

Friday, June 25 PM 1:30-4:30, Room 140

Session 2 (room 140): **Popper and Lakatos**

Stefania Jha, “Popper transcended – the Lakatos – Polanyi connection”

Stefano Gattei, “Karl Popper’s Philosophical Breakthrough”

William M. Shields: Popper's Quantum Ghost

Yuann, Jeu-Jenq, “Lakatos, A Methodologist of Research Programmes or A Philosopher of Political Practices?”

“Popper transcended – the Lakatos – Polanyi connection”

Stefania Jha

Popper opposed Lakatos’s several attempts to improve his doctrines instead of promoting Popperism. Lakatos saw that Popper’s formulation of the logic of scientific discovery and the logic of research, although had the merit of simplicity, was not based on fact. No significant scientific discovery in history was made by Popper’s method.

The Popper, Lakatos and Polanyi archives give insight into Lakatos’s relationship with Popper and into his theoretical growth – from ‘loyal pupil’ to excommunicated heretic. Popper excommunicated him for criticism, independence and seeing merit in the theories of Popper’s ‘enemies’, Polanyi, Kuhn, and other excommunicated pupils.

Lakatos’s analytical mind saw at an early stage, that Popper’s conjectures and refutations formula and his notion of demarcation needed major revision in the general direction Polanyi has pointed out. After Popper’s retirement from the London School of Economics, Lakatos invited Polanyi to give the paper “Genius in Science” summarizing his philosophy of science.

Polanyi holds that scientists do not set out to refute their first guesses for an explanation of a phenomenon. Hypotheses are not abandoned at the first disconfirming test. Scientists are not mainly interested in demarcating ‘metaphysics’ from ‘science,’ rather, in distinguishing between good science and bad. This line is drawn by the community of practice. All scientific understanding has metaphysical and psychological underpinnings, even if undeclared. Personal judgment is involved in recognizing a coherence in nature, a good problem, in choosing the best process to investigate a particular problem (heuristics), and in sensing the implications of a solution. Rationality in science is not formal deductive logic, in spite of Popper’s method of testing conjectures.

Lakatos recognized that Popper’s campaign against inductivism notwithstanding, something other than deductive logic is used in scientific work. Polanyi’s ‘personal knowledge philosophy’ offered a rather complex structure which included a version of Peirce’s notion of retroduction.

In his last papers, Lakatos not only noted that inductivism plays a part in the scientific game, that theories are not rejected at the first negative result but often are adjusted by auxiliary hypotheses, and that judgment in choice of methodologies is a combination of methodological appraisal and heuristic advice.

As he noted in one of his letters to Polanyi, Popperites have much to learn from Polanyi (a practicing scientist capable of analyzing his own scientific thinking and activities).

Although Lakatos is often thought of as basically a follower of Popper who adapted his former Hegelian-Marxist intellectual framework to Popper's philosophy, this interpretation seems to me deterministic. It is more likely, that his preoccupation was with methods of thinking (heuristics), as would be indicated by his use of Polya's explorations in his dissertation (later reworked into *Proofs and Refutations*), by his correspondence with Kuhn, Feyerabend and his readings of Polanyi on this topic. His 1973 lectures given at the London School of Economics would indicate he gained his independence from Popper and opened up his investigations further by taking Polanyi's philosophy into consideration.
(stefania1@jha.net)

“Karl Popper’s Philosophical Breakthrough” Stefano Gattei

Karl Popper's critical rationalism is well-known for its strict deductivism: as the author of *The Logic of Scientific Discovery* and of many later works clearly states, not only science does not proceed by inductive inferences, but also there simply is no such logical entity as an inductive inference.

However, the young Popper thought quite differently. Indeed, if we read his early (unpublished) writings, and particularly Popper's 1927 thesis, “*Gewonheit*” und “*Gesetzeserlebnis*” in der *Erziehung*, we see that he clearly held an inductivist position. Contrary to Freud's, Adler's and others' psychological theories, which often go beyond what is factually verifiable and impose on empirical facts, he argued, natural science theories only abstract from empirical data, never asserting something beyond the facts.

In his later reconstructions of the development of his own thought, Popper seemed determined to remove any traces of this early inductivism. However, contrary to what he later urged us to believe, he did not arrive at his criticism of induction in the years between 1926 and 1928, nor did he formulate his famous criterion of demarcation. Moreover, instead of being involved in abstract epistemological and methodological problems, in those years Popper was actually attempting to find his way in the different fields of psychology. Viewing science as an adventurous revolutionary project, an “unneeded quest” for ever growing but never certain knowledge, Popper undertook an autobiography in which a sort of rationality of scientific revolutions dominates the narrative, concealing the plurality of directions in which his thought developed, the diverse options, the intellectual impasses, and the decisive turning points.

However, I think we do not have to look for a sort of continuity between Popper's early writings and his published works. Instead, I think we should look for a break and inquire the *reasons* for that break. Such a break, I suggest, dates to his third thesis, *Axiome, Definitionen und Postulate der Geometrie*, completed in 1929: up to this year epistemology entered Popper's reflections as far as the problem is that of the justification of the scientific character of these fields of research. But in 1929 Popper explicitly

discussed the cognitive status of geometry without referring to psycho-pedagogical aspects, thus turning from cognitive psychology to the logic and methodology of science. Applied geometry sets the context for Popper's discussion of scientific rationality. In the following years, he will be applying the hypothetico-deductive model to all natural sciences.

stefano.gattei@tiscali.it

Popper's Quantum Ghost
“William M. Shields”

-insert abstract here—

“Lakatos, A Methodologist of Research Programmes or a Philosopher of Political Practices?”

Yuann, Jeu-Jenq

In the field of philosophy of science, I. Lakatos is first of all considered a philosopher of scientific research programmes. Recent researches demonstrate that an essential part of what Lakatos has achieved in his LSE period reflects the influences he received before settling in England. These researches have their origin consisting in I. Hacking's paper on Lakatos' philosophy of science. According to Hacking, Lakatos' papers published during the period of LSE time would not constitute a coherent picture unless the Hungarian conception of the events of modern philosophy is incorporated into the attempt of a complete understanding of Lakatos. The 'incoherence' refers to the fact that the methodology of scientific research programmes as a 'synthesis' of Popper and Kuhn's philosophy of science is insufficient to vindicate the image that science is an enterprise of objective rationality and of constant growth. While Lakatos expresses explicitly that the image is crucial to any inquiry of science, it is not convincing unless something more is added. This paper intends to demonstrate this needed part by an application of Lakatos' distinction between 'internal history' and 'external history' explicated in his rational construction of the history of science. We attempt to manifest that the ideas Lakatos gained from the Hungary political practices are not 'external' and hence have to be 'internalized' in the philosophical development of his ideas. Once the 'internalization' is carried out, we will be better situated to fully comprehend the profound meaning of Lakatos' philosophy of science.

jjyuann@mail.thu.edu.tw