

I. Lakatos, a Methodologist of Research Programmes or a Philosopher of Political Practices?

Jeu-Jenq Yuann

Department of Philosophy, National Taiwan University

Abstract

In the field of philosophy of science, I. Lakatos is first of all considered a methodologist of scientific research programmes. Lakatos' methodology (abbreviated in this paper, MSRP) not only supersedes that of Popper's falsificationism, but also incorporates the essential part of T. Kuhn's historical approach, i.e., scientific practices into its formation. Theoretically speaking, it is rather common to portray Lakatos' philosophy as a modified combination of Popper and Kuhn. However, due to its rationalistic image implanted from Popper's critical rationalism, this combination has been severely criticized by P. Feyerabend for lacking consistency. Feyerabend's criticism let alone being successful or not, points out the following question: why would Lakatos insist on a rationalistic position even without a persuasive argument to defend it? The answer to this question is likely to be one which has something to do with Lakatos' personal conviction linking with his academic background back to the time before his settlement in England. Indeed, there are researches demonstrating that what Lakatos did before exiling to England was secretly incorporated into his philosophy in general and MSRP in particular. Among these researches, I. Hacking's paper on Lakatos' philosophy of science holds a role of crucial importance. According to Hacking, other than the English part,

Lakatos' philosophy contains a Hegelian part. Hacking vindicates that the dialectical development of theory and practice prevailing in Hungary dominates much of Lakatos' ideas consisting in MSRP. While noticing this role of the dialectical method in Lakatos' philosophy, we also retain the role of critical rationality long exercised by Lakatos and fortified by his acquaintance of Popper. We hence put forward an argument sustaining the combination of the dialectic method and the critical rationality in Lakatos' MSRP. The combination holds all things dynamically and thus demonstrates the rational construction of the history of science. The demonstration is therefore not merely a matter of Lakatos' personal conviction, but also an outcome of scientific progress established on the unity of theoretical and practical rationality.

Keywords: I. Lakatos, K. Popper, T. Kuhn, P. Feyerabend, I. Hacking, Methodology of Scientific Research Programmes

I. Introduction*

In the field of philosophy of science, I. Lakatos is first of all considered a methodologist of scientific research programmes. Throughout the years, there have been many researches contributing to the study of Lakatos' methodology. Among these, two distinct approaches have gradually emerged. One stresses the application of Lakatos' ideas, the other, the origin of them. The first approach which is somehow pragmatic, results in studies trying to apply Lakatos' methodology of scientific research programmes (MSRP) to divergent fields.¹ The second approach which is keen to be historical in nature, attempts to detect the development of Lakatos' ideas as related to the Hegelian approach of the dialectical unity of theory and practice.² The first approach which

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¹ An example of this is *Imre Lakatos and Theories of Scientific Change*, K. Gavroglu, Y. Gouderoulis & P. Nicolacopoulos eds. (Dordrecht: Kluwer, 1989). Besides, MSRP refers to I. Lakatos' paper "Methodology of the Scientific Research Programmes", in *Criticism and the Growth of Knowledge* (Cambridge: Cambridge, 1970), pp. 91-196. Underneath whenever referred to, the paper is abbreviated as MSRP with the page number after a colon.

² In this approach, the major representations are: B. Larvor, *Lakatos, An Introduction* (London: Routledge, 1998) and J. Kadvan, *Imre Lakatos and the Guise of Reason* (Duram, NC: Duke University Press, 2001). For the detail and criticism of both books, the readers can see: J. Wettersten, "Searching for the Holy in the Ascent of Imre Lakatos", *Philosophy of the Social Sciences*, Vol 34: pp. 84-150.

started earlier, presumes to some extent the superiority of MSRP over other methodologies. The latter approach which tries to look at Lakatos' philosophy by taking into account his Hungarian background manifests its significance beyond the realm of historical interest. Though the apparent distinction of these two approaches is rather clear, it is not my purpose to make a comparison between them; nor would I intend to say that they have equal weight in the Lakatosian research. I merely intend to convey the image that an essential part of what Lakatos has achieved during his London School of Economics (LSE) period reflects the influences from the period before his settlement in England (before 1956). With this image in mind, I gain the advantage of examining Lakatos' philosophy from a broader context. Rather than looking at MSRP as another methodology, we incorporate it into a long tradition of critical rationality. In other words, I will try to present Lakatos by taking into account another picture so the presentation of his ideas would be more complete and substantial. In what follows, I am going to deal with: 1) an example which reiterates that Lakatos' methodology supersedes that of Popper's; 2) an examination of the fact that Lakatos' philosophy can be simplified as a 'synthesis' of Kuhn and Popper's philosophies; 3) an analysis of Feyerabend's criticism of Lakatos; 4) an exposition of I. Hacking's paper on Lakatos' philosophy of science; 5) a consideration of Lakatos' Hungarian academic background in critical rationality; 6) an exploration of the significance of Lakatos' political practices in his methodology. Through these sections, I want to show that a more coherent view of Lakatos' philosophy can be accomplished by extending the scope of our understanding to include some of his biographical remarks³.

³ It might be better to remind the readers right in the beginning of the main arguments to notice that while taking ideas substantially from the secondary sources in this study, the author presumes that the readers are familiar with the original ideas to which these secondary sources refer.

II. Lakatos' Methodology Superseding Popper's Methodology

There is no doubt about the fact that though the disagreement was more than obvious later on, Lakatos is a Popperian⁴. This was true not only of his theory and his methodology, but also of his style and his concerns. This is the view held by the leading Lakatosian, J. Worrall, his former Ph. D. student. Worrall explicitly says: "I regard the methodology of scientific research programmes as the result of a 'creative shift' within Popper's own philosophical research programme."⁵ Moreover, Worrall thinks that there is a possibility making comparison among different methodologies. First, he holds that Popper's methodology of corroboration improves on the earlier atemporal theories of confirmation by taking the 'temporal and historical elements' into account. Nevertheless, Popper's methodology is superseded by Lakatos' MSRP on Popper's failure "to capture scientists' intuitions about empirical support."⁶ According to Worrall, MSRP is better than Popper's methodology because it deals better with the following two questions:

⁴ As Popper's philosophy is well known for its argumentative ability of critical rationality, being a 'Popperian' does in no way to exclude being a polemic to this very philosophy. However, Lakatos admitted rather unreservedly his gratefulness to Popper: "Personally, my debt to him is immensurable: more than anyone else, he changed my life. I was nearly forty when I got into the magnetic field of his intellect. His philosophy helped me to make a final break with the Hegelian outlook which I had held for twenty years (like revelations acting upon weak minds)." See I. Lakatos, "Popper and Demarcation and Induction", in *The Methodology of Scientific Research Programmes* (Cambridge: Cambridge University Press, 1978), p. 139n. The final sentence is very relevant to this study because it portrays an image of how Lakatos proceeded from being a Hegelian of dialectic rationality to a Popperian of critical rationality.

⁵ J. Worrall, "The Ways in Which the Methodology of Scientific Research Programmes Improves on Popper's Methodology", in G. Radnitzky and G. Andersson (eds.), *Progress and Rationality in Science*, p. 65.

⁶ *Ibid.*, pp. 46-47.

“When does a fact support a theory?” and “When is one theory better supported by the facts than another?” We will proceed to look at Worrall’s argument, that Lakatos’ MSRP offers better answers to both questions.

Worrall bases his argument on J. Watkins’ exposition of Popper’s methodology.⁷ According to Watkins, Popper’s concept of corroboration seeks a high degree of corroboration by pursuing severe tests of the theory concerned. The degree of corroboration “depends in turn on the novelty of the tested prediction relative to background knowledge” (which means ‘known facts’, being taken as unproblematic in the testing of a particular theory).⁸ In other words, whatever facts being discovered independently of ‘background knowledge’ fulfill the requirement of ‘novelty’, otherwise using ‘known facts’ to test a theory would merely add repetitions of tests, not degrees of corroboration. In this respect, Worrall thinks that Lakatos’ MSRP is better in the sense that it does not exclude those facts which are known, but incorporates them into the construction of the theory.⁹ Where, then, stands Popper’s methodology of corroboration? Its proposed solution to the problem is ‘too coarse-grained’, according to Worrall, because Popper firmly supports the view that it is correct to see as unacceptable a theory incorporating known facts and being supported by them in turn. However, the real point is not whether the facts are known or not, but that either the facts are incorporated into the construction of the theory, or they are used to support the theory. Worrall reiterates: “This methodology (MSRP) embodies the simple rule that one can’t use the same fact twice: once in the construction of a theory and then again in its support.”¹⁰

⁷ J. Watkins, “The Popperian Approach to Scientific Knowledge”, in G. Radnitzky and G. Andersson (eds.), *Progress and Rationality in Science*, pp. 23-43.

⁸ *Ibid.*, p. 34.

⁹ Worrall says: “The reason behind this assessment is not simply that the facts about it were already known (including in the ‘background knowledge’) but that they were known *and used in the construction of the theory.*”, *Ibid.*, p. 48.

¹⁰ *Ibid.*, p. 48.

Theoreticians factually do feel free to use the earlier successes of their experimentalist colleagues and incorporate them into the construction of their theories. The feeling is precisely the way in which practical scientists arrive at “heuristic considerations which lead to the construction of a theory.”¹¹

Second, with regard to the question concerning the comparison among theories, Worrall applies the history of science to rebut Popper’s method of corroboration. He says: “When looked at in any detail, most cases in the history of science turn out to be ‘messy’.”¹² Throughout the history of science, all scientific theories, even the best ones like that of Newton’s, were inconsistent with acceptable experimental results, and the inconsistency remained so even until the theories concerned were replaced by their rivals. This historical fact immediately contradicts Popper’s theory of corroboration, which insists that any theory in conflict with accepted experimental results has to be refuted for being falsified. However, the same situation would receive a more flexible treatment in MSRP. In MSRP, two refuted theories may still be in competition because the standards to judge them refer not to their ultimate truth, but to their possibility of being supported by more facts. MSRP thus in practice presumes that theories are ‘true’ and their clashes are significant. The clashes are considered indications that some auxiliary assumptions or observational theories need to be replaced. In this way, “the ‘protective belt’ or auxiliary theories surrounding the ‘hard core’ theory will be articulated and modified.”¹³ A theory is considered better, if and only if it receives support from more facts. By this criterion, we will not know if the concerned theory is definitely true, but we will be able to judge in the long run, that a theory constantly receiving factual supports is very likely in its state of progress. Otherwise, it is in the state of degeneration.

¹¹ *Ibid.*, p. 51.

¹² *Ibid.*, p. 52.

¹³ *Ibid.*, p. 55.

In his answers to the questions concerning the factual support of a theory and the comparison among theories, Worrall stresses the point that MSRP “attempts to correct the Popperian theory of corroboration both over its characterization of the empirical support relation and over the conditions under which one theory is scientifically superior to another.”¹⁴ In brief, Worrall considers MSRP a better methodology on the historical grounds. Popper’s methodology fails because it does not correspond to historical facts. Incorporating known facts into the construction of theory is not only actual practice, but also within scientists’ freedom to do so. The strict application of clear-cut falsification between theories and experimental results never really happens, according to Worrall. If this is indeed the case, then would it be better if MSRP is interpreted in the way so that the real hero of ‘the historicist school of philosophy of science, namely, T. Kuhn is therefore taken into account?

III. Lakatos’ MSRP as a Combination of Popper and Kuhn

It is not uncommon to see MSRP in the first place portrayed as a combination of Popper and Kuhn. This is precisely what Larvor holds. The difference between Popper and Kuhn is more than obvious; they are in direct conflict essentially concerning the nature of science. To Popper, Kuhn’s ‘Structure of Scientific Revolutions’ is dangerous for holding that science proceeds through paradigms which are not so different from communities of un-critical puzzle-solvers. And for Kuhn, Popper’s position of critical rationalism has little relevance to the activities of real scientists. With the rigorous confrontation in sight, it is understandable to see Lakatos’ intention to combine them as expressed by Larvor:

¹⁴ *Ibid.*, p. 57.

On the one hand, Lakatos shared Popper's conviction that Kuhn's account of science is politically dangerous... On the other hand, Lakatos agreed with Kuhn that the rationalist accounts of science then available bore little relation to activities of real scientists. The only solution to this dilemma was to develop a theory of scientific method which was sufficiently subtle to cope with the detail of the actual history of science and yet sufficiently rationalistic to resist the political dangers presented by Kuhn.¹⁵

That is, what Lakatos really intends to achieve might not be merely a 'correction' of Popper's methodology, but a combination of 'Popper's rationalistic philosophy of science' and 'Kuhn's history of science'. Indeed, this is the case as the rift between Popper and Kuhn mainly shown by Popper's stress on the normative role of critical rationality, and Kuhn's adaptation of scientific practices as things of prime importance. This explains apparently why in his MSRP, Lakatos takes Popper and Kuhn's ideas as cores of discussion. One can even label Lakatos' MSRP as 'a sophisticated falsificationism with historical considerations'. In what follows, I will further uncover the meaning of this label by exclusively taking into account the differences between Popper and Kuhn.

First of all, Lakatos' terms, like 'Methodology of Scientific Research Programmes' and 'Naïve Falsificationism' are not his, but the terms of Popper and Kuhn's.¹⁶ We all know the crucial roles these two

¹⁵ B. Larvor, *Lakatos: An Introduction* (London: Routledge, 1998), pp. 45-46.

¹⁶ Kuhn says: "Though he is not a naïve falsificationist, Sir Karl may, I suggest, legitimately be treated as one." See T. Kuhn, "Logic of Discovery or Psychology of Research", in *Criticism and the Growth of Knowledge* (Cambridge: Cambridge University Press, 1970), p. 14. Popper says instead that: "I am using here the word 'paradigm' in a sense slightly different from Kuhn's usage: to indicate not a dominant theory, but rather a research programme - a mode of explanation which is considered so satisfactory by some scientists that they demand its general acceptance." In K. Popper, "Normal Science and Its Danger", in *op. cit.*, p. 55.

terms play in MSRP. On the one hand, Lakatos' employment of 'research programme' helps him to combine Kuhn's conception of 'paradigm' without falling into a unified and single mode of thinking. On the other hand, Lakatos' use of 'naïve falsificationism' helps him to hold a very simple-minded version of the idea of falsification and at the same time, stresses the fact that Popper's own position can be distinguished from this version by calling it 'sophisticated falsificationism'. Sophisticated falsificationism is different from the naïve one in emphasizing scientists' heuristic creation of an accumulation of novel facts. A research programme includes more novel facts than another implying that it is in the state of progress, rather than in a state of degeneration. Gradually, scientists will further affirm their adherence to a progressive research programme and give up a degenerating one. Through scientists' choice, the spirit of falsificationism remains.¹⁷

Second, Lakatos' MSRP carries out a modification of Popper's methodology. This has a great deal to do with Kuhn's criticism of Popper in line with his historical sketch. Kuhn thinks that Popper's falsificationism contains ideological elements which stress procedural maxims¹⁸. Falsification has to be carried out by testing scientific theories through empirical means, and whether a scientific statement has meaning or not, depends entirely on its empirical support. To Kuhn, if we accept such a principle, then most cases in the history of science will not be defined as science. Popper's falsificationism can apply to nothing but testing propositions such as 'all ravens are black' or 'all planets move in ellipses', etc. However, scientific statements are by no means represented by propositions of this kind. Science is a lot more complicated than a set of simplified propositions. In this situation,

¹⁷ Lakatos says: "I shall try to explain this stronger Popperian position which, I think, may escape Kuhn's structures and present scientific revolutions not as constituting religious conversion but rather as rational progress. In *op. cit.*, p. 93.

¹⁸ Kuhn says: "Rather than a logic, Sir Karl has provided an ideology; rather than methodological rules, he has supplied procedural maxims." See *ibid.*, p. 15.

Lakatos says: “‘*Irrefutability*’ would become a hallmark of science.”¹⁹ The reason is not difficult to understand. Lakatos knows very well that the empirical basis does not serve as a criterion demarcating science from non-science. But what would be the criterion then? According to Lakatos, if we have to take the history of science into full account, the conventionalist position of P. Duhem appears to get the upper hand. According to Duhem, there is no instant refutation of a theory, far from it. When a theory is under tests for empirical proofs, all that is really taking place in reality is ‘continual repairs, and many tangled-up stays’ till ‘the worm-eaten columns’ cannot support ‘the tottering building’ any longer. Even in the case when the theory loses its original simplicity and has to be replaced, the immanent falsification is still a matter of personal taste rather than an objective unanimity (MSRP: 105).

By incorporating Duhem’s conventionalist elements into the Popperian system, Lakatos appears to successfully bring historical considerations into it. A theory, when it is under the tests of experiments, would not be refuted on the empirical basis, but through the way it is treated in the minds of those people who supported it. When the experimental results are not supportive of the theory, there will be auxiliary hypotheses coming to serve as a protective belt, preventing the theory from being rejected. The case does not limit itself within one group of theories; rather it spreads all over other theories. Competitions among various groups of theories reflect the actual development of science and MSRP is set to describe the development.

Generally speaking, by looking at Lakatos’ modification of Popper’s methodology, we might be able to say that he prefers Kuhn’s approaches to that of Popper’s. Our reason for saying so refers to the fact that though falsification still exists in its sophisticated form, it does not really exist in the sense that any long-term degenerating research programme can reach a triumphant coming-back once it derive novel facts

¹⁹ Lakatos, *ibid.*, p. 102.

from its research programme.²⁰ However, this ‘preference’ only indicates the basic structure of MSRP. Beyond the structure, Lakatos has an ultimate aim inserted in his MSRP: a description of scientific growth. Apparently indeed, Lakatos seems to blame Popper for failing to take historical practices of science into full account. What he actually did instead was to put forward a rational reconstruction of the history of science. True, Lakatos did not say that science proceed rationalistically by accumulating more and more facts through its development. Yet, with the reconstruction, Lakatos nevertheless alludes strongly that science is, by its nature, rational, even though a full explanation of the reasons remain entirely lacking. This ‘ambivalent’ attitude characterizes for many Lakatos’ endeavor to combine rationalist and historical approaches of science. Obviously, the attitude immediately raised criticisms, Feyerabend being a remarkable one among many.

IV. Feyerabend’s Criticism of Lakatos

In the previous section, we have seen that Lakatos’ MSRP is rather ‘flexible’ in trying to incorporate the Kuhnian elements into the Popperian system. Though Kuhn’s challenge is pervasive, the basic framework adopted by Lakatos is keen to be that of Popper’s approach. In the final part of MSRP, Lakatos makes an analogy between Plato’s world of ideas and Popper’s idea of ‘three worlds’. He even makes such an audacious statement that without paying attention to the interaction of the three worlds, we can have nothing but caricatures (MSRP: 180). Hence, one should say that Lakatos adopts Kuhn’s history and arranges

²⁰ Lakatos would not see a ‘definite’ defeat of a research programme. He says: “But if a scientist in the ‘defeated’ camp puts forward a few years later a scientific explanation of the allegedly ‘crucial experiment’ within the allegedly defeated programme, the honorific title may be withdrawn and the ‘crucial experiment’ may turn from a defeat into a new victory for the programme.”(MSRP: p.173)

it in a way so that it can cope with Popper's realist position of the 'three worlds'. Is this attempt a successful one? Does Lakatos succeed in maintaining science as an enterprise which remains rational, objective and accumulative throughout its growth? An affirmative answer is likely to be the case. Indeed, Lakatos appears to offer such an image in his MSRP, but Feyerabend warns us that though Lakatos expects to portray a rationalistic image of science, all Lakatos actually does is something slightly different from his own 'epistemological anarchism'.²¹

Feyerabend's remark indicates how to interpret Lakatos. Should we listen to his plea of tolerance so that we can feel secure in following a progressive research programme (or reject a degenerating one) and maintain that science by its nature is a rationalistic enterprise? Or should we simply look deep into Feyerabend's aphorism assuming that as there is no pre-established demarcation principle forcing us to endorse or refute a specific research programme in MSRP, all we can do is say 'anything goes'? In brief, should we simply say that in spite of Lakatos' effort, science is basically an 'anarchistic business' in which there is no binding method, but pious faith?

What does Lakatos have to say about 'the anarchists' who follow a degenerating research programme without being concerned by the fact that its theoretical core has been for a long time in the state of 'degeneration' and the forthcoming of novel facts is not likely to be imminent? With regard to the answer of this question, Lakatos has this to say. True, there is no definite standard on the basis of which a theory can be negated forever, but there are other measures. Lakatos says:

²¹ Feyerabend says: "It is 'rational' to pursue a research programme on its degenerating branch even after it has been overtaken by its rival. There is therefore no 'rational' difference between the methodology of Lakatos and the 'anything goes' of anarchist. But there is considerable difference in rhetoric." See P. Feyerabend, "Theses on Anarchism", in *For and Against Method* (Chicago: The University of Chicago Press, 1999), pp. 113-18.

This does not mean as much license as might appear for those who stick to a degenerating programme. For they can do this mostly in private. Editors of scientific journals should refuse to publish their papers which will, in general, contain either solemn reassertions of their position or absorption of counterevidence (or even of rival programmes) by *ad hoc*, linguistic adjustments. Research foundations, too, should refuse money.²²

Undoubtedly, this is the way that Lakatos appears reluctant to refute a degenerating research programmes because whoever is interested in it can still hold it in private. Why would not Lakatos just offer us a straight criterion of refutation or ‘falsification’? The reason is simple. He does not have one. Throughout the writings of Lakatos, there is no evidence from his viewpoints that an explicit and instant case of falsification has ever taken place in history. To him, thinking it did would be ‘naïve’. This is so because the philosophy of science and the history of science complement each other not by forming a harmonious whole, but constantly by clashing. No rules can prescribe us what to do in advance without taking the practical situations into consideration. Lakatos demonstrated the discrepancies between history and its rational reconstruction by presenting: “the internal history *in the text*, and indicate *in the footnotes* how actual history ‘misbehaved’ in the light of its rational reconstruction.”²³ If by this sentence we think therefore Lakatos holding all rational reconstructions being untenable for their own sake, we would not be mistaken. However, this allegation does not imply that Lakatos turns his back on rationalism. He seems to hold a very unusual view of ‘being rational’, and what ‘rationality’ should be. Lakatos says: “It is perfectly rational to play a risky game; what is irrational is to deceive oneself about the risk.”²⁴ With this statement, he refers to Kuhn

²² I. Lakatos, “History of Science and Its Rational Reconstruction”, in *Philosophical Papers Vol. I* (Cambridge: Cambridge University Press, 1978), p. 117.

²³ *Ibid.*, p. 120.

²⁴ *Ibid.*, p. 117.

and Feyerabend who think that scientists have the right to follow whatever they see advantageous to their career, regardless if the following is carried out under actions of coercive force or dubious faith. Despite the fact that there is indeed no reason to make straight judgements concerning a clear-cut comparison among theories or research programmes, what is 'rational' refers to the awareness that there exists "the slowly emerging victory of one programme over the other."²⁵

According to Feyerabend, there is an aura of 'creative ambivalence' in Lakatos' definition of rationality. It is very creative because he offers an idea of rationality not by telling us its binding definition, but pleading our sympathy. Rarely is there such an original way of making rationality a part of public recognition without explicating what precisely it consists of. However, no matter what kind of sympathy can we be convinced to endorse, this way of claiming rationality is ambivalent. The ambivalence refers to the clash between two sides. On the one side, Lakatos does not want to prescribe any explicit rule of refuting a degenerating research programme, probably because he wants to maintain the 'liberal image' (i.e., taking a tolerant stand). On the other, he would be in no position to accept the label 'anything goes' (as Feyerabend does) due to his desire to maintain the 'basic value judgements' "accepted by the great majority of scientists ... over the last two centuries concerning *single* achievements."²⁶ Feyerabend is determined to unveil the guise of Lakatos' position. Lakatos pretends to be 'liberal', but what he proposes to do, is to curb the followers of a degenerating research programme (such as refusals of publications and funds). Without prohibiting anything prescriptively, Lakatos relied on a conservative attitudes adopted by the institutions to force people complying with 'advice' in order to maintain or safeguard their academic and financial security. By institutional means, Lakatos not only preserves

²⁵ *Ibid.*, p. 118.

²⁶ P. Feyerabend, "The Methodology of Research Programmes", in *Philosophical Papers*, Vol. 2 (Cambridge: Cambridge University Press), p. 208.

his 'liberal ideal', but also escapes the blame of 'anything goes'. The measures taken by institutions are "not irrational, [for they are] results of collective policies of the kind encouraged by the standards. The individual scientist who adapts so readily to the pressures is not irrational either, for he again decides in a way that is condoned by the standards."²⁷ What are these standards? Lakatos says that they are not what traditional methodologists prescribe as 'abstract principles', but are: 'basic value judgements over the last two centuries over a single achievement', 'common scientific wisdom', 'essential parts of a rational reconstruction of the history of science', etc. None of them explicit, thinks Feyerabend. According to Feyerabend, the ambivalent nature of the standards forms an essential part of Lakatos' methodology. It contains a hidden implication which prevents itself from being explicitly explained: the ideology underlying the whole enterprise of science. Feyerabend thinks the 'achievement of science established over the last couple of centuries' is presumed. There is no foundation to argue for the 'superiority of science' by referring to its standards'. Feyerabend reiterates: "A rational reconstruction as described by Lakatos is rational in the sense that it reflects *what is believed to be a valuable achievement* in the domain. It reflects what one might call *the professional ideology* of the domain."²⁸ To him, 'Rational reconstructions' take 'basic scientific wisdom' for arguing that the modern science is indeed better than magic, Marxism, Aristotelianism, Hermeticism; "the standards are therefore arbitrary, subjective, and 'irrational'."²⁹ What is ironic is that these standards are called by Lakatos "parts of rational reconstructions", whereas they are usually considered by many elements of 'irrationalism'.

Feyerabend says further that, "measured by the standards of the methodology of research programmes the conservative attitude ex-

²⁷ *Ibid.*, p. 218.

²⁸ *Ibid.*, p. 210.

²⁹ *Ibid.*, p. 213.

pressed by the [Lakatos'] suggestion is neither rational nor irrational."³⁰ What Lakatos describes is, according to Feyerabend, a mere sociological fact, which proceeds like something ideological within a specific domain. However, Lakatos is more complicated than this. While the traditional epistemologists argue for their abstract principles, he uses propaganda instead. While Lakatos has to push forward his subjective idea of rationalism which is not supported by abstract reasons, he is determined to convey a change that his 'rationalism' is eminently 'rational' not according to the standards of common practices, but "according to the standards of commonsense."³¹ Lakatos "makes full use of our inclination to regard commonsense as inherently rational and to use the word 'rational' in accordance with *its* standards."³² Obviously, we have a circular argument here, but Lakatos does not stop at this argument. He moves further to expand the argument's maximum effect on both conservative and liberal fronts. In his argument against naïve falsificationism, he emphasizes the new 'rationalism' which takes the history of science into its account. And on the other front, Lakatos argues against Kuhn by emphasizing the distinct 'rationality' of commonsense. With this strategy, Feyerabend comments on the fact that,

[Lakatos does not inform] his audience of the switch and so he can have his cake (have more liberal standards) and eat it too (have them used conservatively) and he can even expect to be regarded as a rationalist in both cases. Indeed, there is a great similarity between Lakatos and the early Church fathers who introduced conservative doctrines in the guise of familiar prayers (which formed the commonsense of the time)

³⁰ *Ibid.*, p. 219.

³¹ *Ibid.*

³² *Ibid.*

and who thereby gradually transformed commonsense itself.³³

Feyerabend seems to talk about ‘two Lakatoses’ here: the liberal one, who does neither prescribe nor prohibit anything, and the ‘rational’ one, who endorses ‘his rational reconstruction’ by appealing to people’s commonsense. To Feyerabend, the ‘rationalistic’ position of Lakatos seemed to be truly unusual. He even feels that Lakatos has done all these intentionally as well as instrumentally. Lakatos’ rationalism was nothing but a ‘political instrument’ “that he would use or put aside as the situation demanded.”³⁴ What was the situation urging Lakatos to use his ‘rationalism’? For Feyerabend, the admiration of Popper once was the only reason. Nevertheless, even this reason was dropped out when Lakatos later on admitted in private correspondence with Feyerabend that Popper’s philosophy lacked the claimed originality. Thus, the self-mocking Lakatos was even more praised by Feyerabend. For all these reasons, Feyerabend exhorted Lakatos that he cannot both have his cake and eat it too. He should give up the position of critical rationalism entirely in order to maintain a more coherent one, which is the position of epistemological anarchism, that of Feyerabend.

V. Hacking’s Discovery of Lakatos’ Philosophy

By examining Feyerabend’s criticism of Lakatos, we must wonder why Lakatos appeared so different in many aspects. Why did he try so hard to waver between two conflicting positions (i.e., that of Popper, the rationalist and Kuhn, the irrationalist)? Why did he insist maintain-

³³ *Ibid.*

³⁴ P. Feyerabend, *Killing Time* (Chicago: The University of Chicago Press, 1995), p. 130.

ing Popper's 'third world' which refers to the objective knowledge of scientific growth? Why would he discourage degenerating research programmes by the employment not of methodological rules, but of refuting funding and publications? Why did he stick to a kind of 'rationalism' defined not by objective rationality, but by the basic judgments of the last two hundred years? Why did not he simply join the group of Kuhn and Feyerabend, claiming 'irrationalism'? All these questions suggest a hypothesis that Lakatos' insistence on rationalism is not something of logical argument, but of personal presumption. Larvor tries to further elaborate this hypothesis by looking at Lakatos' ideas before his settling in England. Larvor talks rather explicitly about this.

For Lakatos, theories should succeed or fail on their logical merits only. However, there is an important question which can only be addressed in the context of his life as a whole: why was Lakatos a rationalist? Rationalism, the view that Reason can and must prevail over Will, was not a conclusion for Lakatos; it was a premise. In order to see why Lakatos took rationalism as his starting point and guiding principle we must look to his early life in Hungary and Russia...As a result, Lakatos was always conscious of the dangers posed to Reason by entrenched dogma in all areas of inquiry, and this concern helped to mould his mature work.³⁵

From Larvor's statements, we can detect two key questions: 'what rationality?' and 'why rationality?'. The first question asks how Lakatos successfully establishes the rationalist image of scientific achievement over the last two centuries. The second question concerns Lakatos' insistence that in the inquiry of science, Reason has to prevail. With regard to the first question, Hacking's exposition is originally illuminating. Hacking begins his exposition with the following statement concerning Lakatos' philosophy:

³⁵ Larvor, *op. cit.*, p. 1.

The philosopher will find himself baffled by a ‘methodology’ that seems to reject method, with a concept of ‘rationality’ that abolished the very idea of ‘being a reason for’. The working scientist finds a key notion of ‘research programme’ that excludes most real-life research programmes. Our problem is, then, to find some underlying problem and strategy that explains how the scintillating but sometimes absurd surface of Lakatos’ writings lies over a fundamental contribution to the philosophy of knowledge.³⁶

Hacking has no doubt that Lakatos is a philosopher of ‘first magnitude’, but he asks further: what underlies Lakatos’ philosophy as a whole? To this question, Hacking’s answer is twofold: one is that of Hungary, the other that of England. On the one hand, the Hungarian past of Lakatos can be mainly represented by Hegelianism which refers to a coherent (or systematic)³⁷ interpretation of truth, a surrogate perceived through long-termed dialectical relationship among rival theses. On the other hand, the English tradition of scientific inquiry refers to a foundationalist position which seeks to establish a representational theory of truth. The difference between coherentism and foundationalism in epistemology is beyond our discussion, but Lakatos’ problem is succinctly manifested by it. Hacking says: “Lakatos’ problem is to provide a theory of objectivity without a representational theory of truth.”³⁸ Hacking praises Feyerabend as Lakatos’ ‘most colorful critic’, but Feyerabend’s blame of Lakatos for lacking an adequate description

³⁶ I. Hacking, “Lakatos’ Philosophy of Science”, in *Scientific Revolutions*, I. Hacking (ed.) (Oxford: Oxford University Press, 1981), p. 128.

³⁷ The author has to be thankful to one of the reviewers who suggests the replacement of ‘coherentist’ with ‘coherent’ and the addition of “or systematic” written in the parenthesis. With this replacement and addition, the author is therefore exempted from committing the likely mistake of attributing to Lakatos’ philosophy a stance of coherentism. As the author has no intention to do such an attribution, the suggestion is endorsed without reservation.

³⁸ *Ibid.*, p. 129.

of current scientific works is irrelevant to Lakatos' concerns in philosophy. Even the actions of bureaucracy like rejecting funding and turning down publications should not hinder us from properly demonstrating Lakatos' attempt to understand the content of objective judgment in science.

What is the content of Lakatos' objective judgment in science? This question has a great deal to do with the previous question: what rationality? According to Hacking, in order to establish the 'rationality' he wants, Lakatos employs three parts of a strategy. First, the appeal to scientists or people who think about the appropriate branch of knowledge "because workers in a given domain tend to have a better sense of what matters than laymen" (not the commonsense of all people around). Second, the method of hypothetico-deductive nature which stresses not what is predicted, but what has been achieved. Thirdly, the history reconstructed rationally by depicting its internal part which is 'retroactive' in the sense that what happens or has happened in science prove what will succeed in science. The appeal, the method and the history all three constitute a form of 'rationality' which holds the progress of objective knowledge in science as a conviction of scientists, a proof of scientific achievements and a process in which the objective knowledge of science is accumulated, though not without setbacks happening all the time.

This form of rationality was first actualized by Lakatos with a reference to the development of mathematics. Note also that this part of philosophical works ushered in Lakatos' philosophical contributions since his settlement in England (first in the philosophy of mathematics and later in the philosophy of science). Lakatos' basic idea consisting in both philosophical domains remained the same: realizing "that present mathematical and scientific education is a hotbed of authoritarianism and is the worst enemy of independent and critical thought."³⁹ The major enemy of critical thought at this stage for Lakatos was the 'for-

³⁹ I. Lakatos, *Proofs and Refutations*, *op. cit.*, pp. 142-3n.

malistic mathematics' which "has been the proud fortress of dogmatism."⁴⁰ According to Lakatos, this 'fortress' refuses to be criticized because of a 'deductivist style'. In this style, adds Lakatos: "Mathematics is presented as an ever-increasing set of eternal immutable truths" and "counterexamples, refutations, criticism cannot possibly enter"⁴¹. 'Heuristic style', on the contrary, highlights these 'factors' of criticism which gave birth to the new concept. This style is accordingly recorded by Lakatos in the form of the Hegelian language referring to the tripartite formation of thesis, antithesis and synthesis. The formation is generally capable of describing the various developments in mathematics. And it is fully expressed in the following paragraph by taking into account the example of mathematics.

The Hegelian conception of heuristic which underlies the language is roughly this. Mathematical activity is human activity. Certain aspects of this activity – as of any human activity – can be studied by psychology, others by history. Heuristic is not primarily interested in these aspects. But mathematical activity produces Mathematics. Mathematics, this product of human activity, 'alienates itself' from the human activity which has been producing it. It becomes a living, growing organism, that *acquires a certain autonomy* from the activity which has produced it; it develops its own autonomous laws of growth, its own dialectic. The genuine creative mathematician is just a personification, an incarnation of these laws which can only realize themselves in human action. Their incarnation, however, is rarely perfect. The activity of human mathematicians, as it happens in history, is only a fumbling realization of the wonderful dialectic of mathematical ideas. But any mathematician, if he has tal-

⁴⁰ *Ibid.*, p. 5.

⁴¹ *Ibid.*, p. 142.

ent, spark, genius, communicates with, feels the sweep, and obeys this dialectic of ideas.⁴²

Hacking would think that, to Lakatos, what happens in mathematics as a form of knowledge takes place in science as well⁴³. Scientist's, like mathematician's ideas have a personal element, but this does not affect the possibility that the objective part of science can always be detached from this 'personal element'. What counts as an essential part of knowledge is not the combination of the subjective and objective elements of it, but the objective parts only. History can be interpreted in many ways, but the internal part of it does not shift its points by following interpretations. Despite the fact that Lakatos' philosophy is not an explicit method of rationality, it somehow convincingly demonstrates the growth of science as a dialectical development proceeding hypothetico-deductively to truth.⁴⁴ It seeks not proofs on the realist ground, but justifications on the self-correcting character of enquiry. This is also the reason why Hacking explicates that while many discuss Lakatos' philosophy in terms of method and rationality, he would consider rather that Lakatos is more a metaphysician than an epistemologist. At least, Hacking would think that the primary concern in MSRP

⁴² I. Lakatos, *Proofs and Refutations* (Cambridge: Cambridge University Press, 1976), pp. 145-46. Lakatos admitted later that he then was fully convinced by the Hegelian dialectic reasoning to depict the heuristic style taking place in the development of mathematics, but at the time of MSRP the Hegelian language quoted here sounded an 'ironical emphasis' to him.

⁴³ There is a good reason to say that Lakatos did intend at this stage already to take into account both mathematics and science. Lakatos said: "While in mathematics this authoritarianism follows the deductivist pattern just described, in science it operates through the inductivist pattern (*ibid.*, p. 143n).

⁴⁴ We should be in full awareness that, while applying the hypothetico-deductive method to portray Lakatos' methodology, Hacking stresses very much the similarity between C. S. Peirce and Lakatos, both for him considering that the process of inquiry is mainly characterized by "the self-correcting character of inquiry". For detail see I. Hacking, *Representing and Intervening* (Cambridge: Cambridge university Press, 1983), p.126.

is keen to be the issue of truth, rather than that of method and rationality.⁴⁵ Science, being our model of objectivity, is undoubtedly the way through which we are led to open the gate of the true world.

Following Hacking's explication of how Lakatos' philosophy of the Hegelian heuristic style also apply in science, we should be able to see why in Lakatos' methodology, there is no foundational idea to construct 'truth' *par excellence*, but only to unveil truth with a heuristic style. The style is the way through which truth gradually appears manifest by criticism. Without recognizing the function of this heuristic style and pursuing truth instead on the representational ground, all expositions concerning the nature of science is illusory for Lakatos. We should say therefore that Lakatos applies the same idea to his philosophy of science which, as we have seen, puts forward a 'mode of rationality' established on the Hegelian dialectics at least for the time being.

VI. Considering Lakatos' Hungarian Legacy within Critical Rationality

Hacking's comments on Lakatos have been influential in many ways. It unveils the internal tension of Lakatos' philosophy, opens a new approach concerning his background, and most importantly, offers an explanation for his idiosyncratic formulation of rationality. However, as Motterlini says, "Hacking is just a part of the whole story."⁴⁶ What is lacking in Hacking's exposition, according to Motterlini, are the following two points: 1. Truth is not to be replaced by method, but is connected to method. 2. Other than the Hegelian system, what is in-

⁴⁵ I. Hacking, *op. cit.*, p. 112.

⁴⁶ M. Motterlini, "Between the Hegelian Devil and the Popperian Deep Blue Sea", in *Appraising Lakatos: Mathematics, Methodology and the Man* (Dordrecht: Kluwer, 2002), p. 44.

corporated into Lakatos' methodology is not the demolition of a representational theory of truth, but Popper's fallibilism.⁴⁷ The combination of these two points helps us decisively to see the above-mentioned question: Why rationality? Or put the question in a more explicit way, why would Lakatos maintain his adherence to rationality all the way through his career?

The answer lies in the combination of above two points. First, truth and method are in the relationship of connection rather than replacement. Hacking's words that "Lakatos has made the eternal verities depend on a mere episode in the history of human knowledge"⁴⁸ are not correct, as Lakatos would not be satisfied by limiting his appeal to truth within a specific period of time.⁴⁹ Being a lifelong rationalist, Lakatos' intention is more than obvious.

Secondly, the incorporation of Popper's fallibilism helps Lakatos to clarify the previous point, namely, the formation of truth. However, the incorporation is not direct, but interpreted. This interpretation refers to Lakatos' 'idiosyncratic comment' on Popper's fallibilism as follows:

Popper, when (in fact in 1934)⁵⁰ dividing the aspects of discovery between psychology and logic in such a way that no place was left for heuristic as an independent field of inquiry,

⁴⁷ *Ibid.*

⁴⁸ I. Hacking, "Lakatos' Philosophy of Science", *op. cit.*, p. 143.

⁴⁹ This is obvious in the above-mentioned Hegelian language. At the end of the quotation said Lakatos: "The activity of human mathematicians, as it happens in history, is only a fumbling realization of the wonderful dialectic of mathematical ideas. But any mathematician if he has talent, spark, genius, communicates with, feels the sweep, and obeys this dialectic of ideas." In other words, personification of mathematical ideas is merely a matter of contingency, whereas the self-manifestation of the dialectic of ideas is fundamentally a matter of necessity. The difference is essential and has nothing to do with history.

⁵⁰ Referring to Popper's *The Logic of Scientific Discovery* (London: Hutchinson, 1959), originally published in German as *Logik der Forschung* (Vienna: Springer, 1934).

obviously had not there realized that his 'logic of discovery' was more than just the *strictly logical* pattern of the progress of science. This is the source of the paradoxicality of the title of his book, the thesis of which seems to be double-faced: (a) there is no logic of scientific discovery; (b) the logic of scientific discovery is the logic of conjectures and refutations. The solution of this paradox is at hand: (a) there is no *infallibilist* logic of scientific discovery, one which would infallibly lead to results; (b) there is a fallibilist logic of discovery which is the logic of scientific progress. But Popper ... was not interested in the metaquestion of what was the nature of his inquiry and he did not realize that this is neither psychology nor logic, it is an independent discipline, the logic of discovery, heuristic.⁵¹

From here we see that Lakatos converted Popper's 'logic of discovery' into a reiteration of fallibilism and then linked it with the 'heuristic style' to which the Hegelian language most characteristically referred. This is by all means an excellent interpretation which not only put Popper's fallibilism side by side with the Hegelian dialectics, but also hints a possibility of superseding both with his own ideas of 'proofs and refutations'. Through the process of 'proofs and refutations', science vindicates itself by moving on the track of progress which turns out to be a 'replacement' of truth in Lakatos' methodology. This is the reason why for Lakatos, truth cannot be realistically represented by referring to something else; nor does it refer to a local idea which is confirmed within a system. Truth is presumed, and the pursuit of it leads us closer and closer to it. However, never will we be able to conceive truth in its complete form; the idea of verisimilitude applies here. Taking both points together, the method is that of Popper's (interpreted) fallibilism and the pursuit of truth is the claim of verisimilitude. Hence, when Lakatos claims rationality, he means that of critical

⁵¹ I. Lakatos, *Proofs and Refutations* (Cambridge: Cambridge University Press, 1976), pp. 143-44.

rationality, rather than Hegelianism. “With reference to Hegel”, says Motterlini: “Lakatos never specified the kind of works and contributions he regarded as fundamental for his education.”⁵² Motterlini even thinks that the way Lakatos stresses Hegel might be a sheer matter of ‘ideology’. According to Motterlini, there is a shift taking place in Lakatos’ philosophy concerning Hegel.

Lakatos’ philosophy of mathematics aims to challenge dogmatism (i.e., Euclidianism and formalism) rather than to defend fallibilism from the attack of skeptical irrationalism. Within an Hegelian network, the *rationality* of the development of mathematics (and science) being the very premise does not need to be argued for... On the other hand, Lakatos’ philosophy of science aims to grasp the unfolding rationality within the history of science and to defend it from any attack... If forced to choose one side in the battle between dogmatists and skeptics, this time Lakatos would have probably sided with the former camp.⁵³

Motterlini continues to say that from the philosophy of mathematics to that of science, Lakatos undertook a shift in the concept of *heuristic* by escaping the Hegelian devil and moving towards the Popperian blue sea.⁵⁴ What he means precisely is the fact that the Hegelian system contains an inexorable nature which stipulates the ‘rule of Reason’ without thinking that “human activity can always *suppress or distort the autonomy of the alienated process*.”⁵⁵ With the inexorability held firm in Hegel’s logic, anything happening in history is to be justified by the very ‘rule of Reason’. By the application of the Hegelian rule, what has been successful in history is always ‘right’ and ‘superior to’ what has not been successful in history. According to Motterlini,

⁵² M. Motterlini, *op. cit.*, p. 26.

⁵³ M. Motterlini, *op. cit.*, p. 30.

⁵⁴ *Ibid.*, p. 33.

⁵⁵ I. Lakatos, *Proofs and Refutations*, *op. cit.*, p. 148.

here comes the problem and Lakatos' adherence to Popper as the solution of it.

The dangers of the dialectical approach lie obviously in the *authoritarian* attitude and in the *inexorability* of the process as formulated by Hegel first and then by Marx. On the contrary, Popper's critical philosophy suggests that this process is never ending, and that our syntheses today are our theses tomorrow.⁵⁶

In conclusion, Motterlini holds nevertheless that, Lakatos uses "the Hegelian idea of a dynamically unfolding rationality underlying the growth of knowledge to reject the alleged irrationality of the context of discovery", but he also uses "Popper's fallibilism to wring authoritarianism out from Hegel's dialectical process."⁵⁷ In other words, what Lakatos does might be considered to be a combination of Hegel and Popper. However, this is by no means a simple juxtaposition of two sets of ideas. It is actually a practical claim stressing the active role for dialectics as an instrument of criticism rather than a mere rhetoric for empty scholasticism. We eventually have to hold that putting the 'dialectical rationality' into practice forms an essential part of Lakatos' 'rationalistic conviction' which would be meager if we take into account only Popper's fallibilism.

VII. Lakatos' Political Practices

With all the ideas consisting in the previous sections, the complicated nature of Lakatos' philosophy of science becomes evident to us. It is clear to us by now that the philosophy is a combination of many elements, ranging from methodological debates among Popper, Kuhn

⁵⁶ M. Motterlini, p. 29.

⁵⁷ *Ibid.*

and Feyerabend to the application of the Hegelian dialectics. However, with all the theoretical elements in sight, we are still inclined to say that the essential parts of Lakatos' philosophy would not be fully uncovered if they are interpreted merely in theoretical terms. Practical concerns also play roles of crucial importance in Lakatos. This is clear to us as soon as we are aware of the role of history in Lakatos' philosophy of science.

Any theoretical formulation of Lakatos' position would not be too different from pressing him into a position of 'empty scholasticism'. Lakatos emphasizes the importance of historical practices which expands its application even to 'dialectical rationality'. 'Dialectical rationality' should not remain a fixed position. Instead, it should be a critical attitude. His idea of practices form an essential part of his philosophy, and it comes from his leftist background in Hungary. This is clearly demonstrated by Motterlini. While stressing that Lakatos' insistence of looking at 'dialectical rationality' as a practice of criticism, Motterlini unveils that this might be an influence of G. Lukacs on Lakatos.⁵⁸ This point is confirmed by Ropolyi. According to Ropolyi, Lukacs exerted a crucial influence on Lakatos in general, and made him aware of the 'right' relationship between practice and theory in particular.⁵⁹ From Lukacs' influence, "Lakatos' philosophy of science (first and foremost his MSRP) can be considered as an abstract, theoretical representation of a special kind of political practices."⁶⁰ To Lakatos, what happens in the Marxist political practices can be applied to scientific systems. In Marxism, concrete political practice and abstract theoretical values form a special kind of unity. And in scientific system, there is also a similar unity between scientific practice and theoretical rationality. According to Ropolyi, the analogy between political practices and scientific practices is very clearly expressed in

⁵⁸ *Ibid.*, p. 25.

⁵⁹ L. Ropolyi, "Lakatos and Lukacs", in *Appraising Lakatos: Mathematics, Methodology and the Man* (Dordrecht: Kluwer, 2002), p. 323.

⁶⁰ *Ibid.*, p. 328.

Lakatos. Ropolyi says about Lukacs' influence on Lakatos,

Their Marxist attitude was eminently expressed in the methodology of understanding the relation between theory and practice. In this view, the (political, scientific, everyday, etc.) practice is primary and acts as the source of experience and as the final criterion for theoretical truths, but it would, in and of itself, be blind. These practices have to be based on and oriented by a theoretical system of (political, scientific, everyday, etc.) values.⁶¹

Despite the unabridged difference between Marxism on the one hand and MSRP on the other, the citation above somehow offers a more comprehensive picture of Lakatos' philosophy of science. Indeed, in MSRP, Lakatos intentionally manifested a unity of theory and practice. Moreover, the unity also claims a rational attitude in favor of progress. According to Ropolyi, this attitude demonstratively shows the influences Lukacs exerted on Lakatos, especially the conscious state through which we could make a rational decision *when the situation demanded*. The situation has obviously a great deal to do with the application of the ideas of dialectics consisting mainly in those leading figures such as Hegel and Marx. Rational decisions are made by considering the concrete social and political situations as well as by elaborating a careful and critical analysis of the historical process. All these are carried out on the basis of our understanding and consciousness.⁶² In depicting Lukacs' influences on Lakatos, Ropolyi admits that, although the link is indirect, but the impact is obvious. The most prominent one being the 'philosophizing' of Lakatos' political practices and his Marxist career which was undoubtedly something of unforgettable nature to him. It is therefore reasonable to recapitulate Lakatos' philosophy by taking into account his politically active part back to the period of time before 1956. The Lukacsian view was dominant in this

⁶¹ *Ibid.*, p. 332.

⁶² *Ibid.*, p. 327.

period of time, according to Ropolyi.⁶³

However, having said all this, Lakatos did not remain in a static state under the Lukacsian influence. During his period in England from 1956 to 1974, Lakatos, probably due to the unpleasant experiences he had with communist system as well as political practices, changed fundamentally. He first preferred theory and disregarded political practice by becoming a follower of Popper. The Popperian concept of rationality and the related methodology were then acceptable to Lakatos. According to Ropolyi, the ‘new Popperian’ did not last long as Lakatos later on turned back to the Popperian conception by gradually working out his own position.⁶⁴ Whether Lakatos at this point was actually doing a ‘return’ back to the Lukacsian conception was never certain, yet the ‘working out’ of his own position can be plausibly attributed to a consequence of long development of both theoretical and practical concerns throughout the decades. Having said that, we hence need to keep in minds that before and after 1956, the formation to uniting two rather distinct traditions happened to be one particular feature in Lakatos. This feature not just characterized Lakatos’ philosophy, but also comprised an essential part of his methodology. Though we are not able to expose all details of Lakatos’ biographical track of development, two examples hopefully could be sufficient to show that Lakatos is a life-long critical rationalist influenced by practical considerations rather than theoretical choices only.⁶⁵

The communist experience of Lakatos was a bitter one. He was active as a member of *The Resistance* during the Second World War, became an educational official after the war, then was sent to prison for

⁶³ *Ibid.*

⁶⁴ *Ibid.*, p. 328.

⁶⁵ Whoever is interested in the biography of Lakatos can refer to J. Long’s “The Unforgotten: Imre Lakatos’ Life in Hungary”, in *Appraising Lakatos: Mathematics, Methodology and the Man* (Dordrecht: Kluwer, 2002), pp. 263-302 and L. Congdon’s “Lakatos’ Political Reawakening”, *op. cit.*, pp. 339-49.

several years and eventually exiled in England. His relationship with the communist party was shaky as he was devoted to it and banished from it too. When Long asks: “What kind of communist was Lakatos?” she answers

Everyone agrees that, though ambitious, Lakatos was not a cynic or ‘careerist’. He was as likely to endanger his career by impulsive faith driven words and acts as to promote it. In style he was a ‘critical believer’, always willing to argue and joke about party theory and practice, but he appears to have in no way ‘woke up’ to problem in the system until after his release from jail in 1953.⁶⁶

The ‘critical’ attitude of Lakatos does not adhere to a specific ideology. It depends on his practical judgement at the time when a decision has to be carried out. Lakatos continued this style even after his communist years. In 1968, when Lakatos was in The London School of Economics facing the student movement asking rights to join the administration of the university, he wrote “A Letter to the Director of the London School of Economics.”⁶⁷ In this letter, Lakatos explicitly expressed his objections towards the students’ demands. Congdon’s comment on this letter is very intriguing.

Lakatos insisted upon the principle of academic autonomy for the same reason that he focused on the internal history of mathematics and science, namely that it freed reason from external, and hence irrational, pressures and made possible the growth of knowledge. Well-trained and experienced men and women, in their capacity as scholars, embody reason and

⁶⁶ J. Long, “Imre Lakatos’ Life in Hungary”, *op. cit.*, p. 279.

⁶⁷ I. Lakatos, “A Letter to the Director of London School of Economics”, in *Philosophical Papers*, Vol II (Cambridge: Cambridge University Press, 1978), pp. 247-53.

pledged to search for truth in the way determined purely by science's inner life.⁶⁸

With these two examples referring to Lakatos' practical life during the periods before and after 1956, we clearly see that Lakatos should be considered a man of critical rationality throughout his life. Though the critical rationality activated apparently an aura of the Popperian influence, Lakatos' philosophy undoubtedly went through a process which is wider in contents and traditions than a simple and faithful follower of falsificationism. Popper certainly has been an influential figure in fortifying Lakatos' critical rationality, but this attribution would not be enough if the designated rationality remains in the realm of theoretical realm. At least, with the stress on practical concerns, a full understanding of MSRP would not be likely unless the relationship between the theoretical and practical rationality is taken into account. This account explains also the reason why Ropolyi holds firm that although Lakatos is reputed for being a methodologist of research programmes, an essential part of this methodology comes to be in line with his reflections established on the previous political practices. The consequence of Lakatos' reflections was his determination to submit everything to critical examination. With regard to this, the confusion Lakatos creates is indeed too rich to be interpreted by resorting to any single viewpoint, let alone a theoretical one. A proper interpretation of Lakatos' philosophy could not be achieved unless he is also taken into account as a philosopher of political practices. The unity of theory and practice leading the way to progress is fully exposed by Ropolyi, though not necessarily referred to the Marxist way of thinking.

In this view, the (political, scientific, everyday, etc.) practice is primary acts as the source of experiences and as the final criterion for theoretical truths, but it would, in and of itself, be blind. These practices have to be based on and oriented by a theoretical system of (political, scientific, everyday, etc.)

⁶⁸ L. Congdon, "Lakatos' Political Reawakening", in *op. cit.*, p. 341.

values. History (of political, scientific, everyday, etc.) is progress towards the realization of these value systems – mankind is the author *and* the actor of its own drama. In the elaboration of acceptable values, modern thinking prefers reason and consciousness, so there is a very intimate interrelatedness between the relations of theory-practice and rationality-irrationality.⁶⁹

With this quotation, we can totally understand why in rationally reconstructing the history of science, Lakatos would emphasize the mutual enrichment between history and philosophy of science.⁷⁰ We now see rather clearly that the point was not that while philosophy of science sheds light on the understanding of facts, history of science instead substantiates the implementation of rules. The point is the fact that given a dialectic proceeding between theory and practice, the self-manifested progress demonstrates simultaneously the ideas of rationality and objectivity.

VIII. Conclusion

In this paper, I endeavor to examine some writings on Lakatos proceeding from taking him as a critic of Popper's falsificationism to a progressivist of unifying theory and practice. While portraying Lakatos' MSRP from a theoretical point of view, the philosophy of science is nonetheless unusual in the sense that it does not limit itself within the range of theoretical rationality. A substantial part of this philosophy

⁶⁹ L. Ropolyi, "Lakatos and Lukacs", *op. cit.*, p. 332.

⁷⁰ This point refers to Lakatos' famous paraphrase of Kant's dictum: "Philosophy of science without history of science is empty; history of science without philosophy of science is blind." See I. Lakatos, "History of Science and Its Rational Reconstruction", in I. Lakatos, *Philosophical Papers*, Vol.1 (Cambridge: Cambridge University press, 1978), p. 102.

refers to the practical rationality. These two components consisting in Lakatos have a great deal to do with his academic life which can be roughly divided into two tracks. One track is the Hungarian-Marxist tradition (represented mainly by the Hegelian dialecticism) and the other is that of the critical rationality (represented mainly by Popper's ideas). I then proceed to examine these two tracks and argue for their union. I argue that instead of developing independently from each other, they form a single dialectical process through which the unity of theory and practice is actually the main line of thinking throughout not only Lakatos' philosophy but also his life. By looking at this dialectical development, I conclude that Lakatos should foremost be treated as a 'critical believer' who conceived his ideas all through his life under various influences, among which the most prominent one could be his pious belief in critical rationality.

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拉卡透斯：一個研究綱領方法論者，或是一個政治實踐的哲學家？

苑舉正

國立台灣大學哲學系

摘要

在科學哲學的領域中，拉卡透斯均主要視作為一位「科學研究綱領方法論者」。在這個觀點中，拉氏方法論不但超過波普的否證方法論，也融入孔恩科學哲學中歷史進路理的重點，即對於科學實踐的強調。從理論的角度而言，將拉氏方法論當作波普與孔恩哲學「修正綜合」的觀點，是一個相當普遍的看法。然而，因為這個看法中過於強烈地顯現波普理性主義形象的緣故，所以這個「形象」遭遇費耶阿本批判為缺乏一致性的方法論。費氏的批判中提出如下問題：為什麼拉氏會在缺乏證成理性主義的情況下，堅持一個「理性主義」的立場呢？這個問題的答案，似乎與拉氏個人信念有關，而若是欲探討這個關係，則必須先研究拉氏定居英國之前的學術背景。的確，許多研究指出，拉氏流亡英國前的學術背景，均曾隱密式地融入其哲學中，尤其是「科學研究綱領方法論」。在這些研究中，哈金的研究論文是一個重要的代表。根據哈金的詮釋，拉氏哲學中，除了英國部分之外，還有一個「黑格爾」部分。哈金證實，在「科學研究綱領方法論」之中，有許多理念與在匈牙利流行的那

種強調理論與實踐之辯證關係的哲學類似。當注意拉氏哲學中包含辯證法的同時，我們依然強調拉氏哲學中「批判理性」這一受波普哲學影響的部分。我們因而論證，「辯證方法」與「批判理性」兩者均為拉氏「方法論」中的關鍵理念。兩者均抱持從動態歷程中認知概念外，其結合亦能展示科學歷史的理性建構。因而，我們結論說，這個展示不僅為拉氏個人信念，也是建立在統一理論與實踐之上的科學進步之結果。

關鍵詞：拉卡透斯、波普、孔恩、費耶若本、哈金、科學研究綱領方法論