While Peirce is a seminal figure for contemporary semiotic philosophers, it is axiomatic of a fully semiotic perspective that no philosopher or philosophy (semiotics included) can provide any final answer, as signs are always interpreted and the context of interpretation always varies. Semiosis is evolutionary: it may or may not be construed as progressive but it cannot be static. While Peirce offers a way out of the mind-body divide that both permeates and separates classical rationalism and empiricism, he himself is read in this article as closer to the rationalist tradition exemplified by Kant and Hegel that he critiques than to either thoroughgoing empiricism or post-Nietzschean relativism. From a contemporary perspective, Peirce thus falls short of qualifying as a fully semiotic thinker, notwithstanding his key role in the development of semiotic philosophy.

It is axiomatic to modern (or postmodern) forms of semiotics that meaning depends on the context of reception. This renders impossible taking the work of any thinker as the last word on the subject. Peirce cannot escape this any more than, say, Augustine, Saussure or Greimas. Considering and interpreting Peirce (for example) contributes to the development, and of course ultimately to the decline, of semiotics. While it is habitual among educational and other so-called ‘applied’ philosophers to take a certain philosopher’s argument as a given, those who have contributed most to the discipline, from Socrates and Plato (if not before) and since, have not worked in this way. Rather, they have attempted to philosophise. Nevertheless, a position held by many philosophical, as opposed to general semioticians, is that Peirce has provided a fully satisfying schema that escapes the mind-matter dualism implicit in modernist thought: that is, in empiricism and rationalism.

We are presented, for example by Deely (2001), with three fundamental epistemological choices: idealist rationalism (exemplified by Kant), empiricism (by Locke) and semiotics (by Peirce). The first two are held to be dualist (in the sense of Cartesian mind-body substance dualism), the
third not. Deely makes the further, unusual move, of characterising Peirce as not only the first non-dualist but also the first postmodernist.

The model is crude. In relation to Rationalism, what is mainly targeted here is transcendental subjective rationalism, as in Descartes and Kant, but there is less concern, it seems to me, to address the less dualistic rationalisms of, perhaps, Spinoza and Hegel—or, indeed, more recent proponents. In relation to Empiricism, while it is the case that the British Enlightenment empiricists—notably Locke and Hume—rely on a conception of the mind as the producer of ideas from sense impressions, this reliance is much less strong in Hume than in Locke. Indeed, one can read Hume as struggling to express a basic lack of conviction in the powers of the mind at all. Even Locke, in his denial of inherent human nature, is implicitly moving in that direction (as well as resurrecting, if only briefly, the importance of the science of the sign). The Empiricist tradition is not itself wholly at ease with mind-matter dualism. Dewey is perhaps the strongest example of a strongly anti-dualist empiricist as evinced by the role of the ‘body-mind’ concept in Experience and Education (Dewey, 1998).

It might also be noted that this model takes no account of nihilism (and from that, existentialism). Neither nihilism nor existentialism is obviously either Rationalist or Empiricist, though whether it is dualistic in the mind-matter sense remains open to debate; it is certainly not explicitly opposed. On occasions, Nietzsche’s thinking approaches Peirce’s (or vice versa). In the second essay from On The Genealogy of Morals, Nietzsche discusses punishment in terms of signs that are formed by relations many of which seem to be pure chance. All that overtly differs from Peirce (as it differs from Saussure) here is the attribution of semiosis to the ruthless Will to Power; Nietzsche’s vision is aggressively amoral and thus anti-progressive, both logically and ethically. Concerning semiotic interest in the broadest sense, these movements influenced poststructuralism which, though indebted also to Saussure, should not simply be rejected as idealistic semiology operating on unreconstructed dualist assumptions; ‘il n’y a pas de hors-texte’ (Derrida, 1976, pp. 158–9) is not so much a statement of reduction of reality to language, as an expression of their interfusion, grounded in Derrida’s conception of ‘archi-writing’ (archi-écriture: Derrida, 1978). The latter term does not denote a primordial form of writing, prior to speech and other expressive forms, but rather the primacy of the expressive act, be it mark or utterance, that is always prior to speech and writing—and, indeed, any sign system—as we understand them, thus ensuring that meanings are always deferred and ending (not reinforcing, as those who critique Derrida from a Peircean semiotic tradition may claim) the reliance on a transcendental subjectivity under which all signification is subsumed. For hors-texte, read rather ‘context’ than simply ‘outside the text’: the claim that everything is contextual is a natural extension of Saussure’s and Peirce’s differing conceptions of the relationality of the sign. It does not limit Derrida to the interests of a literary critic or render him a passive heir to outmoded idealism. If Peirce is a postmodernist then Derrida is, at the very least, another sort of postmodernist.

© 2014 The Philosophy of Education Society of Great Britain.
The view of Peirce as a clean break from dualistic thought, and furthermore as about as clean a break as would be possible, is therefore open to contention. Peirce can be understood as closer to the rationalist and idealist positions than, say, Deely or others of a strong Peircean persuasion would allow. To take a liberty with Heideggerian terminology, one might suggest that for Peirce, Semiosis is the House of Reason, or the mechanism of rational progress, whereas on a thoroughly non-dualist account, Reason would be no more than a Tenant in the House of Semiosis, the fruits of the thinking mind as only one aspect of the acting organism. However, while semiotics remains at odds with dualistic empiricism (which is always at odds with itself insofar as the shaping of experience must be accounted for as an aspect of experience), Semiosis is Experience, or at least, if a pansemiotic perspective is taken, can only be known through experience, so semiotics is therefore also empiricist in at least one important sense. Human experience is human involvement in semiotic events, whether or not those events are primarily human in nature. In the field of educational philosophy, most commentators would have no problem in acknowledging Dewey as both Peirce’s heir and a non-dualist empiricist. On this account, the nearer Peirce is to classical rationalism, the further away he is from being a fully semiotic philosopher.

In the remainder of this article, Peirce’s debts to, and reactions against, Rationalism will be considered in relation to Kant primarily, and secondarily to Hegel. To do so, I identify six features of Kantian and Hegelian rationalism, five of them solely from Kant, and then will discuss Peirce’s position as I understand it on each of them.

Kant claimed, in no particular order:

1. the existence of synthetic a prioris;
2. that the empirical is ultimately explicable only within the rational; that the rational subsumes the empirical;
3. universal subjectivity;
4. the inevitable superiority of triadic over dyadic models; and
5. the separation of phenomenon from noumenon.

Both Kant and Hegel were progressivists.

6. Kant’s moral absolutism can be contrasted with Hegel’s universal progressivism. While Kant saw progression through assimilation (via duty), Hegel posits progression through agonism.

1. Kant’s Claim for the Synthetic a priori

Kant’s claim is that certain synthetic concepts must be understood prior to experience; that is, they are required to shape experience. He argues this most forcefully in the *Critique of Pure Reason*. For example, Kant claims that ‘Mathematical judgments are always synthetical’ and that ‘proper mathematical propositions are always judgments a priori’ (Kant, 1934, p. 32). Knowing \(2 + 2 = 4\) is therefore a prerequisite for empirical
understanding. It can be questioned whether this is synthetic, however; it can be argued, for example, that \(4 = 2 + 2\) (or simply that any whole consists of its component parts) is analytic, and that reversal of the terms is of no consequence. Kant has already conceded that ‘All bodies are extended’ is analytic (ibid., p. 30), yet all sets of four comprise two sets of two; all multiples are collections. Atomic theory since Democritus has assumed that entities are comprised of smaller entities. If such knowledge is synthetic, very little conceptual space is left for the analytic. If only propositions of the form \(X = X\) (i.e. pure identity) are analytic, then there are no analytic propositions at all, and Kant’s scheme is invalid. Also, Kant’s justification, aimed variously at Locke and Hume, is simply that such reasoning must be \textit{a priori} or there would be no reason, but merely experience. The latter position is that with which Hume struggles. However, Kant’s argument for reason here is circular: the conclusion is implicated in the premise.

Kant, therefore, is relatively easy to critique on this issue, partly because he is not entirely convincing on what constitutes the synthetic. Peirce did not embrace the distinction, but the Peircean triads imply synthesis, while his appeal to inherent Qualities implies the analytic (though an empiricist might explain a quality such as redness not as inherent at all but rather as a generalisation from experience). The semiotic universe construed by Peirce comprises Representamen Signs, the results of Interpretant signs which, given their relations to Objects, generated new Interpretant signs, which continue to be generated in this way. Their meanings are not simply given prior to experience, though one might say they are given into experience, which in turn modifies them. As meanings are always dependent on relation, they may all be said to be synthetic. They are also given, in the delimited sense above. They are not however fixed but are rather Dynamic. To this degree, Peirce might be considered rationalist in the sense more of Hegel than of Kant, insofar as he increasingly sees the world as mind developing itself, rationally, through relations. In this sense, Peirce moves towards a pansemiotic position without abandoning rationalism.

2. The Subsuming of the Empirical into the Rational
Kant explains the empirical as making sense only within the context of the rational: cognitively in terms of the fundamental Categories (Kant, 1934), and ethically in terms of the Categorical Imperative and the moral law that flows from it (Kant, 1909, p. 281). Thus mind dictates material/bodily experience. Peirce does not need to separate mind and body, at least in his later semiotic thinking, but he still offers a rational schema which accounts for experience: his various reformulations of the triadic models built on Firstness, Secondness and Thirdness. As with Kant, the pure ‘categories’ here are implicit and remain hidden: one cannot isolate Firstness any more than one could isolate pure Relation or Modality. Any attempt to explain Firstness in terms of Qualities (see above and Note 9) begs the response that Qualities may be features of a noumenal world that remains ultimately inaccessible at the phenomenal level, though Peirce does not raise the
distinction and committed Peirceans take him as denying it. However, as
neither Kantian Category nor Peircean Firstness is either empirically or
logically testable other than indirectly, through the creation and working
out of alternative models, there are no grounds for resolving this.¹³

Also, Peirce remains as committed as any idealist or rationalist philoso-
pher to the logical possibility of infinite non-existent worlds and entities.
Given the role that pure chance plays in the increasingly pansemiotic
approach that Peirce takes towards the end of his life, the possibilities for
change are potentially infinite.¹⁴ Why actual change should be progressive
or rational is entirely unclear, unless some higher power has invested
certain beings (specifically humans) with rational power and free will, such
that arbitrary change at the level of Firstness (of there be such a level) is
transformed into rational change at the level of Thirdness; however, for
Peirce explicitly to take this position would be an admission that he had
scarcely moved on from Kant at all.

While Kant’s argument for rationalism is circular (above), Peirce, like
Hegel, effectively collapses mind and experience. Like Hegel, the ration-
alist idealist, Peirce seems increasingly to see the universe as spirit unfold-
ing or revealing.¹⁵

3. Kant Claims Universal Subjectivity

Unlike Descartes, however, Kant distinguishes the I as Subject from the
I/me as Object.¹⁶ This raises an interesting question that Kant does not
address directly. The I as Object is clearly a distinct entity. However, the I
as Subject, the noumenal I, cannot be so defined. This leaves open the
possibility that the I as Subject is, in fact, universal and not differentiated,
and thus that the noumenal world may not be differentiated. Kant assumes
that noumena in the ‘positive’ sense are ‘object[s] of a non-sensuous
intuition’ (Kant, 1934, p. 187: italics in original), but at the same time
acknowledges that objects as we know them through ‘sensuous intuition’
can only be phenomena.¹⁷ On one level, by setting Subjective non-
empirical I against Objective empirical I, Kant is dualist while Peirce is not.
On another, by raising (if only indirectly) the possibility of the undifferen-
tiated I as Subject, Kant poses a challenge to Peirce, whose scheme has
nothing to say either way about the possibility of an undifferentiated
noumenal world. Peirce the phaneroscopist can validly be read as working
at the phenomenal level while the noumenal remains mysterious and prior.
He only opposes Kant in this dualism insofar as Kant assumes the
noumenal world as comprising entities. The key point here is that there
need not be noumenal, necessary or a priori entities. What is experienced
as Object, or what constitutes Object as an element in semiotic experience,
may have no more ‘realist’ grounding than, say, Derrida’s trace. Un cer-
tainty around this destabilises all claims to a realist semiotics (Deely,
Stjernfeld etc.) since a minimal realism would allow of a noumenal sphere,
even identified as a physical sphere, lacking discrete entities: in effect, a
process rather than a substance metaphysics.¹⁸ On this reading, for
example, a physicalist might see the universe beyond human understanding
as energy, or the play of forces, while all the patterning that we perceive (that is, the division of reality into distinct and related entities) may be of our own creation, broadly understood. Peircean realism requires the myth of the Object. It is not anti-empiricist, anti-rationalist or anti-semiotic to hold that the basic elements of life are common to all (not taking ‘elements’ in any specific sense), but that this life force (for want of a better expression) need not be differentiated at the noumenal level, understood as reality underpinning human experience. It may be processes and events rather than entities that drive or comprise semiosis.

4. Both Kant and Peirce Tend Towards Triadic Models

It is sometimes assumed that Peirce’s triadism anchors his semiotics in the real external world, unlike Saussure’s semiological dualism which seems to concede to idealism. However, the argument here is circular, given that firstly, elements of the triads (such as Firstness in all its forms and the Object) are never empirically verifiable, and secondly because, at the most basic and ill-defined level (bearing in mind the point above about the untestability of Peirce’s triadic models), triadism is ubiquitous. When I move my left leg after my right, I move to a new place; the process of walking can be seen as either dyadic, triadic or polyadic; Hegel has thesis-antithesis-synthesis; Aristotle has the syllogism; the Christian church has the Holy Trinity. Triadism per se offers nothing philosophically. The syllogism is the proto-typical logical triad, in which the Third is the ‘Therefore’. Triadism thus working in the context of logic is ubiquitous. As a logician (and thus, by definition, a form of rationalist), Peirce adopts the triad as the obvious conceptual framework. Specifically, in relation to the present argument, Kant acknowledges the inevitability of triadic models (Kant, 1934, p. 82) and they feature very strongly in his work.¹⁹ Peirce here is not moving forward on a different basis from Kant. However, philosophical semiotics need not necessarily be logical, and thus need not rely on triadic models such as the syllogism or Peirce’s Firstness, Secondness and Thirdness. Indeed, even the latter could be construed as telling us no more than that events interact to produce new events. Presumably neither Saussure nor any of his followers would object to the notion that signs encounter one another (and encounter pre-semiotic reality, insofar as this is held to exist) and thus engender new signs. After all, the sign is always relational in both branches of recent semiotic thought.

5. Kant Separates Noumenon and Phenomenon

This separation can be seen as an acceptance of mind-body dualism, though, as indicated above, on the broadest definition, noumenon relates to that which is beyond, or prior to, merely human understanding and therefore, in some ways beyond human experience,²⁰ so could even be interpreted in a physicalist sense, say as universal energy, the play of forces, or life force. While Peirce’s semiotics may supersede Kant on the first, constrained definition (that is, on the assumption of mind-body substance
dualism), on the second, broader, account, Peirce has nothing to say, and can have nothing to say, about whether there is a noumenal world above, beyond or underpinning semiosis. As Saussurean semiology acknowledges, the logical connection, should there be one, between the elements of the sign and the world beyond it can never be shown. That Peirce assumes it, albeit in a new form, attests to his latent rationalism. From a pragmatic perspective, his triadic scheme has pragmatic validity insofar, and only insofar, as one can apply it usefully; any such applications cannot be undergirded by claims to metaphysics or universal value.

6. Kant, Hegel and Peirce are all Progressivists

Kant, Hegel and Peirce are all Enlightenment progressivists insofar as progress is regarded as universal and rational. None would be sympathetic to a social constructivist, nihilist, poststructuralist or any strongly relativistic take on progress. Kant has progress flow from the actions of autonomous rational agents motivated by that which guides ‘the starry sky above and the moral law within’ (Kant, 1909, p. 260): that is, universal rational laws which are expressed in nature and which guide experience but can be clear only to the mind. While for Kant progress comes through assimilation (freedom as duty), to Hegel it comes via the agonistic dialectic of inevitable opposition and resolution, as reason works itself out in and as the world (Hegel, 1977). Peirce’s concerns are always less social than Hegel’s—indeed, they are rarely social at all, something that makes him a difficult philosopher for educationalists, for example—but in the juxtaposition of Firstness and Secondness and in the resolution that Thirdness offers as the Interpretant Sign, there is a kind of implicit dialectical movement that resonates with Hegel. Also note that Hegel, while commonly construed as an idealist, is arguably not a dualist insofar as the body of the world cannot be divorced from mind itself.

Peirce’s progressivism can therefore be regarded as broadly Hegelian, though not expressed in terms of alienation, struggle and negation. However, just as Hegelian progress can seem to some merely to be inevitable change, since there are no criteria for assessing it as progress (other than the accrual of power, perhaps), Peirce can be held to a similar charge. Peirce assumes change to be progressive because he attempts to explain it as rational process. Of the three, only Kant’s Categorical Imperatives offer grounds for judging whether change has been progressive, and even the criteria for judgment thus derived would be open to evaluative interpretation. Universal unfolding is not necessarily progressive. As Peirce assumes it to be, then he must tacitly be working on a basis not dissimilar to Kant’s: the logic of the rational outcome.

Peirce, therefore, owes many debts to rationalism and can be seen as its heir rather than its successor.

There is an alternative ground on which to base a fully semiotic account: that experience is not ultimately subject to reason, though human experience (at least) inevitably involves reasoning and must be approached semiotically on that basis. Such a semiotic account would remain

© 2014 The Philosophy of Education Society of Great Britain.
pragmatic, but more along the lines of Dewey’s Instrumentalism than Peirce’s pragmaticism.  

WHAT DOES THIS MEAN FOR EDUCATION?

This has been a general philosophical discussion, and it might seem to some that education *per se* has got rather lost in it. Peircean scholars might also argue that Peirce himself has not played a sufficient role. This is because the debate has been around the obstacles the present writer has come up against in taking Peirce as the basis of a fully semiotic theory of education; these initial obstacles need to be overcome for a fuller exegesis to be justified.

There are alternative starting points to Peirce for an interest in semiotics (even though some Peirceans might cast them as semiological rather than semiotic), and the debate around semiotic starting points has very significant implications for education. Ontologically, are we to regard the student or child as person in some essentialist way, as on the Judaeo-Christian, humanist and Marxist accounts, or as inessential narrative, as might the poststructuralists? Epistemologically, are we to separate opinion, emotion, belief, knowledge and understanding? Are we to see knowledge acquisition as progressive? Are we, indeed, able to distinguish the ontological from the epistemological? Ethically, are we to guide the next generation along the ‘right path’, or should we be more concerned to respect them as Other, creators of a world that we cannot predict and have no right to judge or approve? Clearly, where Peirce is positioned is important here, given his undoubted position as the founding father of (much of) modern, or postmodern semiotics. There are many, however, who remain unconvinced that Peirce’s work can offer the final word, even in terms of philosophical underpinning, but rather see it, for all its inspiring qualities, as a not entirely happy marriage of competing traditions rather than a final resolution of the tensions between them. Merrell, for example, cites Peirce’s ‘collusion . . . of evolutionary cosmology coupled with his no-nonsense “realism” tinged with “idealist’ metaphysics’ (Merrell, 1997, p. 95). The present argument is that he does not move as far from an Enlightenment rationalism as his more committed followers claim, and that semiotic education grounded in Peirce therefore somewhat runs the risk of the narrow paternalism from which formal education has continued to suffer. In short, it would be too committed to a ‘realism’ that it could not satisfactorily defend, and insufficiently relativistic in acknowledging that the fundamental element of a fully semiotic approach must be a realisation that meaning is always dependent on the context of reception, that that context is always shifting, and that the outcomes of human interactions (at least) can therefore never be entirely predictable. Appeals to universals, mystical or mathematical, add nothing to the challenge of educating on the basis of such a realisation, and may rather have the effect of closing down debate and interpretation than opening it up. They may, for example, justify curricular and didactic approaches that will not have the desired
effects, and the intended effects of which may not in any case be regarded
as universally desirable.29 There are grounds for letting go of more than
Peirce was willing to let go of. Peirce is an important element in the
construction of a fully semiotic educational theory, no more. Such a theory
needs the semiological tradition and Deweyan pragmatism as much as it
needs Peirce.

Correspondence: Andrew Stables, 20 Bulkington, Devizes SN10 1SN, UK.
Email: andrew.stables@roehampton.ac.uk

NOTES

1. It is interesting that Stjernfeld, also a strong Peircian realist, is critical of a number of aspects of
Deely’s argument here: see Stjernfeld, 2006.
2. ‘Hume finds no reason to grant or assume that the diversity of our experiences (whether visual
perception, pain or active thinking and mathematical apprehension) constitute a unity rather than
a diversity. For Hume, all introspection reveals is the presence of various impressions and ideas,
but does not reveal a subject in which those ideas inhere. Accordingly, if observation is to yield
knowledge of the self, the self can consist in nothing but a bundle of perceptions. Even talk of a
“bundle” is misleading if that suggests an empirically discoverable internal unity. Thus,
Descartes’ commitment to a res cogitans or thing which thinks is unfounded and substance
dualism is undermined’ (Calef, 2005). See also Hume, 1977.
3. ‘But purposes and utilities are only signs [italic in translation] that a will to power has become
master of something less powerful and imposed upon it the character of a function; and the entire
history of a ‘thing’, an organ, a custom can in this way be a continuous sign-chain of ever new
interpretations and adaptations whose causes do not even have to be related to one another but, on
the contrary, in some cases succeed and alternate with one another in a purely chance fashion’
Like), Section 12.
4. Deely is also unusual in his claim that Heidegger follows Peirce in this revised conception of the
postmodern. Stjernfeld, for example, has been very critical of Deely on this (Stjernfeld, 2006).
5. Peirce rejects key aspects of Kantianism but fully embraces logical, scientific reasoning. Indeed,
he suggests it is universal and (in effect) foundational:

Logic, in its general sense, is, as I believe I have shown, only another name for
semiotic ((séméiötiké)), the quasi-necessary, or formal, doctrine of signs. By describ-
ing the doctrine as “quasi-necessary,” or formal, I mean that we observe the characters
of such signs as we know, and from such an observation, by a process which I will not
object to naming Abstraction, we are led to statements, eminently fallible, and there-
fore in one sense by no means necessary, as to what must be the characters of all signs
used by a ‘scientific’ intelligence, that is to say, by an intelligence capable of learning
by experience. As to that process of abstraction, it is itself a sort of observation. The
faculty which I call abstractive observation is one which ordinary people perfectly
recognize, but for which the theories of philosophers sometimes hardly leave room. It
is a familiar experience to every human being to wish for something quite beyond his
present means, and to follow that wish by the question, ‘Should I wish for that thing
just the same, if I had ample means to gratify it?’ To answer that question, he searches
his heart, and in doing so makes what I term an abstractive observation. He makes in
his imagination a sort of skeleton diagram, or outline sketch, of himself, considers
what modifications the hypothetical state of things would require to be made in that
picture, and then examines it, that is, observes what he has imagined, to see whether
the same ardent desire is there to be discerned. By such a process, which is at bottom
very much like mathematical reasoning, we can reach conclusions as to what would be
true of signs in all cases, so long as the intelligence using them was scientific. The
modes of thought of a God, who should possess an intuitive omniscience superseding reason, are put out of the question. Now the whole process of development among the community of students of those formulations by abstractive observation and reasoning of the truths which must hold good of all signs used by a scientific intelligence is an observational science, like any other positive science, notwithstanding its strong contrast to all the special sciences which arises from its aiming to find out what must be and not merely what is in the actual world (Peirce, 1997, p. 227).

6. Note that Kant often refers to his own work as the Critique of Pure Speculative Reason, thus using ‘speculative’ in a similar sense to Peirce: that is, the classical philosophical sense of raising fundamental questions about being and thought.

7. As early as the third paragraph of the Preface to the first edition of the Critique of Pure Reason (CPR), Kant reveals that thoroughgoing empiricism is simply unthinkable:

In recent times the hope dawned upon us of seeing those disputes settled, and the legitimacy of her claims established by a kind of physiology of the human understanding—that of the celebrated Locke. But . . . this so-called queen could not refer her descent to any higher source than that of common experience (Kant, 1934, p. 2).

Having established from the outset that experience cannot be all, Kant makes clear similarly early in the Preface to the Second Edition that the (necessary) rational ‘must necessarily contain elements of a priori cognition’ (Kant, 1934, p. 9) Thus, Kant is seeking to explain this a priori cognition rather than arguing for it. Note also the circularity in his rejection of Hume (Kant, 1934, p. 35):

Among philosophers, David Hume came the nearest of all to this problem . . . According to his conclusions . . . all that we term metaphysical science is a mere delusion . . . Against this assertion, destructive to all pure philosophy, we would have been guarded, had he had our problem before his eyes in its universality. For he would then have perceived that, according to his own argument, there likewise could not be any pure mathematical science, which assuredly cannot exist without synthetical propositions a priori, an absurdity from which his good understanding must have saved him.

However, Kant’s argument for synthetic a priori is not watertight (main text). In renewing commitment to metaphysics, at the very least, Peirce is much closer to Kant than to Hume here. Interestingly (e.g. Kant, 1934, pp. 426ff.), Kant appears to have more admiration for Hume, and certainly to warrant his argument more attention, than that of any of other philosopher in CPR.

8. A Kantian might argue that it is a valid argument of the modus tollens sort, as follows: If a thought is part of experience, it can be explained empirically; some or all thoughts cannot be explained empirically; thought is therefore not (merely) part of experience. However, what may be lacking here might be adequate explanation; this is certainly no argument for a distinct power of (non-empirical) reason.

9. 'Qualities as such, however, are prior to existence: they are, in the vocabulary of Peirce's categories, Firsts rather than Seconds. Since only Seconds, which can causally interact, can have distinct identities, qualities do not have distinct identities; red, for example, takes in many shades of red, which shade into each other without any sharp boundaries' (Peirce and Moore, 2010, p. 90).

10. Peirce does not entirely reject the a priori though he acknowledges only limited success in identifying it:

The principles and analogies of Phenomenology enable us to describe, in a distant way, what the divisions of triadic relations must be. But until we have met with the different kinds a posteriori, and have in that way been led to recognize their importance, the a priori descriptions mean little; not nothing at all, but little. Even after we seem to identify the varieties called for a priori with varieties which the experience of reflexion leads us to think important, no slight labour is required to make sure that the divisions we have found a posteriori are precisely those that have been predicted a priori. In most cases, we find that they are not precisely identical, owing to the narrowness of our reflexional experience. It is only after much further arduous
analysis that we are able finally to place in the system the conceptions to which experience has led us. In the case of triadic relations, no part of this work has, as yet, been satisfactorily performed, except in some measure for the most important class of triadic relations, those of signs, or representamens, to their objects and interpretants (Peirce, 1997, p. 233).

11. The ‘Table of the Categories’ appears on page 79 of CPR (Book 1 of the Transcendental Analytic). The Categories are of Quantity (unity, plurality, totality), Quality (reality, negation, limitation), Relation (inherence and subsistence, causality and dependence, community) and Modality (possibility-impossibility, existence-non-existence, necessity-contingence).

12. Introduction to the Metaphysic of Morals, Section 4: ‘The categorical imperative, which only expresses in general terms what obligation is, is this: Act according to a maxim which can at the same time hold good as a universal law’ (Kant, 1909, p. 281). The moral duties derived from this can be summarised as: Treat each moral principle as a universal law. (If something is right, it is right in every context: the standard argument against the Nazi guard who claims he was only acting under orders, for example); Treat humans as ends in themselves (for the perfected human acts expresses the moral law); and Act as if you live in a kingdom of ends. (Judge in relation to ends, not means.)

13. For all Peirce’s scientific pedigree, Popper, for example, would presumably regard his account as limited—along with, *inter alia*, Marx’s—on the grounds that it is not open to empirically testing hypotheses that seek to falsify it (Popper, 1959). Although North American, Peirce is more strongly representative of the Continental than Anglo-Saxon philosophical tradition in his return to, or failure to abandon, metaphysics.

14. ‘Peirce maintains that the laws of nature are constantly being breached by purely chance occurrences’ (Turley, 1969, p. 1).

15. ‘At least by 1907, Peirce would recognise that the end of semiosis of the highest kind is an intellectual habit, which realization may lead us to wonder whether the third basic element that is active in the universe, habit-taking, is a form of semiosis, and if that is what imparts the teleological current that Peirce finds in evolution’ (Houser, in Peirce, 2000, pp. lxxxiii–iv).

16. See, for example, Kant, 1934, pp. 106–7:

[H]ow . . . I am able to say: ‘I, as an intelligence and thinking [all italics in original] subject, cognize myself as an object thought’ . . . is a question that has in it neither more nor less difficulty than the question—‘How can I be an object to myself?’ or this—‘How can I be an object of my own intuition and internal perceptions?’ . . . as regards internal intuition, we cognize our own subject only as phenomenon, as not as it is in itself. . . . On the other hand . . . I am conscious of myself, not as I appear to myself, but only that I am.

17. Kant, 1934, p. 187:

The doctrine of sensibility is also the doctrine of noumena in the negative sense, that is, of things which the understanding is obliged to cогitate apart from any relation to our mode of intuition, consequently not as mere phenomena, but as things in themselves. But the understanding at the same time comprehends that it cannot employ its categories for the consideration of things in themselves, because these possess significance only in relation to the unity of intuitions in space and time, and that they are competent to determine this unity by means of a general *a priori* connecting conceptions only on account of the pure ideality of space and time.

18. Although process metaphysicians often look back to the fragmented writings of Heraclitus, the seminal figure for the modern/postmodern era is A. N. Whitehead, whose *Process and Reality* (1929) arose from his time at Harvard not long after the death of Peirce.

19. See, for example, Kant’s treatment of ‘cosmological dialectic’ questions in the latter stages of CPR (Kant, 1934, c. pp. 300ff.)

The number of categories in each class is always the same, namely, three—a fact that also demands some consideration, because in all other cases division *a priori* through conceptions is necessarily dichotomous. It is to be added, that the third category in each triad always arises from the combination of the second with the first.

© 2014 The Philosophy of Education Society of Great Britain.
Thus totality is nothing else but Plurality contemplated as Unity; Limitation is merely Reality conjoined with Negation; Community is the Causality of a Substance, reciprocally determining, and determined by other substances; and finally, Necessity is nothing but Existence, which is given through the possibility itself. It must not be supposed, however, that the third category is merely a deduced, and not a primitive concept of the pure understanding. For the conjunction of the first and second, in order to produce the third conception, requires a special act of the understanding, which is by no means identical with those which are exercised in the first and the second (Kant, 1934, p. 82).

20. Note that Kant is not entirely consistent on the noumenon in CPR, moving between negative and positive conceptions and thus not entirely clear on the degree to which the human mind can apprehend the noumenal at any level.

21. Unlike, most notably, the ideal forms considered by Plato, the relationship of which to experience may be very tenuous, as in the Myth of the Cave (Republic Book 7; Plato, 1888)

22. For example, to illustrate this at the epistemological level:

The Now that is Night is preserved [all italics in original], i.e. it is treated as what it professes to be, as something that is; but it proves itself to be, on the contrary, something that is not. The Now does indeed preserve itself, but as something that is not Night; equally, it preserves itself in the face of the Day that now is, as something that is also not Day, in other words as a negative in general. This self-preserving Now is, therefore, not immediate but mediated; for it is determined as a permanent and self-preserving Now through the fact that something else, viz. Day and Night, is not (Hegel, 1977, p. 60).

Scaled up to the social, cultural and political spheres, the inevitable result is progress through struggle. For example, (Hegel, 1977, p. 297): ‘The Spirit of this world is a spiritual essence that is permeated by a self-consciousness which knows itself and knows the essence as an actuality confronting it’; thus alienation is central to progress.

23. Cf. the Hegelian influence on the Continental tradition, including Nietzsche, the whole Marxist tradition, and the tendency to separate philosophy less strongly from the humanities and social sciences that the Anglo-Saxon world. Peirce’s philosophy is very unlike sociology or history; this is not the case for structuralism and poststructuralism.


25. For example, attempts might be made to measure consistency in the application of principles in problem situations (cf. certain existing, and sometimes, notorious psychological experiments such as the Milgram experiment: e.g. (psychology.about.com/od/historyofpsychology/a/milgram.htm) (accessed 19 March 2012). Monitoring of the implementation and abuses of basic human rights can also be undertaken. None of these can be an exact art, however.

26. As an evolutionist, it should also be noted that Darwin’s natural selection is not necessarily progressive either, but rather merely an account of change. ‘In an early notebook, Darwin wrote: ‘In my theory there is no absolute tendency to progression, excepting from favourable circumstances’ ’ (Major, 2012).

27. ‘Every tendency has reference to a tendency toward an end’ (Peirce, 1905, quoted in Hulswit, 1997, p. 722) Note also the distinction between the Dynamic and Final Interpretant in Peirce’s later work:

The [Dynamic] Interpretant is whatever interpretation any mind actually makes of a sign . . . The Final Interpretant does not consist in the way in which any mind does act but in the way in which every mind would act. That is, it consists in a truth which might be expressed in a conditional proposition of this type: ‘If so and so were to happen to any mind this sign would determine that mind to such and such conduct’ (Houser et al., 1998, pp. 499–500).

28. ‘. . . to serve the precise purpose of expressing the original definition, [Peirce] begs to announce the birth of the word “pragmaticism”, which is ugly enough to be safe from kidnappers’ (Peirce, 1905, p. 166).

29. Note the argument in Stables, 2008, that even the early Dewey was too inclined to believe in consensus about educational aims and methods.
REFERENCES


