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Department of Philosophy

Faculty of Arts

University of Ottawa

Feyerabend's Practical Relativism

M.A. Thesis

By

Guodu Wang

Advisor: Professor Andrew Lugg



Guodu Wang, Ottawa, Canada, 1993



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ISBN 0-315-82532-4

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## ACKNOWLEDGMENTSS

In completion of this thesis, I should like to give my sincere thanks to a number of people who have instructed or assisted me in various ways. Professor A. Lugg, my adviser, has given me enormous consultations and helps in my pursuing of the subject, and his lectures on Feyerabend's relativistic philosophy and Wittgenstein's practical philosophy led me to the basic ideas contained in the thesis. Professor B. Bazan's lecture on St. Thomas' philosophy and his guidance of my research paper on St. Thomas' doctrine of abstraction and its function in science stimulated my further apprehension of the realistic and rationalist traditions within the Western philosophy, from which I obtain the power of argument against Feyerabend's alluring challenge. Also, that power was strengthened throughout my learning from the other professors' lectures and from my experience of teaching assistance for Professor H. Aronovitch, Professor K. Arnold and Professor S. Petraroja's logic courses. Finally, I would like thank my classmate Mr. R. Fillion, who friendly aid me in the improvement of the linguistic structure of the thesis. I am really grateful to these people for their encouragement and their considerable assistance, either theoretical or technical.

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## CHAPTER I

### INTRODUCTION

Today no one doubts Feyerabend's reputation as an unorthodox critic of the philosophical tradition whose ideas have certainly enlivened contemporary epistemology as well as philosophy of science. What kind of weapon does he hold to make his critique of the tradition philosophy so powerful and yet so controversial? What kind of doctrine led him to that rather extraordinary direction of research?

Many of his critics have portrayed him as 'irrationalist', 'anarchist' and 'dadaist' and so on. By giving him these labels they try to convince the people that Feyerabend's philosophy do not have to be taken seriously, because he himself is not serious but polemical and playful in his arguments. As Oldroyd says:

How seriously are Feyerabend's arguments to be taken? Presumably not very, since he represents himself as a Dadaist (who is not to be taken seriously), and an exponent of irrationalism. If we accept that Feyerabend favours irrationalism (by the usual twentieth-century Western norms) then there isn't much point in drawing attention to what may seem (from our commonplace perspective) to be errors in his argument. He is, so to speak, in a 'heads he wins/tails you lose' position.<sup>1</sup>

In my opinion, however, these commentators are themselves not serious in appreciation of Feyerabend's philosophy; rather, they are using a kind of passive strategy to go around his vigorous

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<sup>1</sup>Oldroyd, D. The Arch of Knowledge, New York: Methuen 1986, pp.338 - 339.

challenge against the tradition. For, though Feyerabend's arguments contain some rhetoric and conjectures, he does argue and reason seriously in accordance with his consistent view of philosophy. Actually, Feyerabend's response to his critics' labelling is biting because he takes these labels as an unfair charge against him. These are brought by his displeased opponents who often do not read his works carefully before rushing to certain negative judgements. For instance, in Science in a Free Society, he gives a title - "Conversations with illiterates" - to reply to Agassi's charge that Feyerabend's promotion of anarchism represents a 'super revolutionary'. He argues:

I regard anarchism as 'excellent medicine for epistemology and the philosophy of science'... I do not say that epistemology should become anarchic, or that the philosophy of science should become anarchic. I say that both disciplines should receive anarchism as a *medic*ine. Epistemology is sick, it must be cured, and the medicine is anarchy. Now medicine is not something one takes all the time. One takes it for a certain period of time, and then one stops. To make sure that this is the way in which I shall be understood I repeat the restriction at the end of the Introduction... Anarchism, I say, will heal epistemology and then we may return to a more enlightened and more liberal form of rationality.<sup>2</sup>

In his later work Farewell to Reason, Feyerabend's response to the charge of 'irrationalism' is more explicit: for him it is not reason or reasonableness, but the abstract tradition of Reason or Rationality that he wishes to oppose. But for his rationalist opponents, the only choice people can take seems to be between irrationalism and their favorite philosophy! For example, when he

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<sup>2</sup>Feyerabend, P. Science in a Free Society, (London: New Left Books, 1978) p.127.

talks about Western civilization, Feyerabend ironically states:

I would not conclude, however, that prominent features of this civilization are pathological. This is hardly more intelligent and certainly not more enlightening than the charge of 'irrationality' or 'lack of a scientific basis' used so freely by the bigshots of the status quo.<sup>3</sup>

So, to understand Feyerabend's comprehensive philosophy properly, we have to ignore these haughty labels colored with his opponents' bias. We have to go deeper into his writings, and, at the same time, appreciate his own description. Fortunately, we have this opportunity. It is in his later collected work Farewell to Reason<sup>4</sup> that Feyerabend finally clarifies his position in epistemology, philosophy of science and all other related social issues in terms of "practical relativism", and thereby explicitly disregards any misleading labels given to him.

First of all, according to Feyerabend, his philosophy is practical. That is, he always considers the philosophical problems of knowledge not in the scope of knowledge itself, but in the scope of human practice. He says:

The ideas of truth, reality and rationality make excellent practical sense.<sup>5</sup>

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<sup>3</sup>Feyerabend, P. Farewell to Reason, (London: Verso, 1987) p.23n.

<sup>4</sup>The essays in this book cover a wide range of topics in epistemology, philosophy of science, politics, education, religion and other social fields. However, a central clue runs through them, i.e. "practical relativism", the new name he labels his philosophy. Around it Feyerabend tries to refresh his several key themes that have long been repeatedly hammered on in his other works.

<sup>5</sup> Pual Feyerabend, Farewell to Reason (New York: New Left Books, 1987), p. 63.

The knowledge we need to understand and to advance the sciences does not come from theories, it comes from participation.<sup>6</sup>

From this standpoint, Feyerabend rejects any epistemological or methodological proposals which are neither proposed from a practical point of view, nor in agreement with the concrete practice. For instance, in philosophy of science, he dismisses logical empiricism and Popper's critical rationalism as "not in agreement with scientific practice, and would destroy science".<sup>7</sup>

On the other hand, Feyerabend claims that his view in philosophy is relativistic. Here I should specify that he does not mean that all his arguments are based on the theoretical assumptions of philosophical relativism, but that they are based on, and concluded from typically practical concerns. This distinction is quite important, since Feyerabend distinguishes his practical version of relativism from the theoretical tradition of philosophical relativism to avoid those misunderstandings of him as a pure epistemic relativist, as suggested by some of his critics.<sup>8</sup>

By my understanding, the distinction between Feyerabend's practical version of relativism and the theoretical version of relativism consists in that they belong to different traditions. First of all, their purposes are different: for Feyerabend, the

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<sup>6</sup> Ibid., p. 284.

<sup>7</sup>Cf. Feyerabend, P. Against Method. (London: New Left Books, 1975) p.14.

<sup>8</sup>In Science in a Free Society, Feyerabend made it clear that philosophical relativism is nowhere represented in his work. Rather, his relativism is "of precisely the kind that seems to have been defended by Protagoras".(Cf. ibid. p.82.) In Farewell to Reason, Feyerabend further clarifies this idea throughout the book, especially his comments on Protagoras, as I will explore next.

purpose of his relativism "is an attempt to make sense of the phenomenon of cultural variety" and to use it "as a weapon against intellectual tyranny and as a means of debunking science". This purpose is clearly stated in the first page of his "Notes on Relativism" of Farewell to Reason.<sup>9</sup> The theoretical traditions of relativism, on the other hand, are indulged in those abstract concepts of Truth, Falsehood and so on, as their theoretical opponents do, and they pay no attention to any practical issues. Second, Feyerabend's practical relativism, when applied to cultural, political and other social practice, is hand in hand with the cultural relativism and political relativism (in Feyerabend's version, it is democratic relativism) which are in any sense practically oriented.<sup>10</sup> The theoretical traditions of relativism, on the other hand, have never taken these practical issues as the topics of their theoretical extensions.

So, basically, Feyerabend rejects any theoretical traditions, philosophical relativism involved, which "seems to transcend human perception and opinion and human life."<sup>11</sup> On the other hand, however, his relativism is not purely practical, or identical with cultural relativism or political relativism, since he is after all a philosopher, and his discussions of epistemological issues regarding truth, knowledge and scientific theories are a major part of his philosophical discourse. The difference from the theoretical traditions of relativism is, as I have clarified above, that these discussions emerge from the current practice of sciences and other

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<sup>9</sup>Ibid. p.19.

<sup>10</sup>For instance, in his Farewell to Reason, Feyerabend carries out a thoroughgoing cultural pluralism or relativism which claims the equal rights and opportunities of different traditions to freely develop their own cultures, and advocates open exchanges between different cultures and so on. These opinions have been widely embraced by many sociologists and anthropologists as Feyerabend noted.

<sup>11</sup>Ibid. p.126.

epistemic activities and not the opposite. In this respect, Feyerabend always indicates that his relativistic view in epistemology emerges mainly from the source of Protagoras' philosophy, and he insists that he and Protagoras should be interpreted as both starting from a practical point of view and both leading to the solution of practical, non-theoretical problems. Siegel describes the point:

Feyerabend's strategy is to argue that Protagoras is best interpreted as speaking not to Plato's abstract, theoretical problems concerning truth and knowledge, but to local, practical problems instead. So understood, Protagoras has not joined issues with the theoreticians. Feyerabend here wants it both ways: he wants to engage, and defeat, the theoreticians; at the same time he wants to claim that he and other relativists like Protagoras are concerned with different issues altogether. This is a fundamental tension which runs throughout Feyerabend's discussion.<sup>12</sup>

So, on Feyerabend's view, his relativism obtains its meaning and its energy only in the sense of practice, and its basic idea is: the truth values of ideas, laws, theories are only relative to the particular views of individuals, groups and societies within which they are formulated. They are personal rather than objective, practical rather than epistemic, and they vary from person to person, from case to case, from time to time.

In this thesis, I am not going to deal with any problems related to the theoretical traditions of philosophical relativism. I shall concentrate on Feyerabend's practical version of relativism concerning mainly those epistemological issues, while briefly

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<sup>12</sup>H. Siegel, 'Farewell to Feyerabend', in Inquiry, 32, pp.359 - 360.

commenting on its wider application for cultural pluralism and so on. I shall try to prove that, though Feyerabend's practical position is a good and fresh starting point in solving those epistemological difficulties, and his relativistic arguments are good medicine to cure the sickness of the theoretical traditions of epistemology and philosophy of science, it is unnecessary for a practical philosopher to be obliged to the relativistic consequence. Instead, I believe that a practical attitude in philosophy leads away from rather than towards relativism; it leads to an objective standpoint. I shall defend this position throughout the thesis, and at the same time, I shall examine the misleading way Feyerabend has taken by which he approaches his relativistic conclusion.

## CHAPTER II

### A PRACTICAL STARTING POINT

In the introduction to volumes I and II of his Philosophical Papers, Feyerabend describes "three ideas that have played an important role in the history of science, philosophy and civilization"; these are, criticism, proliferation and realism.<sup>13</sup>

According to Feyerabend, the first idea, that of criticism, means that "we do not simply accept the phenomena, processes, institutions that surround us but we examine them and try to change them".<sup>14</sup> The second idea, that of proliferation, goes hand-in-hand with the first one, which means that "we do not work with a single theory, system of thought, institutional framework until circumstances force us to modify it or to give it up; we use a plurality of theories (systems of thought, institutional frameworks) from the very beginning".<sup>15</sup> The third idea, that of realism, refers to the nature of the theories we use, which means that "the theories (systems of thought, forms of life, frameworks) are used in their strongest form, not as schemes for the processing of events whose nature is determined by other considerations, but as accounts or determinants of this very nature".<sup>16</sup> In other words, it is in their best sense the genuine description of reality.

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<sup>13</sup> Paul Feyerabend, Philosophical Papers (Cambridge: University of Cambridge Press, 1981), p. ix.

<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

According to Feyerabend, these three ideas have formed an argumentative chain in modern science and philosophy of science, that is:

**criticism ==> proliferation ==> realism**

By this chain of argument Feyerabend means that modern scientists or philosophers of science usually start from a critical attitude in their fields, then propose a variety of "physical principles, psychological assumptions, plausible cosmological conjectures, absurd guesses and plain commonsense views",<sup>17</sup> and eventually they arrive at a realistic conclusion through their heated debates.

Apparently this chain of argument is a great improvement of methodology in the evolution of human knowledge comparing to the scholastic tradition of the Middle Ages. Specifically the idea of criticism, as Feyerabend says, is "the cornerstone of late nineteenth-century science and philosophy of science",<sup>18</sup> and now it is still one of the crucial elements in any successful approach of knowledge.

However, no matter how much can be said in favour of this argumentative chain, there is something missing, according to Feyerabend. That is, **a sense of practice**. As Feyerabend describes, people belonging to this tradition usually "criticize and weed out conflicting ideas" not on the basis of practical concerns, but on some uncritically adopted standards of methodology. They are critical to others, but "they hardly ever examine the standards themselves".<sup>19</sup> So, this chain of argument is in essence restrained in the old scholastic tradition. In this case, no matter how

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<sup>17</sup> Ibid., p. x.

<sup>18</sup> Ibid., p. ix.

<sup>19</sup> Cf. *ibid.*, p. xii.

sophisticated, their theories are practically useless because they are isolated from real life. As a result, their realism "only reflects the wish of certain groups to have their ideas accepted as the foundations of an entire civilization and even of life itself".<sup>20</sup> That is the fatal drawback of this approach, and Feyerabend vigorously challenges it:

Must we adapt our lives to the ideas and rules devised by small groups of intellectuals (physicians, medical researchers, socio-biologists, "rationalists" of all sorts), or should we not rather demand that intellectuals be mindful of circumstances that matter to their fellow human beings? Can we regard our lives on this earth and the ideas we have developed to cope with the accidents we encounter as measures of reality, or are they of only secondary importance when compared with the conditions of the soul as described in religious beliefs? These are the questions which arise when we compare commonsense with religious notions or with the abstract ideas that intellectuals have tried to put over on us ever since the so-called rise of rationalism in the West. They involve both a choice between forms of life and an adaption of our ideas and habits to the ideas (perceptions, intuitions) of the tradition chosen: **we decide to regard those things as real which play an important role in the kind of life we prefer.**<sup>21</sup>

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<sup>20</sup> Ibid., p. xiii.

<sup>21</sup> Ibid.

So, instead of the traditional chain of argument, Feyerabend suggests a reverse one:

**form of life ==> criticism ==> realism-L**

As Feyerabend interprets it, accepting a form of life L we reject a universal criticism and the realistic interpretation of theories not in agreement with L, or in other words, we accept only that kind of criticism which is in accordance with our favourite form of life and regard only those things as real which play an important role in our life, this is what he means by realism-L.<sup>22</sup>

I think that Feyerabend's formula is a good starting point in philosophy of science and epistemology. Certainly it is a better alternative to the traditional chain of argument. As we notice in our field, people belonging to that tradition are accustomed to work out the theory of scientific epistemology and methodology outside of scientific practice. They escape from real life and adopt a narrow and badly shaped methodological framework to contemplate the connection between theories and the world. Put in Hacking's terminology, they attempt to construct this connection by "a single-minded obsession with representation and thinking and theory, at the expense of intervention and action and

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<sup>22</sup> Cf. *ibid.* Here Feyerabend seems to promote a new version of realism. The traditional versions of realism, according to Feyerabend, only reflect the wish of certain groups to have their ideas accepted as the foundations of an entire civilization and even of life itself. By contrast, what Feyerabend proposes seems to be one which is based on the form of life we prefer. If he continued in this way, there would be typically a practical version of realism. Unfortunately, his fascination with relativism prevents him from developing this version of realism any further, as we will see later.

experiment"<sup>23</sup>. On the other hand, though their standards and ideas are fairly abstract and 'philosophical', they try to regulate scientific practice by referring to a few historical examples in an illustrative rather than an evidential manner to show how instructive their speculation is to that practice! The problem is, however, if we limit our discussion only in the epistemic scope without linking with what is going on in our real life, how can we hook it up with the real world? How can we prove that our result of discussion is meaningful and helpful rather than nonsense? In Hacking's metaphor: "If we are mere spectators at the theatre of life, how shall we ever know, on grounds external to the passing show, what is mere representation by the actors, and what is the real thing?"<sup>24</sup> So the traditional disputes over truth, reality and knowledge are mostly useless precisely because those involved always take a spectator's position isolated from practice.

However, a totally different picture will be given if we introduce Feyerabend's chain of argument in our approach. On this picture, the question of knowledge, its justification of truth or falsehood, reality or non-reality, etc., is no longer an abstract and purely epistemic question, inaccessible as scholar's discourse, but a practical one which is closely linked to the concrete practices of scientists and their fellow human beings and therefore one that can be answered only by the participants concerned.

In this regard, Feyerabend is strongly backed by Wittgenstein's remarkable view of the essence of the language game, i.e., the matter related to the foundation and justification of our knowledge. Wittgenstein says:

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<sup>23</sup> I. Hacking, Representing and Intervening (Cambridge: Cambridge University Press, 1985), p. 130.

<sup>24</sup> Ibid., p. 130.

The essence of the language game is a practical method (a way of acting), not speculation, not empty talk.<sup>25</sup>

It is characteristic of our language that the foundation on which it grows consists in steady ways of living, regular ways of acting....Its function is determined above all by action, which it accompanies.<sup>26</sup>

Since our language game and its product - knowledge - is deeply rooted in and conditioned by our steady ways of living and regular ways of acting, and since it is our practice that finally ends the chain of justification of human knowledge, as Wittgenstein repeatedly pointed out, then the nature of knowledge, its value of truth and objectivity, cannot be properly recognized unless the contents of practice are fully taken into account. It is in this sense I believe that Feyerabend sets a good starting point in dealing with epistemological problems, because he introduces the concept of practice to be his prior consideration of the argumentative chain. This is where he breaks from tradition.

From this starting point, Feyerabend immediately draws some remarkable as well as some notorious conclusions:

1. **cultural pluralism, based on his relativistic assumption, which promotes the equality and open exchange among different traditions and fight against the monotony of any 'privileged' idea, tradition or institution;**
2. **anti-foundationalism, which is facilitated by his historical criticism of empiricist and cumulativist**

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<sup>25</sup> L. Wittgenstein, Cause and Effect: Intuitive Awareness, in Philosophical Remarks, ed. by R. Rhees (Oxford: Blackwell, 1975), p.405.

<sup>26</sup> Ibid., p.20.

**interpretation of scientific knowledge;**

- 3. incommensurability between certain competing scientific theories, which signifies his departure from a practical standpoint to a relativistic one;**
- 4. relativism, i.e. a relativistic characterization of truth and knowledge as the end of his philosophy.**

These ideas, I think, constitute the key elements of Feyerabend's practical relativism. Through a careful examination of these elements, we can see that it is his inappropriate way of thinking that leads him astray from his original point of departure to relativism.

## CHAPTER III

### FIRST VISION: CULTURAL PLURALISM

In Farewell to Reason, Feyerabend makes it very clear that his practical relativism "is an attempt to make sense of the phenomenon of cultural variety"<sup>27</sup>. To do this, he gives three main reasons for his promotion of cultural diversity:

- (1) **Cultural diversity is beneficial for our society while uniformity reduces our intellectual and material resources.**

For Feyerabend this conviction constitutes the first rule of his practical relativism:

R1: individuals, groups, entire civilizations may profit from studying alien cultures, institutions, ideas, no matter how strong the traditions that support their own views.<sup>28</sup>

To make it a convincing principle, Feyerabend gives numerous examples in the history of sciences as well as the history of Western civilization to show that how sciences in general have profited from a toleration of a variety of conflict ideas and from a study of unscientific methods, and how Western civilization as a whole has learnt from the beliefs, habits, institution of other traditions. All of these demonstrations are well summarized in his quotation of Stuart Mill's On Liberty:

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<sup>27</sup> Feyerabend, Farewell to Reason, p.19.

<sup>28</sup> Ibid., p.20.

What has made the European family of nations an improving, instead of a stationary, portion of mankind? Not any superior excellence in them which, when it exists, exists as the effect, not as the cause, but their remarkable diversity of character and culture. Individuals, classes, nations have been extremely unlike one another: they have struck out a great variety of paths, each leading to something valuable; and although at every period those who travelled in different paths have been intolerant of one another, and each would have thought it an excellent thing if all the rest would have been compelled to travel his road, their attempts to thwart each other's development have rarely had any permanent success, and each has in time endured to receive the good which the others have offered. Europe is, in my judgement, wholly indebted to this plurality of paths for its progressive and many sided development.<sup>29</sup>

I fully support this pluralistic point of view. I believe that a cultural diversity is needed both for the production of well-developed human beings and for the improvement of sciences and civilization as a whole. My conviction is based on a basic fact that there are many forms of life in the world, from which stem different kinds of culture. As Feyerabend correctly points out, "cultures different from our own are not mistakes but results of a delicate adaptation to particular surroundings, and that they found, rather than missed, the secrets of a good life"<sup>30</sup>. Hence if we do not want to separate our thinking from real life or subject our life to our thought, we must grant the reality and

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<sup>29</sup> I quote from Feyerabend, *ibid.*, pp.33 - 34.

<sup>30</sup> *Ibid.*, p.4.

rationality of cultural diversity and admit the fact that only a variety of ideas, traditions and cultures can assist people to adapt better to a variety of life conditions and to better use both the intellectual and the material resources in the world. So I think Feyerabend is right when he says that "the fate of freedom, toleration and rationality are inextricably intertwined with the way in which influential groups and entire cultures have dealt with diversity (of ideas, customs, attitudes)"<sup>31</sup>.

However, as Feyerabend points out, there exist powerful tendencies in sciences, philosophy and other intellectual fields which reject or partially reject such a point of view. This happens whenever a world view that dominates the mentality of the believers is regarded as the only 'objective' and therefore acceptable measure of truth and goodness. Plato's perfect state, the Marxist communist ideal, American standards of democracy, and positivistic methodology of sciences are all examples. They are universalized and objectivized by their believers, assumed to be valid under all circumstances, provide a single path towards truth and excellence, and therefore guide human thinking and acting properly. All other ideas, beliefs and world-views are either rejected as sheer nonsense, or subject to the laws that rule the domain. This tradition of monotony has caused a very depressing phenomenon that retards the progress of sciences, politics and society, and, as we witness everyday, brings disaster to human beings.

The reason for these undesirable results is simple: since our society and our knowledge are developing, and even our most basic assumptions and most solid beliefs can be changed by the challenge of newcomers, the assumption of any universal and permanent truth or any single path towards that kind of truth is apparently harmful to the progress of humanity. This assumption, if taken for granted, will certainly suppress a variety of new ideas which have not had

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<sup>31</sup> Ibid., pp.23 - 24.

any chance to show their truth and strength, or whose portion of truth is still in embryo and in need of a appropriate circumstances to develop. On the other hand, it will not give the prevailing opinion any chance to be examined and refined by, in Feyerabend's words, "the collision of adverse opinions". Furthermore, as Mill observed, even the prevailing view that is wholly true but not contested "will be held in the manner of a prejudice, with little comprehension or feeling of its rational grounds." In this case, "one will not even understand its meaning, subscribing to it will become a mere confession".<sup>32</sup> Consequently, the triumph of a prevailing idea, theory, or philosophy will always lead to a decrease of human rationality and an increase of prejudice and blind worship.

Based on the above reasoning, I share Feyerabend's opinion that cultural diversity should not be tamed by any idea, theory or institution, no matter how truthful and excellent it has been labelled.

- (2) **Cultural pluralism assumes that in a free society all traditions should be given equal opportunities and equal rights.**

This conviction appears to be the second and the third rules of Feyerabend's practical relativism:

R2: societies dedicated to freedom and democracy should be structured in a way that gives all traditions **equal opportunities**, i.e. equal access to federal funds, educational institutions, basic decisions.<sup>33</sup>

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<sup>32</sup> I quote from Feyerabend, *ibid.*, p.34.

<sup>33</sup> *Ibid.*, p.39.

R3: Democratic societies should give all traditions **equal rights** and not only equal opportunities.<sup>34</sup>

However, we are now threatened by monotony and dullness, according to Feyerabend. Many traditions are disappearing under the expansion and the pressure of Western civilization, which, equipped with Western sciences and democracy, is mistakenly granted a privileged power and right over others. In the future if things continue as they are, everybody will live in a single world covered with a single technological, uniform way of life. To avoid the future of this very monotonous world, according to Feyerabend, we must fight against any kind of ideology which makes one tradition seem superior or become dominant to others.

In this connection, Feyerabend points to the prevailing image of science, which is regarded not as one form of life among others but as something above and overruling all other forms of life. It has become dominant, i.e. scientific research and scientific modes of thought are treated as the only correct and reasonable way of seeing the world. Says Feyerabend:

It reigns supreme because its practioners are unable to understand, and unwilling to condone, different ideologies, because they use this power just as their ancestors used their power to force Christianity on the peoples they encountered during their conquests.<sup>35</sup>

So, to fight for the equality of different traditions and to promote cultural diversity, the popular assumption that science overrules all other forms of life should be criticized and abandoned. That is what Feyerabend does. Showing how non-scientific

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<sup>34</sup> Ibid., p.40.

<sup>35</sup> P. Feyerabend, Against Method (New York: New Left Books Press, 1975), p.299.

ideas have repeatedly lead to scientific advances, he concludes that science is not a superior system with a superior methodology but rather one of many possible ways of seeing the world - a way that has been institutionalized in the West as the only path leading to the Truth. Also, it should be treated not as a standard for judging what is and what is not, what can and what cannot be accepted, but as one tradition among many:

Science has no greater authority than any other form of life. Its aims are certainly not more important than are the aims that guide the lives in a religious community or in a tribe that is united by a myth. At any rate, they have no business restricting the lives, the thoughts, the education of the members of a free society where everyone should have a chance to make up his own mind and to live in accordance with the social beliefs he finds most acceptable.<sup>36</sup>

To me most of these argument are reasonable. In a free society, we do need to protect other traditions from the expansion of Western tradition both among the minorities in Western countries and among the much larger populations in developing countries. And we do need to grant most traditions equal opportunities and rights of developing their own cultures. Any bias which ignores the contributions of other traditions to the health and improvement of the whole society and which regards Western ways of living as superior to non-Western ways of living, or regards science as superior to all other forms of life should be strongly criticized.

However, the question is whether the equality of all traditions is desirable in the extreme form that Feyerabend favours. For instance, is it desirable to treat a tradition as

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<sup>36</sup> Ibid., p.299.

equal which believes that women are in nature inferior and mean and therefore they should be controlled by men? Is it desirable to give a racist tradition equal right to power and equal opportunity to educational means?

Feyerabend calls this sort of criticism "emotional blackmail or slander", and his reply is that "democratic relativism denies the right of traditions to impose their form of life on others and therefore recommends the protection of traditions from outside interference"<sup>37</sup>. However, the question is, do people lead a form of life by the imposition of some traditions, or are they simply **born and raised and educated** in some traditions? If the latter is the case, should we leave the children who are born in some disagreeable traditions without interference, or should we do something (such as a civilized mandatory education and some restrictions on the spread of those traditions) to keep these children from the bad influence of those traditions? Here we still find that Feyerabend's call for the equal rights of all traditions is not practical and that his understanding of the form of life is superficial.

So, in practice, some traditions may not be allowed equality, because allowing them equality will harm the peaceful lives of the majority who do not want to be disturbed by those traditions, and they are actually restricted in a free and healthy society to increase human rights and freedoms in general. For example, the activities of racists to boost and to reinforce their views have to be restricted in order to protect jews, blacks and other races, and any kind of traditional discrimination of women must be eliminated to improve sex equality.

If this is the case, then Feyerabend's call for the equality

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<sup>37</sup> P. Feyerabend, Philosophical Papers, Vol.II (Combridge: Combridge University Press, 1981), p.30.

of all traditions must be further specified and made subject to certain generally accepted standards. That is, instead of allowing all traditions equal presentation in the educational process, we only give good traditions equal opportunity while restricting bad ones; or, promoting good aspects of traditions in education while eliminating bad aspects of them. If so, then our understanding of cultural pluralism as well as our policy of education is no longer neutral or something like 'anything goes', as Feyerabend believes, but fully justified in accordance with those common standards. However, if this is the case, then the old question arises: what are counted as good or bad? Are those generally accepted standards justified? Are there any common and objective ground for judging them?

Feyerabend tries hard to oppose the legitimacy of this question, as we will see later. It is from his opposition that we uncover the relativistic nature of his cultural pluralism.

- (3) **Feyerabend's argument for equality of all traditions is based on a relativistic assumption that truth and objectivity are only relative to those involved. So all beliefs and laws within their own traditions are all equally true, and what is true for one tradition might not be true for another.**

Essentially, this assumption underlies all of the rest of Feyerabend's rules of practical relativism, which all indicate that there is no common and objective ground for judging truth. Truth and knowledge are purely personal, local, relative. Let us pick out some of these principles:

**R4: laws, religious beliefs and customs rule, like kings, in restricted domains. Their rule rests on a twofold authority - on their power and on the fact that it is**

rightful power: the rules are valid in their domains.<sup>38</sup>

R5: Man is the measure of all things; of those that are that they are; and of those that are not, that are not.<sup>39</sup>

R9: the idea of a situation-independent objective truth has limited validity. Like the laws, beliefs, customs of R4 it rules in some domains (traditions), but not in others.<sup>40</sup>

Feyerabend illustrates his idea by telling a story quoted in Herodotus' book 3, 38 of HISTORIES: when Darius was king of Persia, he summoned the Greeks and asked them what they would take to eat the dead bodies of their fathers. They replied that they would not do it for any reason. Later, in the presence of the Greeks, he asked some Indians of the tribe called Callatiae who do in fact eat their parents' dead bodies, what they would take to burn them. They uttered a cry of horror and forbade him to mention such a dreadful thing. By telling this story Feyerabend endorsed Herodotus' conclusion that custom is 'king of all', that different people obey different kings:

If anyone, no matter who, were given the opportunity of choosing from amongst all the nations of the world the set of beliefs which he thought best, he would inevitably, after careful consideration of their relative merits, choose that of his own country. Everyone without

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<sup>38</sup> Feyerabend, Farewell to Reason, p.43.

<sup>39</sup> Ibid., p.44. Actually this is a direct quotation Feyerabend takes from Protagoras.

<sup>40</sup> Ibid., p.73.

exception believes his own native customs, and the religion he was brought up in, to be the best.<sup>41</sup>

Following this tradition-relative idea of truth and goodness, Feyerabend examines and criticizes the classic idea of truth and objectivity, which, according to him, have often been used to make the Western culture seem superior to others, or to take it as a standard for judging what is right and what is wrong regarding non-Western ways of life. Says Feyerabend,

the idea of objectivity arose whenever a nation or a tribe or a civilization identified its ways of life with the laws of the (physical and moral) universe and it became apparent when different cultures with different objective views confronted each other.<sup>42</sup>

So, for Feyerabend the concept of objectivity is actually a practical means used by members of one tradition to authorize their favourite form of life and to reject others. It was specifically strengthened by Greek philosophers when they formalized their way of thinking and arguing as universal standard which, they believed, was independent of the situations in which it occurred. Thus the ancient idea of tradition-independent truth and tradition-independent way of finding truth (i.e. the material notion of objectivity and the formal notion of objectivity, according to Feyerabend) run into Western civilization and became one of its cornerstones. From this conception stemmed the conception of rationality, and to be rational means to accept and to follow this universally valid standards of knowledge, while avoid others.

Feyerabend thus believes that the ideas of objectivity and of

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<sup>41</sup> Ibid., pp.42 - 43.

<sup>42</sup> Ibid., p.5.

rationality are themselves 'subjective' and are always relative to more practical senses. For they can be connected with almost any idea or procedure in any tradition. Also, this idea indicates that there exists a single right way of living, thinking and acting, and that all the other ways must be changed to adapt to it. As Feyerabend observes:

The belief propelled the Moslem conquests; it accompanied the crusaders into their bloody battles; it guided the discoverers of new continents; it lubricated the guillotine and now it provides fuel for the endless debates of libertarian and/or Marxist defenders of Science, Freedom and Dignity.<sup>43</sup>

Of course, each movement filled the belief with its own particular content, and therefore the 'objective' content changes from time to time and from group to group. But the basic idea that there is such an objective content, that it is universally valid and that it justifies human thinking and action is always the same held by different groups. Specifically, "the content has evaporated; the aura remains and makes the powers survive"<sup>44</sup>. This historical phenomenon is summarized by Feyerabend in another rule of practical relativism:

R8: the idea of an objective truth or an objective reality that is independent of human wishes but can be discovered by human effort is part of a special tradition which, judged by its own members, contains successes as well as failures, was always accompanied by, and often mixed with, more practical (empirical, 'subjective') traditions, and must be combined with such traditions to

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<sup>43</sup> Ibid., p.11.

<sup>44</sup> Ibid., p.11.

give practical results.<sup>45</sup>

Several remarks may be made here. First of all, I agree that there are no transcendental laws and beliefs which are independent of a certain practice and which can be said to be true and applicable in that practice. However, the fact that every law and belief arises from a particular tradition does not necessarily mean that their validity is only restricted in the domain in which they arise. These are two different questions. One is about the origins of certain mental products, the other refers to the boundary of their applications. Actually, as we can see in all branches of modern science and technology, many theories, though more or less carrying personal, local and traditional characteristics with them, are not limited by their origins but can be applied to broader and even global usage. This is so because, though scientists approach within a specific tradition, the objects of their approach are objective, and so also is the basis of their scientific practice. This determines the universal validity of some truthful theories which, once arisen, transcend their background traditions, personal involvements and contingent circumstances. For instance, we certainly cannot say that Newtonian mechanics are only applicable in England but not in China.

So, though I agree with Feyerabend that it is wrong to attempt to set up a situation-independent and universally valid truth without participating in any concrete practice and to impose it to all traditions, I do not agree with him that truth and knowledge are merely local and traditional, that is to say, that they can only be defined, used and justified within their home tradition. And I think that his mistake consists in an one-sided mode of thinking which ignores the objective basis of human practice.

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<sup>45</sup> Ibid., pp.72 - 73.

Also, I think his conclusion about the conception of objective truth is likewise mistaken. I admit that this conception has been abused by many traditions in history to make their beliefs and rules superior and respectable to others. In this respect, I agree that the understanding and the using of the concept of objective truth is not transcendental but practical, and that in practice this concept is often mixed with a certain historical tradition to gain their meaning.

However, the fact that members of different traditions like to identify their own beliefs and rules with the meaning of truth and objectivity does not necessarily mean that the concepts themselves are merely relative and meaningful to the different traditions without any neutral and objective value. These are two different questions. Also Feyerabend commits the mistake of a one-sided mode of thinking: **he exaggerates the subjective, historical and tradition-related characteristics of the concept of objective truth, at the expense of its neutral and objective value. So he cannot differentiate what is taken to be true by special groups or traditions, what is justified to be true by ordinary practice of human beings, and what is objectively true in reality.** This is the main reason for his fall into relativism, even though he starts from a practical point of view.

I will extend this argument against Feyerabend's relativistic view of truth further and make it the main topic of my last chapter. Here I would briefly evaluate his discussion of cultural pluralism. I think, except for his radical comments on the equality of all traditions, most of his non-philosophical discussion of the matter are well taken. His argument for cultural diversity is convincing, and his criticism of the tendency to monotony in Western sciences and culture is justified. I think that the power of his argument comes from his practical attitude. In any case, he examines the issue concerned, not from an abstract thinking, but

from the situations and conditions of the particular form of life related to a certain tradition. This attitude deserves our support.

However, when we consider the general philosophical views that lie behind his cultural pluralism, we encounter difficulties. For example, while we may fully agree with his view that knowledge is the local product of a certain practice and his view that what is right for one culture might not be right for another, we can hardly agree with his philosophical generalization that the truth is truth only to its believers, that there is no objective ingredient in knowledge which is applicable to all traditions, and that even the idea of an objective truth or an objective reality belongs to a special tradition. He is right to examine the concept of truth, not as an abstract and transcendental matter, but in relation to human life, but wrong to exaggerate its subjective and relative features at the expense of its objective value.

In my opinion, cultural pluralism is important and necessary in a free and healthy society. Cultural pluralism is also in accordance with a practical attitude in philosophy to deal with epistemological issues. But cultural pluralism does not necessarily entail relativism, nor is it facilitated by relativism. So, though sharing his practical starting point, I oppose his so-called Protagorean wisemen's way of thinking, which means "to become wise, they must 'relativize' their approach"<sup>46</sup> and thus make themselves feel comfortable with their thinking. This is, indeed, a kind of self-deception.

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<sup>46</sup> Ibid., p.52.

## CHAPTER IV

### SECOND VISION: AGAINST FOUNDATIONALISM

As I mentioned in the first chapter, there is a strong tendency, especially in Western science and philosophy, that is in conflict with cultural pluralism, i.e. the tendency towards monotony. For Feyerabend, this tendency is facilitated by a traditional ideology of foundationalism. He says:

Traditional epistemology sets itself the task of trying to find what it calls the foundations of all our knowledge. By a foundation is meant a more restricted body of theory or factual description which is absolutely certain and such that the total knowledge can be obtained from it in a fairly simple and straight forward fashion.<sup>47</sup>

According to Feyerabend, people who believe that they have secure foundations for their opinions more easily adopt an totalitarian attitude in practice which fully excludes cultural pluralism and freedom, for they tend to believe that their thinking and saying are truly justified, while others are talking nonsense:

It cannot stand diverging opinions - it calls them 'lies'; it puts itself 'above' the real lives of human beings, demanding, in a way characteristic of all totalitarian ideologies, the right to rebuild the world from the height of the 'what should be', i.e. in accordance with its own 'invincible' precepts. It refuses

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<sup>47</sup> P. Feyerabend, Knowledge without Foundations (Oberlin: Oberlin College press, 1961), p.55.

to recognize the many ideas, actions, feelings, laws, institutions, racial features which separate one nation (culture, civilization) from another.<sup>48</sup>

So, to defend democracy, freedom and cultural diversity and to encourage the competition of rival opinions and theories, Feyerabend sets out to criticize the traditional ideology of foundationalism as one of his major concerns in his philosophy.

Feyerabend's main target of criticism here is the empiricist ideology of philosophy of science, which, according to him, is dominated by foundationalism. His central point is that **there are no indubitable statements or infallible measures (either theoretical or empirical) for scientists to use as a foundation for their research, and the growth of scientific knowledge has nothing to do with such a stable foundation.** Actually, in order to advance science, scientists are engaged in a practice that prevents such a foundation from even coming into existence. Let us illustrate his standpoint from his two issues of critiques of empiricist foundationalism in philosophy of science.

#### **I. All observation statements are fully theoretical.**

According to Feyerabend, empiricist foundationalism admits that science contains unsure and hypothetical parts. But it emphasizes that such parts will either disappear or will turn into trustworthy theories as the result of further research, because they rest on a guaranteed foundation - experience, which is held to support and give content to theories without itself being affected by human thought.

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<sup>48</sup> Feyerabend, Farewell to Reason, p.102.

This ideology is of a piece with the view that there is a basic distinction between theoretical terms and observation terms, and that theoretical terms acquire their meaning from observation terms, whose meaning are in turn given and verified by what is immediately observed. Hempel summarizes this point of view very clearly:

It is a basic principle of contemporary empiricism that a sentence makes a cognitively significant assertion, and thus can be said to be either true or false, if and only if either (1) it is analytic or contradictory - in which case it is said to have purely logical meaning or significance - or else (2) it is capable, at least potentially, of test by experiential evidence - in which case it is said to have empirical meaning or significance.<sup>49</sup>

REQUIREMENT OF COMPLETE VERIFIABILITY IN PRINCIPLE:  
sentence has empirical meaning if and only if it is not analytic and follows logically from some finite and logically consistent class of observation sentences.<sup>50</sup>

This is in essence the positivistic interpretation of scientific theories. Since to the positivists experience is the sum total of what is observed under normal or experimental circumstances, this interpretation, they believe, "can give reasons why experience is stable and why it serves so well as a foundation of knowledge"<sup>51</sup>. However, Feyerabend argues, this is just an

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<sup>49</sup> C. Hempel, Aspects of Scientific Explanation, (New York: The Free Press, 1965), p.101.

<sup>50</sup> Ibid., p.104.

<sup>51</sup> Cf. Feyerabend, Philosophical Papers, Vol.II, p.35.

illusion.

According to Feyerabend, the meaning of scientific terms is not at all determined by experience; on the contrary, the interpretation of an observation language is determined by the theory we use, and it changes as soon as we switch the theory. Feyerabend takes this idea to be thesis I of his alternative interpretation of scientific theories.<sup>52</sup> His reason is:

observations (observation terms) are not merely theory-laden (the position of Hanson, Hesse and others) but fully theoretical (observation statements have no 'observational core').<sup>53</sup>

This means that there is no basic empirical statement which is independent of theories and which can serve as the basis of theories. All scientific terms, observation terms included, are in nature theoretical. So, the positivistic distinction between theoretical terms and observational terms should be abandoned, and what we have in science are only theoretical terms.

Feyerabend believes that this assertion is supported by scientific practice. In his view, scientists often use theories to construct abstract entities to interpret phenomena, and no part of the phenomena is exempt from being interpreted in this way. It is so because, according to Feyerabend, people have to interpret their observations according to their 'prejudices' (in Bacon's sense), i.e. according to their specific ideas about things and their properties, and the interpretation will change as people change their adoption of those ideas. They will re-interpret their observations in the way which is in accordance with their new ideas

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<sup>52</sup> Cf. Ibid., vol.I, p.31.

<sup>53</sup> Ibid., p. x.

or theories about things and their properties.

Feyerabend tries to illustrate this idea in his detailed discussion of the relations between impetus theory and Newtonian theory of motion, between phlogiston theory and oxygen theory, and between classical physics and quantum physics. As we can see in his discussion that, if one decisive theory in a certain scientific field is replaced by another with a different ontology, scientists usually restructure the interpretation of one and the same set of observation data to assign them entirely new meanings<sup>54</sup>.

If this is the case, then it has at least two consequences, according to Feyerabend:

- (1) crucial experiments are not so crucial.

As empiricists describe, in such experiment people attempt to decide by observation which of two given theories is false or has to be abandoned. Hence, the meaning of the observation statements must be independent of the theories to be verified. However, Feyerabend contends that there are no such independent observation statements in that all observation statements are pre-determined by their theoretical background. It follows that the usage of a particular sentence in an observational situation is mostly a theoretical or psychological event based on whatever certain constructive theories the observer prefers. Similarly, the justification as well as later acceptance or rejection of a theory by means of crucial experiments is also a theoretical or psychological decision in accordance with the participant's preferences.<sup>55</sup>

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<sup>54</sup> cf. *ibid.* Part1, "On the Interpretation of Scientific Theories".

<sup>55</sup> Cf. Feyerabend, *PP*, Vol.2, ch.8 on crucial experiment.

(2) The distinction between observation terms and theoretical terms is in essence a pragmatic and psychological distinction.

Feyerabend says:

There is of course a distinction between theoretical terms and observation terms, but it is a psychological distinction, dealing with the psychological processes that accompany their use, but having nothing to do with their content.<sup>56</sup>

Feyerabend defends this by observing that a blind person may take every sentence in a theory as a theoretical sentence, and he may understand that theory perfectly without observation:

the only difference between a blind person and a seeing person consists in the fact that the first one uses a different part of the theory as his observation language. Hence, even a blind person may understand 'red' and similar terms of his theoretical language and there is no reason why he should not be able to explain 'red' to a seeing person 'by ostension'. This being so we cannot assume that when ceasing to be blind he automatically improves his knowledge of redness. It is admitted that he will now possess a new method of deciding whether or not a given object is red. But just as the invention of a new microscope will change our notion of certain microscopic organisms only if it leads to new theories about them, in the same way the fact that our observer is now able to see red will lead him to a new notion of redness only if

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<sup>56</sup> Ibid., p.x, 3n.

it leads him to new theories about red.<sup>57</sup>

The positive aspect of Feyerabend's argument stated above is, I think, that experience cannot provide for our theories an indubitable and stable foundation upon which the truth of knowledge is fully justified, and that experience is not neutral and unaffected by any theoretical presuppositions. This is a fatal attack upon empiricist foundationalism and it is mostly acceptable. Today we have no doubt that scientific observations are theory oriented and observation languages are theory laden. Few people believe that there are any neutral and untouched observation and experiment isolated from any theory. For we cannot observe and apprehend the surrounding world without a certain frame of reference, or conceptual framework, or paradigm or whatever. That is what we take it for granted that 'observers must be prepared'.

However, Feyerabend seem to assume much more than this generally accepted conception. Specifically, when he says that observation terms are not merely theory-laden but fully theoretical, he means that there is no objective component in the meaning of an observational description. In this case, observation statements become the pure extension and application of a certain theoretical construction of human thought. That is the assumption hidden behind his argument, and that seems to go back to the old-fashioned Kantian subjective apriorism: the concepts and categories we use to make sense of our sense-data are not derived from experience, on the contrary, they are imposed by our minds on experience.

In his later work Farewell to Reason, Feyerabend seems to have modified his radical position and admitted that every description of observable events does have an 'objective' core. That is how we recognize its target, he says. But the core disappears as he goes on:

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<sup>57</sup> Ibid., p.33.

But it [a representation] also invites us to look at the target 'subjectively', through the eyes of a special group, or of an individual with a special vision. The new way of looking may intrude to such an extent that recognition becomes impossible without it - it is now 'part of reality' or, to turn the argument around, the original 'reality' was but another 'subjective', but popular view. <sup>58</sup>

The resulting 'objectivity' had 'subjective' causes. Transitions such as these occur in all subjects that are tied to observation and they define reality for them.<sup>59</sup>

Here we see a new version of Berkeley's esse=percipi principle, and we find that Feyerabend follows the same process of reasoning as Berkeley did. He first argues that we cannot have any knowledge of the objective world independent of our consciousness but only of our sensational world. Then he concludes that objective reality is nothing but a subjective or popular view; to be is to be perceived. This absurd conclusion, I think, comes about as a result of one-sided mode of reasoning, i.e. he has overstated the subjective side of human cognition, observation included, at the cost of its objective core. I will give a detailed diagnosis later.

## II The growth of science is not cumulative.

Another basis for empiricist foundationalism is cumulativism, the second main target of Feyerabend's criticism. According to this

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<sup>58</sup> Feyerabend, Farewell to Reason, p.107.

<sup>59</sup> Ibid., p.107.

traditional point of view, science progresses cumulatively: new theories are always built up upon the truthful ground of the old ones. So, a theory T2 is progressive with respect to an earlier one T1 if and only if T2 entails all the true consequences of T1 plus some other things T1 does not contain, so that T2 possesses broader and greater power of explanation.

There are two principles underling this orthodox approach, according to Feyerabend:

- (a) the principle of derivability, according to which a later theory T2 entails a earlier one T1 only if T2 is a logical consequence of T1, in other words, T2 must be logically deducible from the information contained in T1, and therefore they must be mutually consistent;
- and (b) the principle of meaning invariance, according to which meanings are invariant with respect to the process of reduction, since a derivation is not supposed to change the meanings of the theory derived.

For the positivists the second assumption is a logical consequence of the first one, and they play a crucial role in the positivistic approach of explanation as defended by Nagel, Hempel and Oppenheim. Armed with these principles the positivists believe that they can solve the problem of the foundation of knowledge, for they guarantee that the truths of earlier theories constitute adequate grounds for the later ones. However, according to Feyerabend's historical approach in science, these principles, though they might "fairly represent the relation between sentences of the 'All-ravens-are-black' type", cease to be in accordance with actual scientific practice which encompasses such comprehensive structures of thought as the Aristotelian theory of motion, the impetus theory, the Newtonian mechanic theory, the theory of

relativity and the quantum theory.<sup>60</sup>

In opposition to the derivability principle, Feyerabend argues that there are many well known instances in the progress of science where later theories are inconsistent with earlier ones. Actually, later theories often start from challenging the fundamental presuppositions of old ones. Such theories usually do not follow the same direction as their predecessors did: they might not answer problems that their predecessors answered or tried to answer because they dissolve them as pseudo-problems; and they might not count the fact discovered by their predecessors as the evidence for the confirmation of earlier theories because they dissolve them as pseudo-evidence, due to the introduction of new theoretical ideas or the better experimental techniques. The reason for these kinds of inconsistency is in most case due to **the basic difference of ontologies between two successive theories**, which determines their different visions of problems, different standards of measurement, different methodologies and different predictions, even in the domain where they overlap. This fact shows that the derivability assumption is unsuitable for scientific practice.

In opposition to the condition of meaning invariance, Feyerabend argues that, since the later theories often abandon the ontology of their predecessors, they must at the same time abandon the related fundamental presuppositions used to define the meaning of the descriptive terms designating entities in the old theories, and they must replace them by principles of the new theories. In this case, the meaning of the descriptive terms, together with propositions of which they compose, must have been changed, though orthographically they might remain the same. Feyerabend clarifies this as follows:

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<sup>60</sup> Cf. Feyerabend, "Explanation, Reduction and Empiricism", in Philosophical Papers, Vol.I, pp.44 - 96.

Our argument against meaning invariance is simple and clear. It proceeds from the fact that usually some of the principles involved in the determination of the meanings of older theories or points of view are inconsistent with the new, and better, theories. It points out that it is natural to resolve this contradiction by eliminating the troublesome and unsatisfactory older principles and to replace them by principles, or theorems, of the new theory. And it concludes by showing that such a procedure will also lead to the elimination of the old meanings and thereby to the violation of meaning invariance.<sup>61</sup>

So, according to Feyerabend, the progress of science is characterized not only by adding new concepts to the existing system of knowledge, but also by replacing the ontology and related fundamental principles once used to define the conceptual framework of the previous theories with new ones. This process of replacement sometimes occurs to such an extent that the terminology of T1 and T2 may be totally different: some terms might be literally the same, but in fact they designate the different entities or processes -- that is what Feyerabend meant by the concept of incommensurability, which is to be discussed in the next chapter.

Generally speaking, I think Feyerabend's critique of traditional foundationalism is convincing and impressive. His theoretical interpretation of scientific observation is apparently closer to practice than the empiricist one - if we overlook his subjectivistic implications. And his criticism of cumulative explanation of scientific progress is mostly acceptable - if we isolate it from his related thesis of incommensurability for the moment. My overall impression is that **where other people see stability and certainty of knowledge, Feyerabend tries to find uncertainty and change; and where other people see the benefits**

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<sup>61</sup> Ibid., pp.82 - 83.

from a secure foundation of knowledge, he points out both the academic and the ethical damaging effects it could have. His arguments are basically critical, historical and pluralistic. They are rooted in his practical standpoint, as I described earlier, and we can see this spirit everywhere in his detailed case studies of the history of science.

However, the conclusion Feyerabend draws from his critique of traditional foundationalism, like the conclusion he draws from his argument for cultural pluralism, is too radical. According to him, nothing can be claimed to be the foundation of science; science, in turn, also cannot claim to have provide a certain foundation to our culture:

Scientists may contribute to culture, but they cannot provide its foundation -- and, being constrained and blinded by their expert prejudices, they certainly cannot be allowed to decide, without control from other citizens, what foundation the citizens should accept.<sup>62</sup>

In general, Feyerabend does not believe that there are any objective components of certainty containing in human knowledge that can serve as the ground of justification of further cognition. As he declares in his book Knowledge without Foundation:

Assume somebody points out that certainty is an essential part of knowledge in the sense that the meaning of the word 'knowledge' contains the idea of certainty. The answer is very simple: we have decided against certainty ... we have also thereby decided against knowledge in the sense alluded to.<sup>63</sup>

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<sup>62</sup> Feyerabend, Farewell to Reason, p.262.

<sup>63</sup> Feyerabend, Knowledge without Foundation, p.69.

I don't think this attitude is appropriate towards the assessment of knowledge. My opinion is, the fact that the traditional forms of foundationalism misled people to seek ultimately secure grounds of knowledge in terms of immediate observation or self-supporting propositions does not mean that the idea of the foundation of knowledge is sheer nonsense. Just as the question we raised when we talk about traditions in the first chapter: what are counted as good customs or bad ones? Are there any grounds for judging them? I do not think that we are talking nonsense in calling for the grounds of such a judgment, nor do I think it is reasonable to answer it without any basis. In practice, we do think and reason on a certain ground, and we do rely on the certainty of that ground. As Wittgenstein says:

Propositions of the form of empirical propositions, and not only propositions of logic, form the foundation of all operating with thoughts (with language)... And they do not serve as foundations in the same way as hypotheses which, if they turn out to be false, are replaced by others.<sup>64</sup>

That is to say, these fundamental propositions serving as the foundation of our mental activities are indubitable and stable. Just as 'my name is Guodu Wang', 'I write by hand', or 'the water freezes below zero degree and boils above one hundred degrees'. What could make us doubt the certainty of these fundamental propositions? Aren't they the solid ground of our normal reasoning and judging?

That is to say: If I were contradicted on all sides and told that this person's name was not what I had always

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<sup>64</sup> Wittgenstein, On Certainty, section 401.

known it was, then in that case the foundation of all judging would be taken away from me.<sup>65</sup>

So, I believe that such a foundation is necessary in any kind of rational discourse. In the absence of that foundation, judgment and knowledge remains unjustified and we may not understand each other because we lack the common ground of communication. So, a totally negative attitude towards the foundation of knowledge is not a practical attitude at all.

However, if we look for a certain ground to serve as a basis of our knowledge, we cannot accept the offer of empiricist foundationalism, i.e. a ground consisting of some neutral, unaffected observational propositions reflecting what are immediately given in reality. For we are not spectators of the world, as I pointed out at the very beginning, and therefore our cognition is not one of passively mirroring of the world. We actively participate in the world, interacting with natural things in our everyday life, which constitutes the fundamental form of practice, and upon which our cognitive activities are grounded. So, the foundation of knowledge is not in the sense of the spectator's mirroring reflection of reality, nor in the sense of some theoretical presuppositions, but in the sense of human interaction with reality. That is, it is not a matter of our seeing or knowing but a matter of our doing that provides our knowledge an ultimate ground. As Wittgenstein says:

Giving grounds, however, justifying the evidence, comes to an end; --- but the end is not certain propositions' striking us immediately as true, i.e. it is not a kind of seeing on our part; it is our acting, which lies at the

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<sup>65</sup> Ibid., section 614.

bottom of the language-game.<sup>66</sup>

So, though Feyerabend correctly points out that the foundation of knowledge in terms of immediate and neutral observations is impossible, he is wrong when he says that observation propositions are fully theoretical, because that indicates that we start to see and to know only on the basis of a fully theoretical framework. If this is the case, our knowledge is of course ungrounded and uncertain, because, as Wittgenstein points out, hypotheses serving as foundations are unstable and replaceable. In this case, Feyerabend still restricts his thinking in the spectator's position of traditional debates. Specifically, a rationalist mode of thinking. Comparatively, I think Wittgenstein's view is more practical and anti-traditional. According to him, we do not start with passive observations, nor do we start with any theory. We start with a repeated and common way of doing things that constitute the bottom of our language game, the end of justification of knowledge. Wittgenstein says:

The common behaviour of mankind is the system of reference by means of which we interpret an unknown language.<sup>67</sup>

For example, the act of counting. Is it fully theoretical? No, it is a technique we learn from our common way of practice. But isn't it truly correspondent to the objective situations? Isn't it certain enough to provide us ground for further mathematical operations? Wittgenstein answers:

What we call 'counting' is an important part of our

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<sup>66</sup> Ibid., section 204.

<sup>67</sup> Wittgenstein, Philosophical Investigations (Oxford: Blackwell, 1967), I, section 206.

life's activities. Counting and calculating are not - e.g. - simply a pastime. Counting (and that means: counting like *this*) is a technique that is employed daily in the most various operations of our lives. And that is why we learn to count as we do: **with endless practice, with merciless exactitude**; that is why it is inexorably insisted that we shall all say 'two' after 'one', 'three' after 'two' and so on. - 'But is this counting only a use, then: isn't there also some truth corresponding to this sequence?' The truth is that counting has proved to pay.<sup>68</sup>

Instead of doubting everything or denying any certainty of the foundation of knowledge, as Feyerabend and those sceptics do, Wittgenstein believes that "it belongs to the logic of our scientific investigations that certain things are **in deed** not doubted".<sup>69</sup> It is so not only because "somewhere I must begin with not-doubting",<sup>70</sup> and not only because "if you are not certain of any fact, you cannot be certain of the meaning of your words either",<sup>71</sup> but also because

sure evidence, is what we accept unconditionally as certain: it is the evidence that we go by in acting surely, without any doubt.<sup>72</sup>

I do not think there is any other philosopher before or after

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<sup>68</sup> Wittgenstein, Remarks on the Foundations of Mathematics (Cambridge: MIT Press, 1983), I, section 4.

<sup>69</sup> Wittgenstein, On Certainty, section 342.

<sup>70</sup> Ibid., section 150.

<sup>71</sup> Ibid., section 114.

<sup>72</sup> Ibid., section 196.

Wittgenstein has pointed out in such a clear and convincing way that **the certainty of knowledge lies at our common way of practice, i.e. at our everyday routines of doing things.** Even if we cannot see what his systematic view on the matter would have been, he has no doubt pointed out a truly practical direction to us in solving those endlessly conflict issues as the foundation of knowledge, the truth of knowledge, and so on.

My understanding is: from our childhood up we are learning to act in a common way that is **"in conformity with mankind".**<sup>73</sup> We learn to walk, to eat, to read, to count, to write and so on. With endless practice we get hold of a bulk of fundamental propositions which form our **system of reference,** i.e. the foundation of our language-game. They are certain and indubitable, because **they are themselves grounded in our fundamental form of practice, i.e., in our common way of doing things and they directly reflect the proper interactions between human beings and the objective world.** Their truth and objectivity have been proved countless times and we go by in acting surely without any doubt, and we simply have no ground for doubting them. If someone else doubts these things, we think he or she must be mad because he or she does not mentally share our normal consciousness reflecting our common way of behaving.

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<sup>73</sup> Ibid., section 156.

So, rather than denying the foundation of knowledge and against certainty, as Feyerabend does, I share with Wittgenstein's opinion on the certainty of the foundation of knowledge, i.e. take it for granted while regard this certainty, not as something comes from our theories or experience, but as something lies at our fundamental form of practice. And neither we nor Feyerabend can doubt it or refuse to go along with it, because it is given to us. "It is there -- like our life."<sup>74</sup>

To sum up, I think there is a big difference between Wittgenstein and Feyerabend on the issue of the foundation of knowledge, though both claim a practical philosophy. While Feyerabend argues for knowledge without foundations, Wittgenstein asserts the reality and necessity of "the foundations of our language-game",<sup>75</sup> without it we simply cannot know, judge, communicate or even doubt. While Feyerabend argues against any certainty of knowledge, Wittgenstein rejects only a kind of certainty which comes from our seeing or reasoning but rather regards the certainty of knowledge as rooted in our ordinary way of practice, and this is hardly doubttable.

So, comparatively, I think, Wittgenstein's view of the foundation of knowledge is closer to the real life while Feyerabend's is more traditional. Wittgenstein digs deeper into the river-bed of human life while Feyerabend merely waves the flag of practice. It is true that Feyerabend takes the form of life as his starting point of approach, as we applauded in the first place. However, as soon as he fights with his orthodox rivals, he reverts to the common battlefield that his rivals prefer, i.e. the field of theory, representing and interpreting instead of participating, intervening and acting, and eventually he embraces the relativist

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<sup>74</sup> Ibid., section 559.

<sup>75</sup> Ibid., section 558.

viewpoint. This is a significant difference from Wittgenstein's style who always takes hints from real life. Instead, Feyerabend's practical philosophy is superficial and incomplete: it is rather a good attitude than a consistent methodology, and his historical studies of scientific practice are, though remarkable, lined up with his relativist favours. This feature will become more obvious when we examine his relativistic view of truth -- the central values of his practical relativism. Before entering that issue, however, let us consider the thesis of incommensurability on which it rests.

## CHAPTER V

### THIRD VISION: INCOMMENSURABILITY

In fact, the philosophical kernel within Feyerabend's critique of foundationalism is his thesis of incommensurability, a thesis that has sparked numerous controversies since it was proposed spontaneously by Kuhn and Feyerabend in 1962.<sup>76</sup> According to Feyerabend, his purpose of introducing the idea of incommensurability was to "find terminology for describing certain complex historical-anthropological phenomena which are only imperfectly understood".<sup>77</sup> More specifically, he wanted to feature the historical development of scientific knowledge in a way that is essentially at odds with the traditional interpretation of empirical cumulativism.

To sum up his arguments: there exist pairs of theories in science, T1 and T2, which overlap in a domain D and which are incompatible. That is, the conceptual frameworks of T1 and T2 are such that it is impossible either to define the primitive terms of T1 on the basis of the primitive terms of T2, or to establish correct empirical relations involving both sets of terms. Feyerabend illustrates this as follows:

As an example of two incommensurable theories let us briefly discuss classical celestial mechanics (CM) and the special theory of relativity (SR)... The concept of length as used in SR and the concept of length as

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<sup>76</sup> Cf. T.S. Kuhn, The structure of Scientific Revolutions (Chicago: University of Chicago Press, 1962); Feyerabend, "Explanation, Reduction, and Empiricism", Minnesota Studies in the Philosophy of Science (Minnesota: University of Minnesota Press, 1962), Vol III, pp.28-9'.

<sup>77</sup> Feyerabend, Against Method, p.269.

presupposed in CM are different concepts. Both are **relational** concepts, and very complex relational concepts at that. But relativistic length involves an element that is absent from the classical concept and whose use makes classical concepts inapplicable. It involves the **relative velocity** of the object concerned in some reference system. It is of course true that the relativistic scheme very often gives us **numbers** which are practically identical with the numbers we get from CM; but this does not make the **concepts** more similar... different magnitudes based on different concepts may give identical values on their respective scales without ceasing to be different magnitudes. This conceptual disparity, if taken seriously, infects even the most 'ordinary' situations: the relativistic concept of a certain shape, such as a table, or of a certain temporal sequence, such as my saying 'yes', will differ from the corresponding classical concept also.<sup>78</sup>

So, if two theories are incommensurable, then the use of any concept of one theory T2 makes the concepts of another T1 inapplicable, though they may use the identical names or give identical values. In this case, the explanation of T2 on the basis of T1, or the reduction of T2 to T1 is clearly impossible assuming explanation and reduction to be understood in the manner of Hempel and Nagel. However, Feyerabend says:

Note that the mere **difference** of CM-concepts and SR-concepts does not suffice to make the theories incommensurable. This point is occasionally overlooked by Kuhn.<sup>79</sup>

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<sup>78</sup> Feyerabend, Philosophical Papers, Vol.II, pp.153 - 154.

<sup>79</sup> Ibid., 54n.

That means, if two theories are incommensurable, it is not merely a difference in meanings of concepts between T1 and T2, but a difference in the entire frames of ontology of the two theories, and the shift from T1 to T2 means the exclusion of the ontology of T1, together with the exclusion of all the meaning of its concepts and its laws, while accepting the ontology of T2 as well as its consequences.<sup>80</sup> This is the unique feature of Feyerabend's interpretation of incommensurability, and Feyerabend believe that it characterizes the basic disagreements between different schools of scientists:

The views of scientists, and especially their views on basic matters, are often as different from each other as are the ideologies that underlie different cultures.<sup>81</sup>

In his works, Feyerabend provides numerous illustrations to show this essence of incommensurability. One of the striking examples is the transition from impetus theory to Newtonian mechanics. According to Feyerabend, impetus theory is not just limited by Newtonian theory, nor can it be derived from Newtonian theory. For the ontology behind impetus theory, i.e. Aristotelian law of motion, is incompatible with the ontology of Newtonian theory. In this case, we would say that the impetus theory and Newtonian theory are incommensurable. Even though they may use the same terms, these terms are not mutually definable within the rival's conceptual framework. For example, both impetus theory and Newtonian theory use the concept of force. But the meaning of force is understood in totally different ways in these two frameworks. In Newtonian theory force only produces acceleration, while in impetus theory force is the original cause of the movement of an object,

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<sup>80</sup> Cf. Feyerabend, PP, Vol.1, pp.44 - 96.

<sup>81</sup> Feyerabend, Against Method, p.274.

i.e. it is the impetus that is given by a mover to an isolated object and that causes it to move. In this case, the meaning of force in impetus theory is given by the presupposition of Aristotelian law of motion that says that bodies cannot move by themselves, which is in conflict with the modern notion of motion behind Newtonian mechanics, according to which bodies are in the continuous movement.<sup>82</sup>

To this point, I think, Feyerabend's arguments for incommensurability are hardly refutable, whether historically or theoretically. In the history of science, we can find a variety of incommensurable pair of theories whose ontologies or world-views are totally different. As a result, when a single object is dealt with from the visions of two incommensurable ontologies, each approach usually leads to different questions and projects, and consequently, quite different kinds of properties and mechanisms are often proposed within the respective frameworks of theories.

Feyerabend's thesis of incommensurability is also of great significance in scientific methodology, which, I think, is consistent with his claim for theoretical diversity. If all theories in history of science were compatible and consistent, and followed one by one, there would be no fundamental and revolutionary change, no change that drastically reforms the nature of knowledge and improves the ability of human cognition. Moreover, from an individual's angle, if a scientist sticks on one theoretical framework forever without reforming his knowledge structure, he will fail to catch up with the new movement of scientific discoveries. In this case, an adjustment of methodology within the old framework usually does not work, but a radical switch to an alternative paradigm which, though it might be incommensurable from the one he is familiar with, probably provides him a totally new vision of seeing the subject. In this case, it

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<sup>82</sup> Cf. Feyerabend, PP, Vol.1, ch.4.5

might give him more chance of success. This phenomena happens frequently not only in science, I think, but also in our philosophical discourse in which a kind of cognitive reshuffling usually takes us from one view to another.

Where I cannot agree with Feyerabend is his evaluation of the phenomena of incommensurability and the relativistic conclusions he derives from it. According to him, a theory will be most satisfactory if it is incommensurable with the earlier ones in the domain where they both overlap. This criterion of theory, he thinks, best characterizes the real feature of scientific progress. He says:

If ... theories are commensurable ... we simply have an addition to knowledge (when scientific 'advance' occurs). It is different with incommensurable theories. For we certainly cannot assume that two incommensurable theories deal with one and the same objective state of affairs (to make the assumption we would have to assume that both at least refer to the same objective situation. But how can we assert that 'they both' refer to the same situation when 'they both' never make sense together? Besides, statements about what does and what does not refer can be checked only if the things referred to are described properly, but then our problem arises again with renewed force.) Hence, unless we want to assume that they deal with different (conceptual) worlds and that the change (from one world to another) has been brought about by a switch from one theory to another. Of course, we cannot say that the switch was caused by such a change ... (but) we no longer assume an objective world that remains unaffected by our epistemic activities, except when moving within the confines of a particular point of view. We concede that our epistemic activities may have a decisive influence even upon the most solid piece of

cosmological furniture --- they may make gods disappear and replace them by heaps of atoms in empty space.<sup>83</sup>

This paragraph clearly shows the philosophical inclination that motivates Feyerabend's idea of incommensurability: In order to secure a relativist position in epistemology, he mixes up the human representations of the objective world with the objective world itself, and then deliberately makes the incommensurable feature of certain theories to be the excuse of his refutation of the objectivity of knowledge. However, this strategy does not succeed.

I admit that the idea of incommensurability introduced by Kuhn and Feyerabend does show the weakness of the principle of explanation put forth by Hempel and Oppenheim and that of reduction by Nagel which back up a cumulative interpretation of scientific progress. It convinces me that the development of science is not always cumulative but sometimes revolutionary, and that it is indeed a natural occurrence during a scientific revolution that some new theories might be totally incompatible with the earlier ones.

However, the fact that there exists the phenomenon of incommensurability in the course of scientific progress does not entail the conclusion that this phenomenon is the only feature of scientific progress. Rather, it is one feature among others, or one pole of a chain of theoretical changes, one which reflects the radical, qualitative and discontinuous change in that process. Yes, scientific progress does involve not only an addition to knowledge but also a revolutionary change of ontologies, conceptual frameworks of existing theories. However, this does not lead us to deny the well-known fact that we do add some true information to knowledge from time to time and theories do have successive

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<sup>83</sup> Feyerabend, Science in a Free Society (London: New Left Books, 1978), p.70.

relations from one stage to another in the long run of scientific evolution, at least in term of the referential, experimental, or some methodological successions between stages.

This is another feature of scientific progress, or another pole of the chain of theoretical changes as proceeding in what Kuhn called 'normal science'.<sup>84</sup> Even in the case of incommensurability, we cannot regard it absolutely since they are usually related to the same objects, same observational facts and experimental results. This is so because, no matter how varied and incompatible among human representations, we live and practice in the same objective and material world. That forms our fundamental and common way of interacting with reality, and propositions directly reflecting that way of interaction constitute the common, objective and practical ground of thinking, as I have argued for the foundation of knowledge. This being the case, we cannot say that statements we use to construct theories are not statements about material objects in this material world, nor can we deny that there are any common and objective elements in the different and even incommensurable theoretical representations.

So, it is clear that there is an essential difference between Feyerabend's relativistic perception of incommensurability and mine. For him, if two theories cannot make sense together, then we cannot assume that they deal with one and the same objective state of affairs, even though they are concerned with the same domain; and if we cannot make such an assumption, then we no longer assume that we live in one and the same objective world distinct from our representations of it, but that different groups of people live in

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<sup>84</sup> Note that I only borrow the term of 'normal science' from Kuhn without committing to his interpretation. For I admit the qualitative and partially revolutionary changes within the period of normal science, while Kuhn only designates the consecutive and quantitative changes to that period.

many different and mutually incommensurable worlds constructed by those different and mutually incommensurable representations.

By contrary, for me this procedure of reasoning makes no sense. First, the fact that some theories working in the same domain do not make sense together does not necessarily mean that they do not deal with the same objective situation: they may deal with the same object from different branches or different levels of knowledge which are mutually incomprehensible. This is like the difference between a Chinese doctor's vision of lung cancer and a Western doctor's vision; we are not forced to say that they are dealing with the different diseases.

Second, even though we cannot assume that every pair of incommensurable theories deal with the same object, this only shows the diversity of our scientific researches, but leaves no room for Feyerabend's radical assumption that we can no longer assume one and the same objective world as the common object of scientific approaches. It is true that our epistemic activities are not a passive process of sense reflection but a dynamic one in which our perception of the world are moulded by. However, this fact only shows that our epistemic activities have a decisive influence upon our representations of the world, and it does not provide any reason for Feyerabend to hold that we do not share the same material world, and that we do not share the common way of doing things as our common objective and practical foundation of knowledge.

On the basis of the above reasoning, I do not think that Feyerabend has derived any significant epistemic conclusions from his argument regarding incommensurability to refute an objective standpoint in epistemology. On the contrary, that point of view will be strengthened by a practical interpretation of incommensurability. As I said above, even though we may have many different or even incommensurable images and theoretical

representations of the world, we share a fundamental and common form of practice, and as a result we share a bulk of fundamental propositions directly reflecting our routines of doing things, that belong to our deepest-rooted frame of reference. We learn them from childhood and accept them undoubtably on 'human authority'.<sup>85</sup> If we cannot share them with somebody else, specifically, if someone did not agree with us that we all live on ONE and the SAME world which is material and full of air and water and earth, there will be no ground for understanding between us and him or her. As Wittgenstein says:

If Moore were to pronounce the opposite of those propositions which he declares certain, we should not just not share this opinion: we should regard him as demented.<sup>86</sup>

Suppose a man could not remember whether he had always had five fingers or two hands, should we understand him? Could we be sure of understanding him?<sup>87</sup>

Suppose we begin to learn a theory incommensurable to ours, we start without doubting that the descriptive terms of the theory refer to entities in this material world instead of in the 'other world', because that belief belongs to our deepest rooted frame of reference we all share together. Surely, once we learn a considerable proportion of the theory, something like a gestalt switch may occur and we find that the descriptive terms of the theory have an entirely different meaning as if they referred to an entirely different set of entities in a different world. However,

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<sup>85</sup> Wittgenstein, On Certainty, section 161.

<sup>86</sup> Ibid., section 155.

<sup>87</sup> Ibid., section 157.

it is in fact that we perceive entities in the same world in a entirely different way. These terms might refer to different items due to the new discoveries, but most likely refer to the same items due to deeper level of research. Just as a drawing of a duck can be perceived as a drawing of a rabbit under a certain instruction, this only shows that one object in our world can be perceived from different perspectives of interpretations. Or using Feyerabend's own example, the fact that Homeric view of the world full of gods and demons was incommensurable with the Greek materialist view of the world full of atoms in empty space does not entail his assumption that they deal with different worlds of which one is full of gods and demons and another is full of atoms. Rather, it entails an objective assumption that they both deal with one and the same material world (though they have different images of the world), one which contains atoms instead of gods and demons. Moreover, since we justify this assumption on the basis of the whole history of scientific practice, we can say that atomistic view of the world is more objective and adequate to reflect reality than Homeric one, and thereby the switch from one to another only shows the progress of human knowledge rather than a relativist turnover.

In my opinion, an objective view of the world, just as all other fundamental propositions, belongs to our fundamental system of reference which is a direct reflection of our common way of interaction with reality and which is shared by every rational person. We accept it 'in conformity with mankind', and starting from it we form and doubt different and even incommensurable theories of various objects. It is on the basis of human common-shared objective view of the world and the subsequent framework propositions that make it possible for us to interpret, exchange and evaluate different and even incommensurable theories in different languages or traditions. This is the essence of a practical interpretation of the phenomena of theoretical incommensurability.

## CHAPTER VI

### A Relativist Endpoint

It is now time for us to examine the conclusion of Feyerabend's practical relativism, i.e. his relativist view of truth and knowledge which in fact dominates his vision. He usually expresses it in three ways:

- A. Truth is relative to a particular domain of approach tied to a certain tradition or experience.

According to Feyerabend, when we say something true, it is in essence meant that it is 'true for' some special domain defined by special questions, procedures and principles arising from a special tradition of approach. "They [i.e., such questions, procedures and principles] sound as if they had arisen from the very essence of the world while merely reflecting the peculiarities of a particular approach."<sup>88</sup>

I agree with part of this. Firstly, I take it for granted that the truth of a certain theory is concrete, partial, and limited to a certain domain of reality, because our theories are local products, which reflect things and their processes only within a certain scope, and therefore they may have validity only within that scope. If we arbitrarily extend their usage without further investigating the different conditions of other occasions, our theories will lose their status of validity and what was true may become false. That is a common knowledge obtained from practice.

For instance, in the field of philosophy of science, there is

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<sup>88</sup> Feyerabend, Farewell to Reason, p.73.

a strong tendency that some people work hard to tame science with their presupposed standards and methodologies which is transcend the concrete scientific practice. They "shoot the breeze in well heated offices"<sup>89</sup> when they attempt to figure out rules for the guidance of the development of scientific theories. They want to provide science with a set of methods to solve scientific problems from afar, without participating and understanding the peculiarities of the concrete fields of scientific practice. This tendency is wrong because, as Feyerabend correctly points out:

Science never obeys, and cannot be made to obey, stable and research independent standards: scientific standards are subjected to the process of research just as scientific theories are subjected to that process; they do not guide the process from the outside.<sup>90</sup>

Scientists work in a totally different area of knowledge from philosophers do. And accordingly, their ways of solving scientific problems are essentially different from philosophers' way of solving philosophical problems.<sup>91</sup> They follow their own rules and standards related to their own practice and they never depend on any abstract principles taken from philosophy or other fields that run counter to that practice. Of course, scientists may take hints from a study of, say, logic or the philosophy of science, but, as Feyerabend correctly points out, the study should emerge from the concrete scientific practice; it should not be imposed from outside. In brief, I approve of Feyerabend's slogan: "leave

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<sup>89</sup> Ibid., p.17.

<sup>90</sup> Feyerabend, Philosophical Papers, Vol.I, p.xi.

<sup>91</sup> Cf. Ibid., Vol.II, ch.5, where Feyerabend discusses in detail the difference between scientists' way and philosophers' way of solving problems.

science to the scientists!"<sup>92</sup> And generally speaking, I oppose any forms of dogmatism which attempt to enforce their favoured theories beyond the limited domain of validity to a universal scale.

However, there is still a basic difference between Feyerabend and I. When I say that the truth of our theories is limited in a certain domain, the notion of domain used here refers not only to a certain range of human traditions or experiences, but also an aspect of reality. Feyerabend, however, seems to think of it only in the former sense, which has nothing to do with reality. For he says that truth does not arise from "the very essence of the world but merely reflecting the peculiarities of a particular approach". This means that he leaves no room for an objective understanding of the truth of our theories. That is one reason for his relativist evaluation of truth.

On my interpretation, however, the truth of knowledge reflects not only the peculiarities of a particular approach but also the very essence of the objective world, because there is no impassable gulf between the domain of reality and the domain of experience, and these two domains are overlapped in the course of human practice. In practice, we are both knowers and doers. As we act, we penetrate our ideas and purposes into the domain of reality we are working on, while obtaining new experience and knowledge from that domain of reality. This being the case, the truth of knowledge must both reflect the essence and the mechanism of the given domain of reality and the peculiarities of the related human experience, which are two sides of one coin. Feyerabend emphasize one side at the cost of the other, and therefore he loses the objective sense of truth.

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<sup>92</sup> Cf. A. Lugg, 'Critical Notice of Paul Feyerabend: Farewell to Reason', in Canadian Journal of Philosophy, Vol.21, No.1, 1991, pp.109 - 120.

B. Truth is relative to a given time or epoch.

According to Feyerabend, the truths of theories are temporary. They move with the stream of history. "They are melted down whenever there is a fundamental change".<sup>93</sup> This is because, as he says:

The practice of inventing, applying and improving theories is an art and therefore a historical process. Science as a living enterprise is part of history.<sup>94</sup>

In the history of science, Feyerabend points out, many once utterly ridiculous views have become solid parts of our knowledge, and many once definitely correct views have been gradually weakened until disappearing into thin air:

The history of science is full of theories which were pronounced dead, then resurrected, then pronounced dead again only to celebrate another triumphant comeback.<sup>95</sup>

I partly agree with this opinion, too. First of all, I admit the historical nature of truth, because our realization of the world is a historical process. In this process, all theories, as results of a certain stage of human cognition, are approximate, incomplete and subject to correction. So **what we take to be true** or even **what is proved to be true** in one stage of cognition might turn out to be false in the next and vice versa. In this sense, we should say that truth is evolving, which lies in the long process of human cognition, moving from lower to ever higher levels of

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<sup>93</sup> Feyerabend, Farewell to Reason, p.14.

<sup>94</sup> Ibid., p.14.

<sup>95</sup> Ibid., p.33.

knowledge. Each stage is necessary and justified by the conditions of practice at the time. It is unjustified by the new, higher conditions which gradually arise from new and improved practice.

This process of evolution, however, does not provide any excuse for Feyerabend's relativism, because **the previous theories are not simply rejected and abandoned as sheer nonsense. In Hegel's dialectical terms, they are 'sublated'**. That means preserving the objective core of previous theories while abandoning their subjective forms. The reason is simple: our theories are representations of the objective world. Hence, no matter how many false components they may contain (which may be identified and rejected in the future practice), they still hold some true elements which do reflect the real relations of objects and which, being not falsified but justified many times in endless practice, deposit into the stable riverbed of knowledge, which need not be dependent of individual circumstances, historical events and involved persons. It is these preserved true components of knowledge that constitute the solid ground of scientific enterprise as well as our confidence in science.

We can no doubt attribute some of these true elements to Newtonian mechanics which are still as true as they were on a macroscopic scale and are continually employed in all kinds of mechanical engineering projects. We can also list many other great theories in the history of science, upon which much of our modern technology and modern life are still based. So we can say without doubt that compared to other alternatives, these theories contain more objective contents and therefore represent a higher level of approximation to reality, which may not change from time to time.

Even in 'dead' theories we can find some stable parts of truth. For example, in the early phases of the development of physics, gases were treated as perfectly continuous distributions

of matter. This perception was later abandoned by the success of modern atomic theory. However, the relationship of temperature and pressure obtained in terms of the former perception is now still regarded as true within a certain domain of reality. This view explains the phenomenon of revival of 'dead' theories of which Feyerabend makes use in support of his relativism. But it does not show that the comeback of some falsified theories is arbitrary and therefore the truth is only chronologically relative. It shows only that **even in 'dead' theories there are some objective elements of truth appropriate to the real relations of things** which, after being neglected for an interval of time, might be re-discovered and refined for new use in the new stage of cognition.

C. Truth is relative to particular individuals, groups, or traditions.

This is the central point of Feyerabend's relativism, and we can feel its influence throughout his discussion. Specifically:

What is true for one person, or one group, or one culture need not to be true for another.<sup>96</sup>

To support this view, he points out the human or subjective character of theories:

Scientific statements are supposed to describe facts and laws that exist and govern events no matter what anybody thinks about them. However, the statements themselves certainly are not independent of human thought and action. They are human products. They were formulated with great care to select only the 'objective' ingredients of our environment but they still reflect the particularities of the individuals, groups, and societies

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<sup>96</sup> Ibid., p.73.

from which they arose.<sup>97</sup>

From this description, he jumps to a subjective and relativist conclusion:

As far as I am concerned truth lies with us, with our 'opinions' and 'experiences' and we, 'the many', not abstract theories, are the measure of things.<sup>98</sup>

Perception and opinion, the customary measures of truth, are infallible measures and the worlds projected by different individuals, groups, nations are as they perceive and describe them -- they are all equally real.<sup>99</sup>

Feyerabend's one-sided mode of thinking is fully exposed in this line of reasoning: **He is obsessed by the human or subjective character of knowledge at the cost of the objectivity of its truth.** As described in the previous chapters, he first admits that the objects of knowledge are objective and independent of what anybody thinks about them. Then, when he notices the fact that knowledge itself is not independent of human thought but inevitably reflects its particularities, he embraces the traditional position of subjectivism by denying the objective value of truth, i.e. denying any possibility of our knowledge to reflect the real relationship of objects. In this sense, the truth of knowledge becomes purely relative; it no longer has any objective basis.

Furthermore, Feyerabend believes that it is even impossible to make a false assertion, since every statement could be attributed

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<sup>97</sup> Ibid., pp.120-121.

<sup>98</sup> Ibid., p.50.

<sup>99</sup> Ibid., p.51.

to a particular person or community who regards it as true.<sup>100</sup> In his eyes, everyone can possess his or her own truth. "A sick person lives in a world where everything tastes sour and therefore is sour". "The members of a racist society live in a world where people fall into sharply defined groups, some creative and benevolent, others parasitical and evil", and their views are as true as others.<sup>101</sup>

Doesn't this ethically unacceptable argument derive from Feyerabend's relativist view of truth? Would he like to give a fascist world-view an equal appreciation of truth as others? Moreover, if perceptions and opinions are infallible measures of truth and they are all equally true to their holders, if there is no objective sense in our concerns of truth, then how can we make a right judgment or choice among different opinions or theories with regard to their goodness or fitness to reality? Feyerabend does have an answer:

The resulting conflict is frequently resolved by power-play supported by popular preferences.<sup>102</sup>

For instance, Feyerabend believes, the conflict between Galileo and the Church is not a conflict between truth and falsehood but one between different truths, i.e. between scientific truth and religious truth; and he argues,

the Church was not only on the right track when measuring reality by human concerns but it was considerably more rational than some scientists and philosophers who drew

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<sup>100</sup> Cf. *ibid.* p. 51 where Feyerabend endorses Protagoras view of truth and falsehood.

<sup>101</sup> Cf. *ibid.* p.51.

<sup>102</sup> *Ibid.*, p.81.

a sharp distinction between facts and values and then take it for granted that the only way of arriving at facts and, therefore, reality, is to accept the values of science.<sup>103</sup>

However, despite Feyerabend's personal taste, science has in practice shown a tremendous advantage in improving human adaptation to the nature over so called 'more realistic and rational' theology. How is this to be explained? Doesn't it prove that science has an objective ground while theology merely "fumbles around with words", as Wittgenstein correctly points out?<sup>104</sup> No, Feyerabend argues, it only shows that scientists have applied too much aggressive propaganda by means of their theories, so they won the popular preference. He complains,

it is a pity that the Church of today, frightened by the universal noise made by the scientific wolves, prefers to howl with them instead of trying to teach them some manners.<sup>105</sup>

Realizing this 'fact', Feyerabend sends a letter to a missionary to find out why the Church now retreated in the face of scientific results so fast and to encourage them fight against science to recapture their lost glory. He asks:

If it is legitimate to hold on to and to defend refuted views within the sciences, if such a procedure can lead to scientific progress, why, then, does the Church

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<sup>103</sup> Ibid., p.253.

<sup>104</sup> Cf. Wittgenstein, Remarks on Colour, ed. G. Anscombe and R. Rhees (Oxford: Blackwell, 1967), section 317.

<sup>105</sup> Feyerabend, Farewell to Reason, p.260.

hesitate to do the same thing from the outside?<sup>106</sup>

It is indeed a pity that resulting from his relativist view of truth, Feyerabend has no way out but accepts a sort of imperialist logic of 'Might makes right' as his resolution. Obviously, it is not the way I prefer. Instead, I defend an objective measure of truth.

First of all, I admit that knowledge is a human product, and that we have to produce and develop our knowledge of the world and evaluate its truth value in peculiar framework of cognition which is formed in our peculiar form of life. In this sense, I agree that **what we take to be true is relative to, or dependent on our personal and social context of cognition.**

However, we should not overstate the relative feature of the truth of our knowledge, at the cost of its objective nature. We have to admit that there is an objective core inherent in our knowledge which is independent of our personal and social context of cognition. For example, no one can say that the earth used to be static in the centre of universe and then started to move around the sun by the power of the Copernican revolution in science. So, though we have different or even incompatible images of the world from our ancestors, and we take different or even incommensurable theories as true in accordance with our current ontological framework of cognition, we do not share Feyerabend's view that we live in a different world from our ancestors constructed by these distinct images and theories. We will say that these distinct images and theories are merely alternative perspectives upon the same objective and material world, and their truth value must be justified by means of human practice in the same world as before. **Only through the endless justification of practice can we reach what is proved to be true by practice, i.e., a new level of truth**

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<sup>106</sup> Ibid., p.263.

of knowledge that contains more objective contents than those unjustified theories. At this level, we may say with confidence that these theories are not relative to any personal preference: they in fact constitute the reliable ground of knowledge.

For example, based on the countless confirmations of scientific practice, we can say with confidence that Lavoisier's theory is more objective and adequate to reality than Priestley's theory. For oxygen has been repeatedly proved to be real while phlogiston was taken to be real at that time but it was proved to be false later. Hence we can say that the replacement of phlogiston theory by oxygen theory represents a progress of truth from a lower level to a higher level in the history of science. This is the only reasonable account of the matter.

On this point Feyerabend would probably say that I am ignoring his argument. For when I say that what is proved to be true in practice is more objective and progressive than what is taken to be true, I actually rely on the justification of **facts** we obtained from practice. However, for Feyerabend facts are also relative, as he says:

What counts as evidence, or as an important result, or as 'sound scientific procedure', depends on attitudes and judgments that change with time, profession, and occasionally even from one research group to the next.  
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So, for Feyerabend there are no facts in an objective sense. **Facts are constructed by different theories in support of their respective theoretical resolutions, and are thus only relative to the people who manipulate them.** If this is the case, then Feyerabend would say that I have no reason to say that what is

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<sup>107</sup> Ibid., p.75.

proved to be true is more objective and progressive than what is taken to be true, because, based on the above assumption, there will be no objective basis for the evaluation of competing theories. In particular, he notes that:

Ehrenhaft and Millikan working on the same problem (the charge of the electron) use their data in different ways and regard different things as facts. The difference was eventually removed but it was the core of an important and exciting episode in the history of science.<sup>108</sup>

However, the question is: why could the difference be removed eventually? Why did the Millikan-Ehrenhaft dispute eventually end up with the triumph of Millikan's hypothesis? Is it because the scientific society was convinced by someone who used various techniques of persuasion, as Feyerabend contends in many cases,<sup>109</sup> or more likely, because the improvement of experimental devices and procedures led to more objective and precise facts which founded the final justification of the competing theories? This is a key point in the judgment of Feyerabend's position and mine. And by my reading of the same research material on the matter, I think the power of argument is on my side, though he cites it in defense of his own opinion.<sup>110</sup>

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<sup>108</sup> Ibid., p. 75.

<sup>109</sup> For instance, Feyerabend always tries to convince us that Galileo promoted the new astronomy not by rational appeal to the objective superiority of the Copernican theory, but by use of various techniques of persuasion or even propaganda, as we said before.

<sup>110</sup> Cf. G. Holton, "Subelectrons, Presuppositions, and the Millikan-Ehrenhaft Dispute", in Historical Studies in the Physical Sciences (Johns Hopkins University Press, 1978), Vol. IX, pp.161-224. Since both Feyerabend and I refer to the same material, I have to literally follow the text to give readers an original picture for judgment.

The Millikan-Ehrenhaft dispute, often called 'the battle over the electron', was about the value of the smallest electric charge found in nature. At that time, Millikan was a practically unknown professor with few scientific publications while Ehrenhaft was regarded as an accomplished physicist with many results. In this sense, apparently Ehrenhaft holds more convincing power than Millikan. Both men focus their experimental research on the smallest unit and its value of electric charge. By 1910 Ehrenhaft claimed to find 'subelectrons', that is, he found electric charges with a value much smaller than the charge on the electron, and in the course of time he announced a half, a fifth, a tenth, a hundredth and a thousandth unit of value of the electron, though these results were found only in his laboratories.

By contrast, Millikan focused on finding and refining new evidence for the unitary electron. He was not a great theorist, but his commitment to a practical and objective attitude in his experimental research, his skill as an observer and researcher, and his great eyes for seizing unusual accident in experiments opened the door for his success.

At first, Millikan followed the traditional procedure of the cloud experiment to examine the magnitude of the elementary charge  $e$ . But for years he was not satisfied by the inaccurate results with divergent values of electric charges which left more room for conflicting interpretations. These results especially had no power to refute the hypothesis of his rival -- Ehrenhaft's claim of the existence of 'subelectron'. He found that errors owing to evaporation had to be eliminated, so he improved the procedure by using an exceptionally large battery of 10,000 volts to set up a stronger electric field to hold the top surface of the charged cloud suspended to permit studying its rate of evaporation.

However, when he turned on the electric field, he encountered

a sequence of accidents which opened up a new experimental field. That is, the cloud, instead of being held static, evaporated rapidly and completely. As a result there was no top surface of the cloud available for measurement, but repeated tests showed that whenever a cloud was vanished by his powerful field, a few individual droplets would remain in view.

This discovery by accident marked a revolutionary change in the experimental procedure for studies of electron. It ended the traditional cloud experiment in favour of the much simpler method of individual droplets to determine the value of electric charge. Since the electric field is strong enough to hold the droplets and the droplets are light enough to stop falling, the procedure "made it possible for the first time to make all the measurements on one and the same individual droplet, and... made it possible to examine the attracting or repelling properties of an individual isolated electron".<sup>111</sup> And so the procedure raised the precision of the measurements.

However, even this improvement could not make his rival silent. Ehrenhaft turned Millikan's data regarding water droplets against Millikan. He recalculated the charge on each drop from each of Millikan's observation separately instead of following Millikan's method of averaging them from different values measured on different droplets. The result was a large range of values of droplet charge, and it appeared not that an integral multiple of one unitary charge is self-evident, rather that the same facts could be used to demonstrate the plausibility of Ehrenhaft's opposite theory of a divided electron, which was held with great conviction by a well-known physicist.

This situation forced Millikan to make another major

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<sup>111</sup> Millikan, Autobiography (New York, 1950), p.72. I quote from Holton's 'Millikan-Ehrenhaft Dispute', p.198.

improvement of experimental technique, i.e. using oil drops to avoid all the problems caused by evaporation. While Millikan continued to improve his procedure for years, all the scientist's standards of precision and objectivity in experimental research were met: "a new optical system, a chronoscope accurate to 0.001 second, temperature control to 0.02 degree, a more accurately calibrated voltmeter, a better value for  $u$ , and the ability to change the gas pressure in the viewing chamber over a wide range".<sup>112</sup> And finally, Millikan could proudly announce that measuring on one to two hundred drops he "found in every case the original charge on the drop an exact multiple of the smallest charge which we found that the drop caught from the air".<sup>113</sup> "Here, then, was the first definite, sharp, unambiguous proof that electricity was definitely unitary in structure".<sup>114</sup>

In 1923, Millikan's discovery was recognized in form of Nobel prize by the whole scientific society, and this effectively put an end to the dispute. Now we all know that Millikan's research on electron is of great significance not only in physics but also in chemistry, astronomy and engineering, and that "Millikan's Oil Drop Experiment" became a routine laboratory assignment in physics classes, while Ehrenhaft's amazing hypothesis have vanished into thin air.

Was this ironic consequence caused by Millikan's tactful use of technique of persuasion or propaganda? Of course not! It is because, as Holton concludes, Millikan followed "the scientist's standard behaviour of obtaining information in as depersonalized or

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<sup>112</sup> Ibid., p.202.

<sup>113</sup> Ibid., p.201.

<sup>114</sup> Ibid., p.184.

objective a manner as possible",<sup>115</sup> while his competitor "Ehrenhaft and his colleagues appear to have used all their assiduously collected readings, good, bad, and indifferent".<sup>116</sup> It is these pre-occupied theoretical assumptions that had entered Ehrenhaft's experiment and thereby formed his bias and caused his methodological difficulties.<sup>117</sup>

So, here we once again find out that it is practice on the objective and factual basis that has the last word on the justification of competing theories, and scientific facts, though more or less penetrating the intentions and presuppositions of the researchers, are not merely relative but basically contain an objective core, and scientists always try hard to make the technical procedure of discovering the facts "as depersonalized or objective a manner as possible", as Holton puts it. This fact proves that, from the practical point of view as well, Feyerabend's rejection of the objectivity of scientific fact as well as truth in excuse of his relativistic characterization of the subjects is inappropriate.

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<sup>115</sup> Ibid., p.212. "the method", Holton cites Millikan, "is free from all questionable theoretical assumptions." See *ibid.* p.201.

<sup>116</sup> Ibid., p.216.

<sup>117</sup> Cf. *ibid.* There is a detailed discussion in this article of the reasons of Ehrenhaft's failure, specifically his predetermined attitude and poor methodology in experimental researches. As Holton says: "Ehrenhaft's method was not altogether different from what students do today when they repeat a well-established experiment, nor were the results he obtained".

## CHAPTER VII

### CONCLUSIONS

First of all, I acknowledge that Feyerabend has a practical starting point in dealing with the epistemological problems. In his opinion, these problems are not abstract and inaccessible as philosopher's discourse, but inseparably linked with what is going on in the lives of scientists and their fellow human beings. This practical attitude frees him from the confines of scholastic traditions and expands his research to a broader field of scientific practice, from which many of his remarkable ideas follows. I have discussed some of the central ones above.

Unfortunately, his understanding of a practical methodology is superficial, and his mode of thinking is always one-sided, which leads him to an epistemic relativism. On the basis of the above analysis, I believe that his relativism results from the following methodological difficulties:

1. When he holds that truth is relative from case to case, from time to time, and from person to person, he simply cannot make a distinction among what is taken to be true in mind, what is proved to be true in practice, and what is really true in reality. What he talks about is actually at the level of what is taken to be true by different groups of people, which of course is rather subjective and relative. The reason for this confusion is that he does not realize that truth lies in the evolving process of human inquiry, and therefore it is a matter of degrees. We find and improve the truth of our knowledge through different stages from the subjective and relative to the objective and certain, and from the lower level to the higher level in the course of the improvement of our practice.

2. Another misleading point leading to a relativism is his incomplete understanding of the meaning of practice. In many occasions, his usage of the concept of practice refers only to the social relations of human beings. In his late work Farewell to Reason, he openly declares that his practical relativism deals with the problems that arise from human relations.<sup>118</sup> However, he has ignored the fact that it is human interaction with the objective nature that constitutes the fundamental form of practice from which all other forms of human relations arise.<sup>119</sup> He does not realize that our common and repeated way of interacting with natural things is first and primary; it founds our epistemic activities and entails the practical and objective nature of the truth of our knowledge. This one-sided view of practice leads him to understand truth and knowledge only from the social and personal point of view and not from the natural and objective aspect of practice. That is why he is very good at pointing out the humane, historical and relative features of truth, while he cannot discuss it in any sense of objective justification-conditions. So, even though he attempts to make sense of practice in his philosophical discourse, his one-side mode of thinking (which leaves no room for an objective point of view) restricts him to apprehend it in the full sense. That is another reason why he falls into relativism.

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<sup>118</sup> Cf. *ibid.* p.83.

<sup>119</sup> I have emphasized this point in my previous discussion of the foundation of knowledge, and my position seems strengthened by Wittgenstein's similar comments on practice, as N. Malcolm interpreted:

When Wittgenstein says that following a rule is 'a practice', he does not mean a social practice, he does not invoke a community of rule-followers, but instead he emphasizes that following a rule presupposes a regularity, a repeated or recurring way of acting, which might be exemplified in the life of a solitary person. (Cf. N. Malcolm, "Wittgenstein on Language and Rules", Philosophy Vol.64 (1989), p.5.)

3. Closely relating to the second point, Feyerabend's understanding of the form of life is also inappropriate. He borrows from Wittgenstein this term as a crucial idea in his chain of argument, as I pointed out in the first place. However, he puts excessive emphasis on the particularities of a certain form of life, at the cost of the common objective ground of human life as a whole. It is this improper understanding of the form of life, I believe, that leads to his one-sided view of practice, and further leads to his relativist view of truth and knowledge. Since the concept is also one of the cornerstones of my argument, I would like to discuss it a little further.

Feyerabend always points out that the truth of a statement is not abstract and transcendental but is determined by a certain form of life. As he says:

I no longer agree with the assumption... that the 'correctness' of an idiom, or of the statements that can be formulated in its terms, empirical terms included, is independent of the (linguistic) practice to which the statement belongs: the truth, even of 'empirical' statements, may be constituted by the fact that they are part of a certain form of life which assembles evidence in a certain way.<sup>120</sup>

It is true that this statement is consistent with Wittgenstein's original conception. For Wittgenstein also says that he would regard the certainty of knowledge, "not as something akin to hastiness or superficiality, but as a form of life".<sup>121</sup> However, if our interpretation of Wittgenstein's position on the matter stops here, it does provide relativism with a perfect

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<sup>120</sup> Feyerabend, Philosophical Papers, Vol.I, p.162.

<sup>121</sup> Wittgenstein, On Certainty, section 358.

excuse. If we regard any particular form of life as the final dimension of the truth and certainty of knowledge, then the truth and certainty of knowledge would be in all sense only relative to the different social groups inhabiting in the different forms of life. And that is exactly what Feyerabend thinks. As he continues the paragraph:

'Athene has provided me with new strength' can be a true observation statement for a Homeric warrior; it is false, or simply nonsense for Xenophanes and our modern materialists. There exist numerous experimental statements about the properties of the ether in nineteenth-century electromagnetic theory -- but none of these statements makes any sense today. Phlogiston was weighed and its effects were demonstrated (as oxygen is weighed and its effects are demonstrated today) -- and yet phlogiston is now believed to be a mere fiction.<sup>122</sup>

This is a typical relativist explanation of truth resulting from a biased view of the form of life. It has a misleading consequence that, with the suspension of the common objective ground of human life, every linguistic expression granted by a particular form of life is justified. Fortunately, this is not Wittgenstein's position.

It is true that there are different forms of life. But, against the tendency to relativism, Wittgenstein did indicate an actual conformity of doing, knowing and judgment among human beings; i.e. "the common behaviour of mankind" in different forms of life serves as "the system of reference", by means of which we know, judge and interpret an unknown language. That is the common ground of human cognition that transcends the particular games of the language, pictures of the world, and the forms of life, as I

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<sup>122</sup> Feyerabend, Philosophical Papers, Vol.I, p.162.

have noted in the previous chapters. I do not want to claim that Wittgenstein has resolved all of those epistemological issues in this way, but he does make this point very clear. For example, he points out, if there is no conformity among human beings, there would be also no common concepts, and therefore no concepts at all:

The phenomenon of language rests on regularity, on agreement in acting... Here it is of the greatest importance that all of us, or the overwhelming number, agree on certain things. For example, I can be sure that the colour of this object will be called 'green' by most people who see it.<sup>123</sup>

If humans were not in general agreed about the colours of things, if undetermined cases were not exceptional, then our concept of colour could not exist. No -- our concept would not exist.<sup>124</sup>

If there were no agreement, there would be no common concept of addition, of adding 2, of the series of even integers.<sup>125</sup>

That also applies to the judgement of the true or the false, correctness or mistakenness, as he said in On Certainty:

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<sup>123</sup> Wittgenstein, Remarks on the Foundations of Mathematics, p.342. I quote from N. Malcolm, "Wittgenstein on Language and Rules", p.10. In this paper, Malcolm describes Wittgenstein's saying that without general agreement as to what is "the same", as to whether going on thus fits this rule - there would not be rules, descriptions, or language, but at most "a confusion of tongues".

<sup>124</sup> Wittgenstein, Remarks on Colour, section 351.

<sup>125</sup> Ibid., p.11.

In order to make a mistake, a man must already judge in conformity with mankind.<sup>126</sup>

In my opinion, it is not difficult to explain Wittgenstein's standpoint -- as long as you hold a objective point of view. In our everyday life, no matter how different life styles people have, and no matter how different language-games people engage in, **we all live and practice in the same objective and material reality consisting of the same kind of objects. Our practical relations with these objects form our most fundamental form of practice, i.e., our common behaviour of doing things, which in turn provides us with the common objective ground of obtaining knowledge and justifying its truth, as I have stated. This is the end of justification; it is, as Wittgenstein remarks, "simply what we do. This is use and custom among us, or a fact of our natural history".<sup>127</sup> We accept it on human authority, and we share it with everybody, just as we share the whole world together.**

It is on this practical basis that I make my defense on an objective standpoint in epistemology and fight against Feyerabend's relativism. If Feyerabend could not share this basis belonging to the whole humankind, it is hard to avoid the conclusion that he is misunderstanding human practice.

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<sup>126</sup> Wittgenstein, On Certainty, section 156.

<sup>127</sup> Wittgenstein, Remarks on the Foundations of Mathematics, Vol.I, section 63.

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