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Article

Labeling, Branding or Reality?
The French Invention of "Historical Epistemology" in 1907

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Abstract:

The article discusses the creation of the expression and idea of historical epistemology. It problematized the context of the rise of what would be historical epistemology and who would have been the pioneer author in the introduction of the expression, traditionally considered as resulting from Dominique Lecourt's book, *L'Épistémologie historique de Gaston Bachelard* (1969). The possible options for affiliating the idea of historical epistemology are explored, and the pertinence of attributing the invention of the neologism to Lecourt or lesser-known names is reassessed. Finally, the French philosopher and historian of science Abel Rey is proposed as a precursor to the use of the expression and the idea of historical epistemology. In his doctoral thesis, Rey explored this expression when reflecting on the history and philosophy of science. In effect, pioneeringly, Rey presented a proposal for historical epistemology almost seventy years before what is conventionally accepted as the beginning of this approach.

Keywords: Historical epistemology; Abel Rey; Historiography of Science; Epistemology

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Introduction

In recent years there have been plenty of conferences dedicated to historical epistemology. In the last two years alone, three conferences on this topic have met in Berlin, Columbia and Leuven. The first conference dedicated to historical epistemology was organized by Ian Hacking in Montreal in 1993. This wealth of conferences has prompted some to think that such a craze is a mere fad: historical epistemology would only be a useless label "naming without necessity," according to Gingras (2010), or even a brand that would only serve an advertising purpose: that of justifying the applications for funding of a particular institution. In other words, all the fuss about historical epistemology would merely amount to creating a market from nothing. However, anybody working in the advertising business knows very well that it is impossible to create a market from nothing: nothing can be sold if it does not answer a certain need, albeit more or less vaguely felt.

In fact, it seems that there exists today, as the title of this article suggests, a real necessity to bring epistemology and history closer together. If we have chosen as a title for

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our conference *History and Epistemology: From Bachelard and Canguilhem to Today's History of Science*,[2] it is indeed because we did not want to stick to the current meaning of historical epistemology. We hope that one of the original features of this conference will be that it will also be interested in the long-term history of the concept of historical epistemology. It indeed seems to me that the least that an epistemology which boasts to be historical can do is to look into the historical conditions of its own production. We will not content ourselves with asking what historical epistemology is or what it is worth; we will also wonder what its history has been. In that sense, we merely pay tribute to Hans-Jörg Rheinberger and carry on the work of the one who had been able, most notably in his book *Historische Epistemologie*, to look into this one-hundred-year long history of "historicizing epistemology".

It is also for that reason that our conference has chosen to go back to the French origins of that historical epistemology. Like Hacking, Rheinberger has always kept in mind the French setting in which the first invention of historical epistemology took place. Our conference on historical epistemology is indeed one of the few to welcome such an important number of French attendees, and I would like to take advantage of the opportunity given to me here to thank my co-organizers for granting something like political asylum to an historical epistemology which probably is no longer welcome, for all sorts of reasons that we will certainly have the chance to discuss, in the country where it was born.

A Marxist Oriented Invention?

The history of the term historical epistemology is apparently well-known today. If one sticks to the received view, the locution was invented by Dominique Lecourt in his work *L'Épistémologie historique de Gaston Bachelard*, first published in 1969. Lecourt would later credit Canguilhem, who supervised and wrote a preface to this piece of research, with this invention: "since I am told that this point of lexicological history has been raised, I must say that I owe the locution 'historical epistemology', which referred to Gaston Bachelard's philosophy of science (in my master's thesis of 1969 which bore that title), to Canguilhem" (Lecourt 2007, 30). However, as it has been quoted somewhere else, Canguilhem would have preferred the expression "epistemological history" to that of "historical epistemology" (Gayon 2003, 53). By way of this difference in emphasis, Canguilhem probably indicates where the major difference lies between his own work and Bachelard's.

As some commentators have noted, following Dominique Lecourt the expression "historical epistemology" was also used in a Marxist-oriented context by Marx Wartofsky in 1973: "a few years later, I discovered that the same (expression) had been used in English, completely independently, by Marx Wartofsky, one of the two founders of the *Boston Studies in the Philosophy of Science*, to describe his own Marxist-leaning methodology in the history of science" (Lecourt 2007, 30). Yves Gingras has also remarked that Polish logician Jerzy Kmita had published his *Problems in historical epistemology* in Polish in 1980 (the English translation is from 1988), which was also Marxist in inspiration. Accordingly, for Gingras the expression "historical epistemology" would have appeared in a Marxist–oriented context and would have been constructed using the model of the expression "historical materialism" (Gingras 2010). I do not find this hypothesis convincing, at least in the French context. The two expressions are not homothetic since one refers to a discipline, epistemology, while the other refers to a philosophical doctrine, materialism. The French writers of the 1970s, who, even though they were Marxists, were far from being true fans of historical materialism, do not seem to have made the connection.

On the other hand, however, I do think that such a historical survey might nonetheless

[2] This article is based on a lecture held in this conference at the Max-Planck Institute for the History of Science, Berlin, in July 2012.

be relevant for the lessons that can be drawn from it. But it will have us go back way further. It indeed turns out that the expression "historical epistemology" did not emerge in the Marxist-oriented context of the 1970s but almost seventy years earlier – used by a writer who was no Marxist, even though Lenin read him carefully. The dating of the appearance of the expression "historical epistemology" is no mere anecdotal curiosity: it also allows a better grasp of the philosophical intentions of those who created this phrase that is so discussed today.

An Old Expression for an Old Style of Thinking

I have realized that the expression "historical epistemology" first appeared in the writings of an author who was a great coiner of neologisms in philosophy and history of science and who was also the founder, in 1932, of the *Institut d'histoire des sciences et des techniques* of the *Université de Paris*, an institution to which many of us have been affiliated and of which I was still a member until recently. I am talking about Abel Rey (1873-1940), who as I have noted, described his own work, many years before Foucault, as "archaeology of scientific ideas" (Rey 1930, 384). This writer is mostly forgotten, but as is often the case with minor figures, he articulated ideas in a very clear way that would later be taken up and developed in a more complex fashion by more original and important writers – in this instance, Bachelard and Canguilhem.

It turns out that Abel Rey had used the expression "historical epistemology" as early as 1907 to describe his own work in his PhD thesis *La théorie de la physique chez les physiciens contemporains.* In his introduction to the book, he offered to build, alongside formal logic, a different kind of logic based on the history of science and, more specifically, on what he called "a history of the conceptions and institutions of scientists with respect to methods, where science is advanced enough for its methods to spark off fruitful investigations" (Rey 1907, 13). Abel Rey notes that philosophy, especially "American philosophy", calls "these transcendent investigations on the general principles and conditions of the sciences" *epistemology* but he adds so as to mark his difference, that

> this word, restricted to a positive meaning, might happily refer to the research of documents, the set of historical observations required for the establishment of an exact view of the different sciences, a positive science of the sciences. Historical research bearing on the general spirit of each science would then constitute one of the great sections of this *historical epistemology*. (Rey 1907, 13)

The philosophy of the sciences could only be historical. It is to this kind of investigation that he intended to contribute. "What I primarily intend to do here," he wrote, "is precisely to contribute to these historical investigations bearing on the scientific spirit" (Rey 1907, 13). This historical approach to the philosophy of the sciences went hand in hand with a determined hostility toward any theory of knowledge. In the first issue of *Thalès*, the periodical published by the *Institut d'histoire des sciences*, Rey introduced the following agenda, which sounds quite Canguilhemian: "The theory of knowledge, without a philosophical history of science, is only a vague ideology or a verbal dialectics" (Rey 1934-1935a, xviii).

Moreover, and that is a second basic point made in the introduction to *La théorie de la physique*, if one is to practice the history of the sciences, one should never "lose sight of the methodological goal to which this history contributes" (Rey 1907, 13): the history of the sciences always remains a history with a "philosophical" purpose. Elsewhere, still in the first issue of the periodical *Thalès*, Rey explains that "the history of the sciences is no mere work of erudition." It introduces "a crucial component of the history of civilization," which is not

only "material" but also "intellectual", and even "spiritual" (Rey 1934-1935b, p. v). Here, one deals with a "philosophical history of the sciences," which Rey also describes, following Tannery and, above all, Comte, as a "general history of the sciences." One of the volumes of his *Science grecque* is dedicated to the memory of Paul Tannery, who "reformed the history of the sciences by treating it as a true historian should, by linking it, as Auguste Comte already intended it, to the history of ideas and the history of human thought" (Rey 1933, 1). This general history of the sciences, as "Comte properly saw it, [...] is either philosophical or it does not exist" (Rey 1935-1936, 34).

Thirdly Rey, in *La Théorie de la physique*, emphasizes that such a philosophical history of the sciences results in the complete transformation of our conception of truth, which would no longer conform to the traditional, motionless idea of truth, but which would not disappear either: truth "would be *the becoming* of an evolution; but it would exist, since it would constantly realize and complete itself" (Rey 1907, 396). He continues: "The history of science, continuing the psychological history of perception and conception, would be the history of the acquisition of that truth, the human and necessary outcome of a human and necessary evolution, within the limits of human nature" (Rey 1907, 396). That history would enable one to establish a new conception of truth which Rey describes in very Bachelardian terms as a "new rationalism" and which he holds to be part and parcel of the tradition of the "philosophical spirit" of "Comtean positivism" (Rey 1907, 396, 392). Elsewhere Rey notes that this new rationalism "in no way excludes a psychological history of reason" (Rey 1921, 91).

Eventually, and that is the last important point made in the introduction to *La Théorie de la physique*, Abel Rey explains in what lies the crucial "present interest" of such a research. The critics of "traditional mechanism" wanted to take advantage of the "crisis of contemporary physics" to proclaim the "failure of science", of "reason" and of the "positive spirit" and to revert to a "mystical intuition", to a "mystical sense of reality", to "mystery" (Rey 1907, 19). According to Abel Rey, it is, therefore, clear that "this work is not merely theoretical, for it can also answer serious and current concerns" (Rey 1907, 20). It might help in the fight of the Enlightenment against mysticism and Rey would keep on emphasizing the "humanistic" dimension of the history of science and the "*humanism* conveyed by the positive sciences" (Rey 1934-1935, v). For Rey, as it would also be the case for Canguilhem later, the history of science is always, in a certain sense, a political history of the sciences.

It would be possible to draw other comparisons between Abel Rey and, on the one hand, his primary inspiration, Auguste Comte, and on the other hand, such followers of his as Bachelard and Canguilhem, but also in some ways, Michel Foucault and contemporary German-American historical epistemology.

Rey also maintains that science is the result of a choice between different possibilities and that truth is a "value" among others: "truth is a value, just as the Beautiful and the Good; the search for truth, which is what both Science and Philosophy are after, is the pursuit of a value" (Rey 1936, 3). In that respect, Rey anticipated Canguilhem's most iconoclastic claims when the latter explained that saying that there is no other knowledge than scientific knowledge "does not amount to saying that there are no other goals or values for the human mind except truth" (Canguilhem 1993, 22). Curiously enough, both in Rey and Canguilhem, beyond Max Weber's "polytheism of values" one finds the same reference to Nietzsche lurking in the background. Canguilhem's theory of the "axiological bias for truth" refers to Nietzsche, for whom "truth is a value that is to be situated among a plurality of values" and certainly "not the only value man may devote himself to." (Canguilhem 1971, 177). References to Nietzsche are also significant in Rey, who considers "Eternal return" to be "one of the basic guiding ideas of our science" and regards Nietzsche as some sort of a scientific philosopher – pointing out that Nietzsche "in 1881, by way of a brilliant intuition, an intuition originating in one of the greatest philosophical geniuses of our human history, intended to devote ten years of his life to studying the natural sciences so as to be able to base his idea

of eternal return on atomic theory" (Rey 1927, 308-309). And when Rey represents the history of humanity as a "sinusoidal curve" or as a "cyclical fate" joining Apollo with Dionysos, it is also to Nietzsche that he refers (Rey 1939, 554, 556).

Four Features of French Epistemology

The four characteristic features of what Rey calls "historical epistemology" seem to be widely shared by most of the representatives of what I would like to call the "French style" in the philosophy of science – originating with the one who invented it in the middle of the 19th century, Auguste Comte, and extending at least as far as Michel Foucault. Accordingly, at least in France, historical epistemology is no recent trend that is bound to disappear. Its discrete but insistent presence in Abel Rey's work testifies to this fact. Let me summarize these four features of French epistemology.

1) French epistemology always consists of an *a posteriori* reflection on the sciences. One may wonder how this epistemology may succeed in being more than an ill-informed repetition of science. In fact, it is its historical approach that enables French epistemology not to merely repeat the sciences: the philosophy of the sciences "à la française" is always a history of the sciences. Canguilhem states this relationship very clearly *à la manière d'*Abel Rey: "Without a reference to epistemology, the theory of knowledge would be an empty meditation; without a relation to the history of the sciences, epistemology would amount to a completely superfluous doublet of the science it is supposed to discuss" (Canguilhem 1994, 11-12).

The relationship between philosophy and the sciences can be fruitful only if it rests on the history of the sciences. French epistemology expects to find answers to some traditional philosophical problems, such as the problem of scientific objectivity or the question of truth and especially error, within the history of the sciences. Accordingly, but quite paradoxically, Canguilhem maintains that historicity constitutes a genuine criterion of demarcation between what is and is not scientific. The proof of the scientific nature of a discipline lies in its historical dimension: "A science deprived of history, that is a science within which the rejection of some conditions of objectivity at a given moment and their replacement by other conditions of objectivity more objectively defined had not taken place, such a science is not a science" (Canguilhem 1970, 235). Historicity is what distinguishes "true sciences" from "false sciences," such as astrology, whose proper feature is to have no history.

2) However, this history of the sciences is not a history in the classical sense of the word: it claims to be a "critical" or "philosophical" history and differs from traditional history in two main respects. On the one hand, this history does judge and value what it studies. "To the model of the laboratory," claims Canguilhem, "one can oppose, in order to understand the function and meaning of the history of the sciences, the model of the school or the model of a court of justice, that is of an institution, and a place where judgments are passed on the knowledge of the past" (Canguilhem 1994, 13). On the other hand, it is a history that judges by way of recurrence, that judges the past in the light of the present.

3) Thirdly, the epistemology developed by these authors leads them to address the question of the development of reason, which is grasped only through the development of the sciences. A consequence of this view is that the different forms of reason are said to be dependent on historical or "geographical" conditions. Bachelard explains that since "reason must obey science" the former must follow the "dialectics" of the latter: "the traditional doctrine of an absolute and immutable reason," claims Bachelard, "is only a philosophy. It is an outdated philosophy" (Bachelard, 1983, 145). The new rationalism or "arch-rationalism"

("*surrationalisme*") advocated by Bachelard, after Abel Rey, is a perpetual conquest.

Foucault also keeps in mind the Bachelardian and Canguilhemian lesson regarding the historicity of rationality and acknowledges the fact that he has benefited from Bachelard's idea that "reason works on itself at the very moment it constitutes its objects of analysis" (Foucault 1994, 56). What is at stake here is the constitution of "a form of rationality that is presented as prevailing and to which the status of the reason is granted so as to make it appear as one of the possible forms of rationality at work" (Foucault 1983, IV, 56). Foucault refuses "the blackmail that has very often been directed at any critique of reason or critical questioning concerning the history of rationality," and he holds that it is possible to write "a contingent history of rationality" just as it is possible to attempt a "rational critique of rationality" (Foucault 1983, IV, 56). If Foucault refers several times to Kant's text *What is the Enlightenment?,* for example, in his introduction to the English edition of *The normal and the pathological*, it is because he reads it as the first attempt to "question the history and geography of reason, to question its immediate past and the conditions of its working, to question its moment, its location, and its actuality" (Foucault 1985, 5). Rationality, notwithstanding its claim to universality, adopts historically determined forms.

4) Fourthly, and finally, the history of science is always linked to political goals, broadly construed, either in Comte, where going through the whole history of the sciences only aims at the establishment of sociology, the science that would enable the reorganization of society, or in Canguilhem, with the demonstration that the deterministic conception of the "milieu" is not scientifically valid, which he already judged to be unfair in his early polemical writings against Taine et Barrès, as he would also argue in his later paper "Le vivant et son milieu" (Braunstein 2007). But it is also true of Foucault. When he contrasts a "philosophy of experience, of meaning, of the subject," that of Sartre and Merleau-Ponty, with a "philosophy of knowledge, rationality and concept," that of Cavaillès, Bachelard and Canguilhem, which he endorses, it should not be forgotten that the remainder of his text echoes remarks made by Canguilhem on the occasion of various tributes to the memory of Jean Cavaillès: "Outwardly, the latter has remained the most theoretical, the most circumscribed to speculative tasks, the most remote from current political concerns of the two. Yet during the war, it was that philosophy that took part, very directly, in the fight, just as if the question of the foundation of rationality could not be separated from the question of its present conditions of existence. This philosophy also played a crucial role in the 'sixties when a crisis emerged that was not only that of the University but that of the status and role of knowledge itself. One can then wonder why such a reflection, whilst following its own logic, ended up being linked so deeply to the present" (Foucault, 1985, 4). Historical epistemology has always been a "history of the present."

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If one does not take into account French parochialism – which always results in having the French discovering Anglo-Saxon philosophies with the time-lag of a generation – there is no doubt that the obviousness of the four features, I have pointed out, explains why French epistemology did not in recent years manifest the same amount of interest exhibited by the learned community for the issues raised by the new "historical epistemology." Let us hope that this article might contribute to the awakening of such an interest.

Conclusion

This article aimed to denaturalize the pioneering of the creation of the idea of historical epistemology mistakenly projected by the specialized bibliography, to a greater extent, on the figure of the French philosopher Dominique Lecourt (1969) and, to a lesser extent, on

other authors such as the American historian Marx Wartofsky (1973) and the Polish logician Jerzy Kmita (1980). However, the historical epistemological expression and a reflection on its importance were first located in the work of the French philosopher and historian of science, Abel Rey. More than mapping the expression presented by this author, the paper traced his philosophical purposes in using the concept. Furthermore, considering Rey as the inventor of the idea of historical epistemology allows us to perceive important repercussions in the works of Bachelard and Canguilhem. Finally, it is concluded that it is up to philosophers and historians of science to invest in continuing the vital process of historicizing epistemology as a mechanism to harness the full potential of the alliance established between philosophy and history in studies dedicated to the development of the sciences.

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