Rethinking the 'Confrontation Model': on the Philosophical Presuppositions of the Project of Integrating History and Philosophy of Science

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In this paper I am concerned with the relation between the history of science and the philosophy of science from the perspective of philosophy. The ambition of this paper is to show that the historical study is an essential dimension of a sophisticated philosophical account of science.

The debate on the relation between the history of science and the philosophy of science took various forms since the 70's. However, the idea that pursuing HPS entails the confrontation of philosophical accounts of science with historical data ('confrontation model') is persistent during all these years (Schickore 2011: 456). In short, there is a consensus, among many of the HPS scholars, that at least one way to achieve the integration between the history and the philosophy of science is to show that the historical case studies could lead to the refinement of the philosophical accounts of science.

The aspiration of this paper is to discuss and reject two major philosophical objections that have been repeatedly raised against the 'confrontation model': a) the old Humean is/ought problem, the conviction that norms cannot be derived from facts (Giere 1973) and b) the so-called 'dilemma of case studies' (Pitt 2001), on which historical case studies cannot serve as empirical data for the confirmation or refutation of the philosophical accounts.

According to many HPS scholars (Giere 1973; Burian 1977; Kulka 1977; Moulines 1983; Paller 1986; Pinnick & Gale 2000; Shapin & Schaffer 2011) the essential difference between the history and the philosophy of science is that the former is an empirical or descriptive enterprise while the latter is a normative or prescriptive endeavor. Given this conception and given the Humean conviction that there is an unbridgeable philosophical gap between norms and facts, we are left with only two coherent philosophical options. The first is often identified with 'historicism' (McMullin 1974, Kuukkanen 2016) and rejects the idea that there exist invariant rational patterns that characterize science. The second is identified with 'logicism' (McMullin 1974) and defends the idea that philosophy can detect the immutable rational principles that underlie and determine the scientific progress.

Historicism is a version of 'restrictive naturalism' (McDowell 2009) and in its radical version it takes normative judgements as eliminable through their reduction to empirical descriptions. Logicism, on the other hand, puts normative standards outside the scope of the empirical study and is, in this sense, a version of supernaturalism. It is often claimed (Burian & Steinle 2002, Arabatzis & Schickore 2012), even if not in these terms, that the ongoing divergence between the history and the philosophy of science is due to the fact that the historians follow the path of historicism and philosophers the path of logicism. In the first part of the paper, I suggest that neither radical historicism (eliminative naturalism) nor radical logicism (supernaturalist normativism) can sustain a proper version of the 'confrontation model'. In the framework of eliminative naturalism, the normative realm is reducible to the empirical descriptions of the history (or every other empirical discipline) of science. There is no logical room for the autonomy of the philosophy and therefore there is no room for its relation to history. The 'confrontation model' is not sustainable as a model for the relation between the history and the philosophy of science, simply because one side of the relation (philosophy) has been collapsed to the other (history). But also in the framework of supernaturalist normativism, the 'confrontation model' is not sustainable, since the historical studies of the actual scientific development are simply irrelevant to the normative standards

proposed by the philosophers. Despite their differences, logicism and historicism share the premise that there can be only one kind of naturalist approach to scientific evolution: the restrictive version which identifies the realm of nature with the subject matter of the empirical sciences. Based on this shared premise they end up taking opposite directions: historicism equates philosophy with the various empirical disciplines and discards the genuineness of its normative content while logicism makes empirical research irrelevant to the normative judgements in order to save the autonomy of philosophy.

I argue that a proper understanding of the 'confrontation model' requires the rejection of both historicism and logicism in a philosophically coherent way. This entails two fundamental commitments: a) that the rejection of the abovementioned shared premise creates logical room between eliminative naturalism and supernaturalism. The room can be occupied by 'liberal naturalism' (Macarthur & DeCaro 2010: 9) which proposes that the realm of nature is not exhaustively identified with the subject matter of the empirical sciences b) that the normative/descriptive dichotomy does not reflect the difference between the history and the philosophy of science. On the contrary, the dichotomy can be drawn only from within the two disciplines. These commitments can secure the autonomy of both the history and the philosophy of science which is a precondition for their interrelation. They can also create the appropriate philosophical framework for the understanding of the historical study as relevant and informative to the philosophical accounts of science.

But how can the historical study inform the philosophical conceptualization of science? Here the second objection becomes relevant. According to the 'case study dilemma', the 'confrontation model' faces either the charge that 'the historical evidence may have been manipulated to fit the philosophical point […or…] the problem that one cannot generalize from an isolated case' (Kinzel 2015: 54). In the second part of the paper, I focus on this dilemma and particularly on its first horn in order to suggest that it is misleading. I argue that the risk of manipulation does not exclude the possibility of counter-examples against the philosophical accounts of science. This very possibility can secure the relevance of the historical episodes to the process of the sophistication of the philosophy of science.

Finally, I suggest that 'liberal naturalism' and the rejection of the skeptical 'case study dilemma' are the necessary preconditions for sustaining the 'cyclical' or 'iteration' model (Chang 2011; Scholl & Räz 2016; Hoyningen-Huene 2012) in the relation between the history and the philosophy of science.

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