

# *Teaching Peirce to Undergraduates*

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## *Abstract*

Fourteen philosophers share their experience teaching Peirce to undergraduates in a variety of settings and a variety of courses. The latter include introductory philosophy courses as well as upper-level courses in American philosophy, philosophy of religion, logic, philosophy of science, medieval philosophy, semiotics, metaphysics, etc., and even an upper-level course devoted entirely to Peirce. The project originates in a session devoted to teaching Peirce held at the 2007 annual meeting of the Society for the Advancement of American Philosophy. The session, organized by James Campbell and Richard Hart, was co-sponsored by the American Association of Philosophy Teachers.

*Keywords:* C.S. Peirce, Teaching undergraduates, SAAP, AAPT

## ***Introduction***

This symposium is one of the products of a session that Richard E. Hart and I organized for the 2007 meeting of the Society for the Advancement of American Philosophy, or SAAP. This session was co-sponsored by the American Association of Philosophy Teachers, or AAPT, which was founded some thirty years ago with the intention of recalling professional philosophers from their harmful denial that they are teachers whose main activity is in the classroom. AAPT works to overcome the view – powerful since the first president of the American Philosophical Association described teaching in his presidential address as “die zeitraubende und kraftabsorbierende akademische Lehrthätigkeit”<sup>1</sup> – that philosophy professors have more important things to do than to teach. The focus of AAPT is thinking and acting collectively to make philosophy teaching more effective. The activities of AAPT are not content-driven. It matters little to AAPT whether individuals think that Dewey or Kant, Heidegger or Royce, medical ethics or epistemology, feminism or informal logic, is the most important topic for them to be presenting to their students. Through its meetings and publications, AAPT works to help philosophy teachers with: understanding diverse student populations, increasing discussion in the classroom, using journals, integrating films, and other topics too numerous to list here.<sup>2</sup>

The annual meeting of SAAP is a gathering of dedicated philosophy teachers, although sadly we seldom discuss philosophy teaching either. Rich Hart and I thought that, in conjunction with AAPT, we would try to do something about this sad anomaly. Our only question was one of focus, and eventually we decided upon Peirce. In the hope of giving our session the broadest possible sweep, we chose as our topic: “Teaching Peirce to Undergraduates.” To help us with this important question of how to teach Peirce to undergraduates, we gathered a dedicated group of Peirce scholars and, more importantly, Peirce teachers. The presenters were Cornelis de Waal, Matthew Caleb Flamm, Kathleen Hull, Rosa Mayorga and Michael L. Raposa. The session was a lively and informative one, with many important contributions coming from the audience. At

the request of Peter Hare, we have reshaped the results for the *Transactions* and expanded the list of contributors to include: Douglas Anderson, Vincent Colapietro, André De Tienne, Catherine Legg, Lee McBride III, Jaime Nubiola, Herman de Regt, and Lucia Santaella. Of major assistance to the preparation of this printed version was Kees de Waal, who both developed the roster of additional contributors and performed most of the eventual editorial work.

Before presenting these contributions, however, I would like to share with you some of my own uneven experiences teaching Peirce. Every other year, I offer a survey course in American Philosophy using the John Stuhr edition. Over the course of the semester, we routinely consider: Edwards, Franklin, Emerson, Wright, Peirce, James, and Dewey. And then – based upon the students’ expressed interests – we spend the rest of the semester on some combination of Royce, Santayana, Mead, Addams, Locke, and Randall. Given this array of thinkers, no one could be expected to be temperamentally ‘in tune’ with them all; but Peirce remains, for me, consistently the most difficult. It does not help me in dealing with my felt lack of rapport with Peirce that so many commentators have claimed a priority for him in the American tradition. Peirce was, we read, “the most original and versatile of America’s philosophers and America’s greatest logician” or “the most original, versatile and comprehensive philosophic mind this country has yet produced” or “the most original and the most versatile intellect that the Americas have so far produced . . . any second would be so far behind as not to be worth nominating.”<sup>3</sup> While this level of hagiography seems less prevalent at present, there is no denying that Peirce is a figure who deserves a fair and informed presentation. For me, and perhaps for others, more information might lead to a fairer presentation.

In my class, we spend about two weeks on Peirce. The focus of the first week is on his understanding of the task and methods of the philosopher. Here, we emphasize such themes as: doubt and certainty, the nature of science, and fallibilism and the community of scholars. To uncover these themes, we read and discuss such central essays as: “Some Consequences of Four Incapacities” (1868), “The Fixation of Belief” (1877), “How to Make Our Ideas Clear” (1878), “What Pragmatism Is” (1905), and “Issues of Pragmatism” (1905). I am, for the most part, comfortable with this material; and I believe that I am able to lay the groundwork for understanding how Peirce is both continuous with, and different from, James and Dewey.

The emphasis of the second week is on Peirce’s answers – if you like, his ‘metaphysics.’ Here I find myself much less comfortable. We discuss such central essays as: “The Doctrine of Necessity Examined” (1892), “The Categories and the Study of Signs” (1904-6), and “A Neglected Argument for the Reality of God” (1908). I believe that I can get all of the various pieces in their proper places: tychism-synechism-agapism, firstness-secondness-thirdness, quality-fact-law, icon-index-symbol, etc. The resultant picture, however, never comes fully to life for me – or, I am afraid, for the students. Moreover, I cannot believe that my unsatisfactory results are purely my own, unshared by others who teach Peirce.

My original hope was that I would leave the SAAP/AAPT session of papers and discussion with some suggestions on how to deal with my Peirce problem; and, in this regard, I can report some success. These additional contributions offer me still other possibilities for improving my teaching of Peirce. Along with Rich Hart and Kees de

Waal, I hope that these suggestions from the community of scholars are helpful to others who teach Peirce as well.

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***Mediation, Continuity, and Encounter:  
Introducing Peirce with de Tocqueville and Dewey***

It may seem ironic, though also appropriate, to introduce Peirce not in his firstness (what he is in himself, apart from all else) but by way of the mediation of other authors. The two authors whom I find especially helpful for introducing Peirce are Alexis de Tocqueville and John Dewey. Their concerns are more immediately intelligible, more directly engaging, than Peirce's appear to be.

I try to guide my students into the labyrinth of Peirce's thought through the vestibule of his critique of Cartesianism.<sup>4</sup> I do this *not* by turning directly to Peirce's *Journal of Speculative Philosophy* cognition series in which this critique is put forth,<sup>5</sup> but by assigning Chapter 1 of volume II of de Tocqueville's *Democracy in America*. It is here that the young Frenchman famously observes: "So, of all the countries in the world, America is the one in which the precepts of Descartes are least studied and best followed."<sup>6</sup> The actual conditions of the young nation along with the "continuous activity which prevails in a democratic society" relaxed or broke "the links between generations," undermining the force of traditional authority and enforcing the need for individual ingenuity. For de Tocqueville, Bacon in natural philosophy and Descartes, "in philosophy strictly so called, abolished accepted formulas, destroyed the dominion of tradition, and upset the authority of masters." In effect, the Cartesian self became a cultural ideal of American society<sup>7</sup>: "So each man is narrowly shut up in himself, and from that basis makes the pretension to judge the world."

The fantastic presumption of the isolated self to be an omniscient knower is a central target of the Peircean critique of the Cartesian position. The strenuous advocacy of the *dialogical* self marks the positive outcome of this Peircean critique. It brings into sharp focus a historical community bound together by, above all else, a shared hope – discovering what is not yet known. The emphasis shifts dramatically from the individual to community (i.e., from the isolated individual to social selves, i.e., individuals in solidarity with one another, thus ones in dialogue – but inevitably also in conflict – with one another), from intuition to abduction (the process of intelligent guessing), indeed, from apodictic proof depending solely on intuition to experimental arguments relying primarily on observation. Human knowing is a communal activity, not a solitary achievement; moreover, it is one no longer aimed at attaining absolute certainty, but rather one preoccupied with generating fruitful and testable hypotheses.

One of the most important texts in the history of the United States can, thus, be used as an aid in introducing one of the most important philosophers that this country has produced. Peirce's critique of Cartesianism can thereby be seen as having relevance not only to technical philosophical matters but also broad cultural concerns; and to have pertinence to such concerns in such a way as to anticipate the decisive emphasis of such

thinkers as Dewey, Royce, Mead, and Whitehead on the communal dimensions of human engagement.

The nature and depth of Peirce's actual influence on the development of Dewey's distinctive form of pragmatist philosophy are difficult to gauge. On the other hand, the depth and insight of Dewey's mature assessments of Peircean pragmatism ought to be evident to any informed student of this philosophical movement. "The history of a tradition ... is," as John E. Smith has noted, "an indispensable resource for philosophical understanding."<sup>8</sup> This is nowhere more evident than the way ideas get taken up and carried forward in a tradition (e.g., the ideas of experience, inquiry, and belief in the tradition of pragmatism), but also the way later representatives appropriate, contest, and simply interpret the thought of earlier ones. Dewey's reviews and explications of Peirce provide an excellent example of this.

Turning to Dewey for help in understanding Peirce is useful in correcting a likely misunderstanding of Dewey as well as misinterpretations of Peirce and, more generally, pragmatism. For it helps us understand the depth to which Dewey was involved in engaging critically his historical predecessors. However prospective was the dominant thrust of his philosophical project, Dewey's thought in various ways reveals not only a natural but also a historical (or cultural) piety.<sup>9</sup> This is strikingly evident in his insightful treatments of his pragmatist predecessors (especially James, but also Peirce). Moreover, turning to Dewey in the way recommended here helps us to see just how much a pragmatist Peirce is (just how deep the kinship between Peirce and Dewey).<sup>10</sup> Finally, it assists us in understanding the *continuity* of this tradition. Without question, there are crucial and (in some respects) irreconcilable differences between Peirce and Dewey or, for that matter, between any two American pragmatists; but those who are disposed to drive a wedge between Peirce and the other pragmatists (a tendency exhibited as much by Peirceans as Jamesians, Deweyans, et al.) cannot appeal to Dewey for its justification.

For introductory classes, I have found Dewey's reviews of Peirce's *Collected Papers*,<sup>11</sup> also his "The Development of American Philosophy" (LW 2, 3-21),<sup>12</sup> especially helpful. For more advanced courses, I often use such writings as Dewey's "Peirce's Theory of Quality" (LW 11, 86-94) and "Peirce's Theory of Linguistic Signs, Thought, and Meaning" (LW 15, 141-52).<sup>13</sup> Peirce's theory of signs, as Dewey so forcefully shows in the last mentioned essay, provides the resources for developing a compelling account of mentality in its myriad forms.

In his review of the first six volumes of the *Collected Papers*, however, Dewey stresses Peirce's evolutionism, synechism (doctrine of continuity), commonsensism, and of course pragmatism. Given rather critical remarks made at the outset of this largely appreciative review, however, it might seem to some, especially those Peirceans who tend to be suspicious of Dewey, that approaching Peirce through Dewey biases the reading of Peirce as a truly speculative philosopher in the grand tradition of Western metaphysics. While Dewey foregrounds the less speculative and metaphysical side of Peirce, his own writings provide a corrective. Indeed, I use Dewey against such a misreading of his predecessor. Without reference to Peirce, Dewey proclaims at the end of "Philosophy and Civilization":

As long as we worship science and are afraid of philosophy we shall have no great science. ... As far as any plea is implicit in what has been said, it is, then, a

plea for the casting off of the intellectual timidity which hampers the wings of imagination, a plea for speculative audacity, for more faith in ideas ... (LW 3, 10)

Though in this or that instance, Dewey might have had deep misgivings about the particular directions in which speculative audacity prompted Peirce to move, he would not have had any fundamental opposition to this speculative boldness itself. Far from it.

In the end, facilitating a *direct* encounter with Peirce's challenging texts is, for anyone responsibly teaching a course on American philosophy, a pedagogical necessity. But the stage of precision, encompassing in this instance a painstaking reading of challenging texts, should flow from a phase of romance;<sup>14</sup> and it is to this phase that I have primarily attended in this essay. First looking at Peirce's concerns through the lenses of Alexis de Tocqueville and John Dewey, then working through Peirce's own texts, has in my pedagogical experience proven to be an effective way into his labyrinthine thought. Mediating figures such as de Tocqueville and Dewey facilitate the task of interpreting (of rendering comprehensible) Peirce, who is (as Dewey notes) "a philosopher's philosopher." Moreover, Dewey's gloss on Peirce's writings helps us in various ways to appreciate the continuity of pragmatism. In turn, this should facilitate a direct and fruitful encounter with Peircean pragmatism. Leaving aside the accuracy of R. B. Perry's claim (pragmatism is a movement based on James's misunderstanding of Peirce's writings<sup>15</sup>), Dewey's *understanding* of these writings is, for teachers no less than scholars, invaluable. Peirce did stress that philosophy must transform itself into a science, completely passionless and strictly fair (CP 5.537).<sup>16</sup> But he also wrote this about the debate between nominalists and realists: Though this question

has its roots in the technicalities of logic, its branches reach about our life. The question of whether *genus homo* has any existence [or reality] except as individuals, is the question whether there is anything of any more dignity, worth, and importance than individual happiness, individual aspirations, and individual life. Whether men really have anything in common,<sup>17</sup> so that the *community* is to be considered as an end in itself, is the most fundamental practical question in regard to every public institution the constitution of which we have it in our power to influence. (CP 8.38)

In Peirce's hands, the critique of Cartesianism – his rejection of foundationalism, intuitionism, and individualism – is an integral part of a complex argument *for* envisioning communities worthy of our loyalty and devotion. Authors like de Tocqueville and Dewey help us see, at the outset, the human stakes underlying Peirce's technical concerns. Thus, they can be enlisted to mediate our encounter with C. S. Peirce in order to help bring into sharp focus the continuity between Peirce and others in the philosophical traditions of American philosophy.

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***How to Begin to Make Peirce's Ideas Clear***<sup>18</sup>

This is the age of methods; and the university which is to be the exponent of the living condition of the human mind, must be the university of methods.  
—C.S. Peirce (EP1: 211)

The papers of Charles Sanders Peirce seem to have the reputation among students of being notoriously difficult to read and understand. Allegedly, teachers of pragmatism have a hard job to introduce Peirce's world of concepts. But could it really be more difficult to bring across Peirce's ideas to new students of American pragmatism than any other comprehensive and 'classical' philosophical proposal for an understanding of the world we inhabit? Is there a specific degree of complexity in Peirce's pragmatism that is of a higher order than the degree of complexity of the systems of thought of, say, Aristotle, Kant or Hegel?

I think this would be rather odd to admit and we must fiercely debunk this persistent myth. The history of philosophy shows many grand designs of intricate and interconnected ideas – all difficult to understand attempts to make sense of the world we live in. I think it is safe, and it seems even presumptuous to do otherwise, to accept that Peirce's pragmatism is a system of thought as complex as any other main philosophical system and, therefore, that it can be understood whenever a student or scholar is willing to study it patiently and rigorously, as she would do in the case of the great works of Aristotle, Kant, and Hegel. Admittedly, Peirce was somewhat unlucky in presenting his view of the world in a series of papers that ask a lot of its readers, but this series of papers is at the same time illustrative of the conjectural nature of Peirce's trial-and-error attempt to diagnose the big problems in philosophy and to find a new approach to shed new light on the nature of the universe, using *all* the lessons learned by man, especially those in the history of science and logic, with the greatest emphasis on the method of learning.

Cosmological ideas like tychism, synechism, and agapism, are obviously not the most suitable starting points to try to understand what is at stake in pragmatism. To aid new students of pragmatism entering this new world of thought, it is worthwhile to step back for a moment and see in what historical context Peirce's ideas were formed. The American context in which Peirce developed his conjectures might give the student a feeling of historic urgency to find one's (philosophical) ground again that permeated the (re)United States of America in the second half of the 19<sup>th</sup> century.

In my (teaching) experience, not too many students are familiar with the revolutionary history of the United States of America and the rise of science as a profession. Yet, were the student familiar with the ideas that shaped America and Europe to a great degree, it would help her to understand pragmatism as a typical American philosophy, introducing the pragmatic maxim of meaning and the method of science as a way of fixating our beliefs.

Pragmatism is nothing less than a new step in the history of Western philosophy, in line with both the American Revolution (1775-1783) and American Civil War (1861-1865), which were important moral and political lessons to be learned, and the new and vast revolutions in the methods of science and its new institutions, which offered new resources to learn new things about the world more profoundly. In "The Fixation of Belief" (1877) and "How to Make Our Ideas Clear" (1878), Peirce introduces a new emphasis on how to make our ideas clear. Just as the idea of non-hereditary succession that came out of the Continentals' protest against the ruling of George III, was the result

of making ideas about government and the people more clear (instigated by historical circumstances and fuelled by Locke's ideas), and, again, just as the idea of abolition of slavery was the result of making our ideas about equality more clear (this time given different historical contingencies), Peirce takes a stab at the *very idea* of making our ideas clear and fixating our beliefs in such a way, namely *scientifically and (thus) methodically*, that we diminish the risk of getting into an irritating state of doubt and undesirable insecurity.

Peirce criticizes the state of the art philosophy of his time, pointing out the faulty apriority of Cartesian philosophy and the in itself unfertile Leibnizian "ornament of logic", and proposes his pragmatic maxim of meaning as an (above all) fruitful way of getting our heads cleared of confusions. Calling attention to the circumstances in which Peirce's thoughts developed helps new students understand what is actually at stake in American pragmatism – here emphasizing American. What the American Revolution and the Civil War had clearly illustrated in the field of morals was that authority and a priori systems of thought simply did not succeed in offering the security and certainty we crave. The American republic is both the outcome of a learning process and a daring experiment in itself that hopefully directs the course of history towards a better place to live. The Civil War and its aftermath, in one sense at least, is a great test of the meaning of concepts written down in the constituting documents of a nation: what do we actually mean when we state that 'all men are created equal'? In the same way, the developments in the field of science – chemistry after Lavoisier, biology after Darwin, psychology after Wundt, physics after Maxwell, economics after Cournot, history after Morgan, etc. –, and the very beginning of science as a methodological profession, showed Peirce how to better proceed in making sense of the world of phenomena: use science itself in both elucidating our concepts and fixating our beliefs (EP1: 210–14). This proposal is ultimately defended by the merits it offers, namely a more satisfying understanding of the world (EP2: 398–433).

In brief, it would help students to understand the historical moment of the second half of the 19<sup>th</sup> century as constituting the mentality of America in which Peirce's complicated philosophy has its place. The whole project of pragmatism, at least in Peirce's papers, is to achieve a better understanding of the phenomena of the world by developing a conjectural cosmology in consonance with our best scientific insights (to infer to the best, or even only, explanation), given a *proposal* how to elucidate our concepts involved in that attempt. That it is an American scientist/philosopher from the second half of the nineteenth century who tries to do this can be made clear by pointing out both the moral situation and the state of science that determined America in Peirce's time. It helps opening up pragmatism to new students as a new step in the history of our attempts to understand the world of phenomena

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***Teaching the Neglected Argument***

Throughout my teaching career, I have been housed primarily in departments of religion studies; I teach courses in modern western religious thought and the philosophy of religion, with many of those courses being cross-listed with the philosophy department. I have used Charles S. Peirce's "Neglected Argument for the Reality of God" in more than a half-dozen different courses and on many different occasions. I regularly offer a course on "American Religious Thinkers" (primarily for undergraduates, but open to a few graduate students in history and American Studies as well). Peirce is sometimes the centerpiece of this course which typically begins with Jonathan Edwards and ends with some consideration of John Dewey and H. Richard Niebuhr. Ralph Waldo Emerson, William James and Josiah Royce each draw significant attention along the way. Several years ago I taught a faculty seminar for the members of our philosophy department, on Duns Scotus and Peirce's Scotism. Finally, even in courses where I am not actually assigning and reading Peirce, I often engage his ideas and employ them for specific philosophical purposes. I want to comment very briefly on each of these experiences of "teaching Peirce".

Peirce described his Neglected Argument as a "poor sketch" and a "table of contents." The essay is useful pedagogically for all of the same reasons that it is frustrating. It begins with a meditation on the reality of God, but in doing so invokes some of the basic features of Peirce's phenomenology and semiotic, treats his perspective on the nature of inquiry and scientific method and concludes with a discussion of Peirce's pragmatism. I wrote my first book trying to fill in some of the details of that sketch;<sup>19</sup> others before and after me have performed the same task in different ways. But just as the essay includes an invitation to the reader to engage in the practice of Musement, the whole of it represents an invitation to extend the philosophical project that Peirce was only able to begin here. Trying to figure out what Peirce was thinking is a great challenge on the basis of this essay alone. Yet if it is conceived as an invitation to think *with* Peirce rather than just to think *about* him then the essay can prove to be both philosophically and pedagogically quite useful. Moreover, even if the goal is to teach students about Peirce, this essay is a useful introduction to his thought, indeed, supplying a kind of table of contents for much of what he thought and wrote about each of these topics elsewhere.

I am convinced that Josiah Royce succeeded far better than anyone else in thinking *with* Peirce, at least with respect to understanding the relevance of Peirce's ideas for theology and the philosophy of religion. Peirce's "Questions concerning Certain Faculties Claimed for Man" and "Some Consequences of Four Incapacities," combined with the Neglected Argument, form the perfect prelude to reading Royce's *The Problem of Christianity*. If Jonathan Edward's *Treatise concerning Religious Affections* and Emerson's essay on *Nature* are early classics in the tradition of American religious thought that I label "theosemiotic," that tradition culminates with Peirce's deliberations and with Royce's extrapolation from them in his mature work. Dewey and James intersect with this tradition in certain ways, but also depart from it significantly. (In any event, no teacher should ever pass up the opportunity to read and discuss James' wonderful *Varieties of Religious Experience*—I use it regularly in this course.)

The faculty seminar on Peirce and Scotus was an ambitious undertaking for me (I am not a scholar of medieval philosophy) and only partially successful. Nevertheless, I was clear, at least, about what I intended to accomplish. My guess is that the typical pedagogical approach to Peirce is to treat him as one of the classical pragmatists, linking



him to James, Schiller, Dewey, Mead and others. Here “The Fixation of Belief” and “How to Make Our Ideas Clear” take center stage, even in nuanced treatments of Peirce that suggest how his thinking evolved (or deteriorated) subsequently. Yet I remain convinced that these articles are among the poorest that Peirce ever published, that he did not completely “mean them” even at the time, and that they suffered greatly from being designed for popular consumption. Murray Murphey convinced me of this many years ago—Peirce never did pass through this alleged “nominalist stage”. Linking him to Duns Scotus and to the medieval tradition of scholastic realism was my own attempt to shine the spotlight elsewhere, to take a different pedagogical approach to what I perceived to be the standard one. (At the same time, if the trajectory of Duns Scotus’ thought is traced through the modern period culminating in Peirce’s philosophical deliberations rather than in those of Heidegger and Deleuze, the picture of Scotism that emerges is one that is decisively different from the canonical account presently being endorsed by most contemporary scholars.)

All of my own work is heavily indebted to Peirce’s ideas, as is my teaching. I teach a course about the religious significance of boredom that eventuated in the writing of book about that topic, boredom being a phenomenon that I portray as a kind of “semiotic breakdown,” analyzed in distinctively Peircean terms.<sup>20</sup> I also teach a first year seminar on traditions of martial spirituality that gave birth to another book, one about meditation that I regard as a companion to the boredom project.<sup>21</sup> Peirce’s own meditations on self-control, along with James’ prescription of a “moral equivalent of war” and Royce’s celebration of loyalty, supply a philosophical framework for the treatment of a diversity of phenomena, ranging from Hindu yoga and certain Asian martial arts to Christian and Muslim accounts of the “spiritual combat”. This course is a great pleasure to do—as easy to teach as the Scotus/Peirce experiment proved to be difficult.

Peirce’s philosophy, of course, is notorious for *not* being easy to teach, much less easy when the purpose is the careful explication of his ideas rather than the application of certain selected ones for specific pedagogical purposes. I confess to having shied away from the former task while focusing on the latter, with my location in a department of religion studies serving as only a partial excuse. Nevertheless, insofar as I continue to help my students to think *about* Peirce, my emphasis remains (somewhat ironically for a pragmatist) on the “roots” (in medieval and German thought) rather than on the better known “fruits” (in James, Dewey, et. al.) of his philosophical *oeuvre*. Moreover, I am convinced that—for the purpose of understanding what Peirce himself was up to—Josiah Royce and C.I. Lewis supply more productive clues and insights than some of Peirce’s better known philosophical successors.

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### ***Finding Peirce’s World***

Teaching someone else’s thought is a dark art. When that person’s thought is as extensive, difficult, and developmental as that of Charles Peirce, the art is even darker. The task at hand is to address the teaching of undergraduates, so I will explore teaching a

course dealing solely with Peirce and also make suggestions for presenting a course in which Peirce's work constitutes only a part of the syllabus.

Before turning to my more positive account of teaching Peirce, I begin with a brief mention of two avenues that have failed me. In my early days of trying to teach Peirce I almost always taught "The Fixation of Belief" and "How to Make Our Ideas Clear," thinking that these would suffice to give an account of pragmatism. This approach invariably failed me because the essays do not provide a wide enough view of Peirce's work and because the "truth" story in the former and the pragmatic maxim offered in the latter need to be understood in light of Peirce's later work. I have also found it unhelpful to remove Peircean arguments from their context in his architectonic and compare them with contemporary arguments—too often this approach leads to a caricature of Peirce. For the comparisons to be effective, it is important that Peirce's arguments first be understood within the context of his overall outlook. That is, it's important to find Peirce's world before one trades on it.

So much for failure. Let me briefly sketch some avenues for finding Peirce's world that have worked for me. In a late draft of his "A Neglected Argument for the Reality of God" Peirce opened the essay as he would a letter: "To My Dream Friend." I often have students begin with this opening; here Peirce lays out what he expects of his "dream friend" whom he takes to be his ideal reader. Two things are crucial. First, Peirce sees philosophy as a dialogue, and his reader is an interlocutor not merely an observer. The reader must actually engage in Peirce's own dialogue with the history of philosophy. The second point is related. Peirce occasionally argued that "thought is not in us, we are in thought." The upshot of this scholastic realism is that we students of Peirce's thought must enter into his thought. "Certainly in philosophy," Peirce wrote, "what a man does not think out for himself he never understands at all" (MS 304, 3). We must read Peirce from an internal perspective but we must do so actively, thinking through the ideas as we go. To try to address these points I most often take one of two approaches to teaching Peirce. I have on various occasions taken a class through each of three essays in which Peirce attempts to sketch an outline of his entire system. The first of these is "On a New List of Categories" (1867). Notoriously difficult, this essay nevertheless lays the groundwork for Peirce's architectonic. Here we encounter his categories and the consequences these have for his seminal semeiotic and his developing theory of inquiry. He defines the triad of likeness (icon), index, and symbol and characterizes the basic sign relation. He also sketches the experimental method that works from hypothesis to deduction to inductive testing. The difficulty of the text is eased somewhat by providing the students with the basic categorial projects of Aristotle and Kant—seeing Aristotle's interest in how we can talk about things by providing predicates (*kategoriai*) for them and Kant's interest in employing propositions to organize a "world" out of what is in principle an initially undifferentiated sense experience.

From this essay, we travel to the late 1880s "A Guess at the Riddle." Here Peirce traces the categories across the variety of sciences. Like "A New List," "A Guess at the Riddle" is difficult. But Peirce is explicit about his attempt to "erect a philosophical edifice that shall outlast the vicissitudes of time" (EP I, 246). A number of important themes appear, allowing the teacher to choose her or his points of emphasis. Peirce aligns himself at various points within the history of philosophy marking similarities and differences between his thought and that of Aristotle, Berkeley, Kant, Hegel, Mill and

others. He introduces the idea of habit-taking; he characterizes each of the three categories; he describes his version of final causality; he defends the pragmatic notion of “intellectual hope” derived from Kant’s notion of a “regulative principle”; and he lays the groundwork for his evolutionary cosmology that he developed in his early 1890s *Monist* series of essays. “A Guess at the Riddle” shows Peirce’s work in midstream, still pursuing the basic ideas that attracted him in “On a New List of Categories.” Perhaps most importantly, students get to see Peirce in the process of struggling to make sense of his own developing system of thought; his probabilistic metaphysics is brought into close quarters with his expertise in the sciences of his day.

I conclude the course with a close reading of “A Neglected Argument for the Reality of God” (1908). Some folks avoid this text because of its “god talk.” But any serious interpreter of Peirce’s work must acknowledge that, for better or worse, this god talk is present from the earliest years of Peirce’s career. In any case, God needn’t be the focus of this reading. The “Neglected Argument” provides an extensive introduction to the categories as the “three universes of experience.” Here Peirce not only describes his method but exemplifies it in the case at hand, offering an experiential discussion of abduction in the section on “musement” that students usually find accessible. Moreover, we see the import of Peirce’s scholastic realism in his description of the third universe of experience; included among the mediating “thirds” are “a living consciousness . . . a daily newspaper, a great fortune, a social ‘movement’” (EP II, 435). A general can thus be real without being existent or actual materially or physically.

A second approach I have found to be effective involves reading key series of essays, again in chronological order. One’s choices here can hardly fail. My own favorite progression is to move from “Illustrations of the Logic of Science” (1877-78) to the 1890s cosmological series in the *Monist* to the 1903 pragmatism lectures at Harvard. This set has the structural advantage of opening with “The Fixation of Belief” and closing with “Pragmatism as the Logic of Abduction.” The range of issues covered in this progression is extensive. Students see how the questions of meaning and inquiry lead out to Peirce’s metaphysical and cosmological considerations. But they also see that he never leaves the question of logic—that is, methods of inquiry—behind. Pragmatism is in the end a feature of logic that leads to the abductive method. In these series, the most fundamental of Peirce’s themes are developed: pragmatism, synechism (the belief that the real is continuous), tychism (the belief that the cosmos always retains an element of chance), phenomenology, normative science, perceptual judgment, and truth. Although there is no extended discussion of the semeiotic in this set of readings, there is certainly material enough to enable the teacher to introduce students to its place in and importance for Peirce’s architectonic.

If there is a drawback to this latter approach, it is the temptation to skip across the surface of the ideas. I still find that it is only through a close reading that students can begin to feel the force of Peirce’s logic and the reasonings that lead him to see pragmatism’s alignment with a particular sort of metaphysics. Thus, each time I teach several series, I choose to develop some themes in depth and gloss the others. But in all cases, I focus on the junctures of linkage. For example, I think it’s crucial when teaching “Fixation” to see how his focus on “real things, whose characters are entirely independent of our opinions” leads to his particular conception of a developing truth and, later, his emphasis on the reality of generality. Or again, in “The Law of Mind” we find the basis

for his metaphysical synechism growing out of his attempt to describe our experiences of “mind”—of memory, of awareness, of temporality, et al. And finally, for example, in “Pragmatism as the Logic of Abduction” he argues for a continuity between perception and controlled inquiry, such that our ability to speak about and live in the world hinges on a perceiving that transforms into an inquiry that returns to primary experience for its own testing. The “end of an explanatory hypothesis,” Peirce argued, “is, through subjection to the test of experiment, to lead to the avoidance of all surprise and to the establishment of a habit of positive expectation that shall not be disappointed” (EP II, 235). Overlooking such connections can leave students at a loss as to how to put the Peircean puzzle together, to find a Peircean “world” and not just a mechanical ordering of things of the sort one finds on looking into the work of Herbert Spencer.

Along the way I work hard to provide an historical context for the sorts of arguments Peirce developed. Not only is it important to see how he conversed with his philosophical predecessors from Aristotle to Schelling, it’s important to see his engagement with the ideas of his contemporaries—Spencer, Cantor, James, Pearson, Carus, and a host of others. Moreover, those contemporary debates took place in a world in which science and religion were in a struggle for cultural hegemony, in a world that molded Darwin’s ideas into harsh social practices including the development of the eugenics movement, and in a world in the which the United States both wrestled with its own social horrors and began to emerge as a world power. “American” philosophy which had in the early years of the nineteenth century been blithely ignored, inserted itself into the international conversation. The pragmatism that Peirce and James authored became the most contested philosophy of the early twentieth century. Paul Carus in his 1909 essay “The Philosophy of Personal Equation,” wrote, for example, “that pragmatism (if it is to be taken seriously) actually denies the possibility of philosophy as an objective science.”<sup>22</sup>

Undergraduate courses dealing exclusively with Peirce are rare. So, if I consider fitting his work into a larger course on American thought, I usually choose to teach either one of the synoptic essays mentioned above or one of the lecture series. I choose these according to the general themes of the course I’m teaching. But if the course is specifically about pragmatism, I take a somewhat different approach. Here, I find it very useful to begin with William Kingdom Clifford’s essay “The Ethics of Belief” published in 1877. Peirce’s father was a friend of Clifford, and Peirce had visited him in England in 1875. Against this background, I turn to “The Fixation of Belief” showing the continuities and differences between Clifford’s and Peirce’s outlooks. This lays the groundwork for a reading of James’s “The Will to Believe” in which James takes on Clifford directly. This essay, for me, makes a great deal more sense to students when they see that James was explicitly responding to Clifford’s linking of certainty and scientific practice. The historical trajectory also allows students to see that Peirce seems to be staking out a middle ground between Clifford and James. Finally, I cap this historical story with one of two readings from John Dewey: his 1916 essay entitled “The Pragmatism of Peirce” or his later essay “From Absolutism to Experimentalism.”<sup>23</sup> In this way, I try to show that, despite differences, the pragmatists were engaged in the process of developing what Peirce called a “natural history” of thought.

At the end of any course in which I teach Peirce, I usually ask students to bring Peirce’s thought to bear on some contemporary debates, say realism/anti-realism, the practice of science, or even issues involving business ethics or the treatment of animals.

After a close engagement with Peirce's work, they usually find it relatively easy to think with him, as it were, in answering the questions raised in these debates. It's not important to me what issues I or my students choose; what matters is that they see that Peirce's ideas are not dead or outmoded. They can then see the significance of those contemporary thinkers who draw on Peirce's work to develop their own ideas: Susan Haack, Hermann Deuser, Carl Hausman, Chris Hookway, Ivo Ibric, Cheryl Misak, Sami Pihlström, Michael Raposa, and a host of others. Again, the Peircean lesson is that the history of philosophy is an ongoing conversation; and it's a conversation in which Peirce can still play a relevant role.

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### ***Searching for Some Real Doubt***

My experience teaching Peirce to undergraduates is mostly confined to introducing him into courses that have little to do with American philosophy. I have included him in my Introduction to Philosophy (a course that is typically populated by non-philosophy majors), in my upper-level course in philosophy of science, and in a combined graduate/undergraduate course on the philosophy of text.

In my intro philosophy course I have students read primary texts and use the class sessions to guide them through the readings, using a combination of close reading and lecture. I think it is good for students to experience difficult texts firsthand, and given that decision I see little problem including Peirce at this level. His writings are not any more difficult than those of other great philosophers, whether it be Aristotle, Hume, Kant, or Nietzsche. Though at times Peirce's language can be awkward, he always writes with the reader in mind and he spends considerable time and effort making his position clear and as explicitly formulated as he can. The problem with Peirce is more conceptual. His views are often antithetical to those found in modern philosophy, which have come to define how students understand themselves and the world in which they live.

In my intro course I have sought to use this to my advantage by first devoting a fairly large section to Descartes and then discussing the Cartesian stance from a Peircean perspective. First, we go through Descartes's *Meditations Concerning First Philosophy* in its entirety, which takes some time. I begin with Descartes's method of universal doubt and his subsequent discovery of the ego cogito in the first two meditations, then I go through the remainder of the work, showing how he built upon this newfound Archimedean point and the worldview that results from it. While doing this I draw attention to the notion of clear and distinct ideas, its relation to truth, the role attributed to God, the proof of the external world, the dualism of mind and body, the substance notion of the soul and the argument for its immortality, the emphasis on the individual, etc. Attention is given also to Descartes's criticism of the schoolmen—what he is reacting to and why—and why his work can be seen as the start of a new era in philosophy. At the end I have students reflect upon this by asking them to formulate how much Descartes's views are representative of how they understand themselves and the world they live in.

Next, I have students read Peirce's standard anti-Cartesian papers "Questions Concerning Faculties Claimed for Man" and "Some Consequences of Four Incapacities."

When guiding the students through these texts, I try to constantly relate the moves Peirce is making with the argument presented in the *Meditations*, and I try to get the students involved in developing the rough outlines of the sort of worldview that results from it: no innate knowledge, no God as the guarantor of truth, no Cartesian-style individuals, an emphasis on community, etc. I also show them how Peirce's criticism of Descartes is informed by his reading the schoolmen, and how his departure from Descartes somehow parallels the latter's earlier departure from the schoolmen, suggesting that we too might find ourselves at the dawn of a new era. I conclude by having students reflect on the Peircean view while taking into account what they had said earlier when they discussed the Cartesian view—typically this means they have to reflect upon their own values. Though it upsets some students to find long trusted beliefs and values challenged, the greater didactic problem is addressing a dismissive sophomore relativism. To conclude, the aim of the exercise is to generate some real doubt about some very fundamental beliefs that are generally wholly taken for granted, and to do so in a productive manner.

With the upper-level courses in philosophy of science, I start with the first two papers of Peirce's *Popular Science Monthly* series: "The Fixation of Belief" and "How to Make Our Ideas Clear." Both papers raise many issues traditionally discussed in undergraduate philosophy of science classes: the aim of inquiry, scientific progress, the demarcation of science, the notions of truth and reality, the role of the scientific community, etc. Moreover, these papers raise the issues in an introductory manner that doesn't require much of a background in either science or philosophy. A discussion of Peirce's pragmatic maxim becomes particularly useful when it is later compared with verificationism in its various guises. When coupled with Peirce's realism, it also presents a good avenue for addressing the problems Carnap runs into in "Testability and Meaning." Peirce's discussion of abduction, deduction, and induction further provides an interesting addition to discussions of the deductive-nomological model of science, and Popperian falsificationism, as well as more contemporary views on inference to the best explanation. In short, discussing Peirce in a relatively standard philosophy of science course gives me a high-quality external vantage point that enables me to contrast mainstream twentieth-century views with the views of a scientist-philosopher who had not been exposed to them, and hence is not infected by them.<sup>24</sup>

It is also within the context of this course that I wrote the Peirce volume for the Wadsworth Philosophers series.<sup>25</sup> When writing that book I was searching for a way to get students quickly up to speed on a fairly large number of key themes in Peirce's work, thus making it easier for the instructor to depart from the assigned readings and talk about Peirce's views more generally.<sup>26</sup>

The latter, I do exclusively in a combined graduate-undergraduate course on the philosophy of text, where I use Peirce a lot, but without assigning any Peirce readings. One key philosophical problem in this area is the issue of authorial intent, with the related question of what an author is. When talking about the relation between the author and the text, I find Peirce's conception of the self much more useful than the Cartesian notion of the self implicitly adhered to by textual scholars. Another key problem revolves around the ontology of the text—how does the text relate to its physical instantiations—where I find Peirce's realism very helpful in bringing out the implicit nominalism among textual scholars and showing how their views are a consequence of a very particular but unarticulated metaphysical stance, or a rather crude denial of it.

In short, when teaching Peirce to undergraduates I don't see myself guided by a felt need to teach students "the philosophy of Peirce." Instead I use him in more targeted ways to bring out a contrast with mainstream views in a constructive and responsible manner.

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### ***The Value of Peirce's Historical Commentaries***

I am proud to be able to say that my first opportunity to teach Peirce in a university setting was due to a co-organizer of the present symposium, James Campbell. I was his one-year stand-in at the University of Toledo in 2003–2004 while he was teaching in Germany. In that capacity I was commissioned to teach an American philosophy seminar which enrollment consisted of about eight or ten graduate students, and a single undergrad. This experience greatly influenced my eventual approach to teaching Peirce in undergraduate contexts.

It being my first chance to teach American philosophy I thought I would "play it as safe." To my mind this meant assigning the most "standard" essays and supplementary interpretations. When it comes to Peirce I learned that this is a mistake. I assigned for the students Peirce's most widely discussed essays, those *Popular Science Monthly* pieces James made famous in his pragmatism lectures. At the time I had a conversation with a colleague ringing in my ears about teaching "The Fixation of Belief." My colleague had assigned the essay to his undergrads with hopes that it would communicate something of the originality of Peirce's philosophic vision, in particular Peirce's endorsement of fallibilism against what he calls the "willful adherence to a belief."<sup>27</sup> I shared my colleague's worthy hopes.

My students—the first, mostly graduate group—came to our meeting intrigued by Peirce's suggestive distinctions, but not a little bewildered. They preferred "Fixation" to "How to Make Our Ideas Clear," though they were not particularly moved by either essay. The language seemed to them ponderous and unnecessarily methodical. Peirce's talk about establishing a "rule for attaining the third grade of clearness of apprehension" seemed to them starchy and innocuous. The students patiently endured my clumsy attempts to simplify the pragmatic rule using examples like chairs and desks ("one has no precise idea of 'chair' until one has conceived its practical bearings, as in '*this object has advantages of use in this and such particular context*'..."). They were unimpressed by this most central of rules to early American philosophy.

Similarly, Peirce's four methods for fixing belief seemed to them weighted down by dogmatism about logic and inference-making that hardly applied to everyday reasoning. I saw the irony of this—it was precisely this same "everyday reasoning" that Peirce was trying to show conformed to the clearest and loftiest of logical methods—but I had a hard time turning this to my pedagogical advantage. What I viewed as deft philosophic connection-making they took for only stiffness and scientism. As with "How to Make Our Ideas Clear" I was forced to insist, somewhat in vain, and both despite and because of the student's malaise, that Peirce was diagnosing something central to all of their own spontaneous lives: "*The 'method of scientific investigation' is simply the realization,*

*Peirce is telling us, within modern civilization of a sensibility that is perfectly legitimate on its own account (and not at all restricted to laboratory experiments), and in many contexts preferable to previous belief-systems!"* I admired the display of power in their suppressed yawns.

In brief, I found it a great challenge to communicate Peirce's deceptively simple characterizations. His "new conception" of belief as "scientific," and concomitant method of "reality," could very easily be confused with more imprecise, or perhaps commonsensical versions of the same. I started to wonder how the radical simplicity of Peirce's views could be conveyed apart from a rich acquaintance with historical philosophies. Peirce's approach, being as it is a directly conversant spin, and innovation on historical philosophies, began to seem to me prohibitive to introductory philosophic sensibilities.

But I was not ready to give up teaching Peirce, so as I transitioned into exclusively undergraduate contexts I changed my strategy. I decided to try to make Peirce's deep historical perspective an advantage by excerpting select portions of his more speculative, but I think surprisingly accessible commentaries, and inserting them into key sections of my introduction to philosophy courses. I excerpted, at first, only the very beginning portion of Peirce's "Some Consequences of Four Incapacities" which contains sweeping summarizations and pithy criticisms of Cartesian, or proto-Modern philosophies. I assigned this as short commentary supplementing the transitional readings from the course section on Descartes, hoping to invite students, at some risk to adequate circumspection, to think about his legacy and the challenges his thinking raises for post-Cartesian philosophies. I then directed the students through (very) select readings of Hume and Kant, to fill out the Modern picture, and excerpted a second Peirce commentary: "The Place of Our Age in the History of Civilization."<sup>28</sup> This time I had them read the entire essay, taking a gamble that the personal perspective and strong emphases upon Kant and Hume would offset some of the name-dropping and historical references that the students would find arcane. My gamble paid some dividends.

In different attempts to teach Descartes I have found it exceedingly difficult to convey to contemporary students, perhaps because of the depth of their own Cartesian presuppositions, the radical break that he made from his scholastic forebears. Peirce's four-point compendium of the "spirit of Cartesianism" summarizes with elegant simplicity what in previous classes I had been struggling to articulate to students to be the historical originality of Descartes' thinking: he begins with universal doubt as opposed to unquestioned fundamentals; he defers to internal rather than external authority; he models method on deductive inference as opposed to multiform argumentation; and most crucially, he halts at the overarching, cosmic explanation of the scholastics. This summary analysis proved a highly useful classroom tool because it makes an immense historical shift manageable without reducing it to caricature.

The longer essay was less successful, but had its merits. Peirce's audience in "The Place of Our Age...", an oration delivered in 1863, was a group assembled for the "Reunion of the Cambridge High School Association." Without knowing the precise makeup of attending individuals it is clear from Peirce's style that he felt obligated to offer a retrospective on modern civilization, but this he qualifies in the opening not in authoritative judgment but as "a suggestion that might be put forth in conversation, and nothing more."<sup>29</sup> I conveyed this to my students, urging them to imagine themselves at a



banquet dinner at which a philosopher of some eminence wished to offer speculative historical observations as conversation pieces. Since we had very recently finished reading and discussing Descartes, Hume, and Kant, I hoped that Peirce's broad characterizations of their contributions leading up to the late nineteenth century would not be unfamiliar. While this was partly the case (they at least *knew* of the philosophers referred to), Peirce's penchant for making connections with marginal figures such as Ralph Cudworth, as well as other key philosophic players whom we had not had time to study sufficiently, put the students off. One particular disappointment involved the climactic point Peirce makes about materialism and idealism: "Materialism without idealism is blind, idealism without materialism is void." It seemed the students were tuned out by the time this crucial message was delivered. At the same time, however, our use of the essay had the pleasantly surprising result that it permitted students' entrée into some of the larger speculative considerations that an introductory survey course sometimes needs. Peirce's considerations of the cultural implications of Cartesian and post-Cartesian philosophy opened the way nicely to Nietzsche and Sartre and allowed for the reflective repose befitting the end of an introductory philosophy course.

While these experiences display a tendency to avoid use of Peirce's original philosophic texts in undergraduate contexts, they also reflect a proportionally greater use of his rich, speculative historical commentaries. The enormous importance of an historical understanding of key concepts in any philosophic course of study is obvious to seasoned scholars and teachers. Where Peirce's thinking is of particular use is in his ability to convey with neither caricature nor obfuscation this vital ingredient for genuine philosophic understanding. My ongoing pedagogical challenge is to develop strategies to enable the effective introduction of Peirce's more original philosophic writings in undergraduate contexts.

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### ***Putting Some Peirce into Symbolic Logic***

The philosophy department at the College of Wooster offers only one course in logic; viz., PHIL 220: Philosophy and Logic. Therein students are expected to gain a working knowledge of the nature and function of categorical logic, propositional logic, and predicate logic, as well as address theoretical issues that arise in an examination of formal logical systems. In fact, it is expected that the students in this course will write a small (3- to 5-page) paper on some aspect of the philosophy of logic. The course, by design, is quite ambitious. Most undergraduate courses in symbolic logic will neither attempt to introduce predicate logic nor require their students to write papers on the philosophy of logic. Nevertheless, this was my charge last year.

While it is extremely challenging to fit three formal logical systems into a semester, in this brief account I will focus on the challenge of getting undergraduate students to write a 4-page paper on the philosophy of logic. It is here that I found an opportunity to incorporate the philosophy of Charles S. Peirce into an undergraduate course in symbolic logic.

One of the first tasks, of course, was to track down an interesting and accessible paper topic. Looking through various philosophy of logic texts I found discussions of the central issues in the philosophy of logic.<sup>30</sup> Typical questions include: What are the “propositions” of propositional logic? What do we make of counterfactual conditionals? Are there alternatives to two-valued logics? The question that eventually caught my attention is raised by Susan Haack in *Philosophy of Logics*; namely: What is the relationship between logic and human thought?

In the chapter entitled “Some Metaphysical and Epistemological Questions about Logic,” Haack distinguishes three kinds of position: strong psychologism, weak psychologism, and anti-psychologism.<sup>31</sup> Strong psychologism, according to Haack, is the view that logic is descriptive of our mental processes – it describes how we do (or must) think (ibid). Anti-psychologism is the view that logic has nothing to do with our mental processes. Weak psychologism is the view that logic is prescriptive of mental processes – it describes how we ought to think. Haack locates these positions in the philosophies of Immanuel Kant, Gottlob Frege, and Charles S. Peirce, respectively.

The next task was to select readings that would introduce my students to these three positions. First, I assigned Haack’s “Some Metaphysical and Epistemological Questions about Logic” to introduce the terminology and layout the problem. I, then, assigned a selection from Kant’s *Logic*, wherein Kant claims that “we cannot think or use our understanding otherwise than according to certain rules.”<sup>32</sup> Next, I assigned Frege’s article “Thought.” In this piece, Frege argues that logic is the science which discerns laws of thought, and that thought exists in a “third realm,” independent of thinkers.<sup>33</sup> Lastly, I assigned two readings from Peirce. The first was Peirce’s “On the Algebra of Logic,”<sup>34</sup> which explains how logic, the study of good and bad inferences, arises out of habits of mind which allow us to squelch cerebral irritations quickly and efficiently.<sup>35</sup> The second was “The Basis of Pragmatism in the Normative Sciences,” wherein Peirce argues that, while logic does include a study of reasoning, and reasoning can be regarded as a psychological process, logic cannot be based upon psychological studies.<sup>36</sup> While I recognize that there may be better selections that represent strong psychologism, anti-psychologism, and weak psychologism, I am quite satisfied with the clarity and accessibility of these selections.

Having selected the general topic and the supporting readings, I crafted and assigned the following paper topic:

While discussing the relationship of logic to human thought, Susan Haack briefly delineates weak psychologism from strong psychologism and anti-psychologism. In light of our readings and discussions of Kant, Frege, and Peirce, provide both an accurate account and a valid argument for that position you find most compelling.

This assignment forced my students to choose a position and defend it. The results were mixed and quite interesting. Many students defended Kant and Frege due to their partiality to necessary laws of reason and immutable truths. Others, noting Kant’s apparent inability to account for logical error and the mysteriousness of Frege’s notion of “grasping,” found Peirce’s position to be the only natural and sensible option. Overall, I would consider this assignment a success. It gave my students a nice reprieve in between propositional logic and predicate logic, it got my students thinking about an interesting

and accessible issue in the philosophy of logic, and it allowed me the creative space to work the thought of Charles S. Peirce into an undergraduate course in symbolic logic.

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### ***Teaching Peirce in Spain***

As is well known, the European University system differs substantially from the American one. In most countries of Continental Europe, undergraduate students take from four to five years to obtain their *Licentiate*, a degree roughly corresponding to a Bachelor's in the American system, but requiring approximately 20% more coursework, and involving a greater focus on core classes, with correspondingly lesser time available for electives. The *Licentiate* was, until recently, sufficient preparation for entering the student's chosen profession, whether in science or the humanities (Philosophy, History, Law, Medicine, etc.). In recent years, Master's degrees have become popular for many students wishing to enter their professions with a more specialized preparation.

In Spain, Peirce's thought has generally remained almost unknown throughout the syllabi of the various *Licentiate* programs offered. The only exceptions are the degrees in linguistics, communication studies, and philosophy, in which Peirce's semiotics is normally only alluded to or cursorily presented. As José Vericat has written, Peirce's reception in the Hispanic world has been somewhat shadowy, in the sense that his importance is openly acknowledged, but little is known about what he actually wrote.<sup>37</sup> Much the same could be said about Latin America.

There is evidence, however, that this situation is beginning to change: translations into Spanish are now appearing, particularly on the web (<http://www.unav.es/gep/Peirce-esp.html>), which make a notable amount of Peirce's vast production accessible to the Spanish-speaking readership. Interest in Peirce's work is clearly growing in the Hispanic world,<sup>38</sup> probably due to the general resurgence of pragmatism, and to the gradual approximation of Hispanic philosophers to American academic philosophy.

Since 1990 I have been teaching Peirce in undergraduate courses of Logic and of Philosophy of Language, within the degree program in Philosophy. In the courses of Logic, one of the standard introductory textbooks was used (Copi, Sanguinetti, Garrido, etc.). I always introduced three classes on abduction, a topic that is completely neglected in the standard handbooks. As a basic text for the students, I recommended my paper on Peirce's logic of surprise, and for students of logic in the School of Theology I also recommended a paper on "*Il lume naturale: Abduction and God.*"<sup>39</sup> Both papers include long quotations from Peirce that enable the student to become familiar with Peirce's train of thought on the key issue of abduction, which is—at least to me—Peirce's main contribution to contemporary philosophy of science.

In the courses of Philosophy of Language that I have been teaching regularly to undergraduates of Philosophy and Linguistics over the last fifteen years, I have slowly shifted from a canonical history of analytical philosophy (starting with Frege, Russell and Wittgenstein, and ending with Quine, Putnam and Kripke) towards a more pragmatistic understanding of the evolution of philosophy in the past century. American pragmatism has commonly been seen by European philosophers as something parochial and outside

the mainstream of philosophy. As Rorty noted, while philosophers in Europe study Quine and Davidson, “they tend to shrug off the suggestion that these contemporary philosophers share their basic outlook with American philosophers who wrote prior to the so-called linguistic turn.”<sup>40</sup> It has become more and more apparent to me that there has been a continuous development of thought from Peirce up through Quine, Sellars, Putnam and so on, and that this tradition of thought—as Bernstein suggested—“not only challenges the characteristic Cartesian appeal to foundations, but adumbrates an alternative understanding of scientific knowledge without such foundations.”<sup>41</sup>

In this framework, I am convinced that nowadays the history of twentieth century philosophy of language should be taught in a way that integrates Charles Peirce and pragmatism into the main picture. At present, the central element and real cornerstone of my course on Philosophy of Language is the pragmatist shift of Wittgenstein in the thirties, thanks to the influence of the young Frank P. Ramsey.<sup>42</sup> Since my course covers two terms, with three hours of lecturing each week, it is possible to arrange the program so as to dedicate the first month to a general introduction of the subject, and after that the main points related to language in the work of Frege, Russell, Wittgenstein’s *Tractatus*, Carnap and the Vienna Circle, using standard texts by these authors. At this point, by which high analytical philosophy has been already covered, the first semester ends. The second semester starts by going backwards, since Peirce is covered in two weeks, introducing his biography, and giving his conception of signs, his theory of pragmatic meaning, and providing an account of abduction as the motor of our communicative practices. A very useful text for illustrating to undergraduate students the relevance of Peirce for contemporary philosophy of language is Walker Percy’s lecture “The Divided Creature.”<sup>43</sup>

After this introduction to Peirce’s thought, the pragmatist evolution of Wittgenstein’s views on language is explained with detail, paying primary attention to the influence of Peirce through Ramsey, and also to the influence of William James.<sup>44</sup> After a good acquaintance with Wittgenstein’s *Philosophical Investigations*, it is not difficult to teach most of the issues related to language in the works of John L. Austin, W. V. Quine, H. Putnam and Saul Kripke as if they were—as I think they are—embedded within a common, broadly pragmatist tradition.

This is a very personal approach on how to teach Philosophy of Language to undergraduates in Spain, but I am convinced of its soundness, both from a historical point of view and from a didactic one. Moreover, since students understand that the professor is personally engaged in the way he or she is teaching, they truly become more interested in the subject, as has been stressed by Ken Bain in his suggestive book *What the Best College Teachers Do*.<sup>45</sup> Finally, I involve the students personally in the experience of “abduction” by requiring them to write several papers on the philosophers they read, a practice that is not common in Spain, where the education system focuses primarily on learning via lecture and reading.

To complete this report about teaching Peirce to undergraduates in the Spanish-speaking world, it may be useful to register here that there is an important experience of teaching Peirce in Buenos Aires.<sup>46</sup> In the huge University of Buenos Aires there is a general introductory year called “Ciclo Básico Común,” which enrolls around 15,000 students annually. This “Basic Cycle” includes a course on “Elements of Semiotics and Analysis of Speech”, which is compulsory for the students planning to get certain degrees

(Communication, Social Sciences, Humanities, etc.) and optional for others. Peirce's theories are studied with some attention; in particular, his concept of sign and abduction, following the book of Umberto Eco entitled *Semiotics and Philosophy of Language* and that by Magariños de Morentín, *El signo: Las fuentes teóricas de la semiología: Saussure, Peirce, Morris* (Buenos Aires, Hachette, 1983). Later, in the individual degree programs, the presence of Peirce is more sparse, but evident, particularly in Communication Studies, thanks to the work of Eliseo Verón and Juan Magariños de Morentín.

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## ***Letting Reality Bite***

### *Introduction*

Academic philosophers who have a research passion for Peirce and who suspect that he has the potential to revolutionize philosophy sometimes wonder how they might bring his ideas more into the teaching of undergraduates – where he frequently doesn't feature at all, except in the US where a token coverage of his early papers seems to result largely from patriotism.

Much could be said about specific Peircean ideas and theories which, if included in philosophy curricula, would expand and complicate the vision of philosophy to which students are exposed, and would most likely be greatly appreciated by many who feel troubled and undermined by a sense of narrowness in the current curriculum which they lack the resources to articulate.<sup>47</sup> Just a few examples are Peirce's understanding of pragmatism as a faith in the capacity of experimentation to deliver stable answers to our questions which – in ironic contrast to an understanding of pragmatism as a claim of 'anything-goes' – is in fact the most complete form of realism, his belief in final causes and its potential to resurrect ethical realism against positivism's lingering nihilist onslaught, his distinctive objective idealism, so illuminatingly intermingled with his vision of (mathematical, logical and metaphysical) 'continuity', his belief in real chance, and his most elegant and ambitious theory of signs.

Having said all this, however, in my opinion the most valuable legacy Peirce has given me as a teacher of undergraduate philosophy is not any of his *theories* but one of his *instructions*. I speak of course of his *pragmatic maxim*:

Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object." (Peirce, *Collected Papers*, 5.2).

Increasingly I have come to feel that if pragmatism makes no conceivable difference to my teaching practice, teaching it involves me in a performative contradiction.

Epistemology is the branch of philosophy which concerns itself with *knowledge* (at least etymologically). We often advertise epistemology courses promising that we will address such questions as: What is reality? When and how can we say that we have knowledge of reality? Is knowledge, or what is real, relative to a cultural perspective?

Many students enroll with enthusiasm to explore these questions. The life-stage of a typical undergraduate is often very stressful and confusing, involving decisions about lifelong career path, a first engagement with adult relationships, and further issues of significance. In the face of this, surely a greater understanding of what is and is not *known*, and what is and is not *real* would help, it is thought.

However what do these students commonly encounter? An introduction to epistemology *via* a question of *global skepticism*, which, it is claimed, derives from Descartes, “the father of modern philosophy”. If global skepticism could be put in the form of a question, it would be something like:

**GS1:** Is the entire world real or is the entire world not real?

**GS2:** Do we know what we think we know or do we know nothing at all?

At this point, key texts either emphasize the questions and their overwhelming difficulty,<sup>48</sup> or begin proffering the author’s own answers<sup>49</sup> (arguably replacing global skepticism with global dogmatism). Of course some philosophers do critique the central role given to global skepticism in epistemology,<sup>50</sup> but such nuances rarely find their way into introductory courses in the subject.

If we return to the pragmatic maxim, what conceivable practical<sup>51</sup> difference does it make in the life of a typical undergraduate if the answers to questions GS1 and GS2 are yes or no? For instance, if the entire world is not real, how might this affect my choice of career? One could argue at great length about whether any two issues are really unconnected if one only does enough philosophy, and about the desirability of pursuing ‘Topics of Vital Importance’ as opposed to general questions considered for their own sake. However in the context of teaching introductory philosophy, the bottom line is that in my experience students can’t see connections between GS1 and GS2 and their own experience, even if they try quite hard. Therefore I am embarrassed to teach this material. The worst consequence, in my opinion, is that as the best students usually desire to follow and please the teacher, when presented with this material they learn to *feign interest in questions which they cannot connect to any possible experience*. This impacts profoundly on their philosophical development. From the Peircean perspective, which seeks to find and foster ‘living’ over ‘paper’ doubt, this is arguably a form of intellectual corruption, and as such a betrayal of students’ trust.

Therefore I have been experimenting with other options for teaching epistemology, guided by the pragmatic maxim. It seems to me that rather than presenting general questions and theories, and merely hoping that students will make the connection to specific examples which will render the general material meaningful, it is imperative to (at least some of the time) start from specific examples, ensure students are thinking about them, and move *from there* towards general questions and theories. Therefore, here is a teaching exercise I have devised. I invite you to try it in your own classroom and see what happens.<sup>52</sup>

### *The Exercise*

First I produce slips of paper and invite the students to select one each. (Rhetorically, this already creates an air of mystery and direct engagement, a bit like a reality TV show.) Each slip contains a word or phrase describing one ‘thing’. Here is my list: (1) a tree, (2) the number five, (3) the colour red, (4) your friendship with your best friend (5) a song

(think of an example), (6) a website, (7) World War Two, (8) the New Zealand dollar, (9) a book (e.g. *Moby Dick*), (10) Gandalf, (11) a hammer, (12) the time you will wake up tomorrow, (13) the last dream you can remember having, (14) a marriage, (15) pain, (16) the word 'cat,' (17) fashionability (coolness), (18) Mount Everest, (19) Queen Elizabeth the First.

Once they all have slips of paper, I give them a two-stage set of instructions as to what to do with them. In the first stage I ask that they each come to a decision on their own about whether the item on their slip is:

- 'real';
- 'not real';
- 'partly real' (in which case say which part);
- 'it depends' (in which case say what 'it' depends on).

This ensures that each student has done at least some thinking of their very own about one specific example (for which they are uniquely responsible). I also ask them to 'give a reason' for their answer. This instruction is intended to start the philosophical process – asking for 'a reason' being the most unthreatening and natural way I have found to do this. I typically allocate this stage 5–10 minutes.

Students' consideration of the items above in this light will be found to spontaneously give rise to many classic philosophical issues. For instance, (19) and (12) raise the questions of the reality of the past and future, while (10) broaches the reality of fictional characters. Issues of functionalist as opposed to classically materialist identity can be explored *via* (11) for artifacts and (1) for living things. Interesting questions (arguably neglected by mainstream philosophy) surround the nature and reality of 'social forms' such as marriage and the New Zealand dollar. Related are issues of the reality of signs which arise from songs, words, websites and books, along with some rather insistent and intriguing token – type issues. (By *Moby Dick* do we mean an individual book copy, or do we mean something more, and if so, what?) Finally, (13) and (15) both link to classic Cartesian questions concerning the reality and reliability of individual experience.

In the second stage, I get them in groups of four (a number I have found to be large enough to generate a genuine discussion on an interesting range of examples, but small enough that all students in the group are likely to participate), and ask them to devise a joint definition of the term 'real'. I stress that their definition must 'cover all the things you said were real, and not cover any of the things you said were not real'. They will inevitably find this an extremely challenging task! I drift randomly past groups and listen, fostering discussion by asking questions, or dropping in a new slip of paper with a further example for them to incorporate. I also deliver a wealth of encouragement, assuring them that the exercise *is* hard, and that engaging in the discussion process is the most important thing, though it might feel uncomfortable at first as they are probably used to being told more what to think than is currently happening. The last time I tried this exercise, however, the students engaged happily in discussion for the rest of the class (around 35 minutes), and I had to interrupt them to clear the room for the next class (a rare occurrence at my University).

The biggest challenge with this kind of exercise is the converse of that of traditional teaching – namely making the link from specific examples and discussions back to those canonical general ideas and theories with which we feel it is our duty to acquaint

students. To this end, I have devised a follow-up exercise. In the next class I get each group to state the best definition of reality they can agree on, list them all on the board and encourage general discussion on which definition might be the best (and, importantly, why). Facilitating such an exercise is not easy as I find by this point the groups have generated such a profusion of interesting philosophical arguments on different topics that integrating them can be quite a challenge. With practice, however, one learns to harmonize and develop some useful maximum of the contributions, using something like the philosophical equivalent of jazz improvisation (where traditional teaching is a classical music performance).

It is very useful to write down and keep the definitions as a resource to refer back to in future classes. (For example, when introducing Berkeley one might say, “You remember how in the first class one group defined reality as ...Berkeley agrees with this insofar as...”).<sup>53</sup> I confess that although I am now committed to beginning epistemology courses with exercises such as these, at present I revert to something much closer to traditional lecturing style after the initial two classes. *Entirely* structuring an epistemology course from specific living examples to general theories would be an interesting experiment – perhaps something of a Holy Grail of pragmatist teaching. As mentioned above, one would have to let the presently canonical theories of academic epistemology fall where they may and it is an interesting question how much would survive and whether that would be a good or bad thing.<sup>54</sup>

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### ***Peircean Teaching***

I find myself in the peculiar position of having accepted the invitation to speak on this panel “How to Teach Peirce” while never having formally taught his philosophy. For the past fifteen years I’ve taught traditional undergraduates in general education classes, reading with them primary texts in philosophy, religion, political thought, and history. One of the more charming discoveries I recently made is that Peirce’s ideas have apparently infected my teaching goals and methodology over time. While grading a pile of freshman exams last year, I came upon the following, scrawled across the top of my student Abigail’s blue book:

“EXPERIENCE IS OUR ONLY TEACHER” C.S. PEIRCE.

Surely that had been a mere passing remark I’d made in class one day, while discussing Plato or Augustine or Aquinas or Cicero or perhaps the Bible. But in the heart of the final exam of another student, Sarah, I read, “The aim of education is not action, but *reaction*, that is, learning to be prepared to *react* appropriately to problems that might arise in the future.” While reading this answer, I was vaguely reminded of Peirce’s learning theory (for example, the idea that experience teaches us through a series of surprises)<sup>55</sup> and his pragmatism (for example, his concern with practical bearings for the future long run). Sarah suggested that education’s goal was to prepare us for future learning, specifically,



to teach us how to respond to the future surprises which necessarily interrupt our habits and our habitual ways of thinking. How very Peircean!

I continued to work my way through the pile of exams. Matt wrote, “Our class discussions, analysis of authors’ texts, and examination of contrasting viewpoints prove that teaching *with* the student is vital. On a daily basis we were encouraged to bring in our own personal experiences to the classroom. Without this addition of personal identification, education is rendered useless, because there is no strengthening of character, because the students do not know where to carry/lose their teachings outside of the classroom. Without the ability to learn from doing, or while doing, whatever is taught can so easily be forgotten. Abstract knowledge by itself is useless.”

I’m still struck by the passion and the pragmatic flavor of these young people’s views. It seems that my NYU students had picked up my convictions about the importance of how one stands in relation to one’s philosophical words, how one appropriates for oneself this or that text or thesis or argument. In short, my students had been exposed to a conception of philosophical activity that I had learned myself from teachers, colleagues, and texts imbued with the spirit of American Pragmatism.<sup>56</sup>

I’d like to turn the conversation from “Teaching Peirce’s Philosophy to Undergraduates” to “Peircean Teaching,” and ask the following question: What might it mean to be a Peircean Teacher? What might it mean to incorporate insights from Charles Peirce’s philosophy into one’s classroom practice?

Peirce’s underdeveloped theory of how to teach emerges from his observations of how we learn, extending from our everyday, spontaneous experiences to our formal investigations of nature. Peirce called Experience “our Great Teacher.” And how does Experience teach us? Through a series of practical jokes, Peirce most seriously maintains. Experience says,

Open your mouth and shut your eyes  
And I’ll give you something to make you wise. (EP 2:154)

The essential role of experience in our learning finds its way into the first step of Peirce’s classic form of the abductive inference:

1. Surprise C!
2. If A were true, then C would follow as a matter of course.
3. Therefore, probably A.

The process of inferring is a process of learning; and logic helps us to clarify and justify this process. Without the experiential surprise—without the shock of Secondness—no learning process can get off the ground. We can see that Peirce is not interested in learning as mere recapitulation of existing knowledge or as passive reception; rather, he is fascinated with learning as a process of being confronted by surprising events and originating true ideas to explain those events. In other words, learning itself has a creative component. Given this model, what’s a teacher to do? The teacher is called upon to create a learning space where creativity can emerge and where experience, in the form of some kind of confrontation with one’s new idea, can grind off the false starts and hone one’s ideas further.

There are two particular aspects of Peirce's philosophy I'd like to lift up here for direct application to the question of teaching in a college classroom. The first concerns his view of the necessary role of personal mental engagement to understanding. The second concerns his notion of the "community of inquirers," which touches, pedagogically, on collaborative learning. These Peircean fundamentals of teaching and learning—personal mental engagement and collaborative learning—will be explored through a couple of recent educational experiences I have had with my students.

According to Peirce (and I agree with him on this point), one cannot really understand an argument or proof unless one goes through the intellectual process of the argument, step by step. In other words, there is a reasoning *experience* that the student must undergo. Embedded in Peirce's pedagogy are assumptions about the relation between reasoning and the mind of the thinker; and about the nature of reasoning itself. Every truth must come to us through experience, he suggested, *even in the field of mathematics*: "In reading mathematics, the student should be aware of falling into a passive state. He must remember that it is he himself, and nobody else, who must perform the entire reasoning process..."<sup>57</sup> In mathematics, then, every proof needs to be experienced in order that the student truly discover and be able to validate the argument. This is essentially the work of the imagination. More broadly, all reasoning and learning involves the active participation of the thinker/learner through the engagement of one's imagination.

One example of incorporating Peirce's insights into classroom teaching is an inquiry-based course I developed entitled Utopian Thought of the 19<sup>th</sup> and 20<sup>th</sup> Centuries. I wanted to promote active learning in the class and to connect abstract concepts to their more concrete applications. The Peircean pedagogical premises underlying the project were 1) one cannot really understand what utopia/utopian thought is unless one goes through the thorny process of (ideally) constructing an ideal society; and 2) fixing belief is a *community*, not a personal problem. Students read a number of classic utopian works, watched films about utopia, and discussed the real social problems that gave rise to the authors' projects. I had them analyze these projects from the perspective of Peirce's doubt-belief theory of inquiry. The questions were, What's the problem here? What wasn't working in the writer's society such that Utopia was a solution? Similarly, What's not working in contemporary society?

Subsequently, students were called upon to develop their own utopian society, as a group, and to post it online as a website. The course was developed as a kind of laboratory experience, with a focus on the process of utopia building rather than on the niceties of the product. As they engaged with their ideals and solutions, they found themselves struggling to implement them in a group setting. At times the debates were fierce! Following Peirce's model of the community of inquirers, they realized that while ideas certainly do occur to individuals, their "growth" or success in the world depends on a social continuity of thought. The court of appeal for new ideas switched, then, from the individual mind to that of a community of experience shared and compared.<sup>58</sup> The Web-based utopia, as thought experiment, served well to allow students to envision the pragmatic consequences (practical consequences in thought) of their constructed hypothesis of how society should be arranged in order to reduce suffering and increase human happiness.

I will quickly run through another example of Peircean teaching—an experience that unfolded very much on the fly. We were reading Thich Nhat Hahn’s *Creating True Peace: Ending Violence in Yourself, Your Family, Your Community, and the World*. Hahn is a Vietnamese Buddhist whose central thesis is that peace is possible; it is a practice that begins with individual mindfulness training. By “watering the seeds of compassion” within oneself, the world will eventually “be peace,” he suggests.

My students’ initial reactions to this text were negative. Many believed Hahn to be naïve. One thought that following his views would actually lead to a more corrupt world, because if forgiveness were actually practiced, then people would no longer believe themselves accountable for their actions. “In reality,” wrote April, “no one can forgive another for, say, killing your family member or spouse. This is how the human mind is built; we do not thrive on forgiveness but rather on revenge and hatred.” Wow! What’s a teacher to do? It was the last class before Thanksgiving break. Frustrated and at a loss, I randomly flipped through my book and saw Hanh’s Orange Meditation. “Your assignment for the holiday, “ I told them, “is to do the Orange Meditation and to write a one-page response to it.”

The Orange Meditation is designed to teach your child to practice peace. Hahn recommends that you spend a full 15 minutes slowly peeling and mindfully eating an orange. I will spare you the details. Suffice to say, the papers I received from that class after the break were some of the most profound little papers students have ever written in my classes over the years. I wish I could quote many of them to you. The Orange Meditation might be described as a kind of argument. It is only by imaginatively engaging in the mental process of “mindfulness” that one may come to understand Thich Nhat Hahn’s argument about how mindfulness may lead to world peace.

This learning process, as I’ll call it, brings to mind Peirce’s 1908 “Neglected Argument for the Reality of God.” There, Peirce encouraged his readers to “Enter your skiff of Musement, push off into the lake of Thought” and to undertake a kind of reflection “which will inevitably suggest the hypothesis of God’s Reality” (CP 6.465). It is only by actively performing the mental process that the conclusion of the argument can be understood.

Learning is a process of acquiring more sophisticated ways of interacting with Experience, asking questions of her, listening to her, constructing an intelligent response to her, even *with* her. As the Nobel Prize-Winner Barbara McClintock once remarked about her success understanding the genetics of corn, she had “asked the maize plant to solve specific problems and then watched its responses.” She heard what the corn said back. We never can anticipate Experience’s surprises; but we may learn to be more flexible and more nuanced in our responses. Education brings mindfulness, a quality of attention, along with a deliberate, rather than randomly reactive, manner of dealing with the world around us. Learning, on this model, is essentially active and creative, and it is based on wakeful inquiry.

Embedded in the tradition of American Pragmatism is a conception of philosophical activity that insists upon a real engagement between theory and practice; between abstract ideas and our mode of involvement with them. In particular, Peirce asserts that the reasoner must personally discover and participate in the unfolding pattern of an argument or proof in order truly to understand it. He adds a communitarian dimension to this model: beyond the individual’s unique experience of comprehension in the learning

process, it is the community of inquirers that gives shape to our learning in the long run. To meet this demand, pedagogically, one needs to bring a collaborative learning model into the concrete classroom experience. My experience indicates that, leveraged in the classroom, this method of experiential reasoning can occasionally lead to powerful learning experiences for our undergraduates.

My student Sana wrote, “At first I thought this entire idea of orange meditation was a complete joke. But after I discarded the negative ideas from my head,....I [came to] believe that everyone should try Thich Nhat Hahn’s “Orange Meditation” because it allows one to experience life through a simple object. I have been truly touched by this experience and will definitely continue to practice it.” What a surprise! What a Peircean learning experience.

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### ***Peirce Taught According to His Own Vision***

In 1898, Peirce declared that he intended, “to make a philosophy like that of Aristotle, that is to say, to outline a theory so comprehensive that, for a long time to come, the entire work of human reason, in philosophy of every school and kind, in mathematics, in psychology, in physical sciences, in history, in sociology, and any other department there may be, shall appear as the filling up of its details. The first step toward this is to find simple concepts applicable to every subject.”<sup>59</sup> In his book, Brent refers to this vision of Peirce’s as “extraordinary, daring, grand, and powerful”, and discusses briefly the justifications one might conceivably have for considering this grand hypothesis seriously.<sup>60</sup> Then he concludes with an endorsement of the judgment of the respected German philosopher, Karl-Otto Apel—in which judgment Apel is far from alone—that Peirce’s pragmatism should be taken as “the outline and program of a logic of science of the future.” This can give us a glimpse of the credibility of Peirce’s claim for the comprehensiveness of his hypothesis.

Without any interruption, since 1976, many years before the publication of Brent’s book, my teaching of Peirce, mostly to graduate and sometimes to undergraduate students, has been oriented by Peirce’s *desideratum*, which, as far as I can see, indicates the real scope of his work, that is, to function as a map or guide to any kind of inquiry. Until the 1970’s and even after that time some commentators considered Peirce’s thought as a mere patchwork of incomprehensible tendencies. Fortunately, in the last two or three decades, outstanding titles of secondary bibliography have appeared whose authors converge in their emphasis on the fundamental coherence of Peirce’s work. In fact, his phenomenological, aesthetical, ethical, semiotic, and metaphysical concepts are so interconnected and they are so abstract, broad, and general that they may function as a logical guide for any research in any field whatsoever. When Peirce mentioned that “the work of human reason in any department there may be appear as the filling up of the details” of his theory, he was conscious of the extreme abstractness of his concepts. However, it is this abstraction that allows his concepts to work as a logical diagram, as a conceptual map for the more specialized theories of the idiosyncratic sciences, as he called

them. Indeed, it is the uncommon level of generality of Peirce's concepts,<sup>61</sup> which turns possible their broad range of applications to the most diverse fields of knowledge.

The seemingly most difficult task of coping with the extreme generality of the fundamental concepts is exactly that which, once mentally grasped, comes to function as a broad analytical scheme which may be incorporated by any individual science, discipline, or field of research. This is the line of interpretation that is adopted by Ransdell when he says that to know Peirce systematically does not mean to keep in one's memory a number of abstract definitions in a fixed sequence, but to grasp a certain pattern of formal and dynamic relations.<sup>62</sup> It is a recursive pattern or diagram which becomes increasingly perceptible and able to function as a kind of basic guiding form which will be much more effective for the comprehension of Peirce's thought than any number of isolated definitions. This idea of a guiding map or structure should not be confused with a static model. On the contrary, it is more like a net of dynamic connections that is repetitive in its logical basis but demanding of heuristic procedures at each possible step of its application.

Although Peirce produced works in the most diverse fields of science, his most authentic gift was bent to logic. Leading his effort toward that direction his endeavor was to create elementary and systematic conceptions in order to turn philosophy itself into a science in the sense of applying there with such modifications as may be required, the methods of observation, hypothesis and experiment that are practiced in the sciences. Hence he created a system *of* and *for* scientific thought which functions as guidelines for the development of an authentically scientific understanding of any extra philosophical field. This system is founded on a few highly abstract and refined elementary conceptions, namely, his three categories, of which the third one coincides with the notion of the genuine sign, where one finds the intimate connection between his phenomenology and his semiotics. It is upon this basic foundation that his whole philosophical edifice is constructed. Hence, teaching Peirce implies following step by step the construction of this edifice and gradually leading the students to perceive the fine interrelations among its disciplines.

There is no doubt that the first step should be directed toward a thorough study of the categories, as they appeared in the "new list,"<sup>63</sup> proceeding to their rebirth in "A Guess at the riddle,"<sup>64</sup> and then to their new proposal in the context of Peirce's phenomenology after 1900.<sup>65</sup>

The architecture of Peirce's philosophical disciplines is embedded in the logical scheme of his categories and it is included as the foundational part of an ambitious classification of the sciences. The interrelations between the philosophical edifice and the idioscopic sciences and among these latter should not be minimized since they can illuminate the contemporary proposals for inter and transdisciplinarity.

Serious attention has to be paid to Peirce's semiotics conceived of as a philosophical logic whose classifications, which are not classifications *sensu stricto*, have to be conceived and interpreted within the framework of the logic of vagueness and with the participation of the doctrine of the continuum<sup>66</sup>. Thus they provide all the necessary grounds to deal with the complex problems of ontology, epistemology, the philosophy of mind, the philosophy of science<sup>67</sup>, and all the possible subdivisions of any philosophical thought to which Peirce intended to give a common semiotic foundation, where semiotic should be understood as equivalent to intelligence, continuity, learning, growth, and life.

Such a foundation was based on a semiotic method whose aim was to develop a highly abstract conception of mind, derived from the analysis of what is implicit in the tendency toward truth that lies in the depths of the human soul.<sup>68</sup>

Last but not least, such a conception of semiotics is eloquent enough to discard any overestimation of Peirce's metaphysical ideas without acknowledging the foundations of his pragmatism and metaphysics in the normative sciences of aesthetics, ethics, and logic or semiotics.

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### ***The Delicate Balance Between Learning and Teaching***

We consider ourselves to be teachers of philosophy, but Peirce cautions us to beware of our role, especially if it means being “thoroughly imbued with the vital importance and absolute truth of what [we] teach” (CP 5.583, 1898). Peirce recommends rather that we take an attitude of “learners” of philosophy, for “it is not he who thinks he knows it all,” that can bring others to feel their need of learning, but rather one who is “penetrated with a sense of the unsatisfactoriness of one's present condition of knowledge” (CP 5.583, 1898). For me, it is not much of an effort to see myself as a learner, especially when the subject is Peirce, for every time I read his work, I am struck with new insights. But in addition to being inspired by Peirce's Socratic attitude, at the same time, I confess that, against Peirce's own advice, I often am imbued with the “vital importance and absolute truth” of what Peirce himself has to say about philosophy (in particular, his thoughts on logic and metaphysics).

In my relatively short career as an academic, I have included Peirce in the content of practically all my classes in several different ways: as part of a graduate course in pragmatism, as a graduate course devoted exclusively to his philosophy, and in undergraduate courses in medieval philosophy, philosophy of religion, metaphysics, and introductions to philosophy. In this short paper, I will be directing my comments to these undergraduate courses where I have incorporated Peirce's works.

Typically, one of the topics I cover in my medieval philosophy class is that of universals. I include selections from Boethius, Avicenna, Abelard, Duns Scotus, and William of Ockham. Since an underlying theme of the course is that many modern-day philosophical problems can be traced back to a medieval origin, I introduce Peirce's discussion of nominalism and realism to illustrate this point. I show how Peirce's doctrine of real generals is directly derived (and also differs) from Scotus' universal realism.<sup>69</sup> For these lectures, I usually include his review of “Fraser's *The Works of George Berkeley*” (W2, 1871), his letter to Calderoni (CP 8.205, 1905), “Some Consequences of Four Incapacities” (W2, 1868), his review of Porter's *Intellect*, (W2, 1869), “Lessons from the History of Philosophy” (CP 1.15, 1903), “early Nominalism and Realism” (W2, 1869), and “Lecture IV” of the “Lectures on Pragmatism” (CP 5.93, 1903), among others. Students are characteristically amazed to discover that the founder of pragmatism could be so influenced by these medieval schoolmen.

In my metaphysics class I begin with Aristotle's categories, and eventually introduce Peirce's categories of Firstness, Secondness, and Thirdness, showing the continuity of thought through Kant's own categories. For these lectures, I use, among others, "On a New List of Categories" (W2, 1867), "The Logic of Mathematics" (CP 1.417, 1896), and Lecture II of the "Lectures on Pragmatism" (CP 5.41, 1903). After covering other topics (time and space, freedom and determinism, mind and body,) as well as other philosophers, I like to end the semester with Peirce's selection on "Evolutionary Love" (CP 6.287, 1893) and a discussion of synechism and the continuity of mind.

My philosophy of religion class includes the different types of arguments for the existence of God. After covering the traditional cosmological, teleological, and ontological arguments, as well as the argument from miracles, the argument from faith (Pascal's, James', and Wittgenstein's versions) and the argument from rationality (Hick's and Plantinga's), I introduce my students to Peirce's "A Neglected Argument for the Reality of God" (CP 6.452, 1908). Here, of course, I have to say something about Peirce's notion of reality, as well as his notion of abductive reasoning and our "instinct" for guessing correctly. Typically, there is much exciting discussion as to the interpretation of this enigmatic text, and I usually include it as a topic for writing a final paper.<sup>70</sup>

The other undergraduate course that I have taught in which I include Peirce's notions is an introduction to ethics class. Since for many students this is their first encounter with philosophy, I begin with a discussion of arguments and their use in the discipline. After reviewing deduction and induction, I introduce Peirce's notion of abduction (hypothesis). I have used sections of "Deduction, Induction, and Hypothesis" (CP 2.619, 1878), but students usually have a hard time getting through the reading. A much more popular selection is "The Fixation of Belief" (CP 5.358, 1877), which treats, of course, of how belief turns ("fixes") into knowledge. Peirce did not elaborate much on morality and ethics, so I do not include much on him in the rest of the course. However, one project I am currently working on is trying to develop further what he did say on the subject, so I hope eventually to be able to incorporate something regarding that in the course.

As those with some acquaintance with his work know, Peirce had something to say on practically every topic in Philosophy (and many other non-philosophical topics as well!). He also had read every major philosopher, and had an opinion, which he adamantly expressed, about each. It has been my experience that adding Peirce to any discussion, whether in the context of historical figures or issues, or in the context of more contemporary ones (e.g. Armstrong, Putnam, to name a couple, as well as issues in philosophy of physics, political science, etc.) serves to enrich significantly the conversation.

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### ***Do Not Block the Way of Learning Peirce***

This may sound like a truism: to teach Peirce is to empower students to learn Peirce. And yet this is not a tautological statement, because there are ways of teaching Peirce that create obstacles to learning him. Such obstacles can be removed if one's view of teaching

conforms itself to Peirce's view of learning. Learning is a fundamental semiotic process. It consists in acquiring the ability to generate interpretants that, in doing justice to the signs that initiate or solicit them, allow the forms from the object of those signs to emerge and exert their influence on future interpretants for the sake of that very object. Here is how Peirce put it in 1906: "In respect to the Form communicated, the Sign produces upon the Interpretant an effect similar to that which the Object itself would under favorable circumstances" (EP2: 544n.22).

Teaching Peirce's thought requires that the circumstances for learning that thought be made as favorable as possible. The teacher needs to produce effects on students that are similar to those Peirce's texts would produce, were they sufficiently pellucid to allow these students, without intermediaries, to develop a consistent understanding of Peirce's ideas and offer them relevant extensions that may or may not be consonant with them but remain demonstrably influenced by the same forms. The teacher is a privileged interpretant-sign of Peirce's sign-object, a mediating sign intent on awakening among learners fertile new streams of interpretants that can be said to be fair or trustworthy representations and outgrowths of Peirce's own. The "favorable circumstances" have as much to do with the teacher's pedagogical and communicational skills as with the student's own readings, dedication to the task, and inner sense of logicity. The teacher as a mediating sign is primarily the carrier of a potential experience, the source of which comes from the dynamic object of Peirce's thought. That object determines the sign by making it a carrier of its own power of influence, and the latter will only be as effective as the extent to which circumstances for its absorption and digestion can be made optimal.

Signs carry forms, and forms are an object's only chance to manifest itself, attract attention, and get to be known. Learning is in great part a matter of apprehending such forms, of finding out how they relate to settled experience, and then of embodying them into new signs that keep translating and extending their influence. Interpretation consists precisely in that kind of continuous activity: finding or designing signs whose body gives the transmitted forms ever increasing manifestation, always for the sake of the original dynamic object, not so that the latter remain unscathed, but so that it be allowed to keep informing its offspring even if the latter fades outside its control.

Learning is a process through which ideas grow in proportion to the quality and richness of the system of interpretance that keeps re-expressing them. As Peirce has shown, the power to evoke relevant interpretants rests upon the richness of one's collateral experience and the flexibility of one's ability to conduct collateral observations when appropriate. New interpretations, once completed, are added to that collateral experience and serve to increase a sign's power of suggestion. Learning is thus vitally associated with a steady increase of one's sensitivity to signs and ability to make them out and respond to them, and with a growing semiotic competence manifested in an enlarging openness to all kinds of signs, not only from the standpoint of their recognition and interpretation, but also from the standpoint of their own formation and refinement. Regular exposure to signs tends to sharpen their recognition and magnify their representational power in such a way that, once encountered, they talk to us more volubly and more precisely. Learning is then a matter of enlarging the fields of interpretation through continual semiotic experience. When Peirce tells us that "interpretation is learning" (CP 7.536, c. 1899), he implies that learning is the art of begetting new



interpretants and of nurturing them so that they can carry on the task of communicating forms. To get students to learn Peirce, therefore, the teacher should do well to practice semiotic teaching.

What are favorable circumstances for getting students to learn Peirce? The first rule of reason here should be: Teach Peirce only if you are familiar with his work, i.e., with the logical and philosophical forms that define its identity. Students have little collateral experience and therefore need to suck a great deal of it out of their teacher's own. If the latter doesn't have a good and reliable stock of it, frustration and cynicism will set in, leading to flippant graduate papers. It is not that the teacher is required to understand everything about the texts students will be engaged in, but that the students' heart should not be filled with apprehension from the outset because of the teacher's own expressions of hesitation or other negative feelings toward the thought or character of Charles Peirce. As a mediating sign, the teacher should on the contrary buttress at all times the certainty that Peirce's thought is worth the effort of its exploration, no matter how thick the jungle may appear. For the teacher knows the jungle, has mapped it, carries a compass, and is certified as a guide. Students should start without harboring any doubt or fear: Peirce is a wonderful and versatile thinker, a tremendously sound reasoner, a path-breaker, and is wholly comprehensible given a little dose of persistent concentration. That Peirce is an unclear thinker is an urban legend born out of narrow collateral experience. His writings require no more reading effort than any other serious and original thinker, although they do require that readers be pretty clear about their own metaphysics and be ready to let it be challenged, believing in advance that if Peirce does challenge it, it will be for reasons that cannot be shrugged off. Hence the students who come to Peirce must be convinced that they are in for a fantastic ride, and that they will learn many things worth understanding, at the risk of losing a few cherished paradigms. The second rule shall thus be agapic: show at all times utmost respect and contagious enthusiasm for Peirce's thought, regardless of whether you agree with his views or not. For effective communication of a form requires that it be loved.

A corollary of the first rule is that one should only teach the works of Peirce one is familiar with. This may sound trivial if it was not for the sub-corollary: it is quite all right to begin with "On a New List of Categories"—if one is thoroughly familiar with it. That early text has the reputation of being fiendishly difficult, and it has often been gravely misunderstood even by excellent scholars who have subsequently dismissed it as an optional curiosity. But when I teach a seminar on Peirce's semiotic logic, that is the first text I discuss for several hours with students, because it is chock-full of rich pedagogical and philosophical opportunities that, once unpacked carefully, resonate with them for the rest of the course: students realize that the form at work in that text "in-forms" (or influences in the sense of generating interpretants) all subsequent semiotic texts in ways that allow them to catch a unifying, if evolving, sense of theoretical consistency. As a mediating sign, the teacher removes the text's difficulty by sharing the familiarity earned of it over the years with those who are suddenly and abruptly exposed to it. Familiarity is itself an in-formative and trans-formative quality that enables its earner to provide others with the collateral experience needed for successful streams of interpretance to emerge in fields that a few hours earlier were still barren. Absence of familiarity on the other hand will create insuperable obstacles, especially if that absence is blamed on the text itself ("it

is dreadfully obscure”) instead of on the lack of sufficiently targeted collateral experience within the expounder.

There are myriad forms that deserve communication, and anxiety emerges when one does not know where or how to begin. There are so many points of doctrine to teach, so many possible angles, so many reading strategies. Which to choose? That very much depends on the main pedagogical purpose. But if that purpose is to give a good taste of Peirce, then the overarching plan would have to focus not so much on this or that Peircean tenet, as on the general form, the general character of his thought, in other words, on the form of his forms, the one that holds them all together. This approach does not require extensive readings (assigning too many texts is the surest way to lose the form since it forces students to skim it), but intensive study of a few choice texts, selected less for their conceptual content than for the very method or leading principle that drives their exposition. The form of forms gets sensed when one feels Peirce’s thought churning itself out in the unique cauldron of his mind, and when one begins to recognize it precisely for whose it is. One cannot teach it before it has become familiar. It is like recognizing a handwriting under its various guises, except that we want students to recognize the mindwriting. And, for that, one has to have found and adopted the form of forms, and decided to pretend to make it one’s own while discoursing about Peirce. For that is what it takes to be a sign of Peirce to others: letting one’s self be impregnated by the form of his thought, and then let it percolate through those who listen, read, and re-think it.

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## NOTES

<sup>1</sup> In English: “the time-stealing and strength-sapping academic busy-work.” James Edwin Creighton’s presidential address, “The Purposes of a Philosophical Association,” was published in *The Philosophic Review*, XI/3 (May 1902), 219-237. The quoted passage appears on p. 231. I have discussed Creighton’s presidential address in my volume, *A Thoughtful Profession: The Early Years of the American Philosophical Association* (Chicago: Open Court, 2006), 70-74.

<sup>2</sup> The AAPT meets regularly with the three divisions of the APA, and holds a week-long international workshop/conference biennially. Its website is: [www.philosophyteachers.org](http://www.philosophyteachers.org).

<sup>3</sup> Paul Weiss, “Charles Sanders Peirce,” *Dictionary of American Biography*, ed. Dumas Malone, (New York: Scribners, 1934), 14:403; Ernest Nagel, Review of the *Collected Papers of Charles Sanders Peirce*, VII-VIII, *Scientific American*, CC/4 (April

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1959), 185; Max Fisch, "Introduction" to "You Know My Method," in Thomas A. Sebeok, *The Play of Musement* (Bloomington: Indiana UP, 1981), 17.

<sup>4</sup> This image of the vestibule of a labyrinth is borrowed from Peirce himself. See CP 2.79.

<sup>5</sup> C. F. Delaney's "Peirce Critique of Foundationalism," *The Monist* 57 (April 1973): 240-51. Also, see my Introduction to the section on Peirce in *Pragmatism and Classical American Philosophy* [Second Edition] (NY: Oxford University Press, 1999), edited by John J. Stuhr.

<sup>6</sup> *Democracy in America* (Garden City, NY: Doubleday, 1969), trans. George Lawrence, p. 439.

<sup>7</sup> This was the time when the form of individualism championed by, and embodied in, Andrew Jackson was at its zenith. For this and other very helpful suggestions, I am indebted to James Campbell.

<sup>8</sup> *America's Philosophical Vision* (Chicago: Chicago University Press, 1992), p. 86. Cf. John Herman Randall, Jr., *How Philosophy Uses Its Past* (NY: Columbia University Press, 1963), pp. 47-64; see pp. 47-48 for Randall's definition of a philosophical tradition. In *Nature and Historical Experience* (NY: Columbia University, 1958), Randall notes of his teachers: "What I have learned from them is presumably not what they intended to teach [an important reminder to every teacher!]. Doubtless John Dewey did not set out to impress with *the overwhelming importance of tradition*" (p. 2; emphasis added). See my "Tradition: First Steps Toward a Pragmatistic Clarification" in *Philosophy in Experience: American Philosophy in Transition* (NY: Fordham University Press, 1997), edited by Richard E. Hart and Douglas R. Anderson, pp. 14-45.

<sup>9</sup> See Dewey's *A Common Faith. Later Works of John Dewey* (Carbondale, IL: SIU Press, 1989), edited by Jo Ann Boydston, p. 36 (further referred to as *LW*). See also George Santayana's *The Life of Reason*, volume 3, chapter 10 ("Piety").

<sup>10</sup> The relationship among pragmatism, pragmaticism, and instrumentalism (if not also are variants) is an extremely complex matter. I am not trying here to decide this question, only to suggest that Dewey is more appreciative than many contemporary pragmatists of Peirce's status as a pragmatist.

<sup>11</sup> Dewey's review of volume 1 of the *Collected Papers* ("The Founder of Pragmatism," first published in *The New Republic* (30 January 1935), can be found in *LW* 11, 421-24. His review of volumes 1-6, also published in *TNR* (3 February 1937), can be found in *LW* 11 479-84.

<sup>12</sup> This essay can also be found in *Philosophy and Civilization*. This is profitably read in conjunction with G. H. Mead's "The Philosophies of Royce, James, and Dewey in Their American Setting," even though he does not treat Peirce.

<sup>13</sup> *LW* 15, 152.

<sup>14</sup> See A. N. Whitehead, *The Aims of Education and Other Essays* (New York: Macmillan, 1929).

<sup>15</sup> *The Thought and Character of William James* (Boston: Little, Brown & Co., 1935), volume II, p. 409.

<sup>16</sup> For a criticism of this aspiration, see my "Transforming Philosophy Into a Science: Debilitating Chimera or Realizable Desideratum?" in the special issue of *ACPQ* devoted to Charles Sanders Peirce 72.2 (Spring 1998): 245-278.

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<sup>17</sup> Peirce's dissatisfaction with aspects of American culture invite comparison with such works as James's "The Social Value of the College-Bred" and Dewey's "A Critique of American Civilization." Bernstein's "Toward a More Rational Community" in *Proceedings of the C. S. Peirce Bicentennial International Congress*, edited by Kenneth L. Ketner et al. (Lubbock, TX: Texas Tech Press, 1981), pp. 115-20.

<sup>18</sup> To the memory of Peter Lipton (1954–2007) who made so many ideas crystal clear.

<sup>19</sup> *Peirce's Philosophy of Religion* (Bloomington: Indiana University Press, 1989).

<sup>20</sup> *Boredom and the Religious Imagination*, (Charlottesville: University of Virginia Press, 1999).

<sup>21</sup> *Meditation & the Martial Arts* (Charlottesville: University of Virginia Press, 2003).

<sup>22</sup> Paul Carus, "The Philosophy of Personal Equation," *Monist* 19.1 (January 1909): 78–84; quotation from p. 78.

<sup>23</sup> John Dewey, *Experience and Nature* (New York: Dover, 1958).

<sup>24</sup> In this course I relied largely on a textbook, Edwin Hung's *The Nature of Science: Problems and Perspectives* (Belmont: Wadsworth, 1997), with supplemental readings.

<sup>25</sup> *On Peirce* (Belmont: Wadsworth, 2001).

<sup>26</sup> For instance, the two readings assigned in philosophy of science do not broach the abduction-deduction-induction triad, Peirce's fallibilism, etc.

<sup>27</sup> *Charles S. Peirce: Selected Writings* (New York: Dover, 1958), p. 105.

<sup>28</sup> Oration delivered by Peirce at age 24 at the Reunion of the Cambridge High School Association on November 12, 1863. Reprinted in *Selected Writings*.

<sup>29</sup> Op.cit., p. 4.

<sup>30</sup> E.g., Dale Jacquette *Philosophy of Logic: An Anthology* (Malden, MA: Blackwell, 2002); Sybil Wolfram, *Philosophical Logic: An Introduction* (New York: Routledge, 1989); Robert Martin, "Knowing Without Experience," in *There Are Two Errors In The Title Of This Book* (Lewiston, NY: Broadview Press, 1992), pp. 114–35; and Susan Haack, "Some Metaphysical and Epistemological Questions about Logic" in *Philosophy of Logics* (New York: Cambridge University Press, 1978), pp. 221–42.

<sup>31</sup> Haack, op. cit., p. 238.

<sup>32</sup> Immanuel Kant, *Logic*, trans. R. Hartman & W. Schwartz (New York: Bobbs-Merrill, 1974), pp. 13–30; quotation pp. 13f.

<sup>33</sup> Gottlob Frege, "Thought" in *The Frege Reader*, ed. Michael Beaney (Malden, MA: Blackwell Publishers, 1997), pp. 325–45.

<sup>34</sup> CP 3, pp. 104–11.

<sup>35</sup> Op. cit., p. 105.

<sup>36</sup> EP2:371–97, see esp. EP2: 385ff.

<sup>37</sup> José Vericat, "Introducción," in C. S. Peirce, *El hombre, un signo: (El pragmatismo de Peirce)* (Barcelona: Crítica, 1988), p. 15.

<sup>38</sup> Jaime Nubiola and Fernando Zalamea, *Peirce y el mundo hispánico. Lo que C. S. Peirce dijo sobre España y lo que el mundo hispánico ha dicho sobre Peirce* (Pamplona: Eunsa, 2006).

<sup>39</sup> Jaime Nubiola, "The Logic of Surprise," *Semiotica* 153, 1/4 (2005), 117-130, available at <<http://www.unav.es/users/AbductionLogicSurprise.pdf>>; Jaime Nubiola, "Il lume naturale: Abduction and God," *Semiotiche* 1/2, (2004) 91-102, available at <http://www.unav.es/users/LumeNaturale.html>.

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<sup>40</sup> Richard Rorty, "Pragmatism as Anti-Representationalism," in J.P. Murphy, *Pragmatism from Peirce to Davidson*, (Boulder, CO: Westview: 1990), p. 1.

<sup>41</sup> Richard J. Bernstein, *Beyond Objectivism and Relativism: Science, Hermeneutics, and Praxis*, (Oxford: Blackwell: 1983), pp. 71-72.

<sup>42</sup> It is perhaps interesting to notice that was Richard Rorty the first in pointing out the similarities between Wittgenstein's *Philosophical Investigations* (1953) and the philosophical framework of Charles S. Peirce. The view put forward by Rorty was that Peirce had envisaged and repudiated positivist empiricism fifty years earlier, and had developed a set of insights and a philosophical mood very similar to those of contemporary philosophers working under the influence of the later Wittgenstein. (R. Rorty, "Pragmatism, Categories, and Language," *Philosophical Review* 70 (1961), 197-223). For a study of the relations between Peirce and Wittgenstein see J. Nubiola, "Scholarship on the Relations between Ludwig Wittgenstein and Charles S. Peirce," in I. Angelelli and M. Cerezo, eds., *Studies on the History of Logic*. (Berlin: Gruyter: 1996), pp. 281-294, also available at <http://www.cspeirce.com/menu/library/aboutcsp/nubiola/scholar.htm>

<sup>43</sup> Walker Percy, "The Divided Creature." *The Wilson Quarterly* 13, 1989, 77-87. My paper on this issue "Walker Percy and Charles S. Peirce: Abduction and Language" is available at <<http://user.uni-frankfurt.de/~wirth/texte/nubiola.html>>

<sup>44</sup> Russell Goodman, *Wittgenstein and William James* (Cambridge: Cambridge University Press: 2002).

<sup>45</sup> K. Bain, *What the Best College Teachers Do* (Cambridge, MA: Harvard University Press: 2004).

<sup>46</sup> I am very grateful to Prof. Damián Fernández Pedemonte, of the Universidad Austral, for this information.

<sup>47</sup> At the risk of sounding overly dramatic, as not all of these students remain in the profession, this is an issue of 'life or death' career-wise.

<sup>48</sup> Just a few examples: "The skeptical conclusion is that knowledge is impossible. No one *does* know, because no one *can* know." Jonathan Dancy, *An Introduction to Contemporary Epistemology* (Wiley, 1991), p. 1. "Philosophical skepticism[']s essential element is a general view about human knowledge...the philosophical sceptic holds, or at least finds irrefutable, the view that knowledge is *impossible*." Michael Williams, "Skepticism", *The Blackwell Guide to Epistemology* (Wiley, 2007), p. 35. "General epistemology will be concerned with questions, such as... 'Are there general reasons to think knowledge of any kind is unobtainable?' David Cooper, *Epistemology: The Classic Readings* (Blackwell, 1999), p. 2.

<sup>49</sup> Again, a few examples chosen at random: "As I look at the green field before me, I might believe not only that there is a green field there but also that I *see* one. And I do see one. I visually perceive it... Both beliefs, the belief that there is a green field there, and the self-referential belief that *I* see one, are grounded, causally, justificationaly, and epistemically, in my visual experience. They are produced by that experience, justified by it, and constitute knowledge in virtue of it." Robert Audi, *Epistemology: A Contemporary Introduction to the Theory of Knowledge* (Routledge, 1998), p. 14. "Rene Descartes (1596–1650) was a French philosopher, mathematician, and scientist who, although writing well before the Enlightenment, had the courage and audacity to challenge the

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validity of all his beliefs, including his belief in God. Ironically, in pursuing the farthest reaches of what can be doubted, Descartes found the basis of knowledge itself.” Linda Martin Alcoff (ed), *Epistemology: The Big Questions* (Blackwell, 1998), p. 3.

<sup>50</sup> Thus for instance, John Greco denies that the task of epistemology should any longer consist in refuting skepticism in his introduction to the *Blackwell Guide to Epistemology* (Wiley, 2007). Barry Stroud writes, “Scepticism is most illuminating when restricted to particular areas of knowledge ... because it then rests on distinctive and problematic features of the alleged knowledge in question, not simply on some completely general conundrum in the notion of knowledge itself...,” “Scepticism, ‘Externalism’, and the Goal of Epistemology,” *Proceedings of the Aristotelian Society* (1994), p. 291. Christopher Hookway’s book *Scepticism* (Routledge, 1992) also deserves mention for a careful rereading of Descartes which plausibly suggests that even he did not advocate the kind of global skepticism typically put forward in introductory epistemology classes. Hookway and others are part of a recent trend towards ‘virtue epistemology’ (inspired by pragmatism, insights from virtue ethics and feminist critiques of traditional epistemology) which seeks to replace investigation into *knowledge* with investigation of *knowers* and their ‘intellectual character’. But the question remains how these new theories might affect teaching *practice*.

<sup>51</sup> The meaning of ‘practical’ here includes barring clearly pathological responses, such as refusing to act, or ending one’s life.

<sup>52</sup> I would also be most interested to hear your ‘experimental results’. Feel free to email them to me: clegg@waikato.ac.nz.

<sup>53</sup> The last time I tried this exercise, 3 out of 5 definitions of reality the groups came up with were extremely Berkeleian, which was rather unexpected and interesting to me.

<sup>54</sup> I am indebted to the Philosophy for Children community in Australia and New Zealand (particularly Vanya Kovach) both for helpful discussions on the issues discussed above and some very practical pedagogical tips. Matthew Lipman’s pioneering work writing teaching materials for doing philosophy with children of all ages (which he developed in conscious deference to classic American pragmatism, in particular Peirce’s idea of the ‘community of inquiry’) really opened my eyes to the possibility of ‘bottom-up’ as opposed to ‘top-down’ philosophical inquiry. See also Matthew Lipman, *Thinking in Education* (Cambridge University Press, 2003).

<sup>55</sup> “It is by surprises that experience teaches us all she deigns to teach us.” From “On Phenomenology” (1903) in *The Essential Peirce* 2:154.

<sup>56</sup> For this characterization of philosophical activity see Alasdair MacIntyre, foreword, *Wilderness and the Heart: Henry Bugbee’s Philosophy of Place, Presence, and Memory*, Edward F. Mooney, ed. (Athens, GA: University of Georgia Press, 1999) xvi-xvii.

<sup>57</sup> C. S. Peirce, *The New Elements of Mathematics*, ed. Carolyn Eisele (The Hague: Mouton, 1976), vol. IV, 199-200.

<sup>58</sup> In 1893 Peirce wrote, “...individualism and falsity are one and the same. Meantime, we know that man is not whole as long as he is single, that he is essentially a possible member of society. Especially, one man’s experience is nothing, if it stands alone. If he sees what others cannot, we call it hallucination. It is not “my” experience,

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but “our” experience that has to be thought of; and this “us” has indefinite possibilities.” (CP 5.402).

<sup>59</sup> CP, 1:vii.

<sup>60</sup> Joseph Brent. *Charles Sanders Peirce. A life* (Bloomington: Indiana University Press, 1993), p. 3.

<sup>61</sup> See Fisch, M. H. “Peirce’s general theory of signs”. In *Sight, Sound, and Sense*, T. A. Sebeok, ed. (Bloomington: Indiana University Press, 1978), and “Just how general is Peirce’s general theory of signs,” *American Journal of Semiotics* 2.1-2 (1986): 55-60. See also Vincent Colapietro. *Peirce’s approach to the self. A semiotic perspective on human subjectivity* (Albany: State of New York Press, 1989).

<sup>62</sup> Joseph Ransdell, “Peircean Semiotics.” Incomplete draft of work in progress as of May 1983, p. 12.

<sup>63</sup> “On a new list of categories,” in W2:49-58.

<sup>64</sup> “A guess at the riddle,” W6:166-210.

<sup>65</sup> See T.L. Short, *Peirce’s Theory of Signs* (Cambridge: Cambridge University Press, 2007).

<sup>66</sup> See M. Nadin, “The Logic of Vagueness and the Category of Synechism.” In *The Relevance of Charles Peirce*, Eugene Freeman, ed. (La Salle, Illinois: The Monist Library of Philosophy, 1983), pp. 154-166.

<sup>67</sup> See H. Buczyńska-Garewicz, “Sign and Dialogue,” *American Journal of Semiotics* 2.1-2 (1983): 27-43.

<sup>68</sup> Joseph Ransdell, “Some Leading Ideas of Peirce’s Semiotics,” *Semiotica* 19.3-4 (1977): 157-178.

<sup>69</sup> I treat this same topic, in a much expanded version of course, in my *From Realism to Realicism: On the Metaphysics of Charles Peirce* (Lanham: Rowman and Littlefield/Lexington, 2007).

<sup>70</sup> And I suggest Michael Raposa’s *Peirce’s Philosophy of Religion* (Bloomington: Indiana University Press, 1989), as a good secondary source.