



***La prima inferenza. L'abduzione di C.S. Peirce fra scienza e diritto.* (The First Inference. The Abduction of C.S. Peirce between Science and Law)**

GIOVANNI TUZET.

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In a clear, plain, and direct style, Giovanni Tuzet has written a very compelling work on Peirce's abduction. The book is an elaboration of his PhD dissertation's second part, and it is divided into two parts. The first (Logic of Abduction) consists of six chapters in which Tuzet presents not only Peirce's abduction, but also Peirce's conception of logic as a normative science, deduction, induction, and the role of abduction in the practice of Law. The second part (Philosophy of Abduction) consists of four chapters in which the author ventures deeper into philosophical issues such as causality, perception, proof, and truth. The book concludes with reflections on the relationship between abduction and pragmatism. On the same issue, each chapter is divided in sections, each dealing with some specific topic, and summing up a total of 64 throughout the book.

Tuzet reconstructs Peirce's abduction and philosophy of logic from Peirce's published works and a vast, impressive secondary bibliography of multiple Peircean scholars. In relation to it, Tuzet adopts an 'ecumenical' and conciliatory position, collecting and summarizing their commentaries, only giving some critical remarks about his countrymen Eco, Bonfantini, and Proni. In addition, Peirce's ideas are defended and compared with many contemporary philosophical problems, such as Goodman's new riddle of induction (p. 184–85), direct and indirect

theories of perception (chapter 8), several theories of truth (chapter 10), Searle's theory of speech acts, etc.

Moreover, Tuzet introduces several attractive ideas when seeking to clarify abduction; for instance, the idea of *projectual* abduction. The purpose of this kind of abduction is not to *explain* a series of facts, but to infer the best *means* for a given *end*, and this is used in technological innovation, artistic and intellectual creation, commercial activity, and political and juridical action (p. 113–14). Another idea Tuzet proposes is related with the classification of abduction as *ordinary* and *extraordinary* (p. 4, 59, 79–80, 97–98). In ordinary abduction we have at our disposal the 'rule' for inferring the 'case'; which is something we do not have in extraordinary abduction. This leads him to consider the *novelty* as *absolute* in an extraordinary abduction because a new type is proposed, and to regard it as *relative* in an ordinary one because a new token of a known case is identified (p. 99).

Chapter eight, "Abduction and Perception," is a truly remarkable chapter. Here Tuzet proposes that perceptual abduction has two elements: one classificatory (the comprehension of predicates permits identification) and other explanative (from sensations the presence of an object is inferred). Tuzet prefers to talk of 'classification' and not of 'recognizance', and this allows him to make a triple distinction in perception: a) a new token of a known type; b) a variant token from a known type; and c) a token from an unknown type (p. 238). These distinctions are related with his ordinary and extraordinary abductions, and so he presents, on the one side, *extraordinary perception* as an unknown combination of known characters, and on the other side, perception of an object in a new manner (modification of the type), and perception of a new object (p. 255). In addition he presents an interesting discussion of Peirce's theory of perception and the distinctions between percept, perceptual fact, perceptual judgment, and *percipuum*. In contrast with contemporary theories (e.g. Musgrave, Putnam), Tuzet says that Peirce has a direct *and* indirect account of perception: it is direct because the percept has sensible features and is dyadic; and it is indirect because the perceptual judgment has conceptual features and is triadic (p. 250–52).

The difference Tuzet draws between informativity and ampliativity is equally remarkable. According to Tuzet, deduction can be informative notwithstanding its not being ampliative (p. 150). That is to say, from a logical point of view, deduction makes explicit what is implicit in the premises, but from an epistemic point of view, it can afford new information, and this is precisely what theorematic deduction does. Tuzet further combines this with the pragmatic maxim: both are not automatic and informative, they *select* their logical steps, they are deliberately oriented, and they are conducted through the observation of relations (p. 147).

Of the 64 sections of the book 14 deal specifically with Law (not all about abduction), and as we would expect, there are many judicial references along the way. According to Tuzet, abduction is—logically and cognitively—an obligatory *first* step in Law, although extraordinary abduction is inopportune and even dangerous in a juridical case (p. 4–6). Another important idea (very roughly put) is that Peirce's methodology can be seen both in the *quaestio facti* and *quaestio iuris*, and particularly that the determination of epistemic justice should be followed by the political justice (p. 232), and the determination of epistemic justice is, in turn, determined by truth. In this sense, Tuzet declares himself a realist (truth is objective, and he chooses a correspondentist perspective) and pragmatist (the foreseeability of an action's consequences is the measure of juridical responsibility, p. 226) and, in consequence, he argues against anti-realist approaches to Law and truth. As an example of his approach, he sees induction, both in the *quaestio facti* and *quaestio iuris*, as juridical coherence and jurisprudential praxis (p. 188), and in the same manner, he uses his projectual abduction for discussing the fair or right cause in the practice (p. 221, 222).

In his book Tuzet does not focus on the different juridical roles played by the judges, prosecutors, attorneys, and jurors and their inferences; though at some point he touches upon the inferences made during legal procedure. Nonetheless, Tuzet offers some valuable insight for understanding Peirce in a juridical framework while appealing to the scientific and juridical (Holmes and Green) origin of the members of the Metaphysical Club (e.g. p. 328).

Notwithstanding the cleverness and thoroughness of the work, there are some points which seem to the reviewer, at least, controversial. The first is that the author—following Fann—rather sharply divides Peirce's writings on abduction in two periods: 1859–1890 and 1891–1914 (p. 66; see also, e.g., 232, 292, 297, 303n34, 312, 318). The first period has a syllogistic orientation, whereas the second has a methodological one. But the problem is that in actuality the two models do not exclude one another, and, in point of fact, Tuzet finds that abduction in the early and mature Peirce is constructed as the inference to an antecedent. In addition, in many cases it seems that Tuzet broadens the division to other areas (e.g., to induction also in p. 172). This explains why Tuzet uses Peirce's early ideas to support the later ones (e.g., in the presentation of induction, p. 174–75, 183; corollarial/theorematic distinction, p. 149; and perception, p. 233–35), or says that there is a continuity (e.g., the idea of 'real', p. 288; the pragmatic maxim, p. 319–20), and at one point he admits that the division is purely schematic (in the exposition of the relation between reality and truth, p. 291).

Another critical remark concerns how Tuzet justifies the inferences in the 'second' model. Tuzet says that in the methodological succession

model (abduction, deduction, induction), not one inference is justified individually, but they support one another: precedent knowledge justifies the successive (p. 41; cf. p. 172). However, this could be ambiguous, because “justify” can characterize at least two different situations: on one hand, the epistemic circumstance where we need to use one kind of inference and not another (dealing with a surprising fact, abduction—and not an induction nor deduction—is demanded); on the other hand, the logical circumstance where the premises lend support to the conclusion. It seems to the reviewer that Peirce tried to give formal, epistemic and methodological arguments for justifying (in both senses) each kind of inference along his philosophical career, and this is the basis that supports the interrelation of inferences as unified method (cf. CP 2.779–781, 1901–1902). Otherwise it would seem that the validity and justification of deduction depends on its relation with abduction and induction. Furthermore, Tuzet says that abduction needs deduction and induction (p. 318), but this is not always the case and Peirce denies it, for instance, when he mentions practical retrodution (R 637: 4–6, 1909): in an emergency room a physician is often compelled to act upon his first impression, without further verification, because if he does not, the patient dies. In this case, it would not be reasonable to wait for drawing some consequences of the diagnosis and test them in the clinical laboratory to verify the first impression and begin the treatment.

This brings up another comment. Tuzet wants to push the methodological succession as a paramount of rationality: “Only an articulation of inferences justify our beliefs . . . Our cognitive processes are rational and justified if they occur according the articulation of abduction, deduction, induction” (p. 317). But Tuzet should clarify whom he is referring to with “our”, because that assertion, it seems, cannot be truly applied to the majority of beliefs of humankind that are not acquired by scientific reasoning. Let me explain this: abduction requires a surprising fact, and if I arrive at John’s home and he introduces me to a woman who he says is called Mary, should I proceed scientifically and make a hypothesis, draw some consequences, and then verify indirectly the information in order to *believe* that her name is Mary or—*ceteris paribus*—do I simply accept that it is actually her name? Usually—in Law, for instance—it is said that ‘men of the street’ are reasonable men or women who do not fix *all* their beliefs with the scientific method. In fact, no one does, and Peirce does not disqualify other methods for fixing beliefs as utterly irrational. Moreover, justifications are very different and usually specialized: standards for justifying generalizations are different in our daily lives than when we are designing spacecrafts. Besides, the grades or levels of justification of the judgments of a lawyer or a judge are different from those of a juror, who, precisely, is a “man of the street,” that is someone who relies largely on common sense.

A further criticism is related with how Tuzet explicates Peirce's views on induction. To put it briefly, according to Tuzet, in the first model induction is generalization and in the second it is hypothesis verification (p. 185), and in several places he makes generalization the hallmark of induction (e.g., p. 172, 255). I am not going to argue here that both versions are in fact the same (as I think they are), but merely call attention to the point that, though generalization is the central feature for many induction theorists, it is not so for Peirce. From early onwards, Peirce proposed two rules (which Tuzet acknowledges): that of sampling and predesignation. Peirce further adds that without predesignation induction loses its character and becomes something else, that is to say, a surmise (W3: 313, 1878). As a matter of fact, we can arrive at a generalization through abduction: I see for the first time that my new neighbor walks with a basset hound at six in the morning; the next day I see the same. I can *abduce* that she *always* walks the dog that time. If I want to verify my previous generalization I have to be ready the next day and wait for them to appear. If they do, my generalization has been (provisionally) kept. In this case I kept my generalization by *induction* (I had to check it out, that is to say, I verified it), but only because I had predesignated what I would have seen. So, a central mark of *Peircean* induction is not generalization (from samples), but predesignation *plus* experimentation, which leads to (partial) verification or refutation; and that is what makes induction justify beliefs (a second central mark), something abduction cannot do because its conclusion remains a mere suspicion (CP 5.189, 1903), a suggestion, or a question (R 440:33–34, 1898; CP 5.171, 1903). In this sense, a central feature of abduction is that it does not discharge the genuine doubt raised by the surprising fact or it is ignorance-preserving—as Gabbay and Woods often say—and therefore it is not a matter of (a Peircean) belief (RLT: 178; CP 5.589, 1898), as I suspect Tuzet believes it is.

Returning to abduction, Tuzet makes its ordinary form equivalent to inference to the best explanation (IBE), as defended by Harman, Thagard, and Lipton (e.g., p. 67, 77, 97, 98, 103, 152). But for Peirce abduction does not need to provide the best explanation (CP 2.851, 1897; CP 7.222, 1901), and even more, he says that the idea that the most probable abduction is the best is its first fallacy (RLT: 193, 1898). On the contrary, Peirce argues, for example, that the best hypothesis is that which is more easily refuted if false (CP 1.120, 1898). In this sense, abduction is not IBE (ordinary or extraordinary, because IBE theorists require that IBE accounts for *all* the range of non-deductive inference), but the best hypothesis to put to test. Besides, it is supposed that IBE provides inductive proofs (this is why it has been used as an argument in favor of scientific realism), and Tuzet accepts that abductions do not prove (p. 155); moreover, Tuzet says that both loveliest and likeliest variations of IBE are versions of qualitative induction (p. 181n16). But if this is so, abduction

is not IBE because this implies that abduction is qualitative induction, an idea Peirce held from 1881 (the writings which lead to “A Theory of Probable Inference,” P268b, 1883) to 1896 (R 766), but from which he retracted later on; for instance, in his *Cambridge Conferences* of 1898 (RLT: 141), and in many other places (L75, NEM4: 38; 1901–1902; R 315:25–26; HL: 282, 1903; CP 8.234, 1910).

Now, even if the previous critical remarks were true or fair, Giovanni Tuzet’s book remains an enjoyable, very readable, and highly recommendable book to anyone interested in Peirce, and, particularly, in Peirce’s abduction. The book abounds with clear references to Peirce’s work and picks up the best accounts of Peirce scholars on the subject, and, as should be expected from a good work, Tuzet’s book puts forward innovative and provocative ideas from which the reviewer has been able to sketch only a few.

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