless, humans tend to attribute similar conscious experiences and interactions to specific kinds of other individuals, even though the supposed conscious life of those individuals does not appear as such to themselves. Accordingly, if subjective interpretations of objective reality are understood in terms of conscious experiences of and interactions with objective reality, then only individuals who are supposed to be conscious are capable of culture. By contrast, if subjective interpretations of objective reality are understood in terms of internal and external responses to objective reality, then they basically amount to some kind of perspectival reception of objective reality, depending on both the individuals' specific location within that reality and their specific material constitution and organization, so that virtually all kinds of individuals would be capable of culture if they also satisfy the following requirements.

Second, individuals capable of culture must be capable of acquiring subjective interpretations of objective reality from other individuals, i.e. they must be able of some kind of 'social learning' in the broadest possible sense. In fact, the acquisition of subjective interpretations need not necessarily rely on some specific kind of human-like social learning mechanism (e.g., verbal, observational, etc.; imitation, emulation, mimicry, etc.), but may be based on any kind of mechanism by means of which an individual can acquire information from another, regardless of how that mechanism is physically implemented.

⁹ See Baldwin et al. (2006) and Kroeber & Kluckhohn (1952) for comprehensive reviews of conceptualizations of culture.

¹⁰ See Nöth & Santaella (2022) for a broader discussion of 'the more-than-human aspects of Charles S. Peirce's semiotic philosophy'.

Third, individuals capable of culture must be capable of stably sharing their subjective interpretations of objective reality with other individuals, i.e. they must have some kind of 'long-term memory' in the broadest possible sense. In fact, the retention of subjective interpretations acquired from other individuals need not necessarily rely on some specific kind of human-like long-term memory (e.g., explicit vs. implicit; episodic, semantic, procedural, etc.), but may be based on any kind of mechanism by means of which information can be stored and retrieved over extended periods of time, again regardless of how that mechanism is physically implemented.

Fourth and finally, individuals capable of culture must be able to transmit subjective interpretations of objective reality by processes of semiosis. This last requirement doesn't really add anything to the previous requirements that have not already been presupposed in them. It simply expresses the Peircean semiotic paradigm within which these requirements have been formulated. In fact, within that paradigm, all kinds of beings, including the individuals capable of culture, their subjective interpretations of objective reality, and the groups of which they are part, are to be conceived as 'signs' of some kind. In virtue of their being 'signs', all kinds of beings are capable of transmitting information by processes of semiosis. Accordingly, which kinds of beings are capable of transmitting subjective interpretations of objective reality depends exclusively on how these interpretations are conceived (see the first requirement above). However, the way these kinds of beings are capable of transmitting (e.g., verbally, behaviorally, etc., in different sensory channels) depends on the kinds of 'signs' these beings and their subjective interpretations of objective reality are.

As each of these four requirements can be specified in different ways, the concept of culture and the characteristics of individuals capable of culture can be conceived in very different ways, ranging from very narrow concepts that allow only for human forms of culture, to very broad concepts that allow for non-animal and even non-biological or artificial forms of culture. In fact, depending on how they are specified, the four requirements do not even exclude that individuals of different biological species, or, more generally, with different kinds of material constitution and organization, share the same culture.

Conclusions

This essay explored how culture may be conceived within a Peircean transcendental framework. I first sketched that framework, pointing out that Peirce's attempt to realize Kant's project of a transcendental philosophy more consistently than Kant himself had done results in a semiotic paradigm according to which all beings are to be conceived as 'signs' of some kind. I then suggested that 'symbols', as defined on the ground of that paradigm, are neither necessary nor sufficient characteristics of culture, so that the distinction between culture and nature cannot be sufficiently accounted for in terms of the distinction between symbolic and non-symbolic semiosis. Finally, I pointed out that the Peircean transcendental framework allows for a broad spectrum of different ways of conceiving culture, including human, animal, artificial, and cross-species forms of culture. Therefore, the Peircean transcendental framework might be a fruitful basis for developing a concept of culture that abstracts as much as possible from reductionist and anthropocentric biases.

However, there are several issues that could not be sufficiently addressed in this essay. For example, it needs to be clarified in which sense and why there can be 'natural symbols'. This would require a more detailed discussion of Peirce's distinctions between different types of 'signs' and of the relation between nature and culture within the context Peirce's semiotic paradigm. Related to this, it needs to be further explored how the distinction between genetic and cultural transmission,

or between inherited and acquired information, can be conceived in semiotic terms that abstract as much as possible from specific ontological suppositions. This would also require accounting for the relation between different levels of semiosis, specifically between semiosis at the level of genes and memes, on the one hand, and semiosis at the level of individual organisms, on the other. Last but not least, the tentative non-anthropocentric conception of culture that has been suggested on the grounds of the Peircean transcendental framework needs to be discussed and defended in the context of both traditional conceptions of culture and alternative attempts to develop non-anthropocentric conceptions of culture.

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