

C. S. Peirce: The Life of Science and the Desire to Learn

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[Oral Presentation]

"While they were preparing the hemlock,
Socrates was learning how to play a new tune on the flute.
"What will be the use of that?" he was asked. "To know this tune before dying."
If I dare repeat this reply long since trivialized by the handbooks,
it is because it seems to me the sole serious justification of any desire to know."

Emil Cioran, *Drawn and Quartered*, 82

As some of you know, in the past year of 2014 the Peircean community celebrated the centennial of the death of the American scientist, logician and philosopher Charles Sanders Peirce (1839-1914).² We had an impressive congress in Lowell, Massachusetts, with a broad interdisciplinary audience. Charles S. Peirce stayed in Rome three times in his life, all of them related to his first European trip as part of the American expedition to observe a solar eclipse in Sicily on the 22nd of December of 1870. There are two delightful letters from his first stay in Rome: one from the 14th of October to his mother and another from the 16th to his Aunt Lizzie, describing with pleasure his touristic trip to the "City of the Soul" (as he calls Rome, using the expression of Lord Byron³). We have no documents relating to his second stay (around 1-8 of December, 1870) with his wife Zina and other members of the expedition on their trip to Sicily. However, we have detailed information about his third trip, between the 1st and the 8th of January of 1871, thanks to his diary. Rome was suffering from the *alluvione* of the Tevere of the 28th of December, which is registered on the walls of the nearby Piazza Navona and in other several places. I will not go into details, but I want to bring your attention to this text from Peirce's European correspondence, which we chose as a motto for our project, the *Grupo de Estudios Peirceanos*.

¹ I want to express my deepest gratitude to Juan Andrés Mercado and Francisco Labastida for their kind invitation to take part in this *Convegno*. I am grateful to Erik Norvelle for polishing my text.

² References to Peirce's texts are given with the following abbreviations, followed by the volume number, the paragraph number and the year of the text: [CP] *Collected Papers of Charles Sanders Peirce*, vols. 1-8. Hartshorne, C., Weiss, P. and Burks, A. W. (eds.). Cambridge, MA: Harvard University Press, 1931-1958. [MS] *The Charles S. Peirce Papers* 32 microfilm reels of the manuscripts kept in the Houghton Library. Cambridge, MA: Harvard University Library, Photographic Service 1966. The manuscripts are quoted by their number in Richard Robin, *Annotated Catalogue of the Papers of Charles S. Peirce*, Amherst, MA: University of Massachusetts Press, 1967; the letters are identified by the date and an L preceding the number of the folder. [W] *Writings of Charles S. Peirce: A Chronological Edition*, vols. 1-8. The Peirce Edition Project (ed.). Bloomington, IN: Indiana University Press, 1982- .

³ Both letters are available at <<http://www.unav.es/gep/Roma14.10.70.html>> and <<http://www.unav.es/gep/Roma16.10.70.html>>. All corrections and suggestions —particularly from Roman readers— will be very welcome!

Philosophy is a study which needs a very protracted concentrated study before one [...] begins to be at all expert in the handling of it, if one is to be precise, systematic, and scientific. I gave ten years to it before I ventured to offer half a dozen brief contributions of my own. Three years later [1870], when I had produced something more elaborated, I went abroad and in England, Germany, Italy, Spain, learned from their own mouths what certain students at once of science and of philosophy were turning in their minds. (C. S. Peirce, Letter to *The Sun*, MS 325, p. 4, c.1907).

This text highlights not only how highly Peirce esteems philosophical study, but also the close connection between philosophy and science, something he always emphasized. For Peirce, as for medieval scholars,⁴ philosophy—even metaphysics—should be pursued with a scientific attitude.⁵ I believe following his counsel here is essential to thinking about how philosophy should be taught today.

Twenty years ago I put a sign on the door to my office—and it's still there—with the sentence of Peirce that I have used in my title: "The life of science is in the desire to learn" (*CP* 1.235, c.1902). I learned this quote from the late professor of logic at MIT, George Boolos. Like him, I put it on my door to invite students to come in to inquire, to ask questions, since their questions are not just the life of science, but also the sparks that inflame my passion for teaching. Those—professors and students—who desire to learn are the real agents, the main characters, of philosophical development. Philosophy should not be understood and taught as the transmission of old solutions to outdated problems, but as a way of life devoted to learning the truth wherever we might find it.

My exposition will be divided into four sections: 1) A brief presentation of Peirce, focusing on his work as a professional scientist and a scientific philosopher; 2) Peirce considered as an educational philosopher; 3) Some practical suggestions I have drawn from Peirce's ideas and from my experience teaching philosophy today; and finally, 4) A brief conclusion.

1. Charles S. Peirce a true scientist-philosopher

First of all, I should state clearly that, although Peirce was a philosopher and a logician, he was first and foremost a real practitioner of science. Not only was he trained as a chemist at Harvard, but for thirty years (1861-91) he worked regularly and arduously for the U. S. Coast Survey as a metrologist and as an observer in astronomy and geodesy. His reports to the Coast Survey are an outstanding testimony to his personal experience with the hard work of measuring and obtaining empirical evidence. A glance at his *Photometric Researches* produced in the years 1872-75 immediately confirms this impression of a man involved in solid scientific work (*W* 3, 382-493). I agree with Victor Lenzen that "Peirce's scientific work is relevant to his philosophy, for his philosophical doctrines indicate the influence of his reflective thought upon the methods of science."⁶ To summarize in Max Fisch's words, "Peirce was not merely a philosopher or a logician who had read up on science. He was a full-

⁴ "... the schoolmen also resembled modern scientific men, who cannot be comprehended in this respect at all by men not scientific. [...] But above all things it is the searching thoroughness of the schoolmen which affiliates them with men of science and separates them, world-wide, from modern so-called philosophers" (*CP* 1.33, 1869).

⁵ Cf. J. Nubiola, "What a Scientific Metaphysics Really Is According to C. S. Peirce", *Cognitio* 2015 (in press).

⁶ V. F. Lenzen, "Charles S. Peirce as Astronomer", in *Studies in the Philosophy of Charles Sanders Peirce*, Second Series, E. C. Moore and R. Robin (eds.). Amherst, MA: University of Massachusetts Press, 1964, 33.

fledged professional scientist, who carried into all his work the concerns of the philosopher and logician."⁷

Having done research in astronomy, mathematics, logic and philosophy, as well as in the history of all these sciences, Peirce tried all his life to unveil the logic of scientific inquiry. In addition to his personal experience of scientific practice, his sound knowledge of the history of science and of the history of philosophy helped him to establish a general cartography of scientific methodology. Hence, following Hookway to some extent,⁸ I think that the most accurate understanding of Peirce's philosophy is to see him as a traditional philosopher, but one dealing with the modern problems of science, truth and knowledge. He was aided in this project by very valuable personal experience as a logician and as an experimental researcher in the bosom of an international community of scientists and thinkers.

Science is for Peirce "a living historic entity" (*CP* 1.44, c.1896), "a living and growing body of truth" (*CP* 6.428, 1893). Beginning in his early years, Peirce identified the community of inquirers as essential to scientific rationality (*CP* 5.311, 1868). The flourishing of scientific reason can only take place in the context of research communities⁹: the pursuit of truth is a corporate task and not an individual search for foundations. Throughout his entire life, but especially in his later years, Peirce insisted that the popular image of science as something finished and complete is totally opposed to what science really is, at least in its original practical intent. What constitutes science "is not so much correct conclusions, as it is a correct method. But the method of science is itself a scientific result. It did not spring out of the brain of a beginner: it was a historic attainment and a scientific achievement" (*CP* 6.428, 1893).

Here are two beautiful texts by the mature Peirce which define what a science is. While reading them we have to keep in mind that philosophy is —at least should be— a science as well. The first one is from a 1902 manuscript on the classification of the sciences (*MS* 1343, 6-7, 1902):

Science is to mean for us a mode of life whose single animating purpose is to find out the real truth, which pursues this purpose by a well-considered method, founded on thorough acquaintance with such scientific results already ascertained by others as may be available, and which seeks cooperation in the hope that the truth may be found, if not by any of the actual inquirers, yet ultimately by those who come after them and who shall make use of their results (also in *CP* 7.55, 1902).

The second text comes from the manuscript of the Adirondack Summer School Lectures and deserves to be quoted at length:

But what I mean by a "science" (...) is the life devoted to the pursuit of truth according to the best known methods on the part of a group of men who understand one another's ideas and works as no outsider can. It is not what they have already found out which makes their business a science; it is that they are pursuing a branch of truth according, I will not say, to the best methods, but according to the best methods that are known at the time. I do not call the solitary studies of a single man a science. It is only when a group of men, more or less in

⁷ M. H. Fisch, "Introduction", in *W* 3, xxi-xxxvii.

⁸ Ch. Hookway, *Peirce*, Routledge: London 1992, 1-3.

⁹ S. Jacobs, "Models of Scientific Community: Charles Sanders Peirce to Thomas Kuhn", *Interdisciplinary Science Reviews* 31 (2006), 163-173.

intercommunication, are aiding and stimulating one another by their understanding of a particular group of studies as outsiders cannot understand them, that I call their life a science. It is not necessary that they should all be at work upon the same problem, or that all should be fully acquainted with all that it is needful for another of them to know; but their studies must be so closely allied that any one of them could take up the problem of any other after some months of special preparation and that each should understand pretty minutely what it is that each one of the other's work consists in; so that any two of them meeting together shall be thoroughly conversant with each other's ideas and the language he talks and should feel each other to be brethren (*MS 1334*, pp. 11-14, 1905).

Probably there is nothing more alien to the present competitive style of science than this Peircean notion of scientists working together like brothers. It seems to me that it is the specific task of philosophers to try to teach this *mode of life* through the defense of cross-disciplinarity and of the advantages of affective relations between colleagues in a Peircean spirit of agapastic reasonableness, provided of course that they are able to live and work together in this spirit.

I also want to add that nothing is more opposed to Peirce's ideas than philosophy developed with "a literary spirit." As Susan Haack highlighted, "Peirce aspires, he tells us, to rescue the good ship Philosophy for the service of Science from the hands of the lawless rovers of the sea of literature" (*CP 5.449*, 1905).¹⁰ According to Peirce—and I totally agree with him on this—, philosophy should be undertaken with a scientific attitude, with "an intense desire to find things out" (*CP 1.14*, c.1897).

Perhaps I should digress a moment to aid the listeners in the audience not familiar with Peirce's notion of truth. His view is a realistic one. According to Peirce, reality is independent of what we, or any other mind, may think. If we had all the time in the world and all the necessary evidence, truth would be that final opinion which the researchers would arrive at. Truth is not the fruit of common assent; on the contrary common assent is the fruit of truth.¹¹

2. Charles S. Peirce as an educational philosopher

For five years, from the fall of 1879 until December 1884 Charles S. Peirce worked as a part-time lecturer in logic in the recently created Johns Hopkins University, in Baltimore, where graduate studies involving research were implemented for the first time in the United States. We have excellent information on Peirce's activity as a teacher and some hints of his ideas about how philosophy should be taught.¹² As his students would remember, Peirce was

¹⁰ S. Haack, "As For That Phrase 'Studying in a Literary Spirit'", *Proceedings and Addresses of the American Philosophical Association*, 70 (1997); *Manifesto of a Passionate Moderate: Unfashionable Essays*, Chicago: The University of Chicago Press, 1998, 48.

¹¹ Cf. J. Nubiola, "La búsqueda de la verdad en la tradición pragmatista", *Tópicos* 8-9 (2001), 183-196; Catalina Hynes, *Pragmatismo y verdad en C. S. Peirce y W. V. Quine*, Universidad Nacional de Tucumán, Argentina, 2014. Doctoral dissertation available at <http://www.unav.es/gep/TesisDoctorales/TesisDoctoralCalyHynes.pdf>

¹² E. W. Davis, "Charles Peirce at Johns Hopkins", *The Mid-West Quarterly* 2 (1914), 48-56; J. Jastrow, "Charles S. Peirce as a Teacher", *Journal of Philosophy, Psychology and Scientific Methods*, 13 (1916), 723-726; M. H. Fisch and J. I. Cope, "Peirce at the Johns Hopkins University", in P. H. Wiener and F. H. Young (eds.), *Studies in the Philosophy of Charles Sanders Peirce*, Cambridge, MA: Harvard University Press, 1952, 277-311.

an inspiring teacher for advanced, committed graduate students, but perhaps unintelligible to others.¹³ Paul Weiss summarizes in his early biography of Peirce¹⁴:

Too advanced perhaps for the ordinary student, he was a vital formative factor in the lives of the more progressive ones, who remembered him later with affection and reverence. He treated them as intellectual equals and impressed them as having a profound knowledge of his subject.

For instance, Christine Ladd-Franklin —Peirce's student at Johns Hopkins— remarks that Peirce as a teacher did not attract by "anything that could be called an inspiring personality," but rather "by creating the impression that we had before us a profound, original, dispassionate and impassioned seeker of truth."¹⁵ Joseph Jastrow, another of Peirce's students, highlights that "a deep conviction of *the significance of the problems presented and a mastery of the intellectual processes* were his sole and adequate pedagogical equipment."¹⁶

I love this quotation. It seems to me that most of the difficulties hindering teaching philosophy today —or any other subject for that matter, particularly in the humanities— arise from the general incapacity of teachers to demonstrate the *significance* —for the life of those in the audience— of the problems they are dealing with. In a world that is so fixed on “practical things” it is not always easy to awaken the desire to learn about the specific subject that the teacher *has* to teach that day. But do we really try?

Two comments are in order here. The first is related to the idea of what philosophy is and what teaching philosophy should be. I include a quotation from my admired friend Hilary Putnam, which I have used as a guideline for my teaching for years:

I try to defend the idea that the theoretical and practical aspects of philosophy depend on each other. Dewey wrote in *Reconstruction of Philosophy* that 'Philosophy recovers itself when it ceases to be a device for dealing with the problems of philosophers and becomes a method, cultivated by philosophers, for dealing with the problems of men.' I think that the problems of philosophers and the problems of men and women are connected, and that it is part of the task of a responsible philosopher to bring out the connection.¹⁷

Philosophy is not —and cannot be for me— only an academic exercise, but is an instrument for the progressive critical and rational reconstruction of everyday living. In a world in which daily living is frequently found removed from an intelligent examination of oneself and of the fruits of human activity, a philosophy that separates itself from genuine human problems, is a luxury that we cannot afford. I remember now how I was struck when I read Pierre Hadot's book *Philosophy as a Way of Life* twenty years ago:

The essential characteristic of the phenomenon "philosophy" in antiquity was that at that time a philosopher was, above all, someone who lived in a philosophical way. In other words, the

¹³ J. M. McCarthy, "Was Peirce an 'Educational' Philosopher?", Paper presented at the annual meeting of the New England Educational Research Organization, 3 June 1971, 9.

¹⁴ P. Weiss, "Charles Sanders Peirce", in D. Malone (ed.), *Dictionary of American Biography*, New York: Scribner, XIV (1934), 402.

¹⁵ Ch. Ladd-Franklin, "Charles S. Peirce at the Johns Hopkins", *Journal of Philosophy, Psychology and Scientific Methods*, 13 (1916), 716-717.

¹⁶ J. Jastrow, "Charles S. Peirce as a Teacher", 723. (My emphasis.)

¹⁷ J. Harlan, "Interview with Hilary Putnam", *The Harvard Review of Philosophy*, Spring (1992), 22.

philosopher was someone whose life was guided by his or her reason, and who was a practitioner of the moral virtues."¹⁸

According to Hadot the professionalization of philosophy in the universities from the thirteen century onwards implied the loss of its vitality, its inevitable transformation into something "scholastic" in the worst sense of the term, something you may find today in most departments of analytic philosophy in the English-speaking world. Saying this in a positive way, I would like to reverse Charles Peguy's expression "*La philosophie ne va pas en classe de philosophie*" claiming now: "Philosophy should come back to philosophy classes." And what does this mean? This means bringing back to philosophy classes the problems that affect the real life of students and professors. Hadot's words echo those of Thoreau from 1854, which Hadot also quotes elsewhere.¹⁹

There are nowadays professors of philosophy, but not philosophers. Yet it is admirable to profess because it was once admirable to live. To be a philosopher is not merely to have subtle thoughts, nor even to found a school, but so to love wisdom as to live according to its dictates, a life of simplicity, independence, magnanimity, and trust. It is to solve some of the problems of life, not only theoretically, but practically. (...) The philosopher is in advance of his age even in the outward form of his life.²⁰

This also brings me to the second comment I want to make in relation to the beautiful quotation above about how Peirce used to teach: as exhibiting a deep conviction about the *significance of the problems* presented. Peirce's conviction in the teaching of science was that "the professor's object ought to be to let his pupil as much into the interior of a scientific way of thinking as possible, and for that purpose he should make his lecture experiments resemble real ones as much as possible."²¹ A few lines below, Peirce adds that with his method of introducing the student to real problems

(...) from the first the pupil feels himself an apprentice—a learner but yet a real worker—he is introduced to a great and important investigation [...] and of this investigation he has a necessary part to do; he is not working for practice merely; his investigation is not burdened with fancying he is doing something serious, nor is he made to consider things serious which are not so.

Of course, with general students this is "a much more difficult problem" —Peirce writes — than with advanced students: "The teacher should consider what he expects the pupil to carry into after life of his instruction. He should aim for something attainable in that respect, and strike for that."²²

It seems to me that these comments that Peirce wrote for teaching in a Department of Physics could be applied *directly* to courses on philosophy at basic and advanced levels. The

¹⁸ P. Hadot, *Philosophy as a Way of Life: Spiritual Exercises from Socrates to Foucault*, Oxford: Blackwell, 1995, 281.

¹⁹ P. Hadot, "There Are Nowadays Professors of Philosophy, but not Philosophers", *Journal of Speculative Philosophy* 19 (2005) 229;

²⁰ H. D. Thoreau, *Walden*, [1854] Annotated edition, section 1-A, par. 19. Available at <<http://thoreau.eserver.org/walden1a.html>>.

²¹ Letter from C. S. Peirce to D. C. Gilman, 13 January 1878. Published as "Appendix II. Peirce's Letter to Gilman Concerning the Hopkins Physics Department" in P. H. Wiener and F. H. Young (eds.), *Studies in the Philosophy of Charles Sanders Peirce*, 365-368.

²² Letter from C. S. Peirce to D. C. Gilman, 13 January 1878, in P. H. Wiener and F. H. Young (eds.), *Studies in the Philosophy of Charles Sanders Peirce*, 367.

usual excuse not to do that is related to the extensive syllabus or programs of the subjects that the teachers of philosophy have to teach, at least in continental universities. For instance, in 60 hours of 45 minutes I am expected to cover a whole systematic and historical program of "Philosophy of Language," investing half of the available time in what are called "practical classes." The Bologna reform in my University has not only reduced the total number of hours of lecturing in my subject, but has also stressed that the main agents of the educative process have to be the students themselves: that is, they have to speak in class taking a relevant part of the available time.

The key to solve this difficult riddle in a Peircean spirit—it seems to me—is to focus on problems —instead of programs— and in the real growth of the students through their writing and through the general discussion in the classroom.

In the next section, I will try to deal with this issue.

3. How to teach philosophy according to Charles S. Peirce

As Tom Short has written, Peirce "came to conceive of philosophy itself as inquiry, not as system-building, and as empirical, not as *a priori*." For this reason, Peirce's "ideas must be received, not as the finished products of ratiocination, but on the model of hypotheses in modern science, that is, as conjectures, sometimes roughly sketched, intended to guide further inquiry and to be further developed therein."²³ In what follows I will make some practical suggestions I have drawn from Peirce's ideas and from my own experience about how to teach philosophy today. All of them are tentative and of course they should be adapted to the different environments and educational settings a professor may find him or herself in. I will number them in order to make my exposition more concise.

1) *The starting point*: Philosophy should start from real conversations and not from abstract ideas alien to the life and thought of the students and the teacher. Let's quote Charles S. Peirce (CP 8.112, c.1900):

Remembering, then, that philosophy is a science based upon everyday experience, we must not fall into the absurdity of setting down as a datum and starting-point of philosophy any abstract and simple idea, as Hegel did when he began his logic with pure Being; [...] We must not begin by talking of pure ideas, —vagabond thoughts that tramp the public roads without any human habitation, — but must begin with men and their conversation.

In a well-known Socratic tradition, philosophy should start with our conversations and the different real opinions about human problems.

2) *Thinking through writing*: There are perhaps professors of philosophy who are exceptionally able to promote a discussion in class in order to cover the different views on a particular topic in a reasonable space of time, without any specific preparation on the part of the students. This is not, however, the case with me.²⁴ My experience is that conversation in

²³ T. L. Short, "Interview", in F. Belluci, A. Pietarinen and F. Stjernfelt (eds.), *Peirce: 5 Questions*, n. p.: Automatic Press, 2014, 260-1)

²⁴ "In the classroom, questions are the royal road to discussion". I found immense usefulness in J. Immerwahr's paper "The Philosopher as a Teacher. Asking Questions: Ways to Promote (or Destroy) Class Discussion", *Metaphilosophy* 22 (1991), 364-377.

the classroom without preparation is almost useless. In order to promote the not-easy activity of thinking, we should make our students *feel* a particular philosophical problem, to understand the different solutions available and to try to make his or her mind focus during several hours of personal *writing* on a determinate issue. This is the first step. I have used as my motto for teaching Wittgenstein's warning in the preface of *Philosophical Investigations*: "I should not like my writing to spare other people the trouble of thinking. But, if possible, to stimulate someone to thoughts of his own."²⁵

3) *Sharing and discussing*: In my courses the students are required during the term to write five brief essays (of 600 words) with their opinion about a determinate issue based in some common text. They turn them in on a fixed day and in the next session I give them back all the essays corrected. Four or five—which I select in advance—are read by the authors and freely discussed by the entire class.

I can tell you that from time to time, there are particular afternoons when I feel that the miracle has occurred: *we are doing philosophy!* I am particularly rewarded when the discussion that arose in the classroom continues amongst the students in the corridors and the cafeteria after the class is ended.²⁶ After those sessions of reading and discussion of the essays the students left the classroom convinced that they had learned something much more valuable than the passive taking of notes from a superb lecture from the professor. It seems to me that Dewey's saying "learning by doing" should especially be applied when teaching philosophy.

4) *Passionate teaching*: In order to be a passionate teacher one needs not only a full mastery of the subject and a strong conviction of its importance, but also that he or she should be the first learner: "... in order that he may have any measure of success in learning he must be penetrated with a sense of the unsatisfactoriness of his present condition of knowledge. (...) [one needs] that fever for learning that must consume the soul of the man who is to infect others with the same apparent malady" (*CP* 5.583, 1898). Only the teacher who *lives* his or her science is able to share with the students his or her way of life. There is no mystery in this: it is the same in any other subject. But in philosophy, if teaching does not affect the life of the professor, it will not affect the life of the students either: philosophy will be dismissed as something boring and irrelevant. It might even be said that the main thing a philosopher teaches is his or her own life, his or her personal attitude in the work of philosophy: that his or her own mind—his personal search for the truth—is the message.

But what about the *lectiones magistrales*? Of course those reading and discussion sessions mentioned above form part of a course in which a third of the sessions may be traditional lectures. A former president of my university used to say, echoing George Steiner, that the professors who bore their students could be called *murders* because they kill the desire to learn in their students:

To teach seriously is to lay hands on what is most vital in a human being. [...] Poor teaching, pedagogic routine, a style of instruction which is, consciously or not, cynical in its merely utilitarian aims, are ruinous. They tear up hope by its roots. Bad teaching is, almost literally,

²⁵ L. Wittgenstein, *Philosophical Investigations*, New York: MacMillan, 1953, x.

²⁶ "I continue to teach philosophy because it is through teaching, through the interaction with students in the classroom, that occasionally we make that decisive philosophical shot and make it in such a way that, for a few moments, my students and I are working with the truth—white and hot". J. N. Torgerson, "Why I Teach Philosophy", *Teaching Philosophy*, 13 (1990), 11.

murderous and, metaphorically, a sin. It diminishes the student, it reduces to gray inanity the subject being presented²⁷.

A few lines below, Steiner—who identifies Peirce as "the most important philosopher so far produced by the New World"²⁸— writes that "anti-teaching is statistically close to being the norm." I fear that this diagnostic may be right. Recent voices identify the contemporary soulless competition for grades and status and the general market-orientation of the universities as the ruin of the humanities²⁹. It seems to me that philosophy courses are the real place to reverse this general trend. As I said previously, we need *passion* from the professor, nurtured by a thorough knowledge of the subject to teach in each case and by his or her love for the students, for their growth.

5) *Not theories, but problems and answers*: The popular image of philosophy classes as a boring cemetery of stale theories may be reversed by focusing on problems and in the historical answers that have been given to those problems. I love Spaemann's definition of philosophy as the continued conversation over centuries about ultimate questions. In fact in the fascinating book of Ken Bain *What the Best College Teachers Do* one of the traits identified of the best teachers is an "unusually keen sense of the histories of their disciplines, including the controversies that have swirled within them."³⁰ This is philosophy's daily bread: a thorough understanding of the history of an issue and of the answers already provided is always the hallmark of philosophy, when it is well done.

In my view, the pragmatist tradition may help us understand what theories are. Theories are reasonable answers to problems that affect us, elaborated by our reason and taking in account our experiences together with all available evidence. They are not—and should not be—*ideologies*.³¹ In this sense, theories are built like tools or artifacts. This does not mean that they are arbitrary or that they cannot be better or worse. The fact that all our theories are human creations means that they should allow for replacement, correction and improvement when we discover better or more refined versions of them.

This brings to mind a wonderful seminar about inter-disciplinarity given by Evandro Agazzi years ago in my university. He put his finger on the most challenging issue for real inter-disciplinarity: it requires a *complex common problem* for the different specialties involved with solving the issue.³² Something similar is needed for an historical teaching of philosophy. It always requires an intelligent balance between tradition and pressing contemporary issues. Old questions may be illuminated as if they were completely new if they are placed in contrast with the new advances of modern science or recent issues in the organization of society. Philosophy cannot be stale if we want to affect the minds and lives of our students, listeners and readers.

²⁷ G. Steiner, *Lessons of the Masters*, Cambridge, MA: Harvard University Press, 2003, 18.

²⁸ G. Steiner, *Lessons of the Masters*, 20.

²⁹ L. Siegel, "Who Ruined the Humanities", *The Wall Street Journal*, Review, 13-14 July 2013, C1-C2; M. Nussbaum, *Not for Profit. Why Democracy Needs the Humanities*, Princeton, NJ: Princeton University Press, 2010, 143; L. Waters, *Enemies of Promise: Publishing, Perishing, and the Eclipse of Scholarship*, Chicago: Prickly Paradigm Press, 2005.

³⁰ K. Bain, *What the Best College Teachers Do*, Cambridge, MA: Harvard University Press, 2004, 25.

³¹ L. Menand, *The Metaphysical Club. A Story of Ideas in America*, New York: Farrar, Straus & Giroux, 2001, xi-xii.

³² E. Agazzi, "El desafío de la interdisciplinarietà: dificultades y logros", Seminario Grupo Estudios Peirceanos, Universidad de Navarra, 14 March 2002. Text available at <http://www.unav.es/gep/DesafioInterdisciplinarietà.html>

6) *In public service of humankind*: The question about the role of reason in our lives and in our civilization is probably the central philosophical question that permeates the last two centuries of Western culture and philosophy. Let us recall the emphatic closing words of Edmund Husserl in his Vienna lecture of 1935, referring particularly to Europe but addressed to the entire Western world:

The crisis of European existence can end in only one of two ways: in the ruin of a Europe alienated from its rational sense of life, fallen into a barbarian hatred of spirit; or in the rebirth of Europe from the spirit of philosophy, through a heroism of reason that will definitively overcome naturalism.³³

It seems to me that it is not an overstatement to affirm that reason is in danger nowadays. Reasonableness is far from being the hallmark of our politicians or businessmen all over the world, and it also seems that it is far from the real practices of our scientific colleagues. We philosophers, who—in Husserl's expression—feel ourselves to be "civil servants of humankind," have a serious responsibility to our fellow citizens, like Socrates with Athens. With our work we are not only transmitting philosophical knowledge to new generations, we are keeping alive the flame of rigorous thinking in freedom, the flame of being in plenitude human beings.

4. A brief conclusion

Let me conclude with a wonderful metaphor learned from Hilary Putnam.³⁴ Nowadays, in our life as philosophers and at the same time teachers of philosophy, we have to integrate in a single field of activity the two Kantian concepts of philosophy, *Schulbegriff* (academic philosophy) and *Weltbegriff* (world and vital philosophy). Like a magnetic field with two poles, we have to pay attention in our daily work, on the one hand, to scholarship, to the publication of highly quoted papers in the most respected journals; on the other hand, we have to listen to the cries of humanity and try to help everyone with intelligent solutions, taking part personally in contemporary debates through the media or internet.

There is a tension between the two poles, but this tension is also the cause of the spark that provides light and heat. In a similar way, there will be tension in our life between rigorous scholarship and attending to the world. In my view, we may find in our students a middle ground or a synthesis of both poles: they are eager to learn, and their learning is only possible if we are living philosophers, if philosophy really lives in our lives.³⁵ As I said in the title, "the life of science is in the desire to learn" (*CP* 1.235, c.1902). We have to love them and to love their growth: this is the ultimate secret for teaching philosophy, because "the Law of Love and the Law of Reason are quite at one."³⁶

Thanks a lot for your attention.

³³ E. Husserl, "Philosophy and the Crisis of European Man", 10th May 1935. Text available at <http://www.users.cloud9.net/~bradmcc/husserl_philcris.html>

³⁴ Cf. H. Putnam, *Realism with a Human Face*. Cambridge, MA: Harvard University Press, 1990, xxvi.

³⁵ Cf. J. Nubiola, "La filosofía como libertad y como vocación", *Anuario Filosófico* 35 (2002), 609-627.

³⁶ C. S. Peirce, "Review of Clark University, 1889-1899. Decennial Celebration", *Science* 11 (1900), p. 620; reprinted in P. P. Wiener, ed. *Charles S. Peirce: Selected Writings. (Values in a Universe of Chance)*, New York: Dover, 1966, 332.