

UNIVERSITY OF SOUTHAMPTON

THE RISE, DECLINE AND REVIVAL OF DIALECTICAL MATERIALISM

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June 2002

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UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF ARTS

PHILOSOPHY

Doctor of Philosophy

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The first section of the thesis attempts to show that Engels and Bukharin contributed to the development of dialectical materialism in terms of elaborating the ontological principles for understanding material and social reality. The recent philosophical work of Roy Bhaskar is used as a contemporary comparison in order to show their rich contribution to Marxist ontology. This section shows that Engels utilised the advances within science to enrich the ontological principles of Marxism. Furthermore Bukharin's theory of equilibrium is compared to the recent development of chaos theory and its account of the understanding of the relationship between chance and determination within reality. Engels and Bukharin represent a paradigm of what it means to develop Marxist philosophy in a principled and explanatory manner.

However, the second section of the thesis outlines the reasons why dialectical materialism seems not to have developed beyond its promising beginnings, and instead has become the justification of philosophical dogma. Firstly, the political reduction of dialectical materialism to party ideology is analysed in the work of Leon Trotsky. Secondly, Alan Woods and Ted Grant's equation of dialectical materialism with scientific progress seems to deny the necessity of an independent and distinctive role for dialectical materialism, and so dialectical materialism's ontological imperatives become repudiated. Thirdly, the orthodox dialectical materialist George Novack has difficulty in differentiating dialectical materialism from pragmatism, and this also seems to raise important questions about the philosophical validity of dialectical materialism.

The third section shows that Joseph Dietzgen's neglected form of dialectical materialism represents important progress in the elaboration of the ontological and epistemological principles of Marxism. Dietzgen's dialectical materialism is defended in the form of a polemic between Tommy Jackson (who wants to uphold a rigid form of dialectical materialism) and Fred Casey, a supporter of Dietzgen. Then the superiority of Dietzgen's dialectical materialism over that of Engels is put forward. The approach of Dietzgen is also utilised to criticise the tendency towards idealism in the work of Roy Bhaskar. In other words, the perspective of a flexible and yet still intransigent dialectical materialism is required in order to uphold and develop materialist philosophy and overcome the accommodation to idealism.

The last chapter outlines the main conclusions of the previous chapters and tries to show that a flexible version of dialectical materialism still has a philosophical future.

ACKNOWLEDGEMENTS

This thesis would not have been possible without the inspiration and encouragement of my good friend Dr Phil Sharpe. I would also like to thank my supervisor Professor Andrew Collier for his criticisms and his efficiency. Any errors in the text are of course my own responsibility.

INTRODUCTION

This thesis argues for a specific version of dialectical materialism – a version informed by the work of Joseph Dietzgen, Friedrich Engels, and Nikolai Bukharin. This type of dialectical materialism emphasizes ontology or a theory of being and reality as the basis for our understanding of the development of thought. Consequently the thesis argues for the need for ontological clarity in philosophy, and to this end some of the work of Roy Bhaskar is examined closely, and compared with the ontology of the aforementioned type of dialectical materialism. It is concluded that dialectical materialism and critical realism could, given the will, cooperate in the task of constructing a clear yet flexible ontology and restoring this to the centre of philosophical debate. Another aim of the thesis is to point out the ontological dogmatism of partisan (politically reductive) versions of dialectical materialism and this is done with specific reference to the debate that took place in 1939-40 between Leon Trotsky, Max Shachtman and James Burnham. A further objective of the thesis is to strengthen the case against positivism in philosophy and within dialectical materialism, and to this end an important recent work of Alan Woods and Ted Grant is critiqued. Finally, we try to show that the dialectical materialism advocated in this thesis is superior to the type that makes accommodations to pragmatist philosophy, with the work of George Novack being utilized as an illustration of the latter. We now turn to a brief summary of the individual chapters of the thesis:

In **Chapter One** Roy Bhaskar's critical realism is utilized in order to study Engels's dialectical materialism. The chapter goes on to consider Bhaskar's critique of Engels's methodology, especially the allegation that Engels relegated ontology to a position of unimportance and systematically committed the epistemic fallacy (the reduction of ontological premises to the epistemological). The work of Norman Levine, Sebastiano Timpanaro, Ted Benton, and Andrew Collier is invoked as evidence that there is in fact fundamental compatibility between the work of Bhaskar and Engels, and that there may be contradictions in Bhaskar's stated position on Engels. Finally, David Hillel-Ruben's anti-ontology challenge to Critical Realism and to Engels is rehearsed and possible responses are elaborated.

Chapter Two contains a consideration of the work of Engels and Bhaskar with reference to their views on causality and ontology. Bhaskar contends that Engels gives ground to an empirical-type view of causality (as opposed to 'real' causality) and implies that Engels is a prisoner of the Newtonian problematic. Bhaskar also holds that Engels over-emphasizes epistemology and indeed commits what Bhaskar has dubbed the epistemic fallacy. However, contra Bhaskar, we conclude that overall Engels should be interpreted as stressing the importance of an ontological approach to reality and having a view of causality that is compatible with modern realist approaches. We therefore argue that Engels's work is convergent with that of the contemporary trend known as Critical Realism. Other philosophical criticisms of Engels, such as those of Gareth Stedman Jones, are rebuffed with the help of the work of Ted Benton and Helena Sheehan.

Chapter Three begins with a consideration of whether Engels's dialectical materialism can meet the challenge of new scientific discoveries (especially in physics) in the 20th century, and considers the relative merits of Engels with the new philosophy of science –

chaos theory, as represented by Ilya Prigogine and Isabelle Stengers. In passing the inadequacy of Lenin's definition of materialism, and his reduction of ontological questions to epistemological ones, is noted. We conclude that Engels's ontological understanding of the world as matter-in-motion, representing dialectical-type processes and laws can take account of the new physics. We hold that the chaos theory of Prigogine and Stengers – whilst it currently commits various philosophical errors, could potentially enrich an Engelsian ontological approach. The chapter goes on to compare Bukharin's work on equilibrium theory with the non-equilibrium models of the chaos theorists. We contend that Bukharin's commitment to ontological precision in understanding society makes his work superior to that of the chaos theorists. Then the concept of 'irreversibility' is examined with specific reference to Trotsky's and Bukharin's theories of the post-revolutionary Soviet Union. Finally the work of Stephen Rigby, Peter Manicas and Tom Rockmore is utilized in order to consider the strengths and limitations of Engels's dialectical materialism.

The aim of **Chapter Four** is to bring to light the defect of subjective idealism and the problem of the world-historical individual within the politically reductive dialectical materialism of the Leon Trotsky of 1939-40. The uncritical approach to Trotsky of John Rees is noted. Does this mean that dialectical materialism has become defunct? A negative answer is given to this question in **Section Three** of the thesis.

Chapter Five examines the positivist errors of Alan Woods and Ted Grant in their recent book *Reason in Revolt*. Woods and Grant are shown to have no conception of the epistemological obstacles confronting science, obstacles outlined by Gaston Bachelard and Louis Althusser. The materialist philosophical approach of Althusser in *Philosophy and the Spontaneous Philosophy of the Scientists* is invoked as a corrective to the anti-philosophical positivism of Woods and Grant. It is then argued that Woods and Grant's methodology is vitiated by the search for epistemological guarantees and a reliance on (an untenable) reflection theory of knowledge. The chapter then moves on to consider whether George Novack's version of dialectical materialism succeeds in overcoming the irrealist and idealist limitations of John Dewey's philosophy. Novack is shown to accommodate to empiricism and it is demonstrated that his conception of logic is an example of the epistemic fallacy, collapsing as it does historical truth into philosophical truth.

In **Chapter Six** it is argued that Joseph Dietzgen's philosophy offers an alternative to the partisan and positivist decline of dialectical materialism. Like Critical Realism, Dietzgen has an emphasis upon ontology as the basis for understanding epistemology, and at the same time Dietzgen rejects adherence to a reflection theory of knowledge. In answer to the question about the relation between mind and matter, Dietzgen argues that if thought was not material, it would not have the epistemological capacity to make generalizations about the primary material character of the world. Further, Dietzgen contends that traditional materialism and idealism represent one-sided epistemological conceptions of how to understand the world. There follows an examination of whether the work of Fred Casey, a follower of Dietzgen, represents a concession to idealism. Rather, it is argued, Casey outlines that because thought is material in monist terms this means that

materialism is philosophically superior to idealism. Some criticisms of Casey by Tommy Jackson are considered and found to be misguided. The chapter then turns to a comparison of the dialectical materialisms of Joseph Dietzgen and Friedrich Engels. It is argued that in order to sustain reflection theory Engels generally asserts that there is a reductive identity between being and thought. It is also argued that Engels had a general tendency to subsume the logic of philosophy into science in a positivist manner. Other possible weaknesses and limitations of Engels's dialectical materialism are considered. It is suggested that Dietzgen's dialectical materialism resolves these problems within Engels. Dietzgen rejects reflection theory in favour of a more dynamic theorization of the relationship between mind and matter. Also, in contrast to idealism's rigid emphasis on ideas and materialism's rigid emphasis on matter, Dietzgen recognizes the basic ontological unity and connection between ideas and matter. Dietzgen shows that Hegel's dialectic is a philosophical expression of the potential for the growing unity between materialism and idealism. Unlike Engels, Dietzgen is firm about the autonomy of philosophy. Dietzgen shows that the development of logic is crucial for the purposes of interpreting and demonstrating the methodological importance of the multifaceted and diverse forms of knowledge about the world.

Chapter Seven aims to show that Dietzgen's version of dialectical materialism with its strong emphasis on the unity of matter and mind can help to oppose the development of idealism within Bhaskar's dialectical critical realism. It is shown that it is a utopian and idealist illusion of Bhaskar's to believe that overcoming the absence of a less reductive materialist ontology will supersede the materialist/idealist division. Later, Bhaskar's conception of the mind as a 'complex of powers' is compared with Dietzgen's theory of the mind, and it is concluded that Bhaskar's idealist epistemological premises, in which the subject subsumes the object, are in conflict with his realist ontology of human emancipation.

Chapter Eight draws the threads together. The chapter begins by rehearsing the value and importance of the different dialectical materialisms of Dietzgen, Engels, and Bukharin. It also recognizes the strength of Roy Bhaskar's argument that the problem of the philosophical subject is ontological, whilst contending that we still need an epistemological form of materialism that defends a materialist philosophical subject as the basis for understanding the ontological principles of the world. We then examine at length Alex Callinicos's attempt to counter the influence of philosophical idealism through the development of historical materialism, thereby glossing over the philosophical issues raised by the materialism/idealism divide. Callinicos is deemed to have failed, whereas it is proposed that Theodore Oizerman's emphasis on the need for Marxist philosophy to epistemologically intervene in ontology (and any knowledge at all) in order to prevent it becoming dogma and stimulating its further development, represents a possible resolution of the materialism/idealism problem. Lukacs is shown to have carried out this type of self-correction of his idealist identity reasoning in his recently discovered work *Tailism and the Dialectic: a defence of History and Class Consciousness*. We conclude by suggesting a twofold importance for the type of dialectical materialism argued for in this thesis – firstly for the development of the process of ontological clarification, and secondly as an epistemological intervention:

showing the limitations of existing ontological theories about the world, and on this basis trying to elaborate distinctive and independent criteria as the platform to overcome philosophical ontological problems.

CHAPTER ONE

INTRODUCTION

This chapter utilises Roy Bhaskar's critical realism in order to study Engels's dialectical materialism. It goes on to consider Bhaskar's critique of Engels's methodology, especially the allegation that Engels relegated ontology to a position of unimportance and systematically committed the epistemic fallacy (the reduction of ontological premises to the epistemological). The work of Norman Levine, Sebastiano Timpanaro, Ted Benton, and Andrew Collier is invoked as evidence that there is in fact fundamental compatibility between the work of Bhaskar and Engels, and that there may be contradictions in Bhaskar's stated position on Engels. Finally, David Hillel-Ruben's anti-ontology challenge to Critical Realism and to Engels is rehearsed and possible responses are elaborated.

Why is Critical Realism important for understanding the development of dialectical materialism?

To Bhaskar, the work of Engels seems to express what he calls an epistemic fallacy or the reduction of the ontological character of the world to epistemological premises. The difference between Marx and Engels is that Engels seems to place emphasis upon an epistemological outlook - the dialectics of nature and reality in general - which is imposed a priori onto a conception of the ontological character of reality. On this view of Engels's work, dialectics is seen as the basis of reality, a basis which precludes open investigation of the ontological character of reality in an a posteriori manner. Whatever Engels's own intentions, the end result of his approach, on this view, is to dissolve science into philosophy. Engels's appropriation of the Hegelian dialectic amounts to a 'closure' of Marxist knowledge in comparison with the open ontological character of the world. According to Bhaskar, Engels sees the world as an embodiment of a dialectical world process, in which the actual ontological distinction between, and relation of, the natural world and society, fails to contain the starting-point of being comprehended and investigated in terms of the actual mechanisms of the praxis-independent natural world. On the contrary, this distinction as the basis to understand the emergence of humanity and society from nature is allegedly glossed over by Engels, whereas to Bhaskar the

dialectical identity of nature and society embodies 'epistemological or ontological identity' which ".....occurs only within an overreaching materialist *non-identity*." [1]. Thus to Bhaskar the 'dialectics' of nature as outlined by Engels forms a conceptual reductionist logic in which nature's being dialectical means that society is dialectical, and means that both nature and society embody the material content of the world. This epistemologically faulty, formal, and arbitrary reasoning leads to an over-generalized schematic understanding which contains a tendency to assertion – 'nature is dialectical, therefore society must also become dialectical'.

To Bhaskar such an approach, by containing false epistemological premises, leads to a weak ontological conception of the world, a conception that does not establish the intransitive mechanisms which reveal the relationship of, and distinction between, nature and society. Instead, for Bhaskar, Engels expresses an epistemic fallacy, and Engels fails to reconcile his epistemological outlook with a firm ontological understanding:

"Yet both epistemic homogenization or equating (in measurement or experiment) and historical emergence (in evolution) presuppose the praxis-independence of the relevant natural poles." [2]

On this view, it is because Engels's dialectics of nature leads to an unviable ontological conception of the world, that the end result is to impose a theory of knowledge (dialectical materialism), or a conception of how knowledge develops, onto an ontological understanding of the world. This imposition is the epistemic fallacy. Instead of epistemology being utilized to formulate a viable ontological foundation for investigating the causal (praxis-independent) mechanisms of nature, and for beginning to comprehend society on these viable premises, both nature and society constitute a universal process.

Bhaskar says that Engels's ontological conception of the world embodying a primary material content represents Engels's epistemological conception of the distinction between materialism and idealism in philosophical terms, and highlights the fundamental flaw of idealism in its stress upon the primacy of thought. Such an approach by Engels, together with his opposition to empirical conceptions of science and knowledge, was not necessarily counterposed to developing a viable ontological alternative to idealism and empiricism, along transcendental realist lines of structures, mechanisms and causal explanations to comprehend the world.

Certainly Engels's concern to avoid the errors of idealism and empiricism, and also avoid reductive materialism, was epistemologically consistent with a potential for a viable ontological stance.

However to Bhaskar, Engels never properly went beyond outlining the contrast between Marxist materialist dialectics and other epistemological approaches, in his attempt to construct a viable ontological approach. Instead, at a methodological level (as already mentioned) for Bhaskar, Engels's arbitrary conception of the dialectics of nature did not overcome either a tendency towards imposition of Hegelian dialectical laws onto reality, or the possibility of a tendency to positivism and adaptation to changing scientific views about the world, given the fragile ontological foundations provided by the dialectics of nature. Also Engels's definition of matter and materialism does not go beyond outlining the epistemological primacy of being to thought, and thereby does not explain a firm ontological position. On this view Engels's conception of the world as a complex of processes, as matter in motion, or even as embodying causal entities, is strictly subordinated to epistemological criteria that do not provide clarification in ontological terms. To say that thought is related to the primacy of matter is a conception that is not sufficient to outline 'causal primacy in being'. Indeed, if we follow the logic of this view, for Engels to merely conceive of the distinction and relation of matter and thought, is in itself not far removed from Hegel, and certainly does not add up to a 'full and consistent realism'. Engels sometimes implied that practice reveals the character of the world, but this is an ontological view conflated with the theory of knowledge. Such an approach does not conceive practice as revealing the objective causal character of the world, a character which is independent of the basis of human activity. Thus, according to this logic, Engels's dialectics of nature do not overcome the epistemic fallacy of empiricism, since they equate knowledge and experience with the character of the natural world.

On this view Engels left Marxism with the problem of how materialism can have a firm ontological conception. While Marxist materialism has been used to justify epistemological opposition to idealism as an explanation of the world, its commitment to an alternative scientific explanation has lacked ontological normative premises - and thus has lacked explanatory substance to comprehend scientific advances. Whereupon Marxism's materialist conception is continually vulnerable to criticism, thereby opening up the way to pragmatic adaptation to

existing contemporary ideas, in order to retain its justification, and all owing to this lack of a viable ontological orientation. Bhaskar sums up the problematic of Engels's conception of materialism:

“But from Engels on, Marxist materialism has more global pretensions, and the difficulty now appears that if a material thing is regarded as a perduring occupant of space capable of being perceptually identified and reidentified, then many objects of scientific knowledge, although dependent for their *identification* upon material things, are patently immaterial.” [3]

Thus the apparently universal concept of materialism is unable to establish the ontological relation between the observable material phenomena on the one hand, and as yet unobserved material phenomena within the world, on the other. Many real phenomena do not fit into this loose, yet restrictive, ontological definition, as being material. However, Bhaskar concedes that it was possible for Engels to overcome the limitations in his ontological position and to overcome the epistemic fallacy of equating a theory of knowledge with reality. Bhaskar says that Engels's critique of empiricism laid the way open for a transcendental realist approach, based upon an ontology that comprehended the world as “.....real structures, mechanisms, processes, relations and fields.” [4]. But then Bhaskar eclectically precludes this by saying that while Engels was not epistemologically opposed to the prospect of such an ontological stance, at the same time, Engels's limited and flawed concept of causality does embody a situation of ‘closure’. While Bhaskar concedes that Engels did criticize the contingency of causality upheld by the empiricists, Bhaskar claims that Engels did not substantiate his own position. In other words, to Bhaskar, the various limitations of dialectical materialism do, in essence, preclude arriving at a view of the world in intransitive terms. Bhaskar is effectively saying that Engels has Hume's position of constant conjunctions defining reality. (And of course Hegel is also open to this accusation).

Bhaskar alleges that Engels exemplifies a complex of epistemological failings - an omnipotent view that the world is dialectical and thought reflects this reality, combined with a tendency to positivism in relation to views about the world. These alleged failings do seem to suggest that Engels's epistemology cannot attain an ontological view that is intransitive. However, this has more to do with Bhaskar's conflation of the scientific conditions by which an intransitive view

of the world is arrived at, with a viable ontological conception of the world, a conflation which constitutes Bhaskar's own epistemic fallacy. In this case the fallacy is the view that outside of scientific experimentation a viable ontological conception of the world cannot be constructed. This also seems to equate the process of knowledge with ontology in that it seems to claim that any 'amateur' attempt to attain a coherent view of the world, e.g. Engels's, cannot meet this criteria of scientific experimentation, and thereby is arrived at in an a priori manner which is declared invalid. However, Bhaskar is not being fair to Engels, in that Bhaskar uses the 'formulation' of the world not necessarily constituting the sum of knowledge about it (of any aggregate of epistemological views about ontology), to castigate Engels's attempt to develop an ontological conception. In other words, Bhaskar arbitrarily uses the limitations of existing nineteenth century views about the world to preclude Engels arriving at a viable ontological view of the world. Bhaskar does not utilize objective criteria of asking whether Engels's ontology, allowing for the historical character of knowledge, did constitute a potential to develop a viable intransitive view of the world. In order to develop a critique of Engels, Bhaskar imposes his own epistemological criteria of scientific experimentation of a transcendental realist nature, and judges Engels on these imposed criteria.

Whereupon to Bhaskar, because Engels does not conform to the criteria of the advance of recent knowledge about the world, this means Engels's views must be faulty. But this is because Bhaskar, in his interpretation of Marx's philosophical naturalism, conflates the transitive with the intransitive. Thus Bhaskar introduces absolutism in terms of knowledge and the process by which it is arrived at. To Bhaskar there is an all-encompassing divide between a transcendental realist approach which reveals the intransitive world, on the one hand, and subjectively imposed views of the world, on the other. Consequently, Bhaskar cannot conceive that Engels might be undertaking a viable attempt to achieve an ontological position - even if it still contains problems or limitations - for Bhaskar uses a reductive argument that Engels's adherence to dialectical materialism precludes such an outcome. We will argue (see below) that Bhaskar is not admitting that dialectical materialism is part of the raw material of Critical Realism. (Engels provides dialectical materialism with an ontology).

To Bhaskar, (notwithstanding his approach to Marx), the world of intransitive mechanisms that are objects of scientific inquiry embody causal laws, laws that are not sequential as empiricism

maintains, but stratified. The criteria by which they are comprehended is by the process of experimentation, a process which establishes the conditions to pinpoint their intransitive character and their features of necessity and material connections that exist outside of human awareness of them. The independence of these objects of an intransitive character, often remains unobserved for long periods of history, yet the objects have a real intransitive existence which is comprehended by science in relation to experimental conditions of evaluation:

“This is the arduous task of science: the production of the knowledge of those enduring and continually active mechanisms of nature that produce the phenomena of the world.” [5]

But to sustain this ontological approach in relation to the intransitive and structured character of objects of scientific inquiry, Bhaskar, without admitting to it, is forced to put forward an epistemological outlook that is very similar to Marxist materialism, such as Lenin’s in *Materialism and Empirio-Criticism*. Bhaskar eclectically says that the view that the objects of scientific inquiry are only intelligible in relation to human investigation of them, embodies the false conception that we cannot imagine the world and outline its character outside of human existence. Yet precisely because the world did exist prior to men, this gives it the character it possesses in intransitive, structured and causal terms:

“There is no absurdity in the supposition of a world without men. Rather it is a possibility presupposed by the social activity of science. It is important to establish this fact.....Our philosophy of science is heavily anthropocentric, which is why it is important to consider what it would be possible to say about our world if there were no men, given that we know that our world is one in which science is as a matter of fact possible. For example things would still act, be subject to laws and preserve their identity through certain changes.” [6]

Such an approach embodies an epistemological position that an independent reality is the basis of thought and understanding. This does not fully encompass the ontological position of Bhaskar, but it does explain the relationship of knowledge to the ontological standpoint. A position of this ilk is in essence not far removed from Marxist materialism, in that both attempt to establish the connection between the primacy of the world existing independently of consciousness, as the basis of consciousness. Indeed Bhaskar goes so far as to indicate the

connection of the ontology/epistemology relationship, positing that the intransitive mechanisms within the world are the basis, or origin, of the character of the transitive mechanisms by which they are cognized. This seems to be an expression of support for the reflection/correspondence theory of Engels, Plekhanov and Lenin, albeit that Bhaskar employs different terminology and formulations.

In other words, Bhaskar maintains that a philosophy of science must oppose an idealist or empiricist epistemology, in order to sustain a correct ontological view of the world. This itself implies a corresponding materialist-type epistemological outlook, in regards to the criteria Bhaskar uses to substantiate this ontological position:

“(1) Is knowledge regarded as socially produced, i.e. as having a material cause of its own kind? Or is it read straight onto the natural world or out of the human mind?

(2) Are the objects of knowledge regarded as existing and acting independently of men? Or do they depend implicitly or explicitly upon men for their existence and/or activity?

Scientists try to discover the reason for things and events, patterns and processes, sequences and structures. To understand how they do so one needs both a *concept of the transitive process of knowledge-production and a concept of the intransitive objects of the knowledge they produce*: the real mechanisms that generate the actual phenomena of the world, including as a special case our perceptions of them.” [7] (my italics)

It is most significant that Bhaskar, while explicitly criticizing all types of philosophy for imposing their epistemological framework upon an ontological position (which is thereby arbitrary and subjective), is implicitly forced to concede that there is no way around the problematic of the need to construct an epistemological approach in order to facilitate arriving at a viable ontological position. Thus Bhaskar is conceding that the real problematic is not in blurring this epistemological/ontological distinction, but in developing an epistemology which can correspond to the character of reality - in its ontology of being. In other words, Bhaskar is effectively conceding that epistemology is crucial for developing an ontological standpoint.

Hence this is not far removed from Engels's attempt to link dialectical logic to dialectical ontology.

ENGELS'S ONTOLOGICAL MARXISM

Bhaskar has a starting point of criticizing Engels's ontological position as embodying an epistemic fallacy, though Bhaskar does not properly ask whether Engels's epistemological outlook could facilitate a viable ontological position but has not yet done so, since its epistemological breakthroughs have not been fully developed. Such a positive assessment seems to be precluded by Bhaskar when considering Engels (but not when he considers Marx), which leaves us with the unresolved paradox that Bhaskar is harshly criticizing Engels, the man who carried out the first explicit Marxist attempt to explain the world in terms of intransitive mechanisms. Bhaskar does not answer the question of whether Engels's alleged failure in ontological terms expresses a dichotomy between epistemology (dialectical theory of knowledge) and ontology that can be resolved in terms of the former facilitating the latter, or instead expresses an epistemic fallacy that requires a transcendental realist theory of knowledge for its solution.

To pose such a question would be to raise a problematic concerning Bhaskar's own uncertainty about the relationship of epistemology to ontology, viz. does the intransitive character of the world automatically lead to corresponding transitive mechanisms, comprehended in scientific terms? Or, alternatively, does it require a prolonged process of philosophical demarcation to develop a theory of knowledge that can comprehend the intransitive mechanisms? Bhaskar is inclined to adopt both positions, yet his analysis of the history of philosophy suggests the latter position. Bhaskar's study of the history of philosophy and scientific thought seems to parallel Engels's account in *Ludwig Feuerbach* that the process of the cognition of reality needs to overcome flawed epistemological positions in order to enhance the capacity to arrive at a viable ontological position. In Engels's case, it is in terms of the conflict of materialism and idealism; with Bhaskar, the counterposition of transcendental realism to either empiricism or idealism. [8]

However, a possible similar understanding of the theory of knowledge, does not yet explain whether Bhaskar and Engels have similar ontological positions, and this needs to be explained.

For what Bhaskar has clearly brought to light - and this could be said to be a problematic for Marxism as a whole - is the question of whether epistemology becomes substituted or imposed in ontological terms and thereby embodies a view of the world which is unrelated to the world in intransitive terms. A comparison of Bhaskar and Engels will illuminate this problematic and the question of whether Engels has fallen into an epistemic fallacy. (This will be dealt with in several stages).

Norman Levine, whilst a severe critic of Engels's dialectical materialist understanding of reality, has helped to indicate the possibility that there is compatibility with Bhaskar's approach. Namely, that Engels, alongside Marx, recognized the distinction between the intransitive and the transitive in explaining the character of the material world and society. [9]. Levine says that Engels was prone to metaphysical Marxist materialism and relating the transitive to the character of the intransitive, but, at the same time, in methodological terms, the point is made that Engels's approach contained important similarities to that of Bhaskar. The similarities are that, for Engels as for Bhaskar, the causal structured character of the intransitive world creates the basis for its transitive character. Further, Levine states that the theoretical problematic of reductionism in Engels's work, the problematic of subordinating the transitive to the intransitive, expressed the question: to what extent does the intransitive material world, in its natural mind-independent content, influence the conscious mind-dependent character of society? [10]. But the essence of Levine's allegation of reductionism against Engels arises out of Levine's denial that the ontological character of the material world has any real significance in explaining the character of the world beyond its supposedly passive non-meaningful activity, which is supposedly made purposeful by conscious human activity or practice. Bhaskar would demur from this approach in that while, like Levine, he would question the metaphysical pretensions of Engels with regard to outlining the dialectical character of nature, society and thought, Bhaskar would not agree with the praxis-type reasoning of Levine concerning Engels's reductionism. For Levine contrasts the non-active intransitive world to the active transitive world and thereby reveals the basis of agreement between Engels and Bhaskar that such an approach by Levine reveals an epistemic fallacy which equates human experience with reality. Indeed Levine defines nature as dialectical when it becomes mind-dependent. [11]. In contrast, Engels and Bhaskar would agree that it is the structured, intransitive character of the world which gives rise to transitive social activity, and this is central to their ontology. For in such a way, both Engels and Bhaskar, unlike Levine

in his interpretation of the Marx-Engels relationship, would have avoided the epistemic fallacy of equating the theory of knowledge and mind-dependent realm with the mind-independent and intransitive realm, and would thereby have avoided conflating the role of the subjective with the original objective intransitive character of the world. This epistemic fallacy is illustrated by Levine's 'interpretation' of Marx and Marx's alleged 'divergence' from Engels:

"For Marx, a dialectic of nature existed where the realm independent of mind was subsumed by mind; for Engels, a dialectic of nature existed in the realm independent of mind which still operated in terms of dialectical laws." [12]

Thus in actuality, the praxis approach of Levine defines the intransitive world by the transitive. On this basis Levine conceives of Engels's ontology as a metaphysical Marxist reduction of matter to thought. This locating of the ontological character of the world in the intransitive is, to Levine, the theoretical basis for Engels's alleged reductionism:

"Engels's theory of knowledge was the foundation of his philosophy of nature. Engels's form of materialism situated the dialectic in the external, as originating in the physical universe. Indeed, Engelsian dialectical materialism was not only an ontological system, but also a reductive system." [13]

However, despite Bhaskar's divergence with Levine's praxis approach, Bhaskar seems to go along with this conclusion, in that he defines Engels's approach as monist but without establishing differences with those such as Levine who have an opposed epistemological starting point, a starting point that leads to primacy of the transitive over the intransitive. Bhaskar, in his criticism of Engels's dialectical ontology, does not seem to recognize that his failure to acknowledge the ontological similarities in his position and that of Engels - the character of the intransitive defines the transitive - leads to a compromise of Bhaskar's own position, and conflation of these two distinct aspects of reality, with primacy given to the intransitive.

Bhaskar's problematic is that he seems to concur with those such as Levine who locate Engels's ontology in terms of his alleged positivist admiration of science, a science whose advances are said by Engels to confirm a dialectical view of the world. [14]. But this equation of Engels's

intellectual interest with his dialectical ontology, actually denies Bhaskar's own epistemological relation of ideas to ontological premises - of being - related to the world's intransitive structured character. Following this latter logic of Bhaskar's, Engels's ideas do not inevitably lead to the perpetuation of the epistemic fallacy. Or, as Sebastiano Timpanaro and Ted Benton explain, it was the scientific advances which enhanced knowledge about the world that led Engels to realize the theoretical necessity to deepen Marx's materialist ontology, beyond its initial explanation of the character of society. [15]. Engels's attempt to locate human history within the wider context of material reality was a measured response to the significance of new biological and other ideas about the world which meant, as Timpanaro puts it:

“He was cognisant, therefore, of the irreducibility of nature to a mere object of human labour or a mere pre-historical antecedent of a reality which is now entirely social-human.” [16]

Or, as Benton argues, Engels propounded the theoretical necessity to relate, in a distinct and not uncritical manner, a socialist response to scientific ideas about the world. [17]

Thus the development of the new scientific ideas, about the world prior to human existence, have revealed that the new materialism of Marx in the *Theses on Feuerbach*, which explained the praxis content of human activity, was inadequate in ontological terms to cognize the real significance of such ideas. This was the context for Engels's elaboration of a dialectical ontology of the world. But such is Bhaskar's hostility to Engels's metaphysical dialectical approach, that Bhaskar implies that the question of the need to deepen an ontological view of the world was of no significance, or that it could only undermine the praxis dynamic materialism of Marx. Thus the question is left unanswered as to why Engels was attempting to go beyond Marx's limited praxis-orientated ontological view of the world. This is also what Colletti, with his critique of Engels's supposed idealist Hegelian-inspired inversion of a dialectic of matter, does not take into account.

Neither was Engels's ontological development of Marx an approach that represented the undue influence of contemporary vulgar materialists, who reduced Marxian history to natural history (Social Darwinism) and so a mere expression of material processes obeying scientific laws. Rather, it represented the theoretical response of Engels, in attempting to outline a Marxist

ontological position of the world, to the challenge of providing distinctive answers to the advances made by science. These were answers which Marx's praxis approach could not provide, concerning the contemporary equation of the world with material processes and laws:

"One need only think of this complex situation in order to understand that the so-called ontological development of Marxism did not represent an impulsive direction taken by Engels, but rather an objective necessity." [18]

Engels was not, in this task, capitulating to positivism, in fact precisely the opposite. Engels was outlining the necessity for Marxist epistemology to comprehend the significance, in a critical manner, of the scientific ontological advances about the world. Engels's attitude to Darwin and other natural scientists has shown how unfair it is to simply equate Engels's views with positivism. Yet such continuing accusations reveal a lack of recognition of the immensity of the theoretical challenge which faced Marxism, in responding to views which called into question the transitive-orientated or philosophical human-centred approach of Marx's dynamic materialism. [19]. Above all, Engels needed to explain the problematic of emergence, a central question for transcendental realism: what is contained within the intransitive character of nature, that leads to transitive social activity without at the same time endorsing contemporary reductionist answers?

Engels's materialist dialectic has been called into question, as not being an adequate response to the advances of science, not only by Bhaskar and Levine but also by the praxis school. But it is the praxis school who are anti-scientific in their conception of Engels's philosophy of nature as superfluous, since for the praxis school it is only the dynamic character of human activity that is of theoretical and cognitive significance. Unfortunately, Bhaskar's critique of Engels's 'metaphysical materialism' leads Bhaskar to endorse the praxis-type view of Marxism and not to acknowledge the ontological approach of Engels, which was to strengthen Marxism in philosophical terms upon sounder ontological premises.

Furthermore, on the misinterpretation of Engels, Benton argues that the dispute about Engels's alleged over-emphasis on Hegel in Engels's dialectic (or misunderstanding about the role of Hegelianism in Engelsian dialectics), can lead to detracting from the theoretical significance of

Engels's ontology in the intellectual conjuncture of the times. The question of the significance of Hegel for Engels's dialectic can only be established in terms of whether it represented intellectual limitations, or otherwise, in regards to its impact upon Engels's ontological position (developed from Engels's intellectual dialogue with contemporary scientific ideas about the world). This in turn raises the problematic of to what extent, if at all, an epistemological outlook is able to evaluate scientific views about the world. This is a process of evaluation which, if it is not to fall into an uncritical (positivist) stance, may alternatively lapse into an epistemic fallacy and conflation of epistemology with ontology or imposition of epistemology onto ontological positions. Benton indicates how Engels, without wishing to deny the necessity of theoretical autonomy for science, was concerned not to allow the bourgeoisie to appropriate objectively significant advances about the ontological character of the world, for its own narrow class interests. It should not be forgotten that Engels's attempt to reconcile a dialectical materialist epistemology with a viable ontological and distinctive position arose out of this conflictual intellectual, cultural and political context. Again, this is not to say that Engels's dialectical view of society is correct simply because it recognizes the need to outline an ontological view of the world. However, what is clear, is that Engels recognized that the intransitive character of the world provides the basis to outline such a position, without epistemology undermining this process of ontological clarification, but rather deepening the ontological significance of the advances made by science. Or, as Andrew Collier puts it, the sciences confirm the materialist position of Marxism, which to Engels meant the need to apply Marxist epistemology to the new context created by scientific advances:

".....hence his appeal to the history of the sciences for the vindication of his broader philosophical position." [20]

Thus the constant discovery by science of the intransitive mechanisms indicating the world, mechanisms which to Bhaskar confirm (and provide the basis to develop) a transcendental realist approach, is a process which to Engels is a vindication of dialectical materialism. Collier reveals that Engels's approach places stress upon ontological materialism, amounting to more than epistemological materialism (but not unconnected to it). This ontological materialism emphasized the effect of being on thought, or the primacy of matter over mind. Lenin's

Materialism and Empirio-Criticism contains a similar emphasis. Ontological materialism is defined by Collier in the following way:

“This is a doctrine about the relations between the real objects of the various sciences, and more specifically between those of the natural sciences on the one hand and the human sciences on the other. It asserts the unilateral dependence of the latter upon the former. This is not, it must be stressed, a doctrine about the relations between the sciences themselves - that is, it is not reductionism; it concerns only the realities of which these sciences yield knowledge.” [21]

Collier in a later work, *Scientific Realism and Socialist Thought*, goes into greater depth concerning the similarities between Bhaskar’s transcendental realism and ontological Marxism. The intransitive world is conceived by both as being structured in a way that, while mind-independent, can be known by thought and an ever deepening of knowledge about the world, without conflating an epistemological approach with the ontological. [22]. Ontologically, causal mechanisms operate independently of thought, an independence which is the basis of objective ontological theoretical knowledge about the world. This also explains the criteria upon which a theory of knowledge about the world can arise, a theory of knowledge which is not imposed upon ontological conceptions:

“The distinction between intransitive and transitive objects implies that ontological questions (questions about what exists) must always be kept distinct in principle from epistemological questions about what we can know.” [23]

Thus Collier concludes, after a long analysis of the relationship between transcendental realism and Marxism (regardless of our opinions of the vulgarization of dialectical materialism) that both attempt to avoid the epistemic fallacy by emphasis upon the centrality of ontology. In the case of Marxism this means a ‘dialectical ontology’ which is “verified by the practices of the natural sciences”, or justified by an “appeal to natural science and applied in social science.” [24]

This is why Engels can say that “nature is the test of the dialectic”, without this embodying an epistemic fallacy. Rather, the intransitive character of the world, in ontological terms, interacts with and helps to explain the transitive character of society. [25]. Thus when Engels says that

dialectical thinking recognizes change and inter-connection within the world, this is not meant to constitute a rigid epistemological principle that conflates ontology with the utilization of a dialectical theory of knowledge. Instead, it is an illustration of how, in ontological terms, a dialectical theory of knowledge can enhance cognition of the ontological character of the world, instead of such a theory of knowledge representing the a priori impositions of conceptual truth onto its ontological character. It is to say that the structured intransitive ontological character of the world gives rise to concepts and the possibility to develop a theory of knowledge which can enhance understanding of the world's processes, laws and mechanisms.

This is in conformity with Bhaskar's often stated view that while the world does not automatically give rise to corresponding epistemological clarification in ontological terms, it *does* contain the intransitive potential to be understood correctly (via the ever deepening process of knowledge) and from this there is the possibility of overcoming the problematic of the epistemic fallacy:

“We have these concepts that we have, because the world is like it is (or appears as it does). If the world were different from what we thought, our concepts would have to be different - and of course concepts do change.” [26]

Thus the aim of Engels, in his ontological definition of the world of 'matter in motion', is an attempt to provide firm ontological, *and* epistemological, criteria to comprehend the intransitive character of the world. And in the process acknowledging the theoretical significance of recent ideas about the world, without being restricted by their epistemological and ideological limitations, such as reductionist Social Darwinism. So a firm, distinctive, epistemological standpoint was then required, but without it compromising the ontological.

It is the failure to grasp the ontological character of the dialectic that leads others to justify an a priori idealist dialectic. These failures are not the fault of Engels. Engels's intention is to relate concepts to the intransitive character of the world. But such an a priori imposition arises when the structure of the world is equated with aspects of the theory of knowledge, or when epistemological criteria, such as language, sensations, or practice, are given ontological primacy. Such approaches fail to relate concepts about the world to its structured intransitive character. In

this way there is a conflation of the process of knowledge about the world on the one hand, with its ontological character on the other. But this is precisely what Engels seeks to avoid with his emphasis upon ontology as the basis of epistemology. Thus the following definition of the epistemic fallacy, by Collier, is taken account of by Engels and counteracted with his dialectical ontology:

“It is thought to be contradictory that the structure of the world should be known through sensation (or language, or practice) and yet the structure of the world be independent and determinant of sensation (or language, or practice); hence idealism arises through the aligning of ontological primacy with epistemological primacy.” [27]

Along these lines Levine is critical of Engels for placing undue emphasis upon the dialectic as a method of cognizing the ontological intransitive character of reality. Levine believes that this leads to the ontological being undermined in epistemological terms. On this view, instead of being a dynamic, conceptual and logical theory of knowledge, dialectics was reduced to merely expressing the correspondence of thought with reality - dialectics as a passive reflection of the intransitive character of reality. [28]. According to this Engels's error was in reducing epistemology to an expression of the external world (the dialectical character of nature and society). Levine is aware that this epistemological approach was conceived in the ontological terms which have later been elaborated by transcendental realism. Indeed Levine inadvertently reveals that contained within Engels's approach is avoidance of the epistemic fallacy, a theoretical victory for which Levine unjustifiably castigates Engels for allegedly undermining the significance of the dialectic! Nevertheless, Levine outlines how Engels was aware that the development of thought and knowledge about the world relates to its intransitive, ontological character:

“Thought had its origin in being, in sense data. However, the being that Engels primarily had in mind was not the social a priori, but being as an external nature. The referent, for Engels, was the intransitive. Since Engels was primarily involved with the perception of external objects, he defined being as primarily the material objects which impacted on our sense organs and which in turn gave rise to sense data. Being was defined in terms of the intransitive.” [29]

In summation, along with Bhaskar and Collier, Engels, in accordance with the limits of contemporary knowledge, is attempting to explain how the intransitive character of the world represents the basis of thought and ontological clarification. Further, Engels is trying to make clear that this means that knowledge can overcome the problematic of the epistemic fallacy. To Engels the correspondence (or potential correspondence) of thought to reality represents the ontological character of the world. In this context, Bhaskar's objection to Engels's ontology, even if we were to concede Bhaskar's point about an alleged metaphysical reductionism of reality to matter in motion (which is debatable), is still perplexing. Bhaskar's claim that Engels's ontology fails to comprehend immaterial elements, in a material world, is also unsatisfactory. Levine conceded that Engels was quite equipped in ontological terms to explicate matter in energy terms, in order to putatively take account of Einstein's later theoretical revolution. It is possibly more fruitful to locate the differences between Engels and Bhaskar in epistemological terms. (See below).

David Hillel-Ruben in *Marxism and Materialism* challenges Engels's conception of the necessity of an ontological standpoint, as integral to upholding the epistemological distinction between materialism and idealism (and the correctness of the former against the latter). In a brief discussion of Engels's view that the world as 'matter in motion' embodies a complex of processes which undergo constant transformation - as against the static view of the world held by metaphysical materialism - Ruben refuses to conceive the ontological position of Engels as any more correct than other materialist positions:

"My own point here is not that Engels' view is necessarily the correct one. The point, rather, is that Engels was quite right to regard the question of what is the nature and structure of that which exists essentially independently of us as a question for scientific investigation. Our beliefs about its nature or structure have changed as the natural sciences have themselves changed, and it is important not to tie materialism down to outdated beliefs about the nature of mind-independent reality which are taken from a particular stage in the development of the natural sciences, a mistake which many materialists have certainly too often made." [30]

With this reasoning Ruben is conflating the problematic of limitations in the given contemporary view of the world held by Engels, on the one hand, with the denial of the basis of ontological

precision, in terms of the mind-independent character of the world, on the other. To Ruben any ontological position about the world is inherently problematical, given changing views about the world, and is soon 'out-dated' and its 'limitations' revealed. On this view the significance of Engels's ontological position is epistemological - to outline the primacy of a mind-independent world as the basis of thought and scientific investigation. But then why was Engels preoccupied in elaborating a distinctive Marxist materialist ontological position on the world? And why was Engels not satisfied to outline the distinction between materialism and idealism in epistemological terms, indicating, like Ruben, that the former represented the class interests of the proletariat and the latter the bourgeoisie? In fact Engels did not rest satisfied with such an epistemological and ideological distinction, precisely because the primacy of the material world as the basis of thought, *revealed that the world was knowable in its objective material content, in ontological terms*. Indeed, to abstain from the task, in theoretical terms, of elaborating upon such an ontological position, actually disarms the working class movement, and this was recognized in *Anti-Duhring*. Furthermore, it was immediate political considerations, of the need to oppose Duhring's conceptual a priori ontological schema, and also the need to uphold the ontological significance of the results of scientific advance, that drove Engels into fulfilling the possibility to outline a distinctive ontological position. [31]

So the question of ontology cannot be separated from that of epistemology or that of ideology, despite Ruben. It needs to be emphasized that a Marxist ontological elaboration of a conception of the world cannot be reducible, in epistemological terms, to ideological and political choice (and class standpoint). But Ruben assumes such a reduction in the course of making the case for the theoretical necessity of philosophical materialism. In contrast, Engels recognized that the world is structured in a way that can be known by science, and it was this, *not the posited necessity for philosophical materialism*, that enabled a distinctive ontological position to be contrasted to that of Duhring. Choosing between the theories of Duhring or Engels is not a question of political preference (even if this is the *form* in which the choice is made). Rather, it is a choice between a position which aspired to ontological clarity and precision about the world - because it realized that science can correspond to the world's structured character - and an a priori philosophical schema according to which the world expresses conceptual truths.

We can go further and state that this difference between Engels and Duhring would have been nonsensical if it had remained at the level of epistemology. For Engels was saying that a conceptual schema cannot explain nature and history; instead the ontological character of the world gives rise to a corresponding theory of knowledge, a theory of knowledge which can best assimilate and evaluate the a posteriori findings of science until a viable ontological conception of the world is achieved. That is why the dialectical approach is not counterposed to the established methods of scientific inquiry. Because the dialectical approach expresses the ontological character of the world, it is an approach of philosophical (not *ideological*) origin which does not conflate epistemology and ontology. Consequently, unlike metaphysics or idealism in general (including Duhring's system-building) which obstruct the elaboration of an ontological conception of the world, a dialectical approach promotes such a conception. Of course the dialectical approach is of epistemological origin, but upon its methodological premises it is able to relate thought to the intransitive character of the world:

“Dialectics.....comprehends things, and their representations, ideas, in their essential connection. consummation, motion, origin, and ending.” [32]

It is from the objective material content of the world that an ontological characterization of the world can be provided, by a theory of knowledge that expresses this character:

“An exact representation of the universe, of its evolution, of the development of mankind. and of the reflection of this evolution in the minds of men, can therefore only be obtained by the methods of dialectics.....” [33]

The question of whether this constitutes an epistemic fallacy, dogmatism, or merely evidences ideological requirements, is obviously still up for debate. But the point is that this question cannot be resolved in purely epistemological terms, as Ruben, Levine, and others would contend. It is the ontological character of the world, expressed by its intransitive structured mechanisms, which provides the answer. To Engels, the materialist dialectic was a superior method to understand, assimilate and advance human knowledge, expressing theoretical superiority over other philosophical and scientific approaches, since it represents the most effective (not the only) way to cognize reality. The materialist dialectic most ably corresponds to the objective material

character of the world, in nature and society. This led to a joint conclusion. Firstly, that in epistemological terms, the natural sciences could not replace the cognitive significance of the materialist dialectic (thus Engels did not endorse the positivist subordination of philosophy to science, or a mere passive summation of scientific advance). Secondly, on the other hand, the materialist dialectic was not a methodological a priori imposition upon the results of science, but a method to enhance understanding of reality (it was by this approach that Engels attempted to overcome the problematic of the epistemic fallacy, an approach which was summed up by Engels's understanding that nature was the 'proof' of dialectics). [34]

These points are brought out in a clear and explicit way in Engels's exposition of the history of philosophy and science. Engels maintains that the theoretical revolutions in science have meant that philosophy can no longer be indifferent to, or sustain a theoretical separation from, science and its advances in understanding reality. This does not make philosophy superfluous or subordinate to science, argues Engels, but it is necessary to relate science to philosophy to obtain viable philosophical advance. So on Engels's view, the epistemological superiority of dialectical materialism lies in the recognition of the need to enhance understanding of the world, in ontological terms. This is to be accomplished by applying a coherent, distinctive, (and not subservient) epistemological outlook to existing scientific knowledge. Thus Engels's dialectical materialism does not repudiate this ontological task, a task which is not carried out purely by science but is mediated in philosophical terms.

THE SPECIFIC ILLUSTRATION OF ENGELS'S DIALECTICAL MATERIALIST OPPOSITION TO THE EPISTEMIC FALLACY

Engels maintains that in a more specific historical context, it was the a posteriori results of scientific investigation which revealed the ontological limitations of Hegel's philosophical system-building, and these results formed the basis to go beyond the limitations of mechanical materialism, in explaining the world. Hegel's dialectic conceived of the processes of change and development within nature, society and thought, in terms of an a priori conceptual philosophical system, a system that was an imposition upon reality, rather than an expression of reality. In epistemological terms Hegel's system was based upon an idealist inversion of the real relation between being and thought. Thus Hegel's idealism rationalizes the necessity of theoretical

restrictions, restrictions which invalidated the advance of philosophical and scientific ideas outside of the 'confines' of his 'complete' philosophical system - a system which Hegel considered the expression of the 'true conceptual' essence of reality. (Engels, *Anti-Duhring*: "Hegel was an idealist. To him the thoughts within his brain were not the more or less abstract pictures of actual things and processes, but conversely things and their evolution were only the realized pictures of the "Idea" existing somewhere from eternity before the world was. This way of thinking turned everything upside down and completely reversed the actual connection of things in the world.") [35]

Therefore a deepening of the ontological understanding of the world, which could overcome Hegel's epistemological limitations, required two interrelated conditions. Firstly, the development of a theory of knowledge to surmount these epistemological limitations (and those of mechanical materialism). Secondly, and primarily, it was the objective circumstances of the theoretical advances in the natural and social sciences and the given historical conditions, which provided the possibility of the development of such a theory of knowledge.

Modern science has helped to establish the changeable character of phenomena in the material world, and has facilitated the close relationship between modern science and the modern materialist dialectic approach. This relationship can provide a viable ontological conception of the world, upon coherent epistemological premises, without simultaneously lapsing into the epistemic fallacy of philosophical systems-building, a fallacy in which an epistemological approach becomes conflated with the ontological. It is in this context that Engels maintained that objective reality, which provides the basis for deepening of knowledge about the world, had revealed the philosophical superiority of dialectical materialism, in its mutually supportive relationship with scientific advance. Objective reality has been shown to be of a material dialectical character and it is upon this ontological premise that materialist dialectic is said to be superior to other philosophical outlooks. In summation, science has helped establish the changeable, material character of phenomena and helped provide an ontological foundation. This foundation supplies the criteria to explain both the distinctiveness and the validity of the materialist dialectic in epistemological terms, in contrast to Hegel's dialectic and all other philosophical systems grounded in an epistemic fallacy.

Thus central to a critique of Hegel's dialectic was that its idealism led to hostility to a viable ontological position, and was instead based upon rationalizing the conformity of reality to a priori concepts. Unlike idealism, modern materialism forges itself on the changing knowledge about the world, a process which goes beyond idealism's a priori constraints. Modern materialism's truths are founded upon ontological premises and not upon conceptual "ultimate truths". [36]. Engels's epistemological justification of a new materialism has no meaning outside of this ontological grounding.

In his outline of Duhring's approach Engels ridicules the grandiose claim of Duhring to have delineated a 'complete' philosophical system, based upon ultimate truths. To Engels this was both an epistemological expression of a vulgarized Hegelian outlook, and the utilization of a priori reasoning. On this view of Duhring's system, the world is seen, in both its character and in knowledge about it, as an expression of Duhring's overblown philosophical system. Indeed, Duhring talks of the need for nature and society to conform to principles and logic developed to explain their essence. This reveals an idealist epistemological conception of the relationship between being and consciousness. According to this conception, the material origin of ideas is effectively denied and instead theorized in idealist terms, relying upon the aforesaid idealist understanding of being and consciousness. Duhring's claim to have created a new system of thought to explain the character of phenomena within nature and society depends upon imposing logical categories onto reality, rather than the categories being derived from nature. In this way Duhring's claim to have resolved all the questions facing science and philosophy embodies a priori reasoning, reasoning not related to the objective material character of the world. It is this objective material character of the world which, via a posteriori scientific investigation, reveals the real relation between relative (changing) and absolute truth. Hence Duhring's approach bears no relation to the character of the world and the development of knowledge which reflects the character of the world. It is the nature of the world which is the basis of objective knowledge about it, and this is why knowledge about the world undergoes continuous development.

Engels explains the relation between the intransitive character of the world and knowledge in the following way:

“The perception that all the processes of nature are systematically connected drives science on to prove this systematic connection throughout, both in the general and in the particular. But adequate exhaustive scientific exposition of this interconnection, the formation of an exact mental image of the world system in which we live, is impossible for us and will remain impossible.....Mankind therefore finds itself faced with a contradiction: on the one hand, it has to gain an exhaustive knowledge of the world system in all its inter-relations; and on the other hand, because of the nature both of men and of the world system, this task can never be completely fulfilled.” [37]

But does this imply that Ruben is correct to interpret Engels as conceiving that materialism has a flexible ontological conception in accordance with the changeable, relative and historical character of scientific views about the world? Doesn't the above quote mean that Ruben's epistemological-orientated version of Marxist materialism is the correct one? In reply, firstly, Engels is rebutting Duhring's claim that irrespective of the historical, social and subjective limits placed upon the level of development of knowledge about the world, it is possible to arrive at virtual complete knowledge of the world, by developing a philosophical world system to explain all phenomena.

Secondly, while Engels rebuts such absolutist claims of Duhring - who denies the relative and changing aspects of knowledge - Engels does not preclude the possibility of arriving at a firm ontological position about the world. Indeed, for Engels, science reflects the potential to arrive at and deepen a viable ontological precision about the world, owing to science's objective character. The fact that opinions change, in line with developing knowledge, does not forestall this possibility but is rather its pre-requisite, as is indicated by Engels's comment about scientists aspiring to understand the inter-connections of the world. Thus the problematic of Duhring is not primarily located in his rigid dogmatic conception of the world as a unity, but rather that he arrived at this conclusion by applying the criteria of idealist reasoning. Such reasoning could also be used to rationalize the world having a fragmented character, or the world as a loose collection of separate entities. For Duhring's method rests upon a priori reasoning at the level of consciousness, and therefore cannot be explained in relation to the actual character of the material world. Duhring's approach represents the epistemic fallacy of identifying thought with being, according to which the potential of thought is equated with unity in being. This equation

is made by Duhring without undertaking any actual analysis of reality in order to justify his conclusion. Duhring's ontology amounts to a vulgar restatement of Hegel's concept of being, applied in epistemological terms. As Engels knew, the real ontological character of the world is not an expression of a logical unity, rather its actual unity and coherence is determined by its material and objective character:

“The real unity of the world consists in its materiality, and this is proved not by a few juggled phrases, but by a long and wearisome development of philosophy and natural science.” [38]

Similarly, as Engels documents, Duhring attempts to utilize the abstract laws of mathematics concerning time, space and infinity and ends up imposing them in an a priori manner in order to account for the universe and the material world. [39]. Engels goes on to explain how the conceptual a priori content of these categories (as opposed to their actual character in the material world) cannot develop a coherent and viable ontological viewpoint. As Engels sets out, Duhring's idealist epistemological method leads to ontological inconsistencies which result in a repudiation of the viable ontological approach outlined by science and elaborated upon by the practitioners of the materialist dialectic of matter in motion. This leaves Duhring with a most unsatisfactory ontological position of formulating the “unchanged existence of matter”, matter which from a state of non-motion is transformed into a state of motion and change. In this way a ‘bridge of continuity’ is supposed to span the static equilibrium of original matter on the one hand, and its present state of motion on the other. Lame as this may seem to us today, it represents Duhring's conceptual resolution of his ontological problematic of how motionless matter becomes turned into motion. Clearly the concept of ‘continuity’ may fit with rational conceptual thinking, but it provides no explanation in terms of actual processes of how motionless matter can acquire motion. However, Engels sets out how theoretical developments in science do provide such an ontological answer:

“But the mechanical theory of heat shows us that the movement of masses under certain conditions changes into molecular movement (although here too one motion originates from another motion, but never from immobility): and this, Herr Duhring shyly suggests, may possibly furnish a bridge between the strictly static (in equilibrium) and dynamic (in motion).

But these processes take place “somewhat in the dark”. And it is in the dark that Herr Duhring leaves us sitting.” [40]

Thus Engels is clearly stating that a viable ontological position can be achieved if idealist epistemology is rejected and the advances of natural science are utilized by a materialist dialectic epistemology. Obviously, changing views about the world will modify this ontological position in accordance with the historical character of knowledge. Nevertheless, within this context a viable ontological position can be obtained in line with the intransitive objective character of the world.

Contra Ruben, Engels held that materialism definitely encompasses an ontological position, since its theory of knowledge (the materialist dialectic) represents the capacity to express reality in an approximate but accurate manner. Engels was aware that to justify putting forward an epistemological standpoint that thought can correspond to reality, that reality must contain an objective (intransitive) character which allows it to be comprehended in thought and expressed through the construction of an ontological conception of the world. Duhring’s idealist epistemology obstructs the possibility to form a viable ontological position, and cannot comprehend the real connections between matter and motion - that motion does not reside outside of matter but is the mode of existence of matter. Every phenomena within the universe contains within itself the character of motion, a motion which is integral to the existence, change and development of material entities (however diverse).

In contrast, Duhring, upon his subjective premises, cannot acknowledge the theoretical advances of those such as Kant who helped to outline the changing character of matter. [41]. Instead, Duhring’s ‘complete’ philosophical system, owing to its idealist premises, results in an unreconstructed use of Hegel’s dialectical categories. This not only ignores the significance of scientific advances about the world, but also, by giving supremacy to epistemology over ontology, cannot arrive at a viable ontological position. As Engels expounds, only when epistemology is orientated (via its materialist character) to reaching a viable ontological position, can its premises be vindicated:

“The logical-real formula is nothing but a lame attempt to make the Hegelian categories “in itself” and “for itself” usable in the philosophy of reality.....We are therefore to think of the motionless primordial state as the unity of matter and mechanical force, and of the transition to movement as their separation and opposition. What we have gained by this is not any proof of the reality of that fantastic primordial state, but only the fact that it is possible to bring this state under the Hegelian category of “in itself”, and its equally fantastic termination under the category of “for itself”. Hegel help us!” [42]

This explains why Engels did not see the demarcation between materialism and idealism as primarily philosophical (merely upon epistemological premises). Rather, the distinction was mainly related to the need to achieve a viable ontological position. For essential to the very theoretical division between materialism and idealism are ontological differences reflecting divergent epistemological premises. Also implicit in Engels is the understanding that without an epistemological recognition of the primary necessity to arrive at an ontological position, these two aspects of a materialist outlook would become disconnected leading to idealism. This is why Engels would not have been satisfied with the concept of conceiving of materialism in purely epistemological terms, with a flexible ontological position (reflecting scientific advances). Instead, Engels saw that it is continually necessary to elaborate upon an ontological position in line with scientific advances and the intransitive character of the world, a character that makes this reworking possible. This meant that when criticizing Duhring it was not sufficient for Engels to develop a critique of the inconsistent idealist ontology. It was also necessary to provide an alternative materialist ontological position.

CHAPTER TWO

Do Bhaskar and Engels have a different and antagonistic philosophical conception of science?

INTRODUCTION

In recent years many objections have been raised to Engels's materialist dialectic. Either it is too rigid or too dogmatic - an exposition of metaphysical materialism - or too empirical, positivist or anti-dialectical. I will examine these objections in relation to the views of Roy Bhaskar.

ENGELS'S DIALECTICAL MATERIALIST ONTOLOGY PROBLEMATIC

It seems that Bhaskar's objections amount to the view that it is transcendental realism which outlines the experimental conditions that lead to a viable ontological position, in a manner that Engels and a primarily philosophical approach cannot. Yet in his later article Bhaskar admits that Marx has an implicit transcendental realist position. So could it not be said that Bhaskar is creating an artificial and arbitrary divide, a divide that is not necessarily there? Or could it not be said that Bhaskar unduly extrapolates certain limitations in Marxist materialism and gives them undue emphasis, which then precludes a viable ontological position for Marxist materialism in relation to transcendental realist premises.

Engels's understanding of causality was limited and rudimentary. To Engels, causality was expressed in terms of matter in motion, and upon this basis - of establishing processes of change and becoming - the world can be understood. With this methodological approach Engels is arguably more compatible with chaos theory than transcendental realism. In chaos theory reality is conceived in terms of processes of becoming, rather than in terms of structured causal intransitive mechanisms which are independent of, and not influenced by, the role of human thought, theory and experimentation. Yet despite this potential difference, Engels does recognize that causality is integral to explaining matter in motion. To deny causality is to conceive of natural laws in a hypothetical manner that cannot be substantiated in terms of reality. [1]. But Engels also recognizes the objective content and context of causality, in explaining the character of the world, which is primarily represented by matter in motion. This is why, for

Engels, matter in motion expresses processes of reciprocal action or interaction, in which processes of causation embody the dynamic ability of matter to undergo constant transformation and change. In the *Dialectics of Nature* (which Bukharin was unaware of, and which may have altered his ontological conception) Engels conceives of causality in the following dynamic terms:

“Reciprocal action is the first thing that we encounter when we consider matter in motion as a whole from the standpoint of modern natural science. We see a series of forms of motion - mechanical motion, heat, light, electricity, magnetism, chemical compound and decomposition, transitions of states or aggregation, organic life.....pass into one another, mutually determine one another, are in one place cause and another effect, the sum total of all matter in all its changing forms remaining the same. Mechanical motion becomes transformed into heat, electricity, magnetism, light, etc., and vice versa. Thus natural science confirms what Hegel has said - that reciprocal action is the true *causa finalis* of things. We cannot go back further than to knowledge of this reciprocal action, for the very reason that there is nothing behind to know. If we know the forms of motion of matter (for which it is true there is still very much lacking in view of the short time that natural science has existed) then we know matter itself. Graves’ whole misunderstanding about causality rests on the fact that he does not succeed in arriving at the concept of reciprocal action. He has the thing, but not the abstract thought and hence the confusion.....Only from this universal reciprocal action do we arrive at the real causal relation. In order to understand the separate phenomena, we have to tear them out of the general interconnection and consider them in isolation, and then the changing motions appear, one of cause the other as effect.” [2]

This seems to be an approach which, if not identical to transcendental realism, is not counterposed to it. For Engels is rejecting the empirical-type conception of causality, which is based upon separating or isolating out phenomena in order to establish that a cause leads to a given effect. This is contained in Engels’s criticism of Graves and the artificial, non-theoretical and closed conclusions of his experimentation in reference to causation. Instead, to understand causation is not to reduce it by this artificial process of isolation and compartmentalization, but to establish the interconnections of phenomena - how they mutually interact in a law-governed, but not a rigid way, in terms of dynamic processes of change and interaction. Thus Engels seems to agree with Bhaskar that the question is not to relate a given cause to a particular

sequence of events, but to understand the essential character of things - which to Bhaskar represents the intransitive structures and mechanisms, while to Engels it is the processes of matter in motion. To Bhaskar, the causal character of the world does not embody Newton's rigid, repetitive and monolithic deterministic laws, or empirical observation of events, but is contained within the intransitive structured character of mechanisms and processes independent of the conditions which enable them to be understood by human activity and science. Thus they can be both cognized and transformed in line with the transitive processes of knowledge about them. Bhaskar states:

"My overall aim, it will be remembered, is to argue that the ultimate objects of scientific understanding are neither patterns of events nor models but the things that produce and the mechanisms that generate the flux of the phenomena of the world. Scientists attempt to discover the way things act, a knowledge typically expressed in laws; and what things are, a knowledge...typically expressed in real definitions. Statements of laws, I have suggested, are statements about the tendencies of things which may not be actualized, and may not be manifest to men; they are not statements about conjunctions of events, or experiences." [3]

No doubt, to Bhaskar, the conception of matter in motion does not embody the same precision as a conception of intransitive structured mechanisms and processes, in explaining the character of non-human phenomena and their relationship to human activity and thought. But is there anything in Engels's conception of causality that is counterposed to that of Bhaskar? Engels's approach is an attempt to elaborate a distinctive alternative to empiricism, in a way which does not conflate the conditions of experimentation that relates a sequence of events, with the causal processes which are also indicated. This is contained in Engels's ontological conception of reality and of matter in motion. According to this conception causality embodies processes of reciprocal interaction and not rigid sequences of cause and effect. Bhaskar illustrates this in terms of outlining a distinctive ontological materialist dialectic viewpoint in relation to modern scientific discoveries. This approach also attempts to avoid the Newtonian problematic of conceiving of causality as repetitious, unilinear, rigid laws, and instead conceives causal laws more in terms of natural necessity, of entities in their dynamic interconnections and processes of dynamic interaction, containing the potentiality for change and development. Now Engels's view is that the 'inner necessity of a thing' contains the potential for change, whether regressive, progressive or any other outcome, and is intimately dependent upon the interconnections and

initial conditions in which it exists. Again, there seems to be nothing in Bhaskar's discussion on natural necessity and its expression in generative mechanisms which contradicts the still rudimentary and implicit conception of this approach in Engels's outline of matter in motion. [4] Indeed, this convergence is expressed in Bhaskar's understanding that the possibility for an entity to exhibit causal type behaviour, represents the primacy of universal interrelated law-governed characteristics. This, in turn, represents the operation of enduring transfactual (universal) mechanisms in nature, which enable an entity to exist and exhibit such causal natures. Thus:

"...necessity as such, like universality, is thus ascribed essentially to the activity of the mechanism; and only derivatively to some particular event or sequence. For the result of the activity of the mechanisms will in general be co-determined by the activity of other mechanisms too." [5]

Engels's *theory of knowledge* concerning causality is also not counterposed to that of Bhaskar. Engels indicates that entities and processes are independent of the theory of knowledge about them in causal terms, but that the process of cognition represents a vital test in revealing the existence of causality within nature, owing to its objective material content:

"But the activity of human beings forms the test of causality." [6]

This act of cognition does not alter the operation of causality within nature, which is independent of this human development of knowledge, but it still plays a transforming role whereby change of nature arises out of human activity and thought in transitive terms; in society and its interaction with nature:

"In this way, by the activity of human beings, the idea of causality becomes established, the idea that one motion is the cause of another." [7]

This can be seen at the epistemological level as the understanding of the active character of knowledge and its influence upon the character of reality through the connection between society and nature. This understanding does not lead to the epistemic fallacy in terms of its conception of causality. On the contrary, it exists within the intransitive character of nature, of matter in

motion, as discovered by the process of cognition, yet independent of this act of understanding. At the same time, causality acquires a more distinct and transitive form within society and the conscious character of human activity.

So it seems that important elements of Engels's epistemological approach concerning the relationship of knowledge to the character of reality within nature and society, are similar to Bhaskar's. Regarding causality, the similarity is also present. Yet Bhaskar does not seem to recognize this. Why?

If we look deeper into Bhaskar's possible reasons for objections to Engels's ontology, it may be related to an equation of the understanding of matter in motion with Newton's theoretical problematic and the limitations of classical science. This classical approach has a limited understanding of the intransitive structures of things, of the internal potential and necessity which leads to interaction. Instead it explains things by causal processes of motion, owing to their location in space at a given moment in time. Thus causation is:

"...external to the thing to which the change occurs." [8]

This means that all conceptions of entities in terms of motion, tend to a viewpoint of mechanical and external processes of causation. The physical character of things represents nothing more than molecular and atomistic structures, which are based upon strict mechanical processes of motion:

"On the physical concept, matter is viewed as composed of rigid corpuscles whose motion accounts for the aggregative and observed behaviour of things. These corpuscles exchange momenta and redistribute velocities among themselves by impact, and they move through space according to the strict laws of mechanics. Action is seen as consisting in the impression of external forces upon these corpuscles, which merely pass on their received motion by direct impact. Events are nothing but the displacement of these basic exhibits of matter in space and time, they are not the transformation of pre-formed substances." [9]

In this way qualitative change is reduced to aggregate physical effects of the displacements caused by external motion. Real qualitative variety and change in terms of the inner potential of

things being realized arising out of their character as intransitive objects, is denied. Such an ontology also leads to an empirical-type theory of knowledge and concept of causality, in which the mechanical motion of A leads to the effect of B etc. This in turn leads to a deterministic concept of laws of empirical regularities or constant conjunctions of events, i.e. law of motion of A leads to B etc. In methodological terms, things are then described in terms of observation of patterns of events, and not assessment of their structures which explain traits of motion and change. Consequently an empirical-type approach is integral to an understanding of matter as rigid physical atomistic entities that are passive and inert, in which motion embodies external causation - x then y. This type of approach cannot explain the diversity, dynamic and transforming quality of entities in terms of their internal structures. There is a reliance on an empirical approach which conflates behavioural traits such as motion and physicality, with internal structure - an approach which cannot account for qualitative change. Such an approach cannot explain what is contained within the material character of a thing and thereby ultimately leads to an ontology of atomistic change based upon contingent and external processes - sequential series of causes and effects. To conceive of things as distinct aggregates of matter, that undergo physical, atomistic or molecular changes, does not satisfactorily account for the systematic change undergone by entities, nor does it account for their interconnections with other entities. This mechanistic approach cannot explain the relationship between the internal structure of a thing and its changes in relation to external conditions. Thus to comprehend things as motivated by external mechanical processes of physical changes, does not enable us to understand what is contained within the structure (that it is not just an aggregate of parts that make the whole, occupying given space) that enables this material transformation to take place. In other words: the classical atomistic approach cannot explain both the continuity and transformation of things, in terms of their material character:

“Once we allow that an event would have occurred, whatever the intrinsic conditions, we are bound to end up denying the principle of material continuity. This is the principle that events are changes in things...i.e. as the transformation of substances, rather than the displacement of physical masses in space and time. What is transformed is already given as complex and pre-formed. Or its partially transformed material continuity is preserved through the change. If it is totally transformed, we seek a new kind of substance, or level of ‘thing’ which will allow us to preserve this principle.” [10]

What of the alternative put forward by Kant etc., of atomistic entities embodying non-mechanical interaction as matter in motion, based upon forces of attraction and repulsion? To Bhaskar, this process of contact of spatio-temporally located entities, does not resolve the problematic of mechanical motion. It fails to answer the question: what is constituted within the internal structure of a thing (its powers and capacities) that could lead to such interaction? Forces based upon attraction and repulsion could only affect each other in terms of 'space and distance', or "point-centres of mutual influence distributed in space". [11] They could not explain how interaction could lead to the internal transformation of things.

So even if Bhaskar grants that Engels does not contain the problematic of Newton in seeing things as external, rigid, yet arbitrary although deterministic and sequential processes of cause and effect of mechanical matter in motion, Engels does not escape the problematic of the Kantian-type alternative. This problematic is namely that non-mechanical matter in motion also does not explain causality in terms of the intransitive, stratified and internal character of things that leads to their transformation and the basis of interaction with other elements. Instead Engels is left with the apparently unavoidable legacy of Newton and the classical physics problematic of describing matter as the effect of motion and not in terms of the character and capacities of things which explain given activities:

"To say that a thing was a power to do something, is by contrast to say that it possesses a structure or is of such a mind that it would do it, if the appropriate conditions obtained. It is to make a claim first and foremost about the thing and only subsidiarily, if at all, about events. It is to say something essentially about what the thing is, and only derivatively about what it will do. It is to ascribe a natural possibility to the thing whose actualization will depend upon the flux of the conditions." [12]

Whilst all the properties of a thing do not necessarily explain its causal powers, in general its identity expresses its causal powers and capacities and thereby its activities, i.e. the question of interaction with other entities. But classical physics of either mechanical or of non-mechanical matter in motion cannot explain causality, or the ontology of entities, in such terms. By implication Engels shares this theoretical problematic. Consequently, to conceive of entities in terms of their reciprocal interaction, as their essence of matter in motion, by no means overcomes this theoretical problematic. Entities are still seen in terms of their spatio-temporal

location, rather than their intransitive, internal character which is the real basis of dynamic processes of change and interaction. Engels may have realized the fundamental flaws of Newton's theoretical paradigm of mechanical motion, but Engels's own ontological alternative (as with Kant) does not overcome this conception of matter in physical, atomistic, spatio-temporal terms, a conception which cannot comprehend the actual character of material things in causal and structured terms. Instead Engels puts forward a modified Newtonian paradigm of the dynamic interaction of material entities via motion. Indeed Engels could be said to have shared the views of Locke on this question. Locke conceived of the manifested quality of things - cognized by sense experience, and the notion of their parts, as explaining these observed traits. But not only does this not explain all observed phenomena, it also does not relate observed manifestations to the internal structure and capacities of an entity. In this way the world of things is conflated with sensation of observed experience of things, things which are not adequately understood in terms of their causal powers and capacities. This is revealed by Locke's scepticism "over a knowledge of real essences". [13]

While Bhaskar would probably agree that Engels does not share the empiricist ontology of Locke, Engels does not get beyond the empiricist-type problematic of an inability to describe the internal character and capacities of things. Instead entities are conceived merely as 'matter in motion', and Engels has a paradigm of atomistic materialism - of matter occupying time and space, a paradigm which cannot explain the intrinsic properties and capacities of things, and the corresponding diversity and changes of a phenomena. In reply it can be asked, firstly, whether in relation to the existing knowledge of his time Engels's approach does not in fact preclude the possibility of overcoming the problematics of the Newtonian paradigm of reducing entities to spatio-temporal qualities, or empirical observed manifestations or representations of rigid deterministic laws? Secondly, in relation to the contemporary development of scientific knowledge, it can be asked whether it is not Bhaskar who underestimates the significance of the spatio-temporal (time orientated, space occupying) quality of things, as an essential element of their intrinsic character. For example, the advocates of chaos theory with their account of irreversible processes have outlined the significance of time in the dynamic change and character of things, and as the basis of interaction with other entities. (See next chapter). Possibly Engels's ontological conception of matter in motion has been reaffirmed at this new higher level of scientific knowledge about reality. This also reveals that Engels's approach is not necessarily restricted to the paradigm of Newton and the atomistic, mechanical view of matter and its

qualities. Thirdly, we can note that Engels recognized and attempted to overcome the problematic of conceiving of matter in external terms as 'in motion', in his outline of the intrinsic internal dialectical character of things - according to which entities were described and evaluated as containing the characteristics of contradiction, quantity changing into quality, and the negation of the negation. In this manner Engels attempted to reconcile the ontology of matter in motion with an understanding of the internal essences and characteristics of entities and thereby overcome the problematic of classical science on this question. Thus the internal dialectical character of things is the basis of their dynamic processes of interaction with other entities, and the basis of processes of change and becoming.

In *Anti-Duhring* Engels describes how the quantitative addition of atoms, or a quantitative addition to the molecular structures of, say, carbon with hydrogen atoms, can lead to a qualitatively new entity. So chemistry in general can vindicate the process of quantity changing into quality. [14] This is an indication that natural entities can contain a dialectical character, rather than being an imposition of the dialectic onto reality. It could be said that such an approach, which describes the dialectical character of things in terms of atomic and molecular structure, does not adequately explain their dynamic and interactive character in a way that overcomes Newton's limitations. This may be true, but couldn't it equally be said that it can provide a basis to overcome this problematic? Thus to understand matter in motion - as not, in classical scientific terms, the external contact of two separate bodies - requires a dialectical theoretical understanding. The acknowledgement of the reciprocal interaction of things, represents grasping their contradictory character - the ability of an entity to simultaneously be at different places at a given moment in time:

".....being in one place and the same place and also not in it. And the continuous origination and simultaneous solution of this contradiction is precisely what motion is." [15]

This passage from Engels obviously implies that this ability of things to undergo such a dynamic process of transformation means that they cannot contain an inert, passive internal structure - a structure which occupies a static place in space and time, which can only undergo motion via external contact. Instead the internal character of things contains the basis for interaction:

“Here, therefore, we have a contradiction which is objectively present in things and processes themselves and can be met with in so to speak corporeal form.” [16]

The external dialectical character of an entity, its contradictory processes and structure, creates the basis for interaction with other entities and their resultant internal transformation and the development of new entities and new processes of interaction and transformation etc. So if the spatio-temporal (space and time) quality is to be understood, it is not by the limitations of classical science - of the external contact of separate entities, occupying rigid locations in spatio-temporal time. Instead, it is by the internal, dialectical contradictory character of things, things that have to realize their capacities by reciprocal interaction and transformation with other entities. Thus no entity contains a rigid spatial and temporal character. On the contrary it can simultaneously contain fluid spatial and temporal characteristics. In other words, acknowledgement of an entity’s internal dialectical character requires realization of its potential, in terms of interaction with other entities, that thereby embody dynamic processes of becoming. Indeed, it could be said that Engels possibly anticipated the conception of material necessity of Harre and Madden, or the physical necessity and inner essence of Fisk, by describing the relation between the internal character of things and their interaction with other entities. [17]

In other words, it was Engels’s analysis of the internal character of things as dialectical, that overcame the limitations of classical physics, i.e. the external characterization of matter in motion:

“Thus, so long as we consider things as at rest and lifeless, each one by itself, alongside and after each other, we do not run up against any contradictions in them. We find certain qualities which are partly common to, partly different from and ever contradictory to each other, but which in the last-mentioned case are distributed among different objects and therefore contain no contradiction within. Inside the limits of this sphere of observation we can get along on the basis of the usual, metaphysical mode of thought. But the position is quite different as soon as we consider things in their motion, their change, their life, their reciprocal influence on one another. Then we immediately become involved in contradictions.” [18]

It could still be conceded that this approach might not have fully overcome the problematic of Newton’s atomistic conception of matter and Newton’s regarding of matter in motion as physical

displacement, which fails to subsequently explain the inner essences of things. Nevertheless, Engels, in line with the existing knowledge of the time, was able to establish important criteria for understanding the relationship between the inner essence of things and their reciprocal processes of interaction with other entities. These criteria overcame the rigid ontological distinction of classical science between internal and external phenomena. This is expressed by Engels's critique of Duhring, according to which motion is only comprehensible by it being understood in terms of contradiction. Further, full theoretical recognition of this relates to the internal character of things, to this internal character's representation in the processes of motion:

".....and thus admits the objective presence in things and processes themselves of a contradiction which is measures of actual force." [19]

So even if we agree that Engels's approach is rudimentary, and that it does not grasp the theoretical significance of entities as intransitive causal mechanisms, based upon inner capacities and necessities, his method is not counterposed to this understanding. Further, even if we grant that Engels sometimes conflates the empirical manifestation of things - their reciprocal interaction and motion - with their intrinsic character, Engels is not expressing an empirical type approach that is contrasted to understanding based upon processes and entities. This is shown when Engels indicates the internal dialectical essence of things which, in ontological terms, is represented by matter in motion and processes of interaction and change. Such an ontological materialist dialectic does not restrict Engels to an atomistic, mechanical view of matter upon Newtonian or empirical criteria. Engels's ontology and theory of knowledge seem comparable to that of transcendental realism, rather than counterposed as Bhaskar implies. This conclusion takes into account the gaps in Engels's knowledge, his inconsistencies and limitations. Further, the inconsistencies - such as Engels's failure to outline a satisfactory conception of the integral relationship between inner natural essences (or necessity of things) and their processes of development and interaction - are related to the limits of knowledge at that time, and not to any inherent theoretical problematic in Engels's ontology or his epistemological approach. So it would seem that any differences between Engels's and Bhaskar's ontologies are not unbridgeable, but relate to the relative and changing aspects of knowledge, rather than being of a fundamental epistemological or methodological character. We have to ask whether Bhaskar fully allows for the limitations inevitably imposed by the historical, social and cultural context of Engels's ontology. Put in this light, the similarities far outweigh the differences.

Given this mounting evidence of the similarities between Bhaskar's and Engels's approach as analysed above, what can be made of Bhaskar's objections to Engels's epistemological method and ontological conclusions? As Richard Norman has pointed out, Engels was aware of the problematic of a conceptual or a priori imposition of the dialectic upon reality, which could undermine the ontological conclusions of applying a dialectical method to understand reality. [20] This is why Engels in his preface to *Anti-Duhring* makes clear that:

"...there would be no question of building the laws of the dialectic into nature, but of discovering them in it and evolving them from it." [21]

Furthermore, Engels was also aware of the need to develop firm epistemological foundations that are not subordinate to science, but relate to the achievements of science, in order to undertake an ontological understanding of reality:

"Marx and I were pretty well the only people to rescue conscious dialectics from German idealist philosophy and apply it in the materialist conception of nature and history. But a knowledge of mathematics and natural science is essential to a conception of nature which is dialectical and at the same time materialist." [22]

To Bhaskar such a statement is not sufficient to uphold a non-idealist or non-empiricist conception of reality, as it does not embody a scientific realist conception of reality. However, this brings us to a fundamental epistemological difference between Engels and Bhaskar, which is not just a question of Engels having a flawed epistemology that could be overcome by the adoption of a realist ontology. On the contrary, Bhaskar is implicitly counterposing transcendental realism to dialectical materialism in ontological terms, as indicated by Sean Sayers who raises epistemological objections to realism as outlined by Bhaskar and maintains that only Marxist materialism upholds a truly non-idealist and non-empiricist view of the world. [23] Sayers argues:

"By contrast, Locke's realism and the recent scientific realism of Bhaskar are dualistic forms of realism since these philosophies both involve rejection of philosophical materialism, and a dualist distinction and separation of consciousness from matter, appearance from reality." [24].

Bhaskar's own views seem to exhibit a tension in postulating on the one hand that Marxism at an epistemological level is quite capable of coming to a fully coherent and systematic realist ontology, and on the other hand that Marxism is not capable of coming to such a sustainable ontological position. There seems to be an eclecticism in Bhaskar's positive assessment of Marx and yet negative approach to Engels. On the one hand Bhaskar often exaggerates the apparent realist ontology of Marx, who actually said very little about the intransitive mechanisms within nature and their causal connections. On the other hand Engels - who said much more about the causal character of the world - is dismissed as an empiricist. Engels is accused of being dogmatic by imposing an epistemological outlook (or closure) upon science, an outlook that ontologically conceives of the world as an expression of a conceptual approach. But at the same time Engels is accused of being too adaptive in allegedly undermining the epistemological approach of dialectics to accommodate empiricist views of the world. We can grant that either scenario could be correct, but Bhaskar seems to have introduced his own process of theoretical closure and precluded investigation of another outcome - that Engels is trying to reconcile the upholding of an epistemological outlook with an open (not a priori) approach to the changing conclusions of science about the nature of the world. Such an open approach does not necessarily or logically lead to the undermining of an epistemological position, but rather it is the basis upon which to reconcile the a priori and a posteriori in conceptual and empirical terms, as the Sayers/Norman debate has outlined.

For example, Engels states:

"Yet the advance of natural science may possibly make my work to a great extent or even altogether superfluous. For the revolution which is being forced in theoretical natural science by the mere need to set in order the purely empirical discoveries, great masses of which have been piled up, is of such a kind that it must bring the dialectical character of natural processes more and more to the consciousness even of those empiricists who are most opposed to it." [25]

It is Bhaskar who tends to have a theoretical omnipotent position which effectively denies that empirical type approaches can make any lasting contributions to the development of knowledge about the world, owing to their 'epistemic fallacy'. Engels is neither denying the validity of empirical type discoveries nor does this lead him to subscribe to the approach of scientists

engaged in such discoveries. Rather, Engels holds that the theoretical potential of scientists' discoveries can be brought out fully only with the culmination of the philosophical development of the materialist dialectic. By implication Engels is saying that it is a Marxist epistemology which will lead to science outlining the most coherent ontological position. Thus Engels's approach does not preclude the necessity of outlining a viable ontological view of the world (contrasted with empiricism and idealism). But does Engels go on to develop such a coherent ontological outline of the world? If we decide that he does not the conclusion to be reached is surely not that Bhaskar is correct to attribute to Engels a flawed epistemology (in Bhaskar's ontological terms), but rather that Engels's ontological conclusions do not sustain a viable epistemological outlook. (Bhaskar is not criticizing Engels's ontology of matter in motion and the three dialectical laws, but instead Bhaskar criticizes Engels's alleged reflection theory. But by Bhaskar's own standards, it is Engels's ontology that should be the starting point for a critique.)

Certainly Engels's conception of the causal character of the world is rudimentary - the relationship of cause and effect is considered in over-generalized terms as being one of numerical interaction. But it is important that Engels differentiates this concept of causality from that of the empirical (which isolates individual observational instances whereby cause A leads to effect B, but has no relation to C or D etc.). Instead Engels says that particular instances of causality have to be understood in their general sense - aspects of a universal type process - in order to explain the objective character of phenomena. According to Engels this conception of causality complements, rather than opposes, a dialectical understanding of reality:

“Further, we find upon closer investigation that the two poles of an antithesis - positive and negative - are as inseparable as they are opposed, and that despite all their opposition, they mutually interpenetrate. And we find in a like manner, that cause and effect are conception which only hold good in their application to individual cases; but as soon as we consider the individual cases in their general connection with the universe as a whole, they run into each other, and they become confounded when we contemplate that universal action and reaction in which causes and effects are eternally changing places, so that what is effect here and now will be cause there and then and vice versa.” [26]

So dialectics, as the basis to comprehend the interconnection of things in epistemological terms, is not ontologically opposed to a structured, causal view of the world. We may question Engels's generalized definition of a metaphysical view of science - which actually encompasses many diverse philosophical trends of thought (including empiricism) - but we must also recognize that Engels usefully contrasts metaphysics to a dialectical approach, a contrast which indicates the difference between empiricism and dialectics with regard to a causal view of the world. Empiricism upholds investigation of objects in isolation of one another - an absolute gulf exists between cause and effect which are in rigid antithesis. The dialectical approach reveals the reciprocal interaction of phenomena. Now can Engels be said, as Bhaskar implies, to hold an empirical causal view of the world? Is Engels's causal view of the world really opposed to that of transcendental realism?

It was Duhring's insistence upon the fundamental epistemological differences between his world-view and that of Marxism which led Engels to indicate why, at an ontological level, only dialectics can sustain a viable ontological view of the world. This was compared to the idealist epistemological approach of Duhring. The immediate theoretical aims of Engels led him to try to establish the connection between epistemology and a corresponding viable ontological view of the world:

"Nature is the proof of dialectics, and it must be said for modern science that it has furnished this proof with very rich materials increasing daily, and thus shows that, in the last resort, nature works dialectically and not metaphysically." [27]

If Engels is right nature is inherently dialectical. In epistemological terms this means, for Engels, that outlining an ontological conception of the world requires the application of dialectics. Furthermore, this achieves the reconciliation of a priori and a posteriori reasoning, and overcomes the Kantian and empirical problematics in relation to developing knowledge about the world. Such an argument may seem circular and deductive, but is it any more so than Bhaskar's reasoning: that because the world is structured, therefore it is by applying a transcendental realist approach that we come to the most viable ontological conception of the world? Is the following statement by Engels in any way methodologically different from Bhaskar's reasoning?:

“An exact representation of the universe, of its evolution, of the development of mankind, and of the reflection of this evolution in the minds of men, can therefore only be obtained by the methods of dialectics.” [28]

Perhaps there is no way around this circular approach, with its problematic of a priori reasoning. The alternative is to allow empiricism or idealism to determine an ontological view of the world - something which both Engels and Bhaskar want to avoid.

To Bhaskar, Engels’s epistemological outlook of dialectical materialism is unable to ask, and answer in philosophical terms, how science is able to develop a viable ontology of the world in terms of intransitive mechanisms and causal laws of an intransitive character. In other words, Engels is thought to commit the epistemic fallacy, in that his conception of the theory of knowledge (dialectical materialism) becomes equated with an understanding of causality, resulting in the world being understood as a projection of this flawed epistemological outlook rather than as the basis to understand the intransitive mechanisms of the world in ontological terms. Instead, Engels’s dialectics of nature are thought to have been substituted for an approach that can enhance the cognitive capacity to comprehend even more profound, as yet unobserved, causal structures within the world. This interpretation of Engels claims that for him to define the world in non-empirical and non-idealist terms is not sufficient, since it is still being defined by the theory of knowledge, and is thereby conflated with an ontological view, rather than being the basis of an ontological view which establishes the intransitive character of the world. On this perspective it is Bhaskarian transcendental realism which reconciles (not blurs) the distinction between epistemology and ontology in that its conception of science embodies the intransitive character of the world:

“For the transcendental realist it is not a necessary condition for the existence of the world that science occurs. But it is a necessary condition for the occurrence of science that the world exists and is of a certain type. Thus the possibility of our knowing it is not an essential property, and so cannot be a defining character of the world.” [29]

So, to Bhaskar, it is the character of the world that is the basis of knowledge about it. Knowledge “follows existence”, so any philosophical position which reverses this equation is fundamentally flawed. Such an approach does not seem necessarily to contradict the Marxist

epistemology of Engels according to which the primacy of the material world is the basis of thought. But this does not satisfy Bhaskar on the question of ontology, since it still reduces ontology to epistemology, because it has a conception of the world as derivative of an epistemological outlook, an outlook that does not embody an understanding of the actual structure of the world. Instead it is based on the truism of existing knowledge to define a view of the world, together with an epistemological subjectivity embodied in dialectical materialism. In contrast:

“...a philosophical ontology is developed by reflection upon what must be the case for science to be possible; and this is independent of any scientific knowledge.” [30]

According to Bhaskar, the Marxism of Engels and orthodox dialectical materialism fails to situate the development of knowledge in terms of the actual character of the world, consisting of intransitive mechanisms. Thus it remains on the terrain of the epistemic fallacy, as with empiricism, in which the epistemological outlook is imposed upon ontology, leading to a subjective view of the world:

“In the empirical realist tradition the epistemic fallacy thus covers or disguises an ontology based on the category of experience, and a realism based on the presumed characteristics of the objects of experience, viz. atomistic events, and their relations via constant conjunctions.” [31]

To Bhaskar, Marxism has not evaluated science in ontological terms. Instead it has left it to science to develop an ontological view of the world, which has then been artificially related to an epistemological outlook which lacks a viable ontological foundation. Thus all scientific advance is hailed as vindication of this epistemological outlook, rather than being evaluated in terms of a coherent conception of the world, as contained in the ontology of transcendental realism. On Bhaskar's view, all talk of the validity of dialectical materialism - as the incorporation of the philosophical achievements of materialism and idealism - cannot disguise the fact that it embodies the limitations of classical philosophy on this question:

“Thus whereas transcendental realism asks explicitly what the world must be like for science to be possible, classical philosophy asked merely what science would have to be like for the knowledge it yielded to be justified. It was presumed that our knowledge was justified: science

was not viewed as a process in motion; and doing away with ontology left philosophy without any critical purchase on science.” [32]

Bhaskar seems to be saying, without directly stating it, that the Marxist critique of empiricism was confined at an epistemological level. It rebutted the equation of experience with reality, but it does not (in terms satisfactory to Bhaskar) contain a viable ontological position that could provide an alternative to the approach of empiricism:

“An ontological dimension is in this way necessary not only to render intelligible scientific criticism, but to make possible philosophical criticism of the practice of a science.” [33]

Marxism, by implication, along with the rest of philosophy, has not been able to carry out this creative theoretical role, since it has failed to use the results of science to build up an ontological view of the world. Bhaskar’s conclusion seems to be that, whilst it formally upholds the distinctive, metaphysical materialist, view of the world as ‘matter in motion’, Engels’s ontology is essentially an adaptation to existing science. Dialectical materialism does not embody the epistemological premises to conceive a viable alternative ontology to that provided in empirical realist terms. It ends up equating the world’s character with its ability to be known by sense perception, thought and theoretical construction - the classic epistemic fallacy.

OTHER PHILOSOPHICAL CRITICISMS OF ENGELS

An alternative view, a view which also claims that Engels’s approach leads to the problematic of the epistemic fallacy, is provided by Gareth Stedman Jones in his article ‘Engels and the End of Classical German Philosophy’. [34]

Here Engels is said to have an approach which is related to Hegel’s understanding of the dynamic and changing historical character of reality and thought; an approach which appeared to have been vindicated by the tremendous scientific revolution of the 19th century. This revealed the ontological applicability in nature and society of concepts of movement, flux, change, motion and process. This led Engels to view history, despite the diversity of phenomena, as the expression of a process:

“Then this concept was further distilled into its essence, its inner principle, its general law of motion: ‘the dialectic’.” [35]

Thus the historical character and content of reality was vindicated by science and explained by the dialectic, which was described in terms of the rationalization of the dynamic character of the world - a world which had been revealed as a series of complex processes of matter in motion. However, Engels did not incorporate into his understanding of these scientific advances the truth that science and its conclusions were not established upon the mode of procedure of the dialectic. Despite this Engels still evaluated and criticized science and its progress using the contrasting procedure of the dialectical method:

“Yet for Engels, it was not the dialectic which must justify its procedures in relation to these determinate sciences. It was, on the contrary, these sciences which must justify their procedures before the tribunal of the dialectic.” [36]

To Stedman Jones this seems to be an illustration of the epistemic fallacy. Engels is saying that only dialectics can fully elaborate upon the significance of the results of science for understanding reality. Yet the laws of phenomena in physics, chemistry, biology, etc have been established without the role of the dialectic. Indeed Engels goes further, claiming that the very advances of science reveal its limitations for cognizing reality, in comparison to the dialectical method. Engels is conflating epistemology with ontology in his contention that only the dialectical method - which has borne no relation to scientific advance - can evaluate the theoretical significance of scientific conclusions about the world. Engels arbitrarily dismisses the existing methods of scientific procedure as metaphysical.

Stedman Jones comes to this conclusion because he agrees with Colletti that it is not possible to undertake a materialist epistemological and ontological reconstruction of Hegel’s dialectic. For Hegel’s idealist system and method identifies thought and being, and defines being by thought. According to Stedman Jones the only way to overcome theoretical inconsistency is to develop a Marxist materialism, without the idealist limitations of Hegel’s dialectic. [37]. On this view Engels was led to attack the methods and procedures of natural science upon the basis of the epistemological problematic of clinging to a philosophical conceptual system which made being a derivative of thought. This in turn raised the ontological problematic that Engels was putting

forward an ontological conception of nature and society which expressed the theoretical influence of this idealist philosophical system, rather than actually building upon the ontological significance of the results of natural science.

However, Stedman Jones only outlines the theoretical problem of Engels's Hegelian legacy in terms of historical materialism and the Marxist understanding of society. He does not carry out a similar analysis in relation to ontology in general, and with regard to the implications of Engels's alleged epistemic fallacy concerning his criticisms of natural science. Stedman Jones's exposition of Hegel's philosophical limitations, and its problematic for Marxism, does not lead to such an analysis in ontological terms, despite equating Engels's view with 'anti-scientific' implications.

In reply, we can look at the approach of Helena Sheehan, who maintains that it would be unfair to implicate any one individual within Marxism (such as Engels) with being either anti-scientific or inclined to positivism. On her view, Marxism has faced the problem of being unduly influenced by partisanship. This leads either to (a) a view of scientific ideas which is not objective because it has been made to conform to philosophical/political premises, or to (b) a proneness to uncritical acceptance of contemporary scientific ideas which led to compromising its distinctive cognitive significance in ontological and epistemological terms. [38]

In this context Engels's "anti-positivist materialism" represented an "extraordinarily impressive achievement", establishing the relevance of philosophy for understanding scientific ideas about the world - in a way which attempted to be neither dogmatic (upon a priori premises) nor subservient and uncritical. [39]. Engels attempted to show how the philosophically mediated (and changing) character of knowledge about the world can still be a reliable indicator of the ontological significance of this knowledge about reality. With this theoretical framework it becomes clear that Stedman Jones's allegation that Engels's epistemological partisanship leads to an anti-scientific logic is not as plausible as it might first appear. For it was, after all, the scientific revolution of the nineteenth century which, as Stedman Jones points out, placed nature and society and within the context of a dynamic historical development: above all Darwin's theory of evolution. Natural science had revealed the evolving character of phenomena, and thereby the necessity in theoretical terms of a new materialism, which broke with the contemplative static ontological limitations of the old materialism. It was in order to understand

the theoretical significance of these scientific advances and the corresponding limitations of traditional materialism, rather than out of any undue influence of the theoretical legacy of Hegel, that Engels was led to the dialectical understanding of phenomena as 'matter in motion'. As Sheehan says:

"It did not arise in a vacuum, but it was new, and a complex and rich tradition in the philosophy of science stems from it." [40]

Sheehan and Ted Benton have shown that those who accuse Engels of either positivism, mechanical materialism, or excessive Hegelianism, in his ontology - or of other specific ontological limitations - do not recognize that it was Engels, whatever his weaknesses, who attempted to develop a distinctive Marxist philosophy of science. [41]. It was Engels who was critical of the tendency to reduce the laws of nature to those of mechanics, or to reduce thought to merely an expression of its material content. For Engels, while thought had a material origin, it was not of a simple reductive character. Materialism had to be epistemologically developed to a new higher level - the materialist dialectic - in order to overcome its theoretical limitations. The materialist dialectic was an outlook which acknowledged the significance of, and overcame, the philosophical problematic in the natural sciences, a problematic which had previously meant that science did not fully develop the implications of its investigations in ontological and epistemological terms. On this criteria Sheehan claims that Engels was fully aware of the epistemic fallacy, and did not impose the materialist dialectic (as a theory of knowledge) upon reality and the scientific investigation of reality:

"Again and again, he emphasized that there could be no question of building the laws of dialectic into nature, but that it was a matter of discovering them in it and evolving them from it. These principles were not to be the starting point of an investigation but its final result. They were not to be applied to nature and human history, but abstracted from a conscientious study of the real processes at work in them." [42]

In this way philosophical development and continuity, and above all ontological relevance, were established in relation to understanding the theoretical significance of the discoveries of science. The relevance of the dialectic was confirmed, not because it was alleged that as a conceptual system it was superior to other philosophical systems, but because natural scientific discoveries

had revealed (in comparison with other philosophical approaches) that reality and its correspondence in thought expressed a materialist dialectical content. This was not a straightforward process of correspondence. It required a protracted process of cognition before natural scientific developments, together with the pre-requisite philosophical thinking, could fully reveal that materialist dialectical thinking expresses the advance of knowledge about the objective world. In other words, while the progress of science represented a spontaneous vindication of the dialectics of nature, it was necessary to consciously apply the dialectical approach in order to obtain the full realization of the objective truth about reality.

Thus Sheehan can reply to Stedman Jones that it was not anti-scientific for Engels to maintain that science failed to sufficiently recognize the role of philosophy for the purposes of cognition of reality. Rather, this was the way to advance scientific knowledge. Similarly, philosophy could no longer ignore the relevance of natural science in ontological and epistemological terms. On this view Engels was proposing a new synthesis or interconnection between philosophy and the natural sciences, in order to most effectively bring out the full theoretical significance of science. In this respect Engels was a forerunner of influential theorists of the philosophy of science such as Thomas Kuhn. Kuhn held that science is explained in theoretical terms by 'paradigm shifts', which to Engels represented qualitative leaps in scientific progress. But unlike Kuhn, Engels did not conceive of knowledge in a self-confined manner, but located it within the whole context of the historical and changing nature of scientific knowledge. [43]

The philosophy of science proposed by Engels drew ontological conclusions, but was not a dogmatic imposition upon science, as Stedman Jones alleges. Engels had a flexible theory of knowledge which was open to assimilating new advances in scientific knowledge about the world. His attempt to create a synthesis of philosophy and science was not without its limitations (see below and chapter two), but according to Sheehan it was far in advance of the idealist, mechanical materialist, or positivist approaches. Within the context of his philosophy of science, Engels tried to address the important contemporary ontological and epistemological questions in elaborating upon a distinctive Marxist outlook. This is not to say that the depth and seriousness of his theoretical understanding of Marxism as a philosophy of science did not contain a problematic, or problematical areas. Above all, we must ask: to what extent is it possible to reconstruct the idealist dialectic in a manner that can help to explain the objective material character of the world? [44]

Stedman Jones is not wrong to raise this question, but, at the same time, the manner in which it is applied - which seems to deny Engels any theoretical validity - does not seem to be a constructive or appropriate response. Surely it is more worthwhile, as Sheehan demonstrates, to indicate where Engels's use of the dialectical method leads to a vague and over-generalized ontological definition of the dynamic and changeable character of reality as 'matter in motion' - thereby raising the question of to what extent the materialist dialectic is imposed in an a priori manner, in terms of ontological conclusions about the world, i.e. dialectical laws which are imposed on all 'aspects' of matter. But the lack of clarity about whether dialectical laws explain the processes and character of all phenomena, does not negate the theoretical validity of Engels's philosophy of science, as Sheehan points out:

"The pioneering nature of Engels's effort and the enormity of his undertaking perhaps made uneven quality and mistaken formulations almost inevitable." [45]

According to Sheehan, Engels was also not without a problematic in his epistemological approach. At times, in both *Anti-Duhring* and *Ludwig Feuerbach*, Engels appeared to be inclined to the positivist-type conclusion that ontological developments within the natural sciences were making philosophy increasingly superfluous, and that materialism would be increasingly indicated exclusively upon a natural scientific basis. But at the same time, statements of such a positivist inclination were inconsistent with Engels's overall anti-positivist stance which continued to stress the importance of the role of philosophy, alongside the sciences, in ontological and epistemological terms.

CHAPTER THREE

How can dialectical materialism meet the challenge of scientific development?

The new developments in science illustrate the ever-changing character of science. They signify that reality is not in a state of uniformity, rigidity, inertia, passivity and immutability, nor can it be explained by rigid objective laws. Reality, on the chaos theorists' view, is rather a chaotic, pluralistic, diverse entity in a constant state of becoming based upon irreversibility. Furthermore, their understanding of reality is inseparable from the role of the observer and thereby inseparable from intellectual construction in our concept of reality. The discoveries of science about reality cannot, on this view, be abstracted from the role of consciousness - the process of cognition is integral to that reality. Yet even Einstein could not accept the significance of irreversibility that arises out of the new physics of the twentieth century. [1]. Specifically, from the developments within thermodynamics, quantum physics etc., the "evolutionary paradigm" of the universe in ontological or cosmological terms is explained by the dynamic "process of becoming" of reality and the conception of knowledge that corresponds to it as "both objective and participatory". [2]. Nature cannot be described from the outside, passively comprehended as if by a spectator, but is instead based upon an active dialogue and communication with reality and within science.

According to the chaos theorists, the role of the observer in the development of coordinates leads to studies of changes in time and to the discovery of unstable dynamic systems, that together represent intrinsic randomness and irreversibility. An understanding of this supposedly leads logically to theorization of dissipative structures in relation to the time-orientated role of the observer. The chaos theorists point out that this approach does not represent a priori reasoning based upon a logical structure, because of the active role of consciousness as part of the dialogue of humanity as an integral element of nature. The multiplicity of levels of reality which continually imply other levels, could not be explained by logical a priori reasoning. Rather:

"There is indeed no logical necessity for dissipative structures actually to exist in nature; the cosmological fact of a universe far from equilibrium is needed for the microscopic world to be a world cohabited by 'observers', that is, to be a living world. Our schema does not correspond to

a logical or epistemological truth but refers to our condition as microscopic beings in a world far from equilibrium.” [3]

This seems to represent a fundamental challenge to both a materialist dialectic ontology and to the ontology of transcendental realism, but not to the Praxis School. Both Engels and Bhaskar (despite the latter’s differences with the former) recognize that the theory of knowledge should not be equated with the ontological intransitive character of reality. Consequently, the ability to express this character does not represent, in transitive terms, the actual ontology of the intransitive world as revealed by science and interpreted in philosophical terms. In contrast, Prigogine and Stengers, in their ontological conclusions, in relation to their interpretation of the contemporary discoveries of science, maintain that while the world has an objective content outside of human experience or consciousness (and thereby repudiate the epistemic fallacy of idealism, of mind as primary to external reality; or empiricism of experience being equated with reality) when it is ‘discovered’ by science, it is however this act of knowledge which is integral to the character of reality. The processes, structures and features of irreversibility, the time-orientated character of reality and its fundamental trait of becoming, is an ontological characteristic that is not independent of (even if it could exist unknown, independently from) the role of observation, experimentation and the theoretical development of knowledge. Science reveals that the very structures of reality cannot be abstracted or separated from the process of cognition of them, which by implication means that they have a different objective character when undiscovered, in comparison to when they are discovered by cognitive means. Thus while the intransitive world of things - in themselves - is not denied, outside of consciousness, these objects are ontologically transformed into new states and irreversible processes by the creative role of knowledge and the ever deepening of the process of cognition of reality.

Such an understanding seems far more in accordance with the Praxis School, which equated practice in activity and thought as the criteria by which reality is to be understood, above all the relation between humanity and nature. So while the Praxis School is often anti-scientific, its identification of the subject and object seems to run parallel with the ontological implications of contemporary science. Whereas the inference from Engels, Lenin and the transcendental realist approach, emphasises the continuing significance of cognizing the realist/materialist character of the world independent of consciousness. Not to undertake such a procedure results in the

epistemic fallacy. But to chaos theorists this approach would seem to be an example of the antiquated legacy of Newton's theoretical paradigm.

What then might be the Marxist response in ontological and epistemological terms to chaos theory? It could be:

(i) To see the 'new physics' and its conclusions in unproblematical terms and to adapt to them in an eclectic, arbitrary, yet positivist and uncritical manner as an affirmation of the materialist dialectic ontology of matter in motion and the dialectics of nature. Whereupon it could be said: 'isn't it a pity that the chaos theorists don't supplement their conclusions with the utilization of dialectics as a theory of knowledge about reality'.

(ii) To provide an alternative ontological and epistemological criteria for understanding the world. This would possibly be based upon transcendental realism and the distinction maintained between the intransitive character of the world and the theory of knowledge developed to understand it, in transitive terms.

(iii) To largely accept the implications of the discoveries of the new science, in terms of the subject/object identification, as was the conclusion of Caudwell in his studies of the new physics. An ontological and epistemological vindication of Marxist materialism in line with the implications of contemporary science.

(iv) To uphold the materialist realist primacy and distinction of the objective in relation to the role of the subjective, but also to incorporate the role of interpretation in understanding the character of reality. Sean Sayers seems to have this approach. [4]

Of these alternatives, (ii) and (iv) are not necessarily counterposed and seem to offer the best way to uphold Engels's call for a distinctive Marxist ontology, an ontology which is also non-dogmatic, compared to the positivist dogmatism, or accommodation of (i) and (iii).

What is also revealed by the transformation of science in the twentieth century is that Lenin's definition of materialism in philosophical terms, in which materialism's ontological criteria can perpetually change in adaptation to science, has also been found wanting. Especially since the

emphasis on the primacy of matter as the basis of thought does not provide a sufficient basis to explain the intransitive character of reality. Marxism is left with elaborating upon the ontological approach of Engels, and Bukharin, in terms of understanding the relationship between thought and reality. Lenin's approach, today, leads to an ideological choice between materialism and idealism, as exemplified by Ruben, Hoffman, etc. It is necessary to 'reconstruct' and develop a Marxist materialist ontology, in order to justify Marxism in contemporary terms - maintaining that it can express the content of objective reality, rather than embody subjective political preference.

If we were to apply Lenin's criteria to the proponents of chaos theory, it would seem that in ontological terms their approach vindicates Marxism in which "...process, becoming, is taken as a primary constituent of physical existence..." [5]. The main task is then to criticize the idealist epistemological starting-point, and bourgeois class standpoint, behind this position. It would be an epistemological question of indicating the contrast between the significance of a materialist dialectical theory of knowledge, with that of bourgeois idealism, thereby revealing limitations of the advocates of chaos theory. In ontological terms this means that the task of reconstruction, elaboration and indeed criteria of criticism of this particular understanding of reality, is consequently neglected. This would happen either by a counterposition, in vulgarized terms, of Engels's conception of matter in motion, or by an accommodation to these new theories about reality, quite eclectically within a 'materialist' conception.

This failure to address such ontological questions is related to Lenin's reduction of Engels's ontological materialist standpoint to that of an epistemological question of upholding matter as a philosophical category. Matter is no longer conceived in the definite ontological terms outlined by Engels, of illustrating in scientific and philosophical senses why and how reality expresses a material character which is the basis of human activity and thought. Instead matter is now defined vaguely as objective reality which exists independently of and as the basis of consciousness. Jordan in his book *The Evolution of Dialectical Materialism* outlines this process of revision of Engels by Lenin, revision in terms of denying the significance of ontology in an understanding of materialism:

"Lenin referred to Engels's absolute materialism - 'the unity of the world consists in its materiality' - as the 'most elementary proposition of materialism', but suggested that

‘materiality’ means simply the ‘objective reality’ which exists outside of us, for ‘matter’ and objective reality were synonymous expressions. In other words, Lenin reduced absolute materialism to epistemological realism and, having done so, claimed that Engels never had anything else in mind.....this proposition will be referred to as epistemological materialism.” [6]

This definition of objective reality as vaguely being equated with matter, and the definition’s questionable ontological significance, meant that it rationalized an accommodation, and an endorsement as ‘materialist’, of a wide variety of views and changing ideas about the world, regardless of their actual ontological implications. This philosophically restricted definition could not define a Marxist materialist approach to changing ideas about objective reality, except to arbitrarily designate such ideas as either ‘materialist’ or ‘idealist’, in both a positivist and dogmatic manner. Thus, despite his own intentions to uphold materialism, Lenin reduced it to a narrow epistemological demarcation, concerning the ‘primacy of objective reality’, an approach which outlines no real criteria for evaluating the ontological significance of changing views about reality, nor for evaluating which views correspond to reality more accurately than others. So we are left with no alternative but to go back to Engels - despite his own limitations - in order to construct a viable Marxist materialist ontology. It was Engels who recognized that ideas about the world can express its actual character. This is not the same as Lenin’s formulation that the vague concept of objective reality is reflected in thought. Engels’s greater precision outlines that the objective material character of reality shows it to be ontologically defined. Given this, a distinctive Marxist materialist ontology can be developed in line with changing ideas, or the deepening of knowledge about the world’s material character.

Thus, in relation to chaos theory, practitioners of this approach such as Prigogine and Stengers do not necessarily deny the primacy of objective reality, and neither do they hold that consciousness is independent of, or primary over, this reality. Lenin’s approach relegates matter to a philosophical conception, and gives no precise indication of how to evaluate the theoretical significance of this approach for understanding reality. In contrast, Engels’s approach can help evaluate their position in terms of the ontological understanding of the world as matter in motion, which also expresses the dynamic dialectical laws such as contradiction, the change from quantity to quality, etc. Engels likewise conceives of reality as consisting of processes of becoming and change, though these are not arbitrary but are law-governed and causal in accordance with the objective material character of the world. This is not to say that Engels’s

ontology does not require substantial modification or reconstruction in line with new ideas about reality. But it is still the most informative indication of how to evaluate new conceptions which purport to substantiate the criteria of the 'primacy' of objective reality; whilst at the same time also presenting a formidable challenge to a distinctive Marxist ontology as presented by Engels and not substantially developed since his time. Instead Lenin's philosophical definition has been utilized to ignore this task and to subjectively tackle ontological questions, lacking the scientific and philosophical substance of Engels. No wonder that chaos theory has been either greeted with bemusement, uncritically hailed, ignored or dogmatically dismissed. Its ontological paradox for Marxism, which would have been understood by Engels, has yet to be grasped - that chaos theory conceives of reality in dynamic terms, but upon the premise of denying reality's structured causal character. Never was there a time more important in scientific, philosophical and political terms (see below) to elaborate a distinctive Marxist materialist ontology in relation to new ideas about reality. We have Engels to thank that we do not start this task without important guidelines. It is Engels's understanding of the objective, structured, causal yet dynamic view of the world, that is important for evaluating chaos theory.

The point that is being made in relation to chaos theory is that the processes of becoming within reality, rest upon the basis of repudiating the ontological significance of uniformity, causality, which can only conceive of entities in repetitious monolithic terms. Instead, for the chaos theorists, chance cannot be separated from necessity, and this is expressed by diversity and irreversibility. Thus:

"If only universal reversible trajectories existed, where would the irreversible processes we produce and experience come from? The point where the trajectories cease to be determined, where.....governing the ordered and monotonous world of deterministic change breaks down, marks the beginning of nature. It also marks the beginning of a new science that describes the birth, proliferation and death of natural beings." [7]

The character of nature and the relations between nature and humanity are - for the chaos theorists - based upon randomness, and irreversible processes, which have been discovered by science. There is an overcoming of the theoretical problematic of classical science which, basing itself upon rigid causal laws, denied these processes of becoming. In turn, according to the chaos theorists, grasping the primacy of time and change leads to the theoretical basis to reject a:

“...conception of objective reality that implied that novelty and diversity had to be denied in the name of immutable universal laws.” [8]

So the theoretical choice is posed between the static conception of the world governed by repetitious causal objective laws, and a world of change of irreversible processes but representing the significance of the arbitrary and contingent. In terms of the significance of Engels, one can hypothesize about what he might have said about the ontological limitations in the approach of chaos theory. He might have said that, despite the theoretical significance of its ideas, chaos theory counterposes two absolute non-dialectical conceptual oppositions - namely, on the one hand the rigid, causal determinism of a stable equilibrium with inexorable objective laws and trajectories of development to explain reality, and on the other hand processes of becoming based upon dynamic irreversible processes, in which contingency is as important as necessity. Engels would presumably have argued that since matter exists in terms of motion, he would agree that static equilibrium models do not explain reality, in comparison to dynamic processes of becoming:

“All rest, all equilibrium is only relative and only has meaning in relation to one or other definite forms of motion.” [9]

Thus the importance of the time-orientated dynamic models of irreversibility is by no means opposed to understanding reality in ontological terms. But at the same time Engels would question the reluctance to address these models of irreversibility in causal, law-governed terms, and instead to conceptualize them as random and contingent processes. Indeed, Engels might have defined irreversibility as the fundamental law of matter in motion, and claimed that it represents the basis of development within nature and society.

At the same time Engels might have modified his understanding of the dialectical character of quantity into quality and negation of the negation, in the expression of reality. Engels's conception of accumulative quantitative changes leading to qualitative change does not sufficiently cognize or explain the full extent of the dynamic processes of irreversible change that lead to further qualitative change and so on. Negation of the negation, in terms of Engels's understanding of contemporary science, was used to explain how repetitive processes, such as the evolution of barley or the butterfly, led to higher stages of development, from initial

rudimentary states of existence. To this extent it explains change in a rigid, uniform way from lower to higher, which is probably an over-generalised and schematic view of reality. It also possibly does not account for the dynamism in this process of change. Nevertheless, it contains the theoretical basis to understand that change is irreversible and leads to new situations, which can never go back to their original state, even when allowing for regression as well as progression. This can be shown in Engels's illustration of the development of rock formations, in geology and the organic world. [10]. It is also applied to society, with the significance of Marx's example of the formation of the capitalist mode of production - and the negation of small-scale private property by large-scale production and continual structural or irreversible changes as essential to its character and functioning. [11]. These changes in turn create the irreversible (but not inevitable) basis of socialism.

Prigogine and Stengers argue that Engels's approach has a problematic that cannot be resolved: on the one hand of rigid trajectories which reflect the influence of Newton's mechanical laws of motion, and on the other of outlining dialectical processes of becoming. But what I have presented about Engels's position is that his approach represents viable ontological premises to resolve the problematic of chaos theory, the problematic of the imprecise relationship between contingency and necessity. Thus in terms of the relationship between being and becoming, Engels would have questioned how the characteristics of processes as spontaneous and diverse, expresses an essence which is not law-governed or related to necessity. But at the same time Engels would have recognized that the diversity and dynamism of the irreversible processes expresses new and more concrete laws which take into account this greater ontological understanding of reality, as outlined by chaos theory. In other words, Engels might well have accepted that the law of quantity into quality, or the negation of the negation, do not encompass the full complexity of the contemporary scientific discoveries, theoretically rationalized by chaos theory. But in turn Engels, in accordance with the ontological understanding of transcendental realism, also questioned whether irreversible processes of change and becoming fully explain the objective or intransitive character of structures and mechanisms within reality, which exist independently of consciousness yet become the basis for transitive and cognitive activity in both theory and practice. In short, Engels would still have been aware of the need to develop a distinctive ontological position, one that comprehends the spontaneity and randomness of phenomena in a manner which relates trajectories and law-governed character of phenomena to

processes of irreversibility and becoming, in accordance with the new higher level of scientific knowledge about the world.

To elaborate upon this point, Engels's alleged problematic is that his approach adheres to the rigid deterministic laws of Newton's paradigm, and represents an antiquated causal theory of the world, a theory that has been shattered by chaos theory. But Engels's causal conception of the objective material character of the world was based upon a materialist dialectic theory of knowledge which emphasised the processes of change within entities. Engels's approach always possessed the potential to theoretically and ontologically comprehend the relationship between a causal law-governed understanding of reality and the changeable character of entities and processes that express this causal character. It is upon this basis that dialectical laws are said to express the ontology of the objective character of the world, as matter in motion. This is why Engels would have been critically appreciative of the emphasis upon dynamic irreversible change. But he would also have been aware that the social and cultural influences of the bourgeoisie, and the rejection of a proletarian class standpoint, leads to phenomena being conceived in arbitrary terms, terms in which irreversibility is not precisely defined in relation to lower and higher stages of development, or progression and regression. In other words, the influence of bourgeois ideology leads to the inability of chaos theorists to develop further the ontological significance of their discoveries, a development which requires a distinctive materialist ontology to carry out this task. This is why the problematic of reconciling trajectories with processes should not be laid at Engels's door, but more properly belongs to the scientists of pro-bourgeois persuasion, whose ontological conclusions still represent the mediation of bourgeois ideology and culture. This is especially true in the conclusions on social upheaval, which is seen as a dynamic yet 'uncertain' irreversible process which can only be defined as contingent and not related to the character and functioning of the capitalist mode of production (see below). The inability to define the direction of irreversible processes, as being unsupported inference - of 'imposing rigidity' upon 'irreversible' processes - may express the ideological influence of bourgeois hostility to social and political change, even when temporary advantages are gained. For ultimately such upheavals express the irreversible, if protracted, character of history in terms of the development of world socialist revolution. This type of bourgeois ideological influence may also relate to the reluctance to draw more precise ontological conclusions about the scientific discoveries within nature, in terms of the direction of development of irreversible processes. This is not to say that the correct response of Marxism is

to emphasise this ideological aspect, at the expense of constructing and deepening a viable ontological outlook - a response which is the problematic within Lenin's position. Clearly science has not outdated the relevance of Engels. In ontological terms his approach is still required to draw out the full implications of the ontological significance of chaos theory.

It is also said that in terms of his theory of knowledge Engels does not take into account the active role of theory in cognizing and interpreting reality. Consequently, while reality should not be conflated with the processes of cognition, nor with the theory of knowledge utilized about it, reality is still indicated and thereby modified by the process of interpretation. In contrast, it is said, Engels's approach still contains the problematic of Newton in that the process of observation is essentially passive and reflects a world existing independent of consciousness. This alleged view of Engels's is said to have been further refuted by chaos theory which has, alongside quantum physics, revealed the active relationship of theoretical construction and experimentation to the reality revealed. Indeed this is a central aspect of critique of the Praxis School, who equate reality with human practice (see previous chapter). But Engels's approach is similar to that of transcendental realism, which also does not deny the active role of knowledge - and practice - in transforming nature and thereby being essential to understanding reality. However, human activity should not be conflated with reality itself. Thus causal processes exist within nature, prior to human knowledge about them, but it requires the development of human activity and thought to reveal their operative character:

"In this way, by the activity of the human beings, the activity or causality, becomes established and the idea that one motion is the cause of another." [12]

Thus while the intransitive or objective reality is the basis of causality, the transitive character of knowledge is vital in revealing its significance. With this approach Engels may well not have been averse to accepting that twentieth century physics and chaos theory have disclosed an ever greater and closer relationship between objective material reality and the processes of knowledge by which it is understood. Indeed, that knowledge can in 'certain circumstances' form a specific aspect of reality, not just in terms of society, but also in relation to natural science, such as quantum physics. Nevertheless, Engels would not have gone as far as Caudwell in blurring the distinction between subject and object, in his outlining of the ontological significance of contemporary science. For Engels, like Bhaskar today, was aware of the epistemic fallacy of

conflating the ontological character of reality with the processes of knowledge by which it is understood. Engels was also aware that the intransitive mechanisms of reality are independent of, if modified by, the increasing cognitive awareness of their character and operation. In this manner the advocates of chaos theory may well have been categorized by Engels as idealists, even though we can comprehend the ontological significance of their approach in materialist or realist terms.

More specifically, Engels would have rejected the epistemological relativism of the proponents of chaos theory, such as Prigogine and Stengers, who hold that the logic of science has been directed towards the vindication of the understanding of reality as irreversible processes so that correspondingly the majority of scientific knowledge up to recent times has been of a limited ontological significance. To Engels this is a rejection of the real relationship of relative and changing truth to objective knowledge of the world, and the replacement of it with arbitrary and subjective criteria to define the development of the process of cognition and knowledge about the world.

In terms of understanding knowledge, when applied to society, the chaos theorists' approach rationalizes the role of randomness in a social and cultural context. We can ask: without Einstein would there have been a theory of relativity? Or, we could add, without Lenin would there have been the October Revolution? From the standpoint of science it has been the social and cultural context that has often impeded the continual, if irregular, questioning of the limitations of classical science, and obstructed the call for a higher level of science to recognize the dynamic and irreversible character of objective reality. The 'new physics' reflects both the internal logic of science and the obstacles and potential in a cultural and social context that has led to long periods of neglect of these types of ideas, and conversely now led to their development. There is an inter-relation between the internal and external influences on the development of scientific logic:

“In particular, how can we consider as accidental, that the recovery of time in physics is occurring at a time of extreme acceleration in human history.” [13]

Thus the rapidly changing social, political and cultural conditions in the twentieth century have become conducive to creating a climate important to the acceptance of irreversibility and

scientific study upon these premises. This situation is said to be the cultural setting for understanding reality because:

“We are discovering the primacy of time and change, from the level of elementary particles to cosmological models.” [14]

We can accept that this cultural climate, and the unmentioned class relations within society, may be the setting for acceptance of such new scientific ideas. Further, we may also grant a cautious acknowledgement that the internal logic of science is towards vindication of irreversibility, even if we do not endorse Prigogine’s and Stengers’s over-generalized critique of classical science. It is also correct for them to criticize Kuhn’s conception of scientific paradigms (as the basis of theoretical revolutions) for ignoring the wider social and cultural context of the advance of knowledge. We can also agree concerning the inter-connections of scientific and philosophical questions about reality. Epistemologically, there is both an internal and an external logic to the development of knowledge about reality, which does not just represent advances within the ‘self-confined’ world of science. But this does not amount to an endorsement of the conclusion reached by the advocates of chaos theory, a conclusion that, in both epistemological and ontological terms, the theoretical problems about reality are only now being resolved in terms of chaos theory’s analytical approach. In epistemological terms (as already mentioned) chaos theory denies the objective cumulative development of knowledge about the world, and it essentially defines classical physics as absolutely false in comparison to the correct ideas in twentieth century science. Continuity in the advance of understanding about the world is rejected by chaos theory in favour of ‘qualitative leaps’, leaps which have only vague or negative relationships to previous knowledge. Instead, science is seen as having a ‘pre-history’ based upon the insights of clever ‘outsiders’ such as Whitehead, Bergson and Heidegger. Then science’s ‘real’ history began in the twentieth century with the overcoming of the problematics presented by classical physics. Also this epistemological outlook does not precisely outline the relationship between objective reality and the process of cognition about it, instead tending to equate or conflate these two distinct aspects into an ontology of reality - an example of the epistemic fallacy. Such flawed epistemological premises mean that we must treat with caution the ontological conclusions of the chaos theorists, if we take seriously the continuing significance of Marx and Engels’s ontology and epistemology. However, after these qualifications are taken into account, this approach that equates being and becoming can still

play an indispensable role in enriching a Marxist materialist ontology. This, in turn, is based upon emphasizing the significance of time in processes of becoming, accentuating irreversible processes with a time-orientated character:

“But obviously we cannot reduce Being to Time, and we cannot deal with a Being devoid of any temporal connotation.” [15]

Thus whilst taking into account the above reservations in ontological and epistemological terms about chaos theory, if it is understood and reconstructed in a systematic manner it could enrich Engels’s ontological understanding of the world of matter in motion, representing dynamic dialectical-type processes and laws.

CHAOS THEORY AND BUKHARIN’S THEORY OF EQUILIBRIUM

What then of Bukharin’s ontological conception of reality and the relationship between nature and society, as resting upon the presupposition of equilibrium? Don’t the non-equilibrium models of the chaos theorists (in order to explain irreversibility) gravely undermine Bukharin’s approach? Prigogine and Stengers maintain that the understanding of irreversibility is based upon spontaneity, contingency and randomness, and that this shatters the causal deterministic view of nature and its relationship with society, as the basis for equilibrium models. From these ontological implications the social sciences can no longer have as one of their fundamental presuppositions that of equilibrium to explain society. The ability to act in an irreversible and dynamic manner in transforming nature, according to the chaos theorists, also gives human activity an intensely unstable and changeable character. Instead instability and fluctuations are more significant for explaining human activity and the interaction with nature upon which it is based.

On this view equilibrium models belong to the paradigm of classical physics, which has long been superseded by thermodynamics and the twentieth century theoretical revolution. At best equilibrium models could describe things in artificial, self-sufficient conditions, a method which could not explain the actual dynamic environmental conditions, or the relation of the internal and external, which explained processes and things in terms closer to non-equilibrium. [16].

Equilibrium models, by definition, as epitomized by the process of experimentation, represent

static models which cannot explain change, instability and irreversibility. [17]. In ontological terms, they cannot cognize the active character of, for example, molecules and cells, which requires the elaboration of far from equilibrium or non-equilibrium models. This applies generally to phenomena studied by physics, chemistry and biology.

A great deal could be said about Bukharin's understanding of reality in terms of equilibrium - especially on the relationship between nature and society. But suffice it here to say that Bukharin's approach did not conceive of equilibrium in static, closed terms, nor did it impose artificial arbitrary initial conditions in order to ignore factors of change which challenged 'equilibrium' situations. Bukharin saw the 'external' relation of nature to society in dynamic equilibrium terms, as a relation that led to great social, economic and political upheaval in the internal class relations of society. Bukharin's method certainly was not a rationalization of repetitive, passive processes, embodying a rigid and static ontological view of reality, either within nature, or in the interaction of nature and society. In this sense there is no fundamental theoretical rationale at an ontological level for why Bukharin's approach is counterposed to recognizing the increasing ontological validity of non-equilibrium models. Bukharin's conception of the role of equilibrium models was not to excuse a passive inert concept of matter in Newtonian terms, nor to perceive of society in a functional and external manner. The critique of structuralism and functionalism, by those theorists representing rigid views of society, as 'natural hierarchies' based upon elite domination and unquestioning carrying out of functions by members of society, were in their turn criticised and opposed by Bukharin. [18]. Further, Bukharin would not have been opposed to the chaos theorists' non-equilibrium models of society. But at the same time Bukharin would not have endorsed the conclusions about history drawn from such non-equilibrium models of society - as an open system containing many diverse potentialities and outcomes - that it represents "fundamental uncertainty". [19]. Bukharin would have held that the presuppositions of chaos theory in advocating the counterposition of contingency to necessity, of spontaneity to law-governed processes, of diversity to the prospect of universality, and of the individual to the collective, are presuppositions that are fundamentally flawed. In this methodological and ontological manner, Bukharin would share the objections of Engels, despite the different ontological emphasis of Engels upon matter in motion and Bukharin's own emphasis upon equilibrium in explaining society.

In terms of understanding reality as irreversible processes of becoming, Bukharin would express considerable agreement, within the context of these methodological and ontological reservations. It was, after all, Bukharin in *Historical Materialism* who held that the dynamic interaction of nature and society – “the external equilibrium” which was mediated by capitalist relations of production - had entered into a situation of disequilibrium. This was expressed by a crisis concerning the further development of the productive forces, in which the irreversible (but not necessarily inevitable) outcome of this end to equilibrium was imperialist war and the onset of world proletarian revolution, an onset that had already specifically been heralded with the October 1917 Revolution. Regardless of the specific outcome of this Revolution and whether the proletariat could maintain power by world revolution and its internal measures for survival, it was the manifestation of an irreversible process of the fundamental crisis of capitalism in conditions of disequilibrium that had enhanced the objective basis for world revolution and the replacement of capitalism by socialism. This is explained in economic terms in Bukharin’s book *The Economics of the Transformation Period* and in a wider ontological context in *Historical Materialism*.

In the latter Bukharin outlines how disturbance in the equilibrium between nature and society, mediated in the form of the conflict between the productive forces and the capitalist relations of production, has led to irreversible processes of change:

“But the basic contradictions, those arising out of the very nature of the given economic structure, continue to be reproduced on a larger and larger foundation, until they attain the proportions that bring about catastrophe. Then the entire old form of production relations will collapse, and a new form arises if the social evolution continues.” [20]

Now to the advocates of chaos theory this could be seen as an illustration of a dogmatic adherence to the view that history follows deterministic laws of historical necessity, with an inexorable unilinear path of development. It does not take into account the true dynamic, open-ended, spontaneous and contingent character of irreversible processes. But the main emphasis of criticism would be that it does not take into account the localized or specific character of irreversibility (see below) which may have led to the Russian Revolution, but which does not apply in other and different circumstances, in relation to the open-ended outcome of the First World War. But this political-type objection to Bukharin’s ontology of equilibrium and

disequilibrium denies the true dynamic and universal character of irreversibility, which has been found within nature by the chaos theorists. The point is that the irreversibility of the October Revolution has had a profound impact upon world politics both in initially accelerating the irreversible decline of world capitalism, and then, with the advent of Stalinism, giving way to a balance of forces that blocked and arrested the decline of world capitalism, through Stalinism's opposition to world proletarian revolution. When it comes to drawing conclusions about the direction of society, it is Bukharin's 'equilibrium model' which is far more conducive to realizing the full implications of 'irreversibility' than the chaos theorists' cautious, inconsistent and eclectic application of their findings in nature, transposed to society.

For example, we can focus on the chaos theorists' indication that "Order through Fluctuation Models" can help to explain human geography, such as population patterns and growth of cities, and also human environmental questions such as housing and slum clearance. Prigogine and Stengers point out that here individual and specific activities can lead to dynamic irreversible processes of change. [21]. This is a direct application of models of study from physics, biology, etc. which can help to pinpoint individual actions that can lead to collective and social change and those which do not. In this manner, while these processes are still non-unilinear and contingent, they are not arbitrary and can be utilized to understand society. In contrast, say the chaos theorists, optimization and functional models offer a non-problematical and orderly relationship between nature and society, and such models present history in a teleological and inherently rational manner. Presumably, by implication, Marxism suffers from a similar problematic, a problematic which ultimately makes reality conform to the model of progress, rather than the development of a model which can account for the diversity and dynamism of phenomena that leads to dramatic yet not rigid change; or change which is not necessarily progressive or retrogressive but that can represent an open-ended outcome. Thus in terms of human geography, the implementation of a slum clearance programme could lead either to improvement for the residents, and better living conditions, or new slums in a different way. [22]. This is an example of how the question of progress is not unproblematical but open-ended and related to a variety of factors and circumstances - but change of whatever character, once it occurs, is irreversible and dynamic. But models of ontology of order-through-fluctuations as applied in physics and biology can, after taking into account the differences between nature and society, be used to explain society:

“We believe that models inspired by the concept of “order-through-fluctuation” will help us with these questions and even permit us in some circumstances to give a more precise formulation to the complex interplay between individual and collective aspects of behaviour. From the physicists point of view, this involves a distinction between states of the system in which all individual initiative is doomed to insignificance on the one hand, and on the other regions in which an individual idea, or a new behaviour, can upset the global state. Even in those regions, amplification obviously does not occur with just any individual, idea or behaviour, but only with those that are “dangerous”, that is those that can exploit to their advantage the non-linear relations of continuing the stability of the previous regime. Thus we are led to conclude that some non-linearities may produce an order out of chaos of elementary processes and still, under different circumstances, be responsible for the destruction of this same order, eventually producing a new coherence beyond another bifurcation. “Order-through-structurations” models introduce an unstable world where small changes can have large effects, but this world is not arbitrary.” [23]

Now doesn't this approach help to explain Lenin's role in the October Revolution? Doesn't it help to explain how the specific instability of the Tsarist and post-February regime, in the context of the general crisis of world capitalism, led to dynamic change expressed in proletarian revolution? At the same time, the elements of bourgeois ideology within Lenin's individual consciousness led to his failure to go into Germany in 1918 to help the leadership of the embryonic KPD and thereby his unwitting contribution to the irreversible defeat of the German proletariat in 1918 which hindered the development of the world socialist revolution. Truly, it seems that the irreversible “order-out-of-fluctuations models” can help to explain the open-ended, dynamic relationship of individual to collective aspects of human activity, and the relationship of the particular to the general in reality. It can help to explain how particular and specific activities can lead to either general or universal type outcomes, or alternative and more limited outcomes. But such ontological conclusions are not drawn by the chaos theorists, due the influence of bourgeois ideological mediated views and an inherent theoretical problematic within their ontology. Thus in terms of the ontological problematic, the chaos theorists relate how the emphasis on time in nature and history is essential to understanding the character of irreversible processes. But this is conflated with the accidental and contingent, denying any possibility of cognition in terms of the direction of development, a possibility which is dismissed as embodying ‘rigid trajectories’ and as contrasting with emphasis on the spontaneous traits

within irreversible processes. This is why chaos theorists talk of the “open character of history” and its fundamental uncertainty, thereby denying the fundamental truth of their own ontology - that irreversibility contains the basis to explain tendencies of development in an open-ended and not rigid manner. Irreversibility expresses the ontological and theoretical reconciliation of dynamic processes of becoming, with open-ended outcomes and tendencies of development. It thereby also expresses the basis to reconcile the spontaneous with the law-governed elements of phenomena, and contingency with necessity. In this manner it reveals that direction and tendencies within history do not express rigid deterministic laws of an inexorable teleological purpose, and reveals this without succumbing to the alternative of methodological individualism and an emphasis upon ‘autonomous’ free will. Yet the drawing out of such a theoretical possibility is rejected. Why?

It is because the chaos theorists reject any attempt at ontological precision in understanding society. Instead of attempting to conceive of society in class terms, they are content to understand society vaguely in terms of ‘cultural entities’. They deny the universal character of class struggle as being important to understand cultural and national questions, instead conceptualizing reality in terms of an ‘uncertain world’ that embodies theoretically vague and crude irreversible processes:

“The ideas to which we have devoted much space in this book - the ideas of instability, of fluctuation - diffuse into the social sciences. We know now that societies are immensely complex systems involving a potentially enormous number of bifurcations exemplified by the variety of cultures that have evolved in the relatively short span of human history. We know that such systems are highly sensitive to fluctuations. This leads both to hope and a threat: hope since even small fluctuations may grow and change the overall structure. As a result, individual activity is not doomed to insignificance. On the other hand, this is also a threat, since in our universe the security of stable, permanent rule seems gone forever.” [24]

Why does an individual and his/her interaction with collective action create the basis for societal instability and inseparable processes of social, economic and political change? This is left at the level of vague assertion, assertion which does not overcome the objection of arbitrary and subjective reasoning. Thus the full theoretical potential of the ontology of irreversibility is not realized by a standpoint which rejects any conception of society in integral, functional and law-

governed terms. Such a conception can, at the same time, provide an explanation of dynamic irreversible processes of becoming, such as Bukharin's equilibrium/disequilibrium model of society which embodies an ontology of the relationship between nature and society (external equilibrium/disequilibrium). Instead the chaos theorists rationalize the pessimistic, while spasmodically euphoric, attitude of the bourgeoisie in a context of a deepening crisis of world capitalism, and consequently see the future as "hopeful, yet uncertain and sometimes unexpected".

At its most precise this approach can be said to justify the 'irreversibility' of the resurgence of capitalism in Eastern Europe and the Soviet Union. The question of reversibility to Brezhnev-type regimes is revealed as ontologically and theoretically impossible under the new irreversible conditions. This resurgence also does not negate the continued irreversible impact of the October Revolution, as Isaac Deutscher has done so much to explain - just as the return of the monarchy to replace Cromwell's republic could not reverse the triumph of the seventeenth century bourgeois revolution. [25]

Irreversibility can certainly be ontologically enriched, and not left at such a rudimentary level, when tied to a progressive materialist ontology which evaluates this understanding in a sympathetic, yet distinctive and not uncritical manner. Thus recent events in Germany, of a growing yet still uneven opposition within the working class to the effects, if not yet to the capitalist character of unification (and not to unification itself), is related to the irreversibility of the October Revolution, despite its retrogressive political outcome in the growth of a dominating bureaucracy. For the extension of this bureaucratic state to Eastern Europe, despite its oppressive characteristics, was an extension, in however limited a manner, of the gains of the October Revolution. This was directly expressed in the East German Welfare State type system, epitomized by its childcare facilities, which have been dismantled together with a massive rise in unemployment. So the irreversibility of even the bureaucratic outcome of the October Revolution means that capitalism cannot be stabilized in Eastern Europe - a position which is leading to new proletarian revolutionary situations. This is not to say that the bureaucratic regimes have represented any progressive historical stage. The outcome of those regimes was economic and political regression in terms of the potential development of socialism and world revolution, and has led to the impetus to restore capitalism in these new historical conditions. On this logic we can see that irreversibility does explain why history is not unilinear, with one-

dimensional progressive or reactionary consequences, of a "protracted forward march of history despite its detours", or a "reversal of the wheels of history" - the former being the socialist, the latter the bourgeois, teleological irreversible schemas. This is why the concept of irreversibility cannot just be added on to the existing understanding of negation of the negation, in an unreconstructed manner. On that view the question of lower to higher stages of development is still interpreted in a teleological and schematic manner. It is in this neo-Hegelian way that Deutscher thought of irreversibility, a view which undermined the ontological significance in his appreciation of the concept of irreversibility. Thereby Deutscher equated the irreversibility of the October Revolution with a spiral and one-dimensional, if somewhat protracted, ascent towards socialism, the triumph over capitalism. Peter Beilharz has made this point about Deutscher. [26]

It is necessary to utilize the ontological relevance of irreversibility to enrich our understanding of how the question of the applicability of the law of the negation of the negation should be conceived. It should not be an excuse to justify a new teleological and fatalistic conception of the onward march of socialism, but it should outline in more elaborate forms the open-ended character and outcome of irreversible processes. More precisely, it should outline why either socialism or the victory of capitalism and reaction has become an acute question in relation to the irreversible character of recent social and political change. The prospect of socialism on a world scale is found together with the spectre of counter-revolution, war, growing poverty, famine and unemployment - factors which could have an irreversible impact in undermining the basis for socialism in a situation of world capitalist crisis. This does not represent the vindication of the 'uncertainty' thesis of the chaos theorists, but is a recognition that, in accordance with historical change, irreversible processes have been immensely accelerated. The irreversible processes of non-unilinear change, containing also definite tendencies of development, have thereby hastened both progressive and reactionary possible outcomes in an objective manner, in terms of the character of reality. This also undermines the giving of any theoretical credence to teleological schemas imposed upon reality.

So it is precisely the theoretical significance of irreversibility in ontological terms, within both nature and society, which illustrates the importance of conscious human practice and thought in order to realize a progressive outcome to open-ended irreversible processes. Paul Thompson makes the point that historical necessity as social progress is not an inexorable unilinear process.

and that therefore: “The Marxist category of irreversibility does not exclude progress and retrogression in history.” [27]. But Thompson then undermines his case with an unreconstructed and undoubtedly teleological emphasis on the criteria of the negation of the negation to understand irreversibility:

“Development in nature and society has a spiral form and is subject to dialectical laws, the most important of these being the law of the negation of the negation, according to which features from a lower stage of development are repeated at a higher stage. Lenin described the negation of the negation as a “...development that repeats, as it were, stages that have already been passed, but repeats them in a different way on a higher basis”. It is crucial here to visualize the figurative model of the spiral form of development. Both progress and retrogression are specific cases of irreversibility. Irreversibility does not travel one way only in a line of irreversible ascent. In other words, a return to the old does not at all deny the category of irreversibility; it is opposed and not essential. Each new coil of the spiral repeats the preceding one but at a higher level. The spiral only therefore appears to return to the old. Development in history is for this reason overwhelmingly progressive.” [28]

Thus the question of regression is seen as secondary, or superfluous, for irreversibility follows a rigid, unilinear pattern of activity from a lower to a higher stage of development; a pattern in which the outcome, if not pre-determined or formally teleological, is always tending towards a progressive outcome, whatever retrogressive events or outcomes may also occur. This approach does equate irreversibility with teleology, and thereby undermines Thompson’s own acceptance of the theoretical and ontological validity of the conception of irreversibility. For its significance does relate to the reality of the open-ended and diverse outcome of the processes of irreversibility, a reality which cannot be made compatible with such a teleological conception of irreversibility. No wonder that Thompson emphatically argues that Trotsky was incorrect to outline the possibility of capitalist restoration in the Soviet Union, arising out of the policies of the Stalinist bureaucracy. [29]. The point is that it would be wrong to say that the existence of Stalinism has meant that capitalist restoration is either inherent to its character or, alternatively, ruled out. The concept of irreversibility can outline the features and characteristics which, in relation to the policy of Perestroika (and its successor forms), indicate the potential for both capitalist restoration and an advance towards socialist revolution.

This non-teleological concept of irreversibility also helps to illuminate the differences within the Soviet Communist Party and the Communist International of the 1920's and 1930's. It can help to reconstruct the history of these disagreements, and increasingly bitter disputes, that led to the division between Stalinism and Trotskyism. Trotsky held that without international proletarian revolution there was the possibility of bureaucratic degeneration and the spectre of capitalist restoration in the Soviet Union via the potential threat of an NEP, and kulak-inspired counter-revolutionary upheaval. Bukharin, in contrast, maintained that the NEP - or proletarian-peasant alliance - that had arisen upon the foundations of the 1917 proletarian revolution, was the means to realize socialism, alongside the advance of world revolution. Both saw the direction of the irreversible outcome of October in a unilinear and schematic manner, a direction with a rigid trajectory in terms of the outcome of the processes of causation. Bukharin had gone from his 1920 equilibrium model, which outlined the limited character of survival for world capitalism, to a conception of world revolution which was more protracted and dependent upon building the proletarian-peasant alliance and advancing towards socialism within the USSR. [30]. Bukharin puts this point in the following manner:

“Lenin taught us that a conflict between the working class and the peasantry is by no means inevitable. Lenin teaches us that our salvation lies in our ability to act along with the peasant, that we are perfectly able to do so and thus to hang on and grow stronger, however long victories are postponed in the West. Trotsky offers something else: the ruin of the proletariat is inevitable without a speedy victory throughout the world; the proletariat will perish under the blows of the “broad masses of the peasantry”, who at one time helped it to triumph.” [31]

Bukharin is actually explaining that Trotsky grasped the open-ended outcome of the October proletarian revolution - the possibility both of advance and of regression. However, Trotsky put this in a rigid manner of two absolutes of success or defeat. On the other hand, Bukharin saw only one real outcome of continued, if prolonged, advance, via the success of the NEP proletarian-peasant alliance. Neither Trotsky nor Bukharin seemed to fully comprehend how the irreversibility of the USSR as a workers' state, basing itself upon the proletarian-peasant alliance, could advance world revolution without succumbing to internal capitalist restoration, and at the same time avoid the dangers that are inherent to long periods of isolation, dangers which Bukharin ignored. Thus Stalin was able to utilize the theoretical counter-position of two absolute conceptions in order to politically establish his own irreversible bureaucratic counter-

revolution by both suppressing the Kulak 'capitalist threat' and establishing 'socialism' (consolidated state above the proletariat) in one country.

Despite the theoretical strengths in both Bukharin's and Trotsky's positions, neither was able to fully grasp the irreversible and dynamic character of the October Revolution as the specific manifestation of the prospect to overthrow world capitalism. Neither could grasp it in a way which could enhance this potential by the adoption of the correct internal economic and political policies. Neither grasped Lenin's understanding on this question. To Trotsky, the fate of world revolution was an external problematic in which the role of the workers' state was primarily political, in terms of facilitating the correct strategic line within the Communist International. Economic policy was primarily an expedient to maintain the workers' state, as a prelude to world revolution, or else defeat faced the Soviet regime. Trotsky did not recognize how the internal policies could be a 'spring-board' to advance world revolution, owing to the irreversible dynamic of the October Revolution - and its enhancement of the objective basis for world revolution, by the consolidation of the workers' state upon the foundation of NEP.

Alternatively, Bukharin's approach was essentially internal, concentrating upon developing the correct economic policies for the Soviet workers' state, without sufficient attention being given to the conception of the irreversibility of the October Revolution and thereby its connection to world revolution and an economic approach related to this conception. Instead the fate of the world revolution was conflated with that of the Soviet Union in terms of Bukharin's understanding of 'socialism in one country'; rather than its irreversible connection established and defined as a dynamic process of interaction and becoming. Thus the internal economic policy of the USSR - NEP - was used to justify a conservative foreign policy and a static conception of world economic equilibrium, which portrayed world revolution as a clear and distinct prospect. [32]

So the concept of irreversibility can shed light upon new theoretical indicators for understanding the differences between Bukharin and Trotsky in the 1920's; a disunity that allowed Stalin to ascend to dictatorial rule. It shows that the choice was not between world revolution or 'socialism in one country', nor between capitalist restoration or an 'adventurist' conception of 'permanent revolution', and neither that a new type of 'Bonapartism' was inevitable. Rather it indicates that the irreversible event of the October Revolution manifested irreversible processes of dynamic change and becoming in which the first workers' state could have advanced the

potential for world revolution, given correct internal economic and political policies. It shows that the fundamental political dividing line was not between Bukharin and Trotsky, but between them and Stalin whose policies led to the irreversible process of bureaucratic counter-revolution. This in turn facilitated a shift in the world balance of class forces against world socialist revolution and in favour of world capitalism. The economic and political power of the world's first workers' state was now used in opposition to world revolution.

In conclusion, this conception of irreversibility as dynamic, open-ended processes of becoming, not only has historical significance, but can also illuminate (as indicated) study of present-day society and contemporary economic and political upheaval. It can enhance our understanding of the wider ontology of being, of the character of nature and of the relationship between nature and society. This can only be realized within the context of a Marxist ontology, which is still underdeveloped since Marx and Engels. Such theoretical development requires the comprehension of Bukharin's dialectical ontology, which has been complimented by Andrew Collier, and which has an invaluable role to play in developing a distinct Marxist ontology of the world. [33]

THE STRENGTHS AND LIMITATIONS OF ENGELS'S DIALECTICAL MATERIALISM

Stephen H. Rigby's important work *Engels and the Formation of Marxism* defends Engels's contribution to Marxism. Engels's understanding of materialism is essentially a philosophical conception that justifies matter as the primary basis to explain ideas: "Matter, for Engels, was not a 'thing', but a concept. It was a 'pure creation of thought', which we use as an abbreviated means of referring to the totality of material things. Matter is an abstraction and can only be known through the study of the concrete material things (and their inherent forms of motion) which make it up." [34]. Idealism reduces matter to a dependency on mind and the unfolding of concepts, whereas Engels conceives of a unity of matter and mind that reflects the independence of matter from mind. However, Engels's materialist monism does not justify reductionism, and instead he has an anti-reductionist understanding of the relationship between nature and social reality. [35]

Primarily, to Engels, materialism was in philosophical opposition to idealism: "It functioned chiefly as a refutation of a belief in the existence of mind independently of, or prior to, the

existence of matter and as a critique of the 'senseless and unnatural' idealist concept of a 'contrast between mind and matter, man and nature, soul and body'." [36]. In general Engels defended a polemical anti-idealist and non-reductionist materialism: "Yet, when Engels rejected idealist philosophy, it was specifically because of its supernaturalist ontology and for its deduction of the nature of reality from a priori abstractions.....Engels certainly regarded 'nature as primary', the brain and thought as a product of nature, and the mind the 'highest form of matter' but nevertheless, his opposition to Hegelian idealism did not lead him to advocate a return to eighteenth-century 'mechanical materialism'. On the contrary, Engels, as we have seen, repeatedly criticised mechanical materialism, a form of materialism which he saw as still dominant amongst the 'vulgar' materialists of mid-nineteenth century Germany, for its static view of nature and its reductionist concept of humanity. He believed that his own materialism was not simply the opposite of Hegelian idealism but rather that it had sublated the achievements of idealist philosophy and achieved the synthesis.....advocated by Marx in the *Theses on Feuerbach*....." [37]

But how was it possible for Engels to differentiate materialism from idealism, in the epistemological terms described by Rigby, without including ontological clarification and elaboration of a materialist dialectics of nature? It was the philosophical and scientific process of elaborating his dynamic dialectical and materialist ontology of matter in motion, that enabled Engels to differentiate himself from mind-dependent idealism and physicalist reductionist materialism. Engels (as Rigby indicates) developed a distinctive ontology of matter in motion, which not only facilitated his polemical differentiation from Duhring, but also shows that Marxism has a method, ontology and philosophical stance, that is distinctive and opposed to idealism, even if it elaborates upon the philosophical gains of Hegel's dialectic. Rigby seems to underestimate the significance of Engels's ontological clarification in *Dialectics of Nature*, *Ludwig Feuerbach*, and *Anti-Duhring*, and so Rigby has an approach that starts with the epistemological and ends with the ontological. In contrast, Engels starts with his philosophical materialist alternative to idealism in ontological terms. Hence (as Rigby formally describes) it is Engels's ontological enrichment of Marxism, in his description of reality as matter in motion, which allows for elaboration of the epistemological division between materialism in opposition to mind-dependent idealism.

In actuality, Rigby's indifference to the importance of ontology is connected to his critical approach towards what he considers to be the problematic philosophical content of Engels's ontology. Firstly, at the level of the minimalist ontology of matter in motion: "Rather than being a dogmatic ontology, his materialism involved little more than the vague claim that nothing but nature exists." [38]. This generalised and abstract ontology is dogmatically irrefutable (in Popperian terms) and so is "redundant". [39]. Secondly, Engels has a maximalist ontology of reducing reality to a priori dialectical materialist principles, such as an a priori denial of the existence of God. However, Rigby does admit that scientific practice actually assumes the non-reality of God: "In practice, Engels's 'materialist' assumption that God does not exist is the basis of any 'rational' (i.e. testable) exploration of the world. An 'irrational' assumption that God does not exist is the precondition of any rational investigation of nature or of human history." [40]

However, Rigby's main concern is to deny the ontological validity of dialectical laws. Rigby elaborates the reasons why Engels's dialectical laws can be considered as non-predictive, non-empirical, a priori conceptual abstractions that are generalised and banal. [41]. Nevertheless, despite this extensive criticism Rigby is forced to accept that Engels's dialectical philosophical principles have contributed towards elaborating ontological clarification about nature and society:

"Yet despite the fundamental nature of such criticisms of Engels's philosophy, it should also be noted that, just as the dialectical emphasis on the universe as constant process forms one of the foundations of the modern scientific outlook, so the dialectical emphasis on inherent conflict, opposition and contradiction is a vital contribution to modern social theory." [42]

In his discussion of Engels's epistemology Rigby accepts that Engels's approach is compatible with a realist standpoint, in which Marxist ontology is equated with depth realism and its emphasis upon the significance of underlying structures: "Thus in his emphasis on both the centrality of theory and of empirical evidence in the production of knowledge, and in his stress on the deep structures (atoms, molecules, surplus value) which determine surface appearances, Engels has much in common with modern realist philosophy." [43]. Engels's support for a reflection theory of knowledge is not a justification for a passive epistemology, which contends that mind crudely reflects the material world. Instead Engels had an activist epistemology – a

correspondence theory of truth – which also had an emphasis upon the importance of theory for explaining and interpreting facts. Wrong theories could conflict with the requirement of understanding and developing knowledge about the world. [44]

Rigby uncritically defends Engels's reflection and correspondence theory of knowledge:

“Engels's epistemology was based on a correspondence theory of truth in which our theories are seen as allowing us at least some partial grasp of the qualities of the object of knowledge. Both realism and empiricism are compatible with a correspondence theory of the truth. Engels, however, rejected the possibility of pure empirical knowledge, stressed the limits of inductive thought and insisted upon the centrality of theory in the production of knowledge.” [45]. This standpoint seems to justify the epistemic fallacy, in that theory, as a reflection (however distorted) of reality, represents an epistemological guarantee of a relation to reality. Such an interpretation undermines the ontological emphasis in Engels's approach, in that it is not the ontological coherence (underlying structures) of the world that explains the possibility and potentiality of knowledge-formation about the world. Instead, it is supposed to be the a priori epistemological necessity of thought as able to reflect/respond to reality, which then explains the ontological content of reality. In this way Engels's and Rigby's adherence to a correspondence theory of knowledge undermines, rather than sustains, their commitment to ontological realism. For the epistemology of reflection, or correspondence, theory of knowledge is more suited to empiricism than realism. This is because empiricism upholds experience, observation, and sensation, as a reflection of reality, whilst realism upholds theory and related ontological criteria and thus cannot reduce reality to sense experience. So critical realism (in contrast to some forms of realism that defend a correspondence and reflection theory of knowledge) tends to justify an a priori theory of truth, such as Bhaskar's claim that it is the intransitive nature of the world that facilitates knowledge-formation in the transitive realm. When Engels (and Rigby) put an emphasis upon ontological criteria for knowledge claims their position is compatible with critical realism, but when they defend the epistemological guarantees of reflection theory they are more in conflict with critical realism. Engels's emphasis on ontology makes him a predecessor of critical realism, but his epistemology is in opposition to his ontological emphasis for defining dialectical materialism. Dietzgen's ontological monism and dialectical logic helps to overcome this philosophical contradiction in the work of Engels, as outlined in chapter six.

The main problems with Engels's approach are in his equation of the logical with the ontological. To suggest that the laws of objective reality and the laws of cognition are identical could imply that there is no difference between reality and thought. This would represent an epistemic fallacy, in that the logical would define the ontological. Both thought and reality are material, but thought is a distinctive part of material reality and is not identical to external material reality. Materialism upholds the non-identity between subject and object, in that the subject cannot fully express the object in spite of the subject's aspiration to define the object. This does not mean there is an unknowable difference between the object and subject, rather there must be an intransitive difference between the object and how the subject describes it. Consequently, it seems pertinent to ask: can cognition operate according to the same laws as operate in reality? For example, in social reality there are structural contradictions, such as that between capital and labour, but thought aims to understand these contradictions by aiming at logical consistency and so attempts to overcome contradictions in cognitive terms. Or, at the least, thought tries to overcome epistemological contradictions that obscure an understanding of contradictions in reality.

In reply it could be argued that dialectical upholds the principle of contradiction, and this is utilised in order to understand contradiction in reality. But even if we accept this, it still does not mean that dialectical logic has to lack the principle of non-contradiction, or else logic would become arbitrary, selective and eclectic. Hence dialectical logic incorporates the principles of formal logic (consistency and non-contradiction) when it is trying to understand the ontological contradictions of reality. In other words, epistemology has an important role in establishing the logical premises, concepts, and method, for understanding reality, but it is not identical to reality. For example, the law of value (which represents the basis of capitalism's structural contradictions) is a crucial methodological starting point for establishing the abstract-value content of capitalist economic activity. But empirically and objectively the capitalist economy does not express the rigid unfolding of these value contradictions of capitalism, and so finance capital seems to operate at variance with value. This is because money and paper values, e.g. internet companies, seem to offset the operation of value, which has a content derived from the abstract labour (as represented in the production of use values) of producers. This intransitive world of finance capital (finance capital exists independently of our consciousness) is actually an expression of the decline of capitalism, in that value production by labour power is no longer the

dynamic basis for capital accumulation, and instead there is finance capital that tries to replace the value content of capitalism.

If thought was in a rigid identity with reality then finance capital would not be possible because it seems to defy the law of value and its material productive content. However, the empirical actuality of finance capital must be explained, and so it is necessary to overcome the contradiction between thought (that has conceptualised value) and reality in relation to the intransitivity (causal efficacy of finance capital) of actually existing capitalism. This means that previous conceptions of value, as defined by thought, must be either rejected, or enriched, in order to transcend the existing limits on thought with regard to the difficulties it has in explaining reality in an explanatory manner. As a result it will then be possible to develop a method that shows how finance capital facilitates new value production (computers) and yet undermines a lot of existing value production. In this manner the contradiction between antiquated thought and its contradictory limits, in relation to trying to understand reality, can be overcome.

It also seems contentious to reduce all of reality, from nature to society, to identical laws, such as negation of the negation. Engels does contend that the change from small-scale private property to large-scale cooperative production, and the potential for planned socialised production, is in accordance with the negation of the negation. But Engels can only establish the negation of the negation as a philosophical expression of something that has already occurred and been empirically verified, and this suggests that the negation of the negation is not a generalised representation of historical and social processes. Only empirical study can establish the validity of the process of the negation of the negation. Certainly, the negation of the negation is a process of movement from lower to higher, but this does not explain the complexity of history, in which class struggle has no ultimate direction, and has many periods of regression as well as progression.

An important collection of articles about Engels was published in 1999. [46]. In this collection, Peter Manicas writes that Engels is committed to a materialist ontology. According to Manicas, Engels argues that all the world is material, and he has a materialist ontology of a material world that is prior to, and independent of, mind. [47]. Manicas maintains that Engels's philosophy is based upon the division between materialism and idealism in relation to the basic philosophical

question of the relationship between thinking and being. This shows that Engels's understanding of the division has an ontological aspect. Consequently, there is an ontological difference and conflict between a materialist ontology of matter in motion, on the one hand, and an idealist ontology of the creation of the world by God, on the other. [48]. Manicas outlines how Engels's ontology is upheld by reflection theory, in order to defend the identity between concepts and objects in the material world: "Engels surely assumes reality is whatever it is, quite independent of our cognition and that knowledge must "mirror" it." [49]

Manicas's alternative to Engels's epistemology is to advocate Marx's *Theses on Feuerbach*, or the view that the act of transforming the world is how we get to know it. But Engels does not deny the validity of this activist epistemology, as Manicas himself concedes and outlines in relation to Engels's recognition that the thing-in-itself becomes a thing-for-us. [50]. But, primarily, it is necessary to indicate that Marx's *Theses on Feuerbach* has a pragmatic standpoint of an object being useful because of its role in our active purposes. This approach cannot sustain the independent intransitivity of the mind-independent world, and it conflates human activity with the ontological content of reality. (This point is elaborated in the chapter on George Novack and pragmatism). Thus a superior, more coherent, ontology and epistemology are needed, ones which will sustain and uphold Marxism as realism and materialism. These are provided by Dietzgen, who shows that the ontology of a material and independent world can be conceptually expressed and cognised by dialectical logic. In other words, the ontological coherence and unity of the world can be articulated and expressed in dialectical logical terms. This does not mean that thought is in a dogmatic or reductive identity of reflection of being, rather it means that if this logic is not developed then the world will not be known in enriched dialectical terms.

The material world is ontologically knowable, (and this was recognised by Engels), but it was Dietzgen who showed that the world will remain inadequately known until we develop the dialectical logic that can most satisfactorily express it as an interrelated whole. There is no epistemological guarantee that reflection theory will generate thought about the object, rather what is required is a conceptual development that enables the material world to be expressed ontologically in logical terms. Dietzgen is not maintaining that reality is a conceptual structure. rather he is indicating that logic tries to establish the primary ontological principles of the material world. Consequently, it is crucial to establish the conceptual premises of the distinctive

material content of the logic that attempts to articulate the ontological nature of material reality. This shows that logic is important and necessary, but it is still secondary to the ontological criteria of the material world. Such an approach by Dietzgen is an epistemologically viable alternative to Engels's ultimate defence of reflection theory and Engels's related identity of being and thought in accordance with the a priori premises of aspects of dialectical materialism. Such an epistemological stance by Engels contradicts his own emphasis upon ontology as the primary and intransitive criteria for defining the relationship between being and thought.

Manicas describes the theoretical problems associated with overgeneralising from Engels's dialectical laws, which can become a substitute for the empirical analysis needed to substantiate the causal phenomena of processes and events. [51]. On this view, Engels's rigid adherence to dialectical laws in reality cannot explain the relationship between causal necessity, contingency and chance. Manicas comments: "Many readers, perhaps content with their capacity "to think dialectically" have concluded that for Engels, "in the last analysis", there is no genuine contingency in nature or in history. It is just this view that ultimately has been the disaster for the "scientific socialisms" that, philosophically, have been dialectical materialisms." [52]. But this view is still part of a description explaining teleology in Engels's conception of historical materialism, and so does not constitute the primary answer as to why Engels could equate dialectical logic with the ontological content of the intransitive in terms of a reductive identity, or epistemic fallacy. The primary answer resides in Engels's adherence to reflection theory, and the connected epistemological pretext for identity reasoning, or equating the object with the premises and principles of the cognitive subject. Hence the real philosophical problem concerns developing a logic that is not primary over, but is still secondary to, the ontological material coherence of the world. In other words, to suggest (as Manicas outlines) that for Engels dialectical laws are the conceptual structures that define reality amounts to an indication of the epistemic fallacy in Engels's approach.

However, despite these philosophical problems Manicas is right to elaborate Engels's untheorised adherence to a realist conception of scientific practice: "On this interpretation Engels (like Helmholtz) assumes a realism of the sort more recently defended by so-called critical realists. . . . Whilst there are points of difference, these writers accept the idea that a valid scientific explanation can appeal to what is, in principle, a non-observable causal mechanism that produces empirical outcomes." [53]. Manicas uses comments by Newton in order to show

that Engels was critical of empiricism and was defending a type of realist analysis of scientific activity. [54]. But Manicas does not attempt to analyse Bhaskar's criticisms of Engels's adherence to an empiricist theory of knowledge. Nevertheless, Manicas has still shown, in contrast to Bhaskar's more stringent criticisms, that Engels's approach towards science can be compatible with realism.

Tom Rockmore is very critical of Engels's philosophical contribution to Marxism: "But on the whole, since he was not a trained philosopher, but rather a philosophical autodidact, his knowledge of and sensitivity to philosophical argument remained primitive at best, certainly primitive in comparison to Marx's philosophical acumen." [55]. Engels is considered to hold the dogmatic view that the highest level of philosophy is Hegel's idealism, and yet Engels also polemically differentiates materialism from idealism. [56]. Primarily Rockmore is concerned to show that Engels does not overcome the problem of the Kantian thing-in-itself through the claim that scientific practice turns objects into things-for-us: "Engels's comment that in making something ourselves we put an end to Kant's incomprehensible thing-in-itself indicates that he has not comprehended this important concept. There is a difference between what is comprehensible and what is cognizable. The thing-in-itself is not incomprehensible, although it is by definition outside experience, hence uncognizable. Certainly, as Engels suggests, many things once thought to be uncognizable have later been understood by modern science. Yet this is not and cannot be the case for the thing-in-itself. This concept designates the way something is, independent of the subject, something that, if knowledge necessarily begins with experience, cannot therefore be known." [57]. Furthermore: "Engels's reading of the thing-in-itself rests on an opposition between philosophy, which sets up a barrier to knowledge, and science, which knows no barriers and which resolves problems that were often thought to be unsolvable." [58]. Thus Engels is considered by Rockmore to have a positivist view that science has become the main basis for developing and interpreting knowledge, and philosophy is no longer independent of science. Rockmore concludes that: "Engels is close to naturalism. Like naturalists, he mistakenly thinks that through science we can have knowledge of the way the world is." [59]

Even if we accept that there are philosophical problems in Engels's interpretation of the thing-in-itself, such as non-recognition of the causal possibility of uncognizable phenomena, this does not mean Engels fails to provide ontological justification and clarification about the causal structures of the world. Rockmore's main basis for his critique of Engels is a relativist and pragmatic

scepticism about the possibility of knowing the underlying structures beyond the appearance of things. Actually Rockmore agrees with Kant that effectively we cannot know things beyond their empirical appearances: “If we know only from the perspective of our time and place, then claims to know the thing-in-itself understood as the essence of society are always historically limited. Marxism cannot claim to go beyond appearance to the social essence, which can only be known as it appears in a given historical moment. Engels may not have been wrong in concluding that much philosophy is wrongheaded, no better than ideology. But he was wrong to maintain that Marxism could surpass mere appearance to grasp reality. Engels, who correctly saw that Marxism needed to come to grips with the thing-in-itself, was incorrect in thinking that Marxism could provide absolute knowledge of society as it is. For we cannot have absolute knowledge, even absolute social knowledge, but only knowledge of how the cognitive object, for instance society, appears at a particular historical moment.” [60]

In summation, it may be accepted that there are ontological and epistemological limitations in the work of Engels, indeed it would be surprising if this were not the case. But this does nothing to negate the fact that Engels’s work is based upon the philosophical necessity to enrich the ontology and epistemology of dialectical materialism.

SECTION 2 - IS THERE A FUTURE FOR DIALECTICAL MATERIALISM?

CHAPTER FOUR: THE DOGMATIC DECLINE OF DIALECTICAL MATERIALISM?

This chapter will analyse whether dialectical materialism is in decline, or whether the problem is with the justification of political egoism, (the individual ego defines what constitutes principled dialectical philosophy and political practice), and its possible justification of subjective idealism.

TROTSKY AND THE POLITICAL DEMISE OF DIALECTICAL MATERIALISM?

John Rees, in his book *The Algebra of Revolution*, outlines the role of a revolutionary dialectic for understanding history, political economy, and political practice. (1). Rees's criteria of what constitutes principled theory and practice will be evaluated in relation to the dispute between Trotsky and the minority of the American Socialist Workers Party about the class nature of the Soviet Union and its military expansion between 1939-1940. (2). Rees describes the merits of Trotsky's dialectical approach. (3). But what Rees glosses over is the close identity that Trotsky makes between dialectical materialism and political theory. Indeed, Trotsky considers that dialectical materialism is identified with a particular conception of the class character of the Soviet Union, and all who disagree are thereby anti-dialectical. (4). Thus Trotsky equates Burnham's explicit support for a pragmatic philosophical approach with the conception of the Soviet Union as a bureaucratic exploiting state. But, Trotsky fails to self-critically ask whether a dialectical conception of the Soviet Union as a degenerated workers' state is still possible and explanatory. Thus, he fails to establish any theoretical criteria that can evaluate alternative theories about the Soviet Union, except in the narrow political terms of defining the authors of these different theories as anti-dialectical and thereby opportunist:

"Burnham began some time ago by constructing, purely empirically, on the basis of his immediate impressions, a non-proletarian and non-bourgeois state, liquidating in passing the Marxist theory of the state as the organ of class rule. Shachtman unexpectedly took an evasive position: "The question, you see, is subject to further consideration"; moreover, the sociological definition of the USSR does not possess any direct and immediate significance for our "political tasks" in which Shachtman agrees completely with Burnham. Let the reader again refer to what

these comrades wrote concerning the dialectic. Burnham rejects the dialectic. Shachtman seems to accept, but.....the divine gift of "inconsistency" permits them to meet on common political conclusions. *The attitude of each of them toward the nature of the Soviet state reproduces point for point their attitude toward the dialectic.*

In both cases Burnham takes the leading role. This is not surprising: he *possesses* a method - pragmatism. Shachtman has no method. He adapts himself to Burnham. Without assuming complete responsibility for the anti-Marxian conceptions of Burnham, he defends his bloc of aggression against the Marxian conceptions with Burnham in the sphere of philosophy as well as in the sphere of sociology. In both cases Burnham appears as a pragmatist and Shachtman as an eclectic." (5)

Shachtman replies to Trotsky in the article 'The Crisis in the American Party: An Open Letter in Reply to Comrade Leon Trotsky'. (6). In his reply Shachtman does not deny Trotsky's equation of dialectical materialism with the arrival at a principled revolutionary position. Nevertheless, contends Shachtman, there is a complex relationship between politics and philosophy, and this means it is possible for those opposed to dialectical materialism and those for dialectical materialism to arrive at conjunctural and specific political agreement. What would be unprincipled, Shachtman argues, would be an effective glossing over and denial of these philosophical differences for the sake of political unity. (7). Shachtman points out some of the paradoxes within Marxist theory and practice about the relationship between Marxist philosophy and Marxist political practice. Lenin was defending dialectics in a philosophical bloc with Plekhanov against Alexander Bogdanov, and yet Lenin was also in a political bloc with Bogdanov against the Mensheviks. Shachtman quizzically asks Trotsky his opinion about this complicated situation: "Wherein does what you call my 'bloc with Burnham in the sphere of philosophy' differ from Lenin's bloc with Bogdanov? Why was the latter principled and ours unprincipled? I should be very much interested to know the answer to this question." (8). Furthermore, Luxemburg did not accept Liebknecht's opposition to dialectical materialism, but she was still in a political bloc with him against Social Democratic opportunism. This shows it is possible for people (such as Burnham) to arrive at a principled political stance and yet be opposed to, or indifferent about, the role and significance of dialectics:

"The connection between a philosophical and a programmatic position, a philosophical and a political position, holds only 'in the last analysis'. The connection is not always direct and

immediate. Political positions are not directly deduced from philosophical positions by means of concrete and scientific analysis. Lenin could speak of “our comrades in politics and opponents in philosophy” without revealing an inconsistency anywhere except in the comrades referred to. Both Engels and Lenin, furthermore, pointed out that the modern scientist, for all his “opposition” to dialectical materialism, is compelled to one degree or another to employ the dialectical materialist method in his concrete scientific work. The materialist theory of knowledge, Lenin wrote, is one “which natural science instinctively holds”. That is often true of the science of politics, too; and I have observed it more than once not only in the case of Comrade Burnham but of others as well.” (9)

It could be argued that Shachtman is upholding the view that people can be spontaneously and politically unconscious dialectical materialists, even when they are consciously opposed to dialectical materialism. This stance is obviously problematic, (but it is problematic for orthodox dialectical materialism in general, for example both Trotsky and Woods/Grant defend a spontaneous dialectical materialism), and represents an over-defensive attempt by Shachtman to defend his political bloc with Burnham in philosophical terms. Despite this, Shachtman was also trying to uphold an important conception of the autonomy of philosophy from existing political practice. Obviously, it could be said in reply (as Trotsky did) that this conception of the autonomy of dialectical philosophy is an attempt to defend an unprincipled political bloc, meaning Shachtman did not want dialectical philosophy to ‘intrude upon’ and challenge his political opportunism. However, independent of his immediate political motives, Shachtman was trying to establish a non-reductive and non-partisan, or autonomous and mediated (but not unrelated), relationship between dialectical materialist philosophy and political practice.

Shachtman also argues that Trotsky’s partisan equation of dialectical materialist philosophy with a defence of the degenerated workers’ state theory is in fact justified on the basis of a non-dialectical approach. For the dogmatic equation of nationalised property relations of the Soviet Union with the (workers’ state) class character of the Soviet Union, has become a formal abstraction that does not dynamically indicate the constantly changing and intensifying degeneration of the Soviet Union. (10). Thus on the basis of non-dialectically emphasising the nationalised property relations of the Soviet Union, Trotsky arrives at the inescapable conclusion that the Soviet Union is state capitalist. Consequently, Trotsky becomes an effective defender of a bureaucratic Stalinist revolution (distorted proletarian revolution) that overthrows capitalism.

(11). Hence, a rigid and dogmatic conception of the Soviet Union as a degenerated workers' state becomes the basis to undermine the perspective that proletarian revolution is an emancipatory and self-conscious political activity. (12)

Trotsky's reply to Shachtman is entitled: 'From a Scratch - To the Peril of Gangrene'. (13). Trotsky can only defensively contend that the American Socialist Workers Party majority (which supports his political position) is spontaneously dialectical in its approach: "At stake at the present time is not the extent to which individual members of the majority consciously apply the dialectic method. What is important is the fact that the majority as a whole pushes toward the proletarian posing of the questions and by very reason of this tends to assimilate the dialectic which is the 'algebra of the revolution'." (14). Thus the sociological composition of the US SWP majority is equated with upholding a dialectical approach. Trotsky then caricatures Shachtman's views about the relationship of dialectical materialism to politics and suggests that Shachtman effectively denies the necessary relationship between dialectical materialism and revolutionary political activity:

"Following in the footsteps of Burnham, Shachtman teaches the young revolutionary party that "no one has yet demonstrated" presumably that dialectic materialism affects the political activity of the party. "No one has yet demonstrated", in other words, that Marxism is of any use in the struggle of the proletariat. The party consequently does not have the least motive for acquiring and defending dialectic materialism. This is nothing else than renunciation of Marxism, of scientific method in general, a wretched capitulation to empiricism. Precisely this constitutes the philosophic bloc of Shachtman with Burnham and through Burnham with the priests of bourgeois 'Science'." (15)

Trotsky claims that Lenin never compromised dialectical materialism in order to obtain a political bloc with Alexander Bogdanov, in contrast to Shachtman's undermining of dialectical materialism in order to obtain political unity with Burnham. (16). Lenin's bloc with Bogdanov was on the basis of political unity against Menshevism. (17). But what Trotsky then adds is of crucial theoretical and political significance. The philosophical differences between Bogdanov and Lenin did start to interact with political questions, and so Trotsky implicitly suggests that this situation therefore created the momentum for a split within the Bolshevik party. In the ensuing split it was, to Trotsky, the greater programmatic cohesion of Lenin's faction that

enabled him to obtain a majority within the Bolshevik faction. (18). Trotsky seems to be accepting that it is almost inevitable that philosophical differences will create political tensions within a revolutionary organisation, so leading to the possibility of a split. Trotsky's only alternative to political fragmentation seems to be the dogmatic affirmation of a monolithic and orthodox form of dialectical materialism in order to uphold revolutionary practice. Ultimately this philosophical dogmatism is sustained by a sociological critique of the petty-bourgeois composition and approach of the Shachtman faction. (19)

Ironically, Shachtman is not opposed to Trotsky in regards to the significance of dialectical materialism, but their real differences concern their criticisms of each other for having a non-dialectical political stance on Stalinism. For example, in relation to the politically disputed questions, Trotsky contends that Shachtman anti-dialectically abstracts out the concrete question of war and military expansion from the class character of the Soviet Union, and on this basis arrives at a defeatist position about the Soviet Union in relation to war with the capitalist states of Finland and Poland. (20). Trotsky also denies that his stance upholds the conception of support for Stalinist bureaucratic revolution. (21). In the last analysis it is these political differences which lead to dialectical materialism being used by Trotsky and the US SWP majority to justify a split of the SWP on the basis of the struggle of principled politics against opportunism.

Burnham has the temerity to reply to Trotsky. (22). He argues that dialectics has been introduced into the political discussion about the Soviet Union and war as a means of obscurantist confusion. (23). Burnham maintains that dialectics is an irrelevancy in relation to the empirically confirmed merits, or demerits, of a particular standpoint, and therefore Trotsky is trying to perpetuate an illusion in holding that dialectics is important for understanding the political situation. (24). Yet, Burnham points out, even Trotsky concedes that dialectical materialism should not be a subject of compulsory study within the party. This, claims Burnham, represents the view that dialectical materialism should function as an ideological means to obtain the adherence and support of the rank and file for the party leadership:

“Or must we seek another kind of explanation for Trotsky's dictum: There is one doctrine - the “secret doctrine” - for the elite, the leaders, the inner circle; and another - the vulgar doctrine - for the mass, the ranks, the followers. What is the relation of the followers to

the secret doctrine? They are not to know it, to study it, to test it in their own conscious and deliberate experience: that is excluded as “lifeless pedantry”. But may they then consider it unimportant, or reject it? Not on your life: then they are alien class elements. No: they must *believe*, they must have *faith*. As for the doctrine itself, it is safe in the hands of the elite; *they* will bring it out on appropriate occasions (a sharp factional fight, for example) to smite and confound the enemy. For my own part, I do not believe in Faith.” (25)

The alternative to the repressive philosophical and ideological role of dialectical materialism is the empirical methods of science, which means that: “There was no revelation, no short-cut, and no prophet.” (26). Burnham also maintains that the proponents of dialectics impose abstract categories (nationalised property of a degenerated workers state) onto a changing situation. Hence Trotsky does not accept (using his abstract categories) that the Stalinist Red Army is acting in a counterrevolutionary manner in Poland and Finland, and this is why he rejects the necessity of a victorious political perspective of opposition to Stalinist military expansion. Instead he effectively defends: “*the bureaucratic road to socialism*”. (27)

Trotsky’s reply: ‘An Open Letter to Comrade Burnham’ argues that Burnham seems to equate philosophy in general, and the role of philosophical logic in particular, with an expression of religious idealism that is opposed to a scientific approach. (28). Yet Burnham is not politically concerned to struggle against this dialectical religion, and neither does he defend or elaborate a scientific alternative. This represents philosophical and political irresponsibility. (29). Trotsky still maintains that dialectics upholds a principled political stance, even if there are exceptions to the rule. (30). He even accepts that dialectical materialism could be superseded by philosophical and scientific advances. But, crucially, this is presently unlikely, because the truth, validity, and necessity of dialectical materialism, is not expressed by its further philosophical development. Instead the truthfulness and significance of dialectical materialism is expressed in the revolutionary practice of the proletariat, and so qualitatively new philosophical development will probably not occur until socialism has been realised:

“Dialectical materialism is not of course an eternal and immutable philosophy. To think otherwise is to contradict the spirit of the dialectic. Further development of scientific thought will undoubtedly create a more profound doctrine into which dialectical materialism will enter merely as structural material. However, there is no basis for expecting that this philosophic

revolution will be accomplished under the decaying bourgeois regime, without mentioning the fact that a Marx is not born every year or every decade. The life-and-death task of the proletariat now consists not in *interpreting* the world anew but in *remaking* it from top to bottom. In the next epoch we can expect great revolutionists of action but hardly a new Marx. Only on the basis of socialist culture will mankind feel the need to review the ideological heritage of the past and undoubtedly will far surpass us not only in the sphere of economy but also in the sphere of intellectual creation. The regime of the Bonapartist bureaucracy in the USSR is criminal not only because it creates an ever-growing inequality in all spheres of life but also because it degrades the intellectual activity of the country to the depths of the unbridled blockheads of the GPU.

Let us grant however that contrary to our supposition the proletariat is so fortunate during the present epoch of wars and revolutions as to produce a new theoretician or a new constellation of theoreticians who will surpass Marxism and in particular advance logic beyond the materialist dialectics. It goes without saying that all advanced workers will learn from the new teachers and the old men will have to reeducate themselves again. But in the meantime this remains the music of the future. Or am I mistaken? Perhaps you will call my attention to those works which should supplant the system of dialectic materialism for the proletariat? Were these at hand surely you would not have refused to conduct a struggle against the opium of the dialectic. But none exist. While attempting to discredit the philosophy of Marxism you do not propose anything with which to replace it.” (31)

In other words, dialectical materialism is true because it represents the principled class struggle of the proletariat as defined by Trotsky, the world historical individual of world revolution? So, any philosophical alternative, or proposed modification to dialectical materialism, becomes defined as opportunist, if this is Trotsky’s opinion. Indeed, the philosophical development of dialectical materialism, or a revolutionary philosophical progression to dialectical materialism is considered to be superfluous, because in Trotsky’s opinion this is not required to further advance world revolutionary class struggle. This theoretical situation leaves the task of philosophical contemplation to the more tranquil period of socialism, because in the meantime dialectical materialism is spontaneously and politically (according to Trotsky) produced in the practice of class struggle. Thus to challenge this elitist view (even if from an alternative standpoint to that of Burnham’s pragmatism) would be considered an opportunist rejection of revolutionary politics and class praxis, and a betrayal of the narrow Trotskyist conception of dialectical

materialism. Thus any heterogeneous philosophical standpoint would be considered heresy, and be condemned in the name of the working class, class praxis, and Trotsky's philosophical and political personification of revolutionary struggle.

Trotsky is accurate when describing Burnham as a '*conscious opponent of the dialectic*'. (32). This is already apparent in relation to Burnham's views about dialectics. It may also be plausible to criticise Burnham for isolating, atomising, and abstracting political developments in Poland and Finland from one another in an empirical manner. (33). But it seems problematic to then conclude that the methodological and political differences between the SWP majority and the minority show that the opposition is therefore an expression of a petty bourgeois reactionary hostility towards the revolutionary proletarian party. (34). Thus, in the name of the proletariat, party discipline, dialectical materialism, and political integrity, Trotsky is the individual who defines what is revolutionary theory and practice. Hence reality is defined by his sensations in subjective idealist terms. (Trotsky's subjective idealism is probably the ideological expression of the problem of trying to oppose Stalin's paranoid, subjective idealist, alienated and fragmented subject).

Burnham replies to Trotsky's *Open Letter* with his article: 'Science and Style'. (35). Burnham contends that Trotsky's rhetorical skills do not amount to a satisfactory defence of dialectical materialism, which is relevant in relation to understanding advances made in science and analytical progress by contemporary forms of logic. Ultimately, Trotsky can only defend dialectical materialism through an ideological appeal for adherence to traditional doctrine. (36). Consequently, Trotsky does not establish the principles of dialectics, and instead dialectics becomes a question of who politically is on Trotsky's side. (37). Furthermore, the political confusion and vacillation represented by Trotsky's stance about Stalinist military expansion is glossed over by reference to dialectics and class truth, which is true, and is presented as the alternative to the objectively defined and empirically verified scientific truth, that is outlined by the minority. Trotsky's advocacy of class truth is the pretext to justify the world historical individual defining reality and what constitutes political principles:

"You are on treacherous ground, Comrade Trotsky. The doctrine of "class truth" is the road of Plato's Philosopher-Kings, of prophets and Popes and Stalins. For all of them, also, a man must

be among the anointed in order to know truth. It leads in a direction diametrically and geographically opposed to that of socialism, of a truly *human* society.” (38)

In this context dialectics is being utilised by Trotsky in an omnipotent manner for the purpose of glossing over an adaptation to Stalinism by the US SWP majority. (39). In other words, Trotsky’s polemics have the power-knowledge imperative of upholding the: ‘anything goes’ approach of the Cannon leadership of the US SWP. (40)

Burnham is as rhetorical as Trotsky; he does not prove or indicate the superiority of empirical science over dialectical materialism. Instead, Burnham is content to polemically assert the irrelevance of dialectical materialism as a philosophy, logic, or science. However, he does indicate the main philosophical problem with Trotsky’s approach: that in the last analysis both truth and principled class politics become equated with Trotsky’s individual opinion. But does this mean that Trotsky has nothing useful to say about dialectical materialism, or more generally, is Trotsky’s philosophical dogmatism an expression of the defunct nature of dialectical materialism?

John Rees would reply no to both of these questions. Carefully ignoring the complicated aspects of the philosophical and political significance of Trotsky’s defence of dialectical materialism between 1939-1940, he enthusiastically shows that Trotsky’s notebooks on Hegel contain important philosophical discoveries and advances. (41) Rees outlines Trotsky’s conception of differentiated unity, which represents a non-reductive understanding of the relationship and unity between being and thought, and between nature and society. However, even if we accept Rees’s evaluation of the complexity and richness of Trotsky’s dialectical approach, this still does not recognise or tackle the philosophical problem of Trotsky’s dogmatic and partisan defence of dialectical materialism from the standpoint of the infallible world historical individual. Consequently, Trotsky’s equation of revolutionary and principled class practice with truth is more problematical than he is prepared to accept, because it can lead to justification for the standpoint of the world historical individual. For this alienated standpoint generally conflicts with (apart from the role of Lenin and Trotsky in 1917) the collective, co-operative, and ethical requirements of explanatory truth, and so contradicts and undermines the political requirements of human liberation. Of course this does not indicate that dialectical materialism is defunct, rather that there are problems with the partisan reductionism of dialectical materialism. The

question of the contemporary relevance of dialectical materialism will be analysed in the third section.

CHAPTER FIVE

IS DIALECTICAL MATERIALISM CONDEMNED TO ADVOCATE A POSITIVIST CONCEPTION OF THE RELATIONSHIP BETWEEN PHILOSOPHY AND SCIENCE?

There has been a paucity of theoretical work about dialectical materialism in the last decade. For this reason Woods and Grant's systematic defence of dialectical materialism is to be welcomed. However, the work *Reason in Revolt* by Alan Woods and Ted Grant is positivist primarily because it represents an accommodation of dialectical materialist philosophy to the new advances in natural scientific development. [1]. Advances in natural science are seen as confirming the correctness of dialectical materialism in an inevitable, mechanical manner. Relativity theory, quantum theory, chaos theory, the theory of genetics, etc, are all seen as unproblematic confirmations of dialectical materialism.

Woods and Grant can be critical of recent scientific advance. They even assert:

"...senseless and arbitrary speculations are the best proof that the theoretical framework of modern physics is in need of a complete overhaul. For the problem here is one of method. It is not just that they provide no answers. The problem is that they do not even know how to ask the right questions. This is not so much a scientific as a philosophical question. If everything is possible, then one arbitrary theory (more correctly, guess) is as good as the next. The whole system has been pushed near to breaking point. And to cover up the fact, they resort to a mystical kind of language, in which the obscurity of expression does not disguise the complete lack of any real content." [2]

The problem here is that Woods and Grant state the difficulty but do not provide any answers. In other words, they lack a worked out philosophy of science. This absence comes through in their criticism of theoretical physics. They can only describe problems but are unable to put forward their own answers. This is why they repeatedly look to science itself to come up with alternatives to the crisis of science. For example they refer to advances in thermodynamics as an alternative to the dead end in theoretical physics. No mention is made that it might be the

philosophical limitations of scientists in their practice which lead to these theoretical problems. Louis Althusser wrote about this in his essay concerning the spontaneous philosophy of scientists. Althusser held that scientists tended to generate a spontaneous idealism alongside the materialist elements of their scientific practice. I will examine what Althusser has to say later in this chapter.

Even when Woods and Grant are critical about the development of a science they can only conceive that the basis is automatically prepared for another science:

“When a science reaches a blind alley, when it is no longer able to explain the facts, the ground is prepared for a revolution, and the emergence of a new science. However, the new science, in its initial form, is not yet completely developed. Only over a period does it emerge in its final and complete form. A degree of improvisation, of uncertainty, of varying and often contradictory interpretations, is virtually inevitable at first.” [3]

This is a teleological view in which the new science is assured of achieving a superior maturity. In biological terms the emerging caterpillar is destined to become a butterfly. Indeed Woods and Grant epistemologically start from the principle that science is its own guarantee of the ability of humans to go from the unknown into the real of the known. Thus it is philosophy, as with Kant’s thing-in-itself, that tries to undermine science and deny the objectivity and knowability revealed by science. [4]

Woods and Grant do make exceptions to their general rule of scientific progress. For example, Heisenberg’s uncertainty principle is said to promote subjectivism in place of objectivity. But this can be blamed upon his version of the idealist philosophical interpretation of science. [5] Woods and Grant do mention the dialectical materialist alternative to Heisenberg’s subjective idealism but only inasmuch as they outline sense perception as being central to an epistemological understanding of how thought develops about reality: “Dialectical materialism sets out from the objectivity of the material universe, which is given to us through sense perception. “I interpret the world through my senses.” That is self-evident. But the world exists independently of my senses.” [6]. Woods and Grant uncritically quote from Lenin in order to substantiate their position. Thus the Kantian character of Heisenberg’s approach, and the denial

of reality behind appearance is only formally challenged by Woods and Grant. They do not consider the realist standpoint that appearances may be misleading and that sensation is not sufficient to understand the underlying intransitive objects of inquiry.

Woods and Grant outline the importance of causality in the Humean and empiricist approach of cause and sequential effect. None of this is related to the dispute between empiricism and realism about causality. Woods and Grant's understanding of causality displays a particular variety of positivism in which science is posited as taking place continuously without the intervention of philosophy:

“The search for a rational insight and understanding of the world in which we live is intimately connected with the need to discover causality....On the basis of observation and experience, we formulate a hypothesis as to what causes a given phenomenon. This is the basis of all rational understanding. As a rule, these hypotheses in turn give rise to predictions concerning things which have not yet been experienced. These may then be tested, either by observation or practice.” [7]

But eclectically Woods and Grant refer to the work of David Bohm and they point out that Bohm correctly shows that causality cannot be reduced to events but is rather about its underlying natural necessity. [8]. This seems similar to the position of Rom Harre and Roy Bhaskar.

In particular Woods and Grant utilize necessity as the basis to explain chance, accident, and predictive behaviour in nature and society. They talk about a dialectical unity of necessity and chance which is based upon their interpretation of the writings of Hegel. On this basis they critically support the scientific practice of chaos theory which seeks to impose models from nature onto society. In supposed accordance with the work of Hegel and Engels, Woods and Grant define history in terms of causal necessity and the ultimate realization of freedom. This is linked to rigid laws which guarantee that the development of the productive forces will realise communism in a predictive manner. [9]

Woods and Grant define the relationship between scientific practice and reality in the vague terms of a law-governed objective reality: “The basic assumption underlying all science and

rational thought in general is that the physical world exists, and that it is possible to understand the laws governing objective reality.” [10]. This is linked to a teleological approach according to which scientific understanding of the world continually deepens and raises new challenges and questions that are assumed to be met. Woods and Grant admit that science can end up justifying dogma but this is only outlined formally because for them science is always in correspondence with reality, or relative and historical truth are in a relationship that moves towards the absolute, even though they define truth as relative:

“The development of science proceeds through an infinite series of successive approximations. Each generation arrives at a series of fundamental generalisations about the workings of nature, which serve to explain certain observed phenomena. These are invariably considered to be absolute truths, valid for all time in “all possible worlds”. On further examination, however, they are found to be not absolute, but relative. Exceptions are discovered, which contradict the established rules, and, in turn, demand explanation, and so on ad infinitum.” [11]

On this basis Woods and Grant uphold the sensationalist view that there is no real distinction between essence and appearance. Thus the thing-in-itself is the thing-for-us. In other words, in Bhaskarian terminology, the intransitive is the same as the transitive. Hence there is no possibility that scientific practice can be misled at the level of appearance because appearance is the essence of the thing being analysed. [12]

So obstacles or inadequate knowledge about the object under investigation are inherently overcome, and resolving one particular problem leads to new questions and obstacles but they are also overcome. There is no conception here of the epistemological obstacles outlined by Bachelard and Althusser. Woods and Grant do refer to Thomas Kuhn and his view that scientific revolutions and the development of new paradigms explains the development of science, but again this is an eclectic addition to their overall perspective that science advances inexorably, gradually, and in quantitative terms rather than the transformation of quantity into quality. In other words, Woods and Grant are justifying in positivist terms the idea that science can overcome its own epistemological problems without philosophical interference. Hence, formally, Woods and Grant argue for the necessity of philosophy, but in its content this call is

reduced to the requirements of science: "...there has been no adequate philosophy which could help to point science in the right direction. The philosophy of science is in a mess." [13]

Woods and Grant argue that dialectical philosophy is needed to overcome the problem of subjective idealism, empiricism and logical positivism. Does this mean Woods and Grant have adopted a stance similar to Althusser and his essay about the spontaneous philosophy of the scientists? The answer would seem to be no, because Woods and Grant defend a rigid orthodox dialectical materialism based upon negation of the negation and the onward movement of thought towards absolute truth. Althusser on the other hand was aware that the thought-object is not in a rigid correspondence with the real-object and that this dichotomy explains the development of idealism which occurs in order to give an illusory idealist definition of the real-object. This is what the spontaneous practice, and ideology, of the scientists leads to when they lack dialectical philosophy. So, in contrast to the outright positivist views of Woods and Grant on the relationship between philosophy and science, Althusser puts forward a different approach in his work *Philosophy and the Spontaneous Philosophy of the Scientists*. [14]. Althusser argues that philosophy has to demarcate itself from science in order to analyse science. Philosophy cannot construct its own object; instead it analyses the objects of other disciplines, and the philosopher is concerned with questions that are connected to the problems of scientific practice. Philosophy cannot produce scientific categories and its method is different from a scientific method. Nevertheless philosophy has a crucial role to play in differentiating ideology from science. This is what is distinct about philosophy, in that science is not sufficient in differentiating itself from ideology, whereas philosophy "is truly haunted by practical ideologies" and so is able to differentiate between science and ideology. In other words philosophy acts to tackle the epistemological obstacles of science. Philosophy needs to tackle the limitations of spontaneous scientific ideology:

"I will draw one final conclusion. There are false ideas about science, not simply in the heads of philosophers but in the heads of scientists themselves: false 'obviousnesses' that, far from being means of making progress, are in reality 'epistemological obstacles' (Bachelard). They must be criticized and dispelled by showing that the imaginary solutions they offer in fact conceal real problems....But it is necessary to go still further: to recognize that it is not by chance that these false ideas reign in certain regions within the domain of scientific activity. They are non-

scientific, ideological ideas and representations. They form what we will provisionally call scientific ideology, or the ideology of scientists. A philosophy *capable* of discerning and criticizing them can have the effect of drawing the attention of scientists to the existence and efficacy of the epistemological obstacle that this spontaneous scientific ideology represents: the representation that scientists have of their own practice, and of their relationship to their own practice. Here again philosophy does not substitute itself for science: it intervenes, in order to clear a path, to open the space in which a correct line may then be drawn.” [15]

Philosophy does not create the problems for scientific practice; instead it asks questions that arise about scientific practice. Scientific practice can exploit philosophy as an ideological substitute for the theoretical basis that it lacks. An example of such an ideological substitute is positivism. To Woods and Grant the problem is the other way around - science is inherently dialectical materialist, so any other philosophical intrusions are idealist and unwanted. For Woods and Grant science is inherently dialectical materialist and this is shown by the scientific practice of the scientists. Any other philosophical evaluation is by definition anti-scientific. But for Althusser science uses philosophy to gloss over its theoretical problems and so science is not inherently dialectical materialist. Dialectical materialism is used to oppose the idealism within science. To Althusser it is the role of dialectical materialism to oppose spontaneous scientific ideology. Woods and Grant would deny the ideological problem of spontaneous scientific practice because to them science has an inherent telos of considering objects in dialectical materialist terms.

Althusser argues that all science is ideological and this is connected to the dominant ideology within society. Philosophical questions cannot produce a science, but they help to pose philosophical questions about scientific problems. In contrast to this, Woods and Grant do not envisage scientific epistemological problems because dialectical materialism has supposedly already resolved them. To Woods and Grant dialectical materialism only adds to the completion of science, whereas Althusser acknowledges the incompleteness of science and philosophy.

Althusser explains that a philosophical intervention is theoretical, but theoretical ideologies are not philosophical, because philosophy acts to demarcate the sciences from theoretical ideologies, and the relationship between philosophy and the sciences constitutes the specific determination

of philosophy. In other words "outside of its relationship to the sciences, philosophy would not exist". [16]. In their scientific practice scientists spontaneously produce philosophical rationalization, especially at a time of the crisis of science which calls into question the coherence of the earlier theory. Their reaction to the crisis may be to defend a religious philosophy of science or to defend a scientific philosophy of science made by scientists, which is also anti-materialist. Generally speaking scientists who cannot overcome the crisis or upheaval in science develop their own spontaneous philosophy of science. This represents the contemporary form of the struggle between materialism and idealism. Contrary to Althusser, Woods and Grant would not recognize the crisis in scientific theoretical development, because all science is in itself a complete addition to dialectical materialism. Thus Woods and Grant would not recognize the significance of the spontaneously produced philosophies of the scientists as the basis to oppose dialectical materialism, for they would contend that lack of support for dialectical materialism is merely due to misunderstanding and the influence of bourgeois ideology. Against this Althusser shows why the very development of science, which occurs through crisis, takes the form of a scientific philosophy - dialectical materialism - which is in struggle with a pseudo-scientific philosophy produced by the scientist.

Althusser outlines specifically the content of SPS (the spontaneous philosophy of the scientists). This consists of Element 1: a belief in the real external and material existence of the object of scientific knowledge, and Element 2: reflection on the scientific practice by idealist philosophies of science. So Element 1 is materialist and it is dominated by Element 2, the idealist. It is in the interests of scientists to change the existing balance of power between Element 1 and Element 2. This cannot be achieved internally within the science itself. [17]

So Althusser is arguing that in order for science to fully realize its material practice, and to discard its idealism, the external role of materialist philosophy is required, or the alliance of scientists with materialist philosophy. In contrast Woods and Grant leave it to science to realize its materialism, because this materialism is spontaneously self-evident and so scientific practice does not require external support. Thus to Althusser we are attempting to overcome the spontaneous limitations of existing scientific practice, whereas Woods and Grant downplay the problem of spontaneity, and consider the scientists' practice as inherently materialist and not dominated by idealism.

and Grant can only provide a political answer to this question. They maintain that science, as with chaos theory, continually confirms dialectics, but the importance of dialectics is denied by the scientists because of anti-communism. [20]

Scientists are hostile to Marxism because of its revolutionary implications. This point has some obvious validity, but Woods and Grant fail to connect it to the domination of science by anti-Marxist philosophical trends such as empiricism and anti-realism. The main reason scientists are indifferent towards Marxism is because they believe it has little relevance for their scientific practice. Woods and Grant are probably right to say that scientists uphold evolutionary theories against revolutionary theories, and so they have a one-sided view of the relationship between evolution and revolution. But from the point of view of the scientists, evolutionary theory seems to be more explanatory than dialectical leaps from quantity into quality. Woods and Grant do not tackle these points because in the last analysis they want to argue that despite the prejudice against Marxism the spontaneous practice of the scientists still confirms Marxism. In other words Woods and Grant have to explain the lack of popularity of Marxist dialectics as an expression of bourgeois ideological prejudice and on the other hand they eclectically argue that science continually confirms Marxism. How do we explain this contradictory approach? The answer is that it follows from a positivist perspective according to which science ultimately provides the answers to questions about objective reality, whilst philosophy merely summarizes the results of scientific practice. Woods and Grant would argue that even reactionary scientists can obtain dialectical-inspired results, though they may deny the significance of the results. Evolutionary theory is an obvious illustration of this point. Scientists would deny that their findings confirm Marxism, but to Woods and Grant such conscious denials do not outweigh the objective confirmation of dialectics in their scientific practice. Thus Marxism is automatically confirmed and realised in a predetermined teleological manner, and this process will be confirmed in the future:

“Scientists who have never read a word of Marx or Hegel, have independently arrived at many of the ideas of dialectical materialism. We are firmly convinced that the future development of science will confirm the importance of the dialectical method, and that those who pioneered it will finally obtain the recognition which has been denied them.” [21]

WOODS AND GRANT AND THE ONTOLOGY AND LOGIC OF DIALECTICAL MATERIALISM

Woods and Grant define dialectics in the orthodox terms of contradiction, transformation, motion and change, and ontologically they uphold Engels's dialectics of nature and the laws of quantity into quality, interpenetration of opposites, and negation of the negation. Contradiction is the highest ontological law. Woods and Grant use many examples in order to substantiate their approach, but their use of modern examples does not seem to go beyond the orthodox approach of Engels. Woods and Grant's approach is also an expression of Engels's dialectics of nature and its universal ontology to explain events within nature and society. For example, Woods and Grant make an analogy of, on the one hand, the relationship between the individual and objective material conditions in a revolutionary situation with, on the other, chemical processes of the dialectics of nature being expressed within social reality. [22]. Woods and Grant use the dialectics of nature in order to argue that there is an identical relationship between ontology and epistemology. This represents Bhaskar's epistemic fallacy of equating the laws of thought with the laws of reality in a reductive manner:

"Dialectics envisages the fundamental processes at work in the universe, in society and in the history of ideas, not as a closed circle, where the same processes merely repeat themselves in an endless mechanical cycle, but as a kind of open-ended spiral of development in which nothing is ever repeated exactly in the same way. This process can be clearly seen in the history of philosophy and science. The entire history of thought consists of an endless process of development through contradiction. A theory is put forward which explains certain phenomena. This gradually gains acceptance, both through the accumulation of evidence which bears it out, and because of the absence of a satisfactory alternative. At a certain point, discrepancies appear, which are initially shrugged off as unimportant exceptions. Then a new theory emerges which contradicts the old one and seems to explain the observed facts better. Eventually, after a struggle, the new theory overthrows the existing orthodoxy. But new questions arise from this which in turn have to be resolved. Frequently, it appears that we return again to ideas which were earlier thought to be discredited. But this does not mean a return to the starting point. What we have is a dialectical process, involving a deeper and deeper understanding of the

workings of nature, society, and ourselves. This is the dialectic of the history of philosophy and science.” [23]

Formally Woods and Grant use contradiction to define the relationship between thought and reality, and this is why theories become inadequate, because they no longer explain reality in an adequate manner. But the rigid identity between thought and reality in their understanding of dialectics leads Woods and Grant to argue that theory continually develops in an explanatory manner, so contradiction between thought and reality is always resolved in a teleological manner, the old being inexorably superseded by the (more explanatory) new.

Woods and Grant analyse the role of logic which is defined as a process of abstraction about the world, and which reflects reality. Once again Woods and Grant do not develop a process of self-criticism of their epistemological premises. In this instance they do not challenge the concept of reflection to understand reality. However, Woods and Grant do refer to the one-sidedness of abstraction and they make the important point that we should not forget this one-sidedness. But in overall terms abstraction, for Woods and Grant, is a teleological process of reflecting accurately through the process from the concrete to the abstract and then arriving at a higher concrete:

“Without abstraction it is impossible to penetrate the object in “depth”, to understand its essential nature and laws of motion. Through the mental work of abstraction, we are able to get beyond the immediate information provided by our senses (sense-perception), and probe deeper. We can break the object down into its constituent parts, isolate them, and study them in detail. We can arrive at an idealised, general conception of the object as a “pure” form, stripped of all secondary features. This is the work of abstraction, an absolutely necessary stage of the process of cognition.” [24]

Woods and Grant do refer to the limitations of abstraction in which the abstract is posited as the ideal, and the concrete defined as the inferior aspect of reality. [25]. But this problem is compartmentalized as a problem for idealism, rather than a problem of materialism. On the other hand Woods and Grant are critical of a crude materialist view which denies the role of abstraction. Ultimately they overcome both types of one-sidedness by referring to the

correspondence between thought and reality. In contrast Bhaskar's intransitive and transitive relationship (which I dealt with in earlier chapters) considers the transitive to be the abstract which is trying to define the complex concrete of the intransitive. Thus out of epistemological necessity we constantly make abstract conceptions about the concrete intransitive. In other words reality can be knowable, but there are no epistemological guarantees that it can be known. Against this Woods and Grant try to defend the epistemological guarantee between the abstract and concrete as shown by their emphasis on reflection theory. This reductive approach of correspondence can be illustrated by the following comment: "The history of science is characterised by an ever-deepening process of approximation." [26]. Thus: "The validity of forms of thought must, in the last analysis, depend on whether they correspond to the reality of the physical world. This cannot be established a priori, but must be demonstrated through observation and experiment." [27]. In other words the reductive identity of thought and reality, subject and object, is an expression of a correspondence which is confirmed through the ever-deepening knowledge of scientific practice.

In their brief summary of the history of philosophy, Woods and Grant refer to Hegel's conception that contradictions exist in reality and thought, but this is given only formal importance because Hegel is considered to have a reflectionist epistemology, which justifies a teleology of knowledge formation - in other words thought ever more profoundly knows reality. [28]

In this chapter I have argued for the superiority of Althusser's conception of the relationship between philosophy and science over that of Woods and Grant, which is an orthodox Marxist (and positivist) view of dialectical materialism and the role of philosophy. Contrary to Woods and Grant, Althusser outlines a creative role for materialist philosophy according to which it is employed to counter idealist philosophies within the spontaneous philosophy of scientists. In this way, according to Althusser, philosophy can help science to more accurately reflect reality especially during crises of science.

DOES GEORGE NOVACK'S DIALECTICAL MATERIALISM CONSTRUCT A VIABLE ALTERNATIVE TO JOHN DEWEY'S PRAGMATISM?

John Dewey developed the pragmatist challenge to existing philosophy. All existing philosophy was based upon a passive and contemplative understanding of ontology as static being, which separated theory from practice. [29]. This led, according to Dewey, to an emphasis upon epistemological certainties and the reductive reflection of being in thought. Existing philosophy justifies a spectator theory of knowledge that separates appearance from essence in a contemplative manner, and denies the important social and cooperative role of practice. Dewey maintains that science expresses the point of view of pragmatism in terms of the dynamic intentionality of human practice, in contrast to idealism, empiricism and realism. [30]

Pragmatism rather than empiricism shows the active relation of sense perception to ideas. Pragmatism develops this dynamic and intentional content to reality by denying the realist emphasis upon the externality of material reality. Realism, according to Dewey, adapts to existing conditions and so cannot sustain emancipatory practice. It only sustains a contemplative cognitive subject. Realism and idealism separate the world into rigid subject and object dichotomies that do not explain the intentionality of human activity which is not reducible to the idealist or realist transcendental antecedent cognitive subject contemplating a passive reality. For Dewey, the ontological and epistemological criteria of pragmatism is most compatible with recognising the changing character of reality in praxis terms.

In this ontological context realism, in contrast to pragmatism, according to Dewey, constitutes another form of the alienated consciousness of contemplative philosophy. Realism would rationalise the alienated philosophical consciousness through its own relegation of the world of actual experience, contingent and uncertain practical activity, to the realm of misleading phenomenal forms. Instead, for realism, according to Dewey, real philosophical and scientific knowledge is defined in Kantian terms as being behind these misleading appearances. So the acceptance of a mystical essence of reality in order to avoid the important ontological and epistemological implications of a reality of actual practice, is typical of the contemplative and elitist character of realism.

But Dewey's emphasis on practical activity as the basis of the ontological character of reality and the character of cognition, is by its own definition an irrealist approach. Why is it possible to draw this conclusion? It is because Dewey equates the philosophical standpoint of conception of an independent reality - the transitive and intransitive - as identical to the epistemological denial that practical activity is central to understanding reality and cognition. Realism, for Dewey, is essentially a denial of a praxis ontology of uncertainty and contingency. Instead realism is only another form of the dualist approach of contemplative philosophy combined with epistemological certainty. It is Dewey who has established the philosophical demarcation between realism and his own pragmatic adherence to irrealism. This approach shows that all forms of contemplative philosophy are a separation of theory and practice: "the beliefs connected with action are taken to be uncertain and inferior in value compared with those inherently connected with objects of knowledge". [31]. So whilst philosophy has placed emphasis upon the role of science, this still does not mean that a new emphasis on practical activity is evident within philosophical discourse.

What are the epistemological implications of Dewey's approach? Dewey has shown that an ontological and epistemological emphasis upon practice is not compatible with realism. Realism is another form of contemplative philosophical consciousness, in which there is a projection of philosophical premises from the realm of reality as practical activity, to an ontologically idealised hidden realm behind the limitations and uncertainties of practical activity. This ontological idealist realm of higher reality requires truths of a dualist character. [32]. The result of realism and other forms of traditional philosophy is to contrast practical activity with philosophical knowledge of a distinct and higher independent reality. In other words a separation of theory and practice. This may realise philosophical truths in the realm of ideas, but at the expense of undermining the practical realization of ideas. Thought separated from action in the form of the search for epistemological certainty, can only undermine the achievement of the practical tasks of human activity. [33]. Thus the renunciation by philosophy of the attempt to comprehend reality independently of human activity, can achieve the further development of philosophy in ontological and epistemological terms.

In other words, according to Dewey, only through the rejection of realism, and its alienated approach, can philosophy acquire an emancipatory content in concrete political terms. The very

development of scientific knowledge in the course of human practical activity has shown that the concept of reality independent of, or in a primary relation to, human activity, is a philosophical illusion which represents an epistemological obstacle to constructing the premises of philosophy and science in more pragmatic terms. For science in practical terms has shown that the relation of being to knowledge is a false epistemological question, a question which has only secondary relevance for understanding the ontological character of practical activity. For Dewey, if philosophy were to abandon its supposed knowing of ultimate reality and instead tried to comprehend the ontological significance of practical activity, it could overcome the philosophical crisis of its relationship to science.

The intellectual and cognitive understanding of things has no meaning in purely theoretical terms unless it is related to the means and methods of practical activity. Intellectual activity, in terms of the aim of theoretical epistemological activity, has an implicit ontological basis in the need to realise and understand practical activity. It has been the hierarchical character of knowledge production within an elitist society which has obscured the recognition of the practical content of knowledge. Instead the advance of scientific knowledge has not been reduced to this practical basis, and is rather located within the epistemological premises of how knowledge occurs in philosophical realist, rationalist, and empiricist premises. Consequently it has not been possible to provide practical methods of scientific inquiry which help to establish values and beliefs, when saddled with realist and rationalist philosophical premises. [34]

Novack develops an alternative to John Dewey in orthodox dialectical materialist terms. He is aware of Dewey's irrealism - in his conception of the connection of the subject and object, or intransitive and transitive - but Novack ends up also justifying this irrealism on the basis of philosophical materialism. On the basis of this philosophical materialism, Novack views sensation as the foundation of knowledge. "Sensation is the primary source of knowledge. All our information about the objects in the outside world comes to us in the first place through the channels of the senses." [35]. This in turn upholds a phenomenalist equation of objective reality with the role of sensation, even though formally Novack tries to ontologically separate reality from the role of sense perception. Indeed he accuses Dewey of separating sense perception from objects in the material world. In other words, Novack criticises Dewey for not relating sense perceptions to objects in reductive epistemological terms. [36]

However, Novack most significantly tries to deny the similarity between Dewey's empiricist and instrumental emphasis on practice and the similar emphasis of dialectical materialism. Novack's failure to tackle the similarities concerning the emphasis upon practice means that he has to rely upon a correspondence theory of truth (reflection theory) in order to differentiate Marxist philosophical materialism from pragmatism. Instead of practice defining the relationship between thought and reality, it is a crude mirror relationship that links reality with thought. Novack's rear-view mirror analogy doesn't self-critically explain that whilst it may have a limited practical function for comprehending oncoming cars, it is not a reliable ontological and epistemological guide concerning the relationship between independent reality and thought:

"Just as a rear-view mirror would be useless and dangerous if it did not convey a reliable image of what was behind the vehicle, so sensations, perceptions and the conceptions based on them would be misleading and worthless unless they indicated to some extent what is and, conversely, what is not." [37]

Novack argues that Dewey denies that practice is a guide to action within objective reality. But this observation does not question Dewey's ontological approach of equating the intentional character of human activity with real mechanisms and tendencies. Dewey reduces ideas to their 'usefulness', but Novack does not provide an alternative to this, because practice is still, for him, the main criteria of the reflection of reality in cognition and ideas, albeit with a formal reference point in objective reality. But as with Dewey's pragmatism, dialectical materialism also has practice actually defining reality, with ideas reflecting this ontological scheme. Novack would deny this and tries to insist upon the materialist content of ideas within external and changing objective reality, which contrasts with the contingent and fluid definition of reality of pragmatism. [38]. So there *is* an ontological distinction between Novack and Dewey when defining reality, but this still does not overcome the common emphasis they give to practice.

Novack does make a fundamental criticism of Dewey, arguing that Dewey defines objects not in terms of their objective content outside of human knowing and consciousness, but rather objects are subjectively defined as objects for us. [39]. Novack defines this approach as empiricist because objects of experience, via practice, ontologically define the world. But Novack still

ultimately agrees with Dewey in considering practice as the main basis to comprehend reality. [40]

Hence Novack differentiates Dewey's pragmatism from Marxism in historical materialist terms, but this still does not represent fundamental ontological or epistemological disagreement, and Novack ends up conceding that pragmatism is not philosophically conterposed to Marxism, because of its emphasis upon practice. There is an explicit acceptance by Novack of the possibility that Marxist dialectical materialism has a philosophical approach similar to pragmatism: ".....[pragmatism's] stress upon the primacy of practice in human life and thought; its insistence that ideas verify their truth and worth by submitting to the test of practical consequences; its utilitarianism which, in its boldest representatives, verged upon materialism; its evolutionary optimism." [41]

In Novack's book *Empiricism and its Evolution* ideas are related to experience and sense perception on the basis of phenomenalist materialism, and so empiricism becomes inconsistent materialism, which means empiricism is not challenged by a critique of sense perception, but is rather located as epistemological truth within a materialist ontology of reality. [42]. Novack does outline the epistemological difficulties of empiricism in trying to explain the relationship between the underlying realities of things with their sensuous manifestation. [43]. But he rejects the role of a priori conceptual philosophical reasoning as an arbitrary attempt to elaborate a theoretical model of reality, and instead of realist models of reality, such as those based upon Bhaskar's intransitive and transitive model, being or dynamic processes of reality are better comprehended by empirical procedures related to experience and sense perception. [44]

Using Berkeley and Hume as the proponents of subjective idealist empiricism, Novack argues that contemporary empiricism, as with Mill and Mach, epistemologically emphasises sensations in a manner which denies objective reality. [45]. Nevertheless, to Novack this does not show that empiricism is epistemologically opposed to a realist conception of reality. Rather Novack thinks it is necessary to demarcate the rational kernel of empiricism from its modern subjective idealist trajectory and incorporate it into dialectical materialism. For empiricism has epistemologically shown how sense perception and experience in relation to human social practice are the basis of understanding reality in theoretical terms. Sense perception is the

starting point and the stumbling block to scientific advance. [46]. Novack continues to conciliate empiricism with an attempt to reconcile empiricism and rationalism through an emphasis upon praxis in empiricist and phenomenalist terms. This is a praxis which is incorporated into a practical materialist ontology based upon a reconciliation of the importance of sense perception and rational understanding that is connected to collective social practice in historical terms. [47]

Novack goes on to gloss over these crucial epistemological accommodations to empiricism by elaborating how in ontological terms it is Marxist philosophy and not empiricism that comprehends the dialectical processes of nature and human social activity, because it is the requirements of class struggle which show the limits of empiricism and the necessity to go beyond this form of bourgeois ideology. Nevertheless, despite this partisan rejection of empiricism in historical materialist terms Novack argues that it is necessary to differentiate the true kernel of empiricism from its falsity. This is based upon the epistemological view that both materialism and empiricism are based upon the primacy of sense perception. [48]. So the epistemological distinction between materialism and empiricism is narrowed down to the view that materialism rejects a correspondence between thought and reality in sceptical subjective idealist terms, and empiricism cannot establish a viable ontology of reality. But even if we accept that Marxist materialism can establish a distinct ontology of social reality and formally shows the connected epistemological limitations of empiricism, this does not mean that Novack actually has established the epistemological limitations of empirical realism in a materialist form. Novack's reliance upon phenomenalist materialist epistemology means that he upholds an irrealist epistemological standpoint of seeking epistemological guarantees of truth through a correspondence approach.

Why is the relationship between pragmatism and empiricism outlined by Novack in irrealist terms? Novack's defence of phenomenalist materialism is the basis for his critique of pragmatism as a step backwards from empiricism. For Novack the empiricist emphasis on sense perceptions is not necessarily retrogressive. Instead Novack wrongly thinks he can overcome the regressive aspects of empiricism by simply linking it to a materialist epistemology of the relationship between thought and reality:

“Dewey's denial that sensation has any intrinsically cognitive elements.....opened the way for the affirmation of the fundamental thesis of the pragmatic and instrumentalist theory of knowledge that ideas do not disclose the content of reality but are invested with truth by human action alone.

The instrumentalist epistemology is detached from objective reality at both ends of the acquisition of knowledge. In its origins, sensation is regarded as without cognitive links with the external world; in its ultimate results, concepts allegedly enable us to reshape things without necessarily corresponding in any respect with the content of reality.

Thus Dewey's discarding of the empirical principle that sensation was the ground of knowledge served to accentuate and consummate the departure from objectivity prefigured in the pristine ambiguity of empiricism about the relations between our sensations and their material causes.” [49]

So for Novack the empiricist emphasis on sense perceptions is not necessarily retrogressive. Instead Novack wrongly thinks he can overcome the regressive aspects of empiricism by simply linking it to a materialist epistemology of the relationship between thought and reality. In other words, he wants to graft empiricism (and pragmatism) onto materialism. He does not recognise that materialism and pragmatism are essentially irreconcilable opposites.

NOVACK'S EPISTEMIC FALLACY

Novack's work on logic represents an epistemic fallacy because his logic is equated with ontology. In his work on logic: *An Introduction to the Logic of Marxism*, dialectical logic expresses the long development of history as illustrated by practice, and it represents the logic of a constantly changing reality which cannot be reduced to the laws of a formal logic. Logic expresses the fluidity of the ontological principles of reality. [50]. The flexibility of dialectical logic is indicated as a reflection of reality that cannot be reduced to static logical categories. In one sense Novack is showing that dialectical logic expresses non-identity reasoning, because it is the very complexity of dialectical processes in reality which shows there is no automatic correspondence between being and thought. Instead there is only an approximate relationship:

“...the laws of dialectics are in the same boat with the law of value in political economy - and with all other laws. They have reality only as approximations, tendencies, averages. They do not and cannot immediately, directly and completely coincide with reality. If they did so, they would not be conceptual reflections of reality, but that objective reality itself. Although thought and being are interdependent, they are not identical.” [51]

But, on the other hand, Novack cannot accept the possible contradictions and problems present between a dialectical epistemology and reality. Novack's approach represents irrealism because he still reduces dialectical logic to the imperatives of practice, and so reduces reality to the actualist ontology of cause and effect, which is logically and immediately expressed in thought. So he equates dialectical logic with the ontological principles of practice, and causality, which are teleologically realised in class struggle. Thus revolutionary practice is both the foundation of real knowledge, and reductively expresses the dialectical character of historical reality as on the one hand the decline of the capitalist system, unable to meet human needs, but on the other hand with the telos of social progress. In this ontological context the revolutionary character of Trotskyism expresses the specific essence of history. [52]

For Novack the logic of reality expresses the revolutionary role of the proletariat, in contrast to the static role of the bourgeoisie. Thus Novack discusses negation, essence, appearance and necessity, in terms of an eclectic reduction of dialectical categories to a teleological philosophy of history as the realisation of the imperatives of revolutionary practice. The appearance of capitalism shows the existence of a powerful system, but its essence is that of decline and negation by class struggle as the expression of historical necessity and rationality. [53]. This correspondence of reality and thought is projected back onto a dialectics of nature, in which the negation of the negation is realised in nature and society:

“The blossom that negates the bud becomes itself negated by the fruit. Capitalism which overthrows feudalism becomes itself overthrown by socialism. This process is known in logic as the law of the negation of the negation.

In this dialectical movement, in this passage out of and into opposition resides the secret to the movement of all real things. Therefore here is the mainspring of the dialectical method of logic, which is a correct conceptual translation of the processes of development in reality.

Dialectics is the logic of matter in motion and thereby the logic of contradictions, because development is inherently self-contradictory. Everything generates within itself that force which leads to its negation, its passing away into some other and higher form of being.” [54]

Thus philosophical truth becomes historical truth, in which dialectical logic is realised as the negation of the negation in the form of a series of progressive historical stages. The historical character of philosophical categories such as abstract and concrete, essence and appearance, is expressed in the teleological terms of reality as dialectical and progressive, thus creating a reductive unity between class practice with the theory of a revolutionary party, which leads inevitably to revolution:

“This is what is meant by the logic of history. This is an outline of the dialectics of class struggle in our time, which moves from one stage to the next until it results in the revolutionary overthrow of the old world and the creation of a new social system. The materialist dialectic we have been studying derives its importance from the essential part it plays in this world historical process. The abolition of capitalism through the triumph of socialism will be the final vindication of the truth, the power and glory of materialist dialectics, the logic of Marxism. The task of revolutionary socialists is to realize this in life.” [55]

Thus the development of class consciousness is equated with the ontological truths of a teleological philosophy of history. This reductive and automatic correspondence between being and thought cannot allow for ontological complexity in the history of social reality, and instead authorizes the view that philosophy is about providing ready-made teleological truths. Novack relies upon spontaneity and experience to justify his reduction of the role of philosophy to adherence to a philosophy of praxis with teleological imperatives. Consequently, for Novack, the development of Marxist philosophy was not about a break with Hegel but was instead a materialist inversion and retention of Hegel’s dialectical categories and philosophy of history. For Novack, Hegel understood the telos of philosophical thought and reality through the reductive identity of being and thought, an understanding which was retained by Marx and Engels. For Marx and Engels agreed with Hegel that philosophical development expressed historical development, but upon a materialist rather than an idealist teleological perspective. [56]

In this chapter I have explored the instrumentalist and irrealist attitude to knowledge of the pragmatist, John Dewey. I have gone on to consider the flawed materialist critique of that pragmatism by George Novack. I have tried to show that, in a materialist form, Novack justifies another idealist Hegelian philosophy of history by equating the epistemological superiority of dialectical methodology with ontological clarity. This irrealism is combined with a philosophical materialist conception of sense perception as the epistemological basis of Marxism. This is demonstrated by the emphasis given to experience and practice within a telos of history.

SECTION THREE: THE NEGLECTED DIALECTICAL MATERIALISM

This section will attempt to show that there is an alternative to the partisan and positivist decline of dialectical materialism.

CHAPTER SIX: THE RELATIONSHIP BETWEEN THOUGHT AND REALITY IN DIETZGEN'S DIALECTICAL MATERIALISM

Joseph Dietzgen has elaborated an important form of dialectical materialism. This has an emphasis upon ontology as the basis for understanding epistemology, but Dietzgen rejects adherence to a reflection theory of knowledge. [1]. Dietzgen contends that developing an understanding of the development of thought in general, and of scientific knowledge in particular, will help to distinguish between truth and error. [2]. Speculative philosophy has tried to uphold the self-sufficient primacy of ideas organised into self-sufficient philosophical systems. But these very premises are contradictory, in that these ideas are ultimately an expression of the material world. Hence speculative philosophy is untenable because it tries to deny that ideas are connected to understanding material objects in the material world. This is why speculative philosophy ultimately accepted the superiority of an empirical emphasis upon knowledge, via sense perception and experience of the world, or tried to uphold idealism in increasingly irrational terms. [3]

Whilst ideas are about objects in the material world, ideas and thoughts are not identical to these objects. The object retains its own qualities that are not reducible to the ideas about it. So the ideas do not primarily define the object - which retains its own independent character. (This seems to express the intransitive and transitive conception of Bhaskar). Nevertheless, ideas about objects have a material content because they are generated by the material world:

“Every definite idea, all actual thought, is identical with its content, but not with its object. My desk as a picture in my mind is identical with my idea of it. But my desk outside of my brain is a separate object and distinct from my idea. The idea is to be distinguished from thinking only as part of the thought process, while the object of my thought exists as a separate entity.

We can make the distinction between thinking and being. We distinguish between the object of sense perception and its mental image. Nevertheless the intangible idea is also material and real. I perceive my idea of a desk just as plainly as the desk itself. True, if I choose to call only tangible things material, then ideas are not material. But in that case the scent of a rose and the heat of a stove are not material. It would be better to call thoughts sense perceptions. But if it is objected that this would be an incorrect use of the word, because language distinguishes material and mental things, then we dispense with the word material and call thought real. Mind is as real as the tangible table, as the visible light, as the audible sound. While the idea of these things is different from the things themselves, yet it has that in common with them that is as real as they. Mind is not any more different from a table light, a sound, than these things differ among themselves. We do not deny that there is a difference. We merely emphasize that they have the same general nature in common. I hope the reader will not misunderstand me when I call the faculty of thought a material quality, a phenomenon of sense perception.” [4]

Contrary to reflectionist epistemologists like Engels, the reference to the desk as a picture in a person’s mind does not express a rigid and inherent relation of correspondence between the thought and the object. Instead, Dietzgen is showing that the relation of subject (as thought) and the object is that of distinction and possible non-correspondence; the object is not mechanically and automatically reflected in thought but rather the object represents an ontological capacity to be known in thought. Thus it is the ontological coherence of the object which enables it to be potentially known in thought, rather than a supposed epistemological guarantee of an inherent relation between thought and object. So Dietzgen’s standpoint is that the objective and material is the primary basis for the cognitive capacity of the subject to recognize and understand the object. In contrast, the approach of Engels is to accommodate to an idealist view that the subject can know and reflect the object because of the subject’s epistemological and reflectionist qualities. To Dietzgen, in ontological terms, thought has the potential capacity to know all the objects in the material world because of its distinctive material character as reasoning and understanding about reality. This epistemological capacity does not define objects because: ‘the objects are not wholly dissolved in the understanding’. [5]. Hence: ‘thinking [requires] an object that can be thought of, something which is more than our thoughts, something still outside of our consciousness’. [6]. In other words, because it is ontologically impossible for an object to become identical with thought - the tree cannot enter our heads - this means we can only

develop images of the object in general terms, and cannot express totally their specific and complex variety. So there is always an ontological and epistemological distinction between the material object and thought, or the: 'things outside are different from the things in our thoughts'. [7]. So the concrete specificity and tangibility of objects in the material world are known by thought in terms of the organisation of sense perception in abstract, general and unitary terms. Thought is not possible without an ontological relationship with other objects in the material world, but thought can only comprehend: 'the perceivable image of an object and not the object itself'. [8]. This ontological and epistemological distinction between the object and thought does not mean the object is an unknowable thing-in-itself in relation to thought. Rather that thought can comprehend the general qualities of objects: 'the faculty of thought has everything for its object, we now understand this to mean that all objects have certain innumerable, but concrete, qualities which are perceptible by our senses, and in addition thereto the general spiritual quality of being thought of, and understood, in short, of being the object of our faculty of thought'. [9]

Indeed it could be argued that Dietzgen is emphatically opposed to a reflection epistemology, because he maintains that thought is not a copy image of reality: "It is with the thinker as it is with the painter. They both search for a likeness of reality and truth. In painting as in understanding there are excellent pictures and bad ones. In this respect one may make a distinction between true and false thought, but you must always know that even the unsuccessful portrait has some likeness, and that even the most accurate likeness is yet far from being in perfect harmony and identical with the object." [10]. This metaphorical and descriptive reference to painting may seem to actually be a vindication of a copy theory of truth, but actually Dietzgen is showing that this metaphorical stance is epistemologically unsustainable. For even the most perfect and immaculate painting is not in a situation of reflective harmony with reality. On the contrary it will leave out important and significant aspects of ontological truth about reality because of the irreducible differences and relation of non-identity between being and thought. Furthermore, Dietzgen has a substantial ontological reason for rejecting a reflection epistemology. He elaborates an approach that shows the infinite nature of the universe and therefore indicates that knowledge can never be complete or an immaculate reflection of reality. Instead, knowledge can only be a partial and approximate expression of the universal and infinite nature of reality: "Yea, even the smallest part of the world is so inexhaustible that the most

talented can never acquire all the knowledge necessary to understand entirely even the most minute object.” [11].

Given the ontological basis to materialism, how do we explain the development of idealism? The difference between an object and its expression in thought can generate the idealist illusion that thought expresses autonomous reason and separation from the objects in the material world: “The object, the content and the function of thought apparently coincide. Reason deals with itself, considers itself as an object and is its own content. But nevertheless the distinction between an object and its concept, though less evident, is just as actual as in other cases. It is only the habit of regarding matter and mind as fundamentally different things which conceals this truth. The necessity to make a distinction compels us everywhere to discriminate between the object of sense perception and its mental concept.” [12]. This comment shows that unlike Engels’s often rigid and dogmatic distinction between idealism and materialism, Dietzgen is outlining that idealism is a problem in the very way we try to understand and develop knowledge about the world. The very act of reasoning creates its own form of idealist illusion that we can autonomously and primarily get to know the world through the actions of the mind. Hence idealism is more than an alienated product of specific historical conditions, it is also an expression of the genuine difficulties we have in getting to know the world. However, Dietzgen has a philosophical answer to this enduring problem of idealism – unlike Engels he is not content to argue that the resolution of the problem of idealism is represented by the metaphorical extraction of the rational and materialist content of Hegel’s dialectic. Rather, Dietzgen is trying to elaborate the ontological premises of an alternative to the enduring problem of idealism. Ontologically thought is not possible without a mind, and its relation to sense-perceived objects, and this creates the epistemological capacity to create concepts about objects. Mind is able to develop the capacity to know things because it can advance from instinctive everyday knowledge to ontological and conceptual reasoning about objects in the material world. The sensually perceived and concrete specificity of things becomes the objective basis for thought to consider these objects in terms of generalised concepts. Hence practical activity, and its relation to sense-perceived objects, becomes interpreted by thought in terms of generalised conceptual reasoning: “If the development of the general out of the concrete constitutes the general method by which reason arrives at understanding, then we have fully grasped reason as the faculty of deriving the general out of the concrete.” [13]. Ontologically speaking, the infinite variety of objects within the material universe represent the basis for knowledge by the mind, but this

material world is independent of mind and is not created by it. However, whilst: 'reason cannot produce such material effects out of themselves', the ontological character of the world is expressed by its inter-relations, and this means mind is a material aspect of the interconnected material world. [14]. It follows that there are no independent, or atomised, things-in-themselves, and mind as material has the universal capacity to know the infinite variety of the material world, but this does not imply that mind primarily, or independently, defines the world. [15]

This is why the faculty of thought has a material basis in sense perception of the world. So reasoning is connected to objects in the material world, and the elaboration of their general qualities: "Reason being unable to exist without some objects outside of itself, it is understood that we can perceive "pure" reason, or reason "itself", only by its practical manifestations." [16]. As mind and thought is material, and so reasons about the material world (organises sense perceptions), it has the epistemological capacity to recognise the ontological contradictions within the inter-related phenomena of the material world. This standpoint is not an expression of what Bhaskar called the epistemic fallacy because the contradictory nature of the world is not defined by mind, or the cognising subject, but rather the ontological character of the material world is expressed by the material content of thought. If thought was not material, it would not have the epistemological capacity to define the primary material character of the world. Thus Dietzgen is able to maintain the realist distinction between the intransitive and transitive, or subject and object, and so does not define the object by the subject, whilst also avoiding dualism in his conception of thought as material within a material world.

Is Dietzgen's epistemology an improvement upon that of traditional materialism, such as reflection theory? In contrast to Engels's tendency to assume an identity of subject and object, Dietzgen is developing a more sophisticated epistemology. Dietzgen accepts that science attempts to understand the nature of things, and this process of analysis is not identical to sense perception. The ontological status of changing and eternal matter cannot be established by uncritically accepting the primary role of sense perception. This is not to suggest that there is an unknown thing-in-itself that defines the appearance of phenomena. Rather that thought as logic and reason has the epistemological capacity to organise sense perceptions, and thereby show the essential ontological nature of things as parts of a whole within a unified material reality. [17].

material world is independent of mind and is not created by it. However, whilst: 'reason cannot produce such material effects out of themselves', the ontological character of the world is expressed by its inter-relations, and this means mind is a material aspect of the interconnected material world. [14]. It follows that there are no independent, or atomised, things-in-themselves, and mind as material has the universal capacity to know the infinite variety of the material world, but this does not imply that mind primarily, or independently, defines the world. [15]

This is why the faculty of thought has a material basis in sense perception of the world. So reasoning is connected to objects in the material world, and the elaboration of their general qualities: "Reason being unable to exist without some objects outside of itself, it is understood that we can perceive "pure" reason, or reason "itself", only by its practical manifestations." [16]. As mind and thought is material, and so reasons about the material world (organises sense perceptions), it has the epistemological capacity to recognise the ontological contradictions within the inter-related phenomena of the material world. This standpoint is not an expression of what Bhaskar called the epistemic fallacy because the contradictory nature of the world is not defined by mind, or the cognising subject, but rather the ontological character of the material world is expressed by the material content of thought. If thought was not material, it would not have the epistemological capacity to define the primary material character of the world. Thus Dietzgen is able to maintain the realist distinction between the intransitive and transitive, or subject and object, and so does not define the object by the subject, whilst also avoiding dualism in his conception of thought as material within a material world.

Is Dietzgen's epistemology an improvement upon that of traditional materialism, such as reflection theory? In contrast to Engels's tendency to assume an identity of subject and object, Dietzgen is developing a more sophisticated epistemology. Dietzgen accepts that science attempts to understand the nature of things, and this process of analysis is not identical to sense perception. The ontological status of changing and eternal matter cannot be established by uncritically accepting the primary role of sense perception. This is not to suggest that there is an unknown thing-in-itself that defines the appearance of phenomena. Rather that thought as logic and reason has the epistemological capacity to organise sense perceptions, and thereby show the essential ontological nature of things as parts of a whole within a unified material reality. [17].

In ontological terms the world is a substance, its parts are attributes, and we can know the world through generalised abstraction from the multiplicity of sense perceptions. Reason enables us to recognise the world as substance, but this does not mean reason created the world. Rather reason generates the concept of substance from the material content of things, and by theoretically generating from sense perception: “[t]he mind proves itself to be the creator of the abstract concept of substance. But it did not create this concept out of nothing. On the contrary, it generated the concept of a world substance out of attributes, it derived truth out of manifestations of things.” [18]. Sense perception can be misleading and complicated, and this has led to the idealist illusion that a thing-in-itself independently defines the nature of things. Certainly: “The faculty of thought in touch with sense perception produces the nature of things.” [19]. But thought cannot be separated from the material basis of things, and this means that the objective basis of thought is sense perception, which is the material content for thought to organise and generalise concepts about the world. On this epistemological basis practice is not primary in relation to theory, because practice expresses sense impressions and theory defines the nature of things from sense impressions:

“The senses reveal to us the substance of the universe in the forms of concrete qualities, in other words, the nature of perceptible matter is revealed to the faculty of thought through a variety of concrete forms. It is not perceived as a general essence, but only through interdependent phenomena. Out of the interdependence of the sense perceptions with our faculty of thought there arise quantities, general concepts, things, true perceptions, or understood truths.

Essence and truth are two terms for the same thing. Truth, or the essence and nature of things, is a theoretical concept. As we have seen, we receive impressions of things in two ways, viz., a sense impression and mental impression, the one practical, the other theoretical. Practice furnishes us with the sense impression, theory with the mental nature of things.

Practice is the premise of theory, sense perception the premise of the nature which is also called the truth. The same truth manifests itself in practice either simultaneously or consecutively in the same place or in different places. It exists theoretically as a homogeneous conception.” [20]

Thought is not primarily concerned with the multiplicity of manifestations of sense perception. Rather, thought tries to establish the true nature of a thing in terms of what is common, or general, to these sense manifestations. Sense perception expresses relative truth in relation to the

changing multiplicity of things within an infinite universe, and thought tries to establish the 'unity in the multiplicity'. [21]. The dynamic changing character of things means theory is not primary over practice, and practice is not primary over theory, because the one changes into the other within the dynamic inter-connected world. [22].

This conception of the relationship between theory and practice shows another important difference with Engels. To Engels, practice is the dynamic, transforming, and seemingly primary aspect of the passive thing-in-itself becoming the thing-for-us. In comparison Dietzgen's more subtle epistemology has shown that practice can only acquire a truly meaningful and consistently transforming quality when it is aligned to theory (the importance of this difference will be shown in the following text of this chapter). Engels sometimes accommodates to the empiricist view that theory is identical to practice, and so he assumes that sense-impressions of everyday practice are sufficient to bring about the necessary change of the object of cognition. For cognition itself is also reduced to the premises and assumptions of sense-perception. Instead of accommodating to this empiricist view Dietzgen is mindful of the rationalist and Kantian standpoint that interpretation is vital for making coherent and intentional the chaotic and numerous forms of sense-impressions. Thus it would be a caricature of Dietzgen's views to reduce him to the type of crude sensationalist epistemology defended and upheld by some materialists, including on occasion Engels.

Throughout this chapter an attempt is made to show why Dietzgen maintains that ideas have a material character. This conception of ideas as material is of vital importance for understanding Dietzgen's alternative to reflection theory. For the reflection epistemologist ideas are true because they passively reflect or copy the material world. But what is the ontological and epistemological content of these ideas? In other words, are these ideas of a non-material or material character? We have already shown that Engels does not provide a satisfactory answer to this question. In contrast, Dietzgen does try to provide an answer. He argues that the difference between truth and error is relative because all thoughts have their origins in the material world, and they are related to some sense-perceived object within material reality. This is why thought establishes the essential material nature of things: 'the true or essential nature of things is perceived in contact with our faculty of thought'. [23]. This equation of thought with defining the nature of things could be considered idealist, but Dietzgen is trying to show that the material character of thought has the epistemological capacity to know primary material reality.

It is not reason, or abstraction, that defines the truth of thought, but rather a question of whether reason is able to generalise about objects within the material world:

“Therefore it is not abstract truth which is the criterion of true understanding, but we rather refer to that understanding as being true which produces the truth, or the general hall-mark of any concrete object. Truth may be objective, that is to say it must be the truth about some concrete object. Perceptions cannot be true to themselves, they are true only in relation to some definite object, and to some outside facts. The work of understanding consists in the abstraction of the general hall-mark from concrete objects. The concrete is the measure of the general, the standard of truth.” [24]

Thus to define an object by the specific sense-perceived manifestations represents error - and to over-generalise is also error. But it is not sense perception that is the basis of error, because this would suggest that the material basis of sense perception was ‘incorrect’. Rather error is a product of incorrect thought about objects in the material world. This comment seems to be paradoxical because if thought is a product of the material world how can it be incorrect? Hence it would seem that Dietzgen does share the philosophical dilemma of reflectionist epistemology in not being able to explain error about the world. But this would be a premature conclusion to draw. For Dietzgen is actually indicating that error is itself located ontologically within the material world. This is because thought is not autonomous from its material basis in sense perceptions, and so thought cannot establish its own criteria of truth, but is instead in a relation to external material objects. [25]. Thus Dietzgen is aware that the material world is not necessarily and readily accessible to thought – there may be many significant ontological reasons why thought is only able to explain the world in the most limited and inadequate manner. This does not mean that the world is unknowable or essentially incoherent – Dietzgen rejects this scepticism – but he also rejects the epistemological consolationism of reflection theory and the view that thought is in an inherent relation of correspondence to, and truth about, the world.

So if we were to summarise Dietzgen’s differences and similarities with orthodox dialectical materialism the following has been shown. Dietzgen shares with philosophical materialism an emphasis upon sense perception as the objective basis of truth. However, his epistemology is not a reductive defence of reflection theory as a copy of material reality. Firstly, he recognises the complexity of knowledge-formation in that sense perception is not an epistemological

guarantee of arriving at truth about objects. For the process of conceptual thought may not abstract, or generalise, from sense perception in an accurate manner. Secondly, the ontological complexity of the infinite inter-relations of the world can create epistemological difficulties when trying to understand material objects. Hence Dietzgen is challenging any tendency on the part of Engels and other dialectical materialists towards epistemological complacency and absolutism. However, he is still affirming the general superiority of materialism over idealism, although he is aware of important objections to this conclusion. For example, idealism still seems to philosophically dominate scientific practice. So Dietzgen asks, if materialism is able to explain the truth of scientific analysis, why do scientists still justify idealist reasoning about their scientific practice? Dietzgen shows how scientists can still define the world in accordance with the aims of their scientific practice, as with the subjective conception of causality. [26]. The theoretical alternative is to find an a posteriori conception of cause that can be materially located within sense-perceived objects, and is not a priori defined by conceptual reasoning. This is not to deny the role of reasoning for understanding the object, but the reasoning should be about abstraction from objects, and this includes the conception of causality. [27]. Causes are not identical to sense perceptions, but sense perceptions are the objective basis to define causes through reasoning. The actuality of cause is shown through its effects, as indicated by theoretical reasoning about sense perception within scientific practice. Then effects become the material basis for another process of causation. Cause is not reducible to sense-perceived experience, but neither is cause an expression of subjective reasoning that is not connected to the material world.

On the basis of the above ontological and epistemological elaboration of dialectical materialism, how does Dietzgen conceive of the relationship between materialism and idealism? His answer is that the one-sidedness of both materialism and idealism has led to a fundamental division within the history of philosophy. Idealism has continued to influence scientific practice because materialism has denied the importance of thought for understanding concrete objects in generalised terms. Materialism reduces thought to sense perception, whilst the idealist separates thought from the material world. So traditional materialism and idealism represent one-sided epistemological conceptions of how to understand the material world:

“The bare materialist principle is inadequate in that it does not appreciate the difference between the concrete and general, because it makes the individual synonymous with the general. It refuses to recognize the quantitative superiority of the mind over the world of sense perceptions. Idealism, on the other hand, forgets the qualitative unity in the quantitative difference. It is transcendental and makes an absolute difference out of the relative one. The contradiction between these two camps is due to the misunderstood relation of our reason to its given object or material. The idealist regards reason alone as the source of all understanding, while the materialist looks upon the world of sense perceptions in the same way. Nothing is required for a solution of this contradiction but the comprehension of the relative interdependence of these two sources of understanding. Idealism sees the only difference, materialism sees only the uniformity of matter and mind, content and form, force and substance, sense perception and moral interpretation. But all these distinctions belong to the one common genus which constitutes the distinction between the special and general.” [28].

Thus Dietzgen is showing, in contrast to Engels’s more emphatic comments, that the materialist/idealist divide is not necessarily a rigid and enduring divide in relation to the problems caused by the one-sidedness of both materialism and idealism. On this view materialism has created epistemological limitations by refusing to accept the importance of the mind for organising sense-perceptions and has instead passively and reductively reduced thought to sense-perception. In contrast idealism has emphasized the reasoning of the mind and has neglected the important relation of sense-perception to thought. Overcoming these aspects of epistemological one-sidedness will not spontaneously overcome the materialist/idealist divide but it will clarify these differences in a new and enriched manner. For example, the materialists have empirically denied the importance of force for understanding matter, whilst the idealists have elevated force over matter. This has led to scientific disputes between materialists and idealists. But science can show the unity between force and matter, and so: ‘we refer to matter as the expression of force and to force as the expression of matter.’ [29]. So whilst it may be possible to differentiate between matter and force in thought, they actually express an ontological unity which one-sided materialism and idealism refuse to recognise. If materialism is philosophically improved it could challenge idealist conceptions of science more effectively. But reductive sense-perceived materialism downgrades the role of theory and so cannot challenge the idealist emphasis upon reason for primarily defining reality. In other words, a truly dialectical form of materialism that emphasizes logic and reason as well as sense perception

and practice can provide a better epistemological alternative to idealism, and in that way transcend the traditional materialist/idealist divide.

In other words, Dietzgen has a limited agreement with Bhaskar (as will be outlined in detail in the next chapter) that the materialist and idealist divide, in its traditional form, can be challenged. It is for this epistemological reason that Dietzgen maintains that it is possible to overcome the differentiation between the real and imagined, because the thought has a material existence. Hence thought and the real are of the same material substance and do not belong to two distinct realms of a diverse ontological content. In contrast, those who uphold dualism – both traditional materialists and idealists – locate two distinct realms of the material and ideal, and on this basis they argue the material or the ideal is primary over the other. “This is made plain by the fact that a sharp distinction is commonly made between that which is real and that which is only imagined, and this difference is exaggerated to such an extent that it appears as if the idea, which indeed is only in the brain, has no existence at all.” [30]. Hence dogmatic materialism maintains that thought does not have a dynamic relation to the material world because it is somehow not material, and idealism denies the importance of the material and places emphasis upon ideas in an autonomous manner. So there is an objective basis for idealism, according to which it seems as if the brain has a self-sufficient spiritual existence and is the primary basis for ideas. Whilst various forms of materialism accept the premises of idealism and bestow an autonomous basis to the ideas of the brain, but simultaneously and formally project a primacy upon matter. In contrast, Dietzgen’s materialist monism ontologically has thought as an abstract expression of the mind - which is a specific part of the material world. In this manner, neither matter nor mind are primary over the other, rather they represent different aspects of the same material world. On this ontological (matter is the unity of the world) and epistemological (thought is part of the materiality of the world) basis the antagonistic divide between materialism and idealism can be overcome: “The thousand year old dispute between the materialists and the idealists turns on the question whether the spirit is material or the world spiritual. Our answer is plain and clear: They both belong together, they together make up the one thing, the thing of all things. Mind and matter are two attributes of the same substance.” [31]

Those who persist in maintaining that there is a basic and continual antagonism between materialism and idealism, such as Engels, Plekhanov, and Lenin, are essentially rejecting the material unity and oneness of the world - which shows that the question of the primacy of matter

or mind is ontologically without meaning. Instead, traditional materialism and idealism are two one-sided and limited ways of considering the relationship between thought and being. Materialism emphasizes being and minimizes the significance of thought, whilst idealism gives a primacy to ideas over their actual material being. The real dialectical basis of the relationship between matter and ideas is to consider ideas as a specific and active part of matter. Ideas have a changing and dynamic content within a material world. With this ontological and epistemological understanding the materialist/idealist divide can be transcended.

Dietzgen also challenges another deficiency in Engels, in that Dietzgen elaborates upon the importance of dialectical logic, which is left untheorised by Engels. Firstly the ontology of reality is the basis to understand logic. So to Dietzgen logic is not primarily the basis to understand reality, but rather logic is the outcome of the infinite universe and all-connectedness of things: "Logic analyses thought. But it analyses thought as it is in reality, and therefore it unavoidably searches for truth." [32]. The human mind is able to be logical because it is part of the material universe: "The human mind lives and works only in connection with the rest of the material universe – and the recognition of the organic unity of things is the fulcrum of my logic." [33]. So the ontological holism of the universe expresses the epistemological capacity for logic to be developed in such a way that it is able to construct truths about reality. In other words, the ontological coherence of reality is the basis for the construction of the a priori truths of logic which represent the capacity to enhance cognition of reality. Dietzgen is aware that the ontological complexity of reality can undermine the supposed epistemological certainties of the a priori truths of logic. Nevertheless, the a priori truths of logic are drawn from reality and so facilitate the possibility to develop new truths about reality. In other words, the ontological complexity of the world means that it is often difficult to distinguish between truth and error. Thought as part of a complex reality is potentially both truth and error. Truth is always possible because it represents the culmination and object of the logic of the human mind, and logic as a specific expression of the material content of the world represents the objective possibility to understand the world. But this does not mean that truth is certain and guaranteed because knowledge is never identical to reality: " "Truth itself" cannot be wholly conceived by the human brain, but in parts. For this reason we possess only the ever-active striving for truth; for this reason, furthermore, the conception or knowledge can never be completely identical with reality, but can only be a part of it." [34]. So error and truth belong to the same reality, and often cannot be separated into distinct and rigid realms of truth and error. Thus error can occur

because thought and reality are 'two different kinds of the same nature'. [35]. Thought and reality are part of the same world, but they are not identical and so mistakes can be made about what constitutes reality. Hence logic cannot be an infallible and omnipotent guide as to what constitutes truth, given this ontological possibility for error to be located within the material world because of the differences between thought and reality. However, despite these problems logic is still the best epistemological and methodological basis to develop truths about a complex material world.

Secondly, Dietzgen transforms Descartes's conception of 'I think therefore I am'. Instead of this comment representing the solipsistic and subjective idealist view that an individual is able to think and construct epistemological truths in a dualistic universe, Dietzgen instead maintains that this comment shows that an individual is able to give an emphasis to thought because it is part of an interconnected material world. In this sense, thought is possibly primarily important because it represents the epistemological expression of the capacity of individuals to develop a logic and knowledge-constructions that make sense of the world. Without the capacity for thought, humans would exist in what would seem to be a chaotic world because they would not be able to interpret and recognise the ontological coherence of the world. With the ability of thought, humans can make sense of the world, and therefore thought and logic are a crucial expression of the material content and ontological unity of the world:

"Thought, intellect, are really existing, and their existence is a uniform part of the universal existence. That is a cardinal point of sober logic.

The fact that the thoughts are of the same worldly substance as the other part of the universe, that they are part of a common nature and not a transcendental essence, has already been expressed by Cartesius in the famous words "Cogito ergo sum", I think, therefore I am.

The fact of my thinking, says the philosopher, proves my existence. In order to come to an absolute conviction on the nature of truth and error, he sets out by doubting everything. And then he says that he cannot doubt the existence of his thoughts. He thus placed the spirit on the basis of real life, delivered it in place of transcendentalism, and that constitutes his everlasting merit." [36]

In other words, Descartes may have aimed to establish how an individual can think within an ontological perspective of an atomized and dualist world that differentiates between thought and

the material. But the ontological unity and materiality of the world means that the isolated standpoint and perspective of the individual becomes transformed into a conception of the individual within an interconnected material world. This shows that Descartes's atomized individual was not sustainable, and only made ontological sense as a collective individual within an interdependent world and universe, for the ontological actuality of thought shows that we are part of the material world. Thought is primary (as Descartes remarked), but the reason is because the material world is primary, which Descartes did not adequately theorise. This approach also upholds ontological monism and disputes dualism. So in relation to understanding logic the irreducible ontological starting point of the individual does not mean that logic is an atomized conceptual exercise. On the contrary, logic has an ontological tendency to aspire to and be able to explain the interconnected character of the material world. In contrast, Engels's brief and untheorised comments about logic could be construed as starting from the individual philosophical brilliance of Hegel and his dialectical categories. This approach does not seem to overcome the Cartesian problem of conceptual projection emanating from the isolated philosophical ego. But Dietzgen has provided an answer to this problem in his systematic exposition of the relation of logic to a unified and connected material universe.

IS CASEY'S INTERPRETATION OF DIETZGEN A CONCESSION TO PHILOSOPHICAL IDEALISM?

Fred Casey was a follower of Joseph Dietzgen, but does Casey interpret the work of Dietzgen in an idealist manner? [37]. For example, does Casey deny the important philosophical differences between materialism and idealism? In his 1922 work Casey indicates that the materialist has considered matter as being primary for understanding reality and its relation to thought, whilst the idealist considers consciousness as primary in relation to the material world. [38]. Casey admits that historically the mind and matter question represents the: 'greatest distinction in all philosophy'. [39]. The philosophical distinction made by materialists and idealists concerning the relationship between matter and mind is an epistemological distinction that does not express the ontological unity of material reality. In other words, in order to philosophically justify the primacy of matter, or mind, means that these conceptions are conceived as distinct in separate dualist terms, and are not ontologically expressed as aspects of the unity and universality of the world. Consequently, epistemological and terminological clarification about differentiating and

privileging matter, or mind, becomes a reason for ontologically denying the unity of matter and mind within the wholeness of the universe:

“Now it must be remembered that the terms “mind” and “matter” are merely names which enable us to distinguish between two different things, but, since the names are not the things, it does not follow that because we use two names there are two *completely* separate and distinct things, so different that they have *nothing* in common, the two may be just two parts of one thing and only mentally separated. As we go on we shall see that all the philosophic word-spinning arises from the use of a rigid logic which first makes mental distinctions, giving names to the parts, and then *treats the parts as being distinct and separate*, whereas in reality they are not so: it was in this way that the old philosophers first started with unity (universe) and then instinctively separated it into mind and matter without being fully conscious of what they had done, since when their philosophic descendants have been staring at mind in one hand and matter in the other, wondering which part constitutes both parts.” [40]

So the history of philosophy has shown that the conflict between materialism and idealism has occurred in terms of the tensions between dualism and monism. The approach of Spinoza represented a philosophical monism that was idealist in its acceptance of the ontological status of God, but which also represented materialist possibilities: “With him there was but one substance in the universe, and that was God. What we called “matter” was one part of God, and what we called “mind” was the other part, or, in other words, mind and matter were but two attributes of God.” [41]. In contrast, Kant made an enormous contribution towards understanding the capacity, role, and significance of the thinking subject, but his ontology was dualist, which expressed the limits of cognition: “Kant did not arrive at unity like his predecessors; he was a dualist, because he believed in a world of appearances or phenomena, and also in a world or noumenon that lay for ever at the back of phenomena, and which constituted the “thing in itself.” [42]. Hegel re-established a type of idealist dialectical monism, in which reality is an expression of the development of consciousness towards the realisation of the absolute spirit. [43]

Materialism, based upon an emphasis concerning the primacy of matter, was consolidated by the advances of science, but until the elaboration of Marx’s historical materialism, the French materialists, and Feuerbach, in a dualist manner upheld and justified various idealist philosophies

of history. [44]. The epistemological distinction between matter and mind, which is connected by the epistemological reflection of matter in mind, is a justification for the dualist ontological differentiation between matter and mind (non-material consciousness). Whereas the actual epistemological capacity for logic to develop explanatory concepts about different things is an expression of the ontological wholeness and unity of existence. [45]

Consequently, the difference between things as parts, and their different classification, is made ontologically coherent in that they are parts of an integral unity. This means thought has the same content as the rest of the universe, so even if thought has a different function and terminological definition in comparison to something else, it does not have a 'nature so special and peculiar as to separate it *entirely* from all the rest of the universe'. [46]. But, traditionally both materialism and idealism have distinguished between the material and immaterial (thought) and so have not logically and ontologically connected thought to the material universe. Thought always was part of the material world, but many forms of materialism and idealism have justified a separation of thought from the material world. This one-sidedness about the relationship of thought to the material world has explained the historic division between materialism and idealism. [47]

Just as no one thing is separate from another within material reality, so this also means thought is not separate from matter. Indeed, thought epistemologically cannot conceive of things in isolation and disconnected within the material world. This shows that thought's ontological relation is that of unity with material reality. Hence thinking about the world is made ontologically possible because it is a part of the material world. So the objects of the material world are the basis to develop thought, consciousness, and knowledge, because of this unity between thought and the material world. Hence sense perception is the objective material basis for thought and generalisation about the parts of the material world being evaluated.

Consequently, a particular fruit is recognised by the senses and becomes conceptualised in general terms as fruit. Truth is the correspondence between objective reality and thought: "Now where the idea or abstract picture in the mind corresponds with some object outside the mind (any part of existence whatsoever, including thought, may be the object of thought), it will be clear that such a picture will be a true picture, but if the opposite is the case it will be false." [48]. This may seem to be support for reflection theory, but what Casey defines as error about reality is expressed by an incorrectness concerning the relation between the part and the general.

So there is not a crude epistemological and reductive correspondence between thought and reality. If we equate the part with the general, and do not adequately define the general character of a particular thing within an inter-connected and changing world then thought will have a one-sided and limited relation to reality: ‘*Truth then, is any statement that accurately expresses the general or common features of a certain definite number of parts*’. [49]

The capacity of the mind to have ideas, and reason, is the objective product of sense perception, and the act of thought as an expression of sense perception, creates the capacity for conceptual reasoning and generalisation about the world. However, it can seem as if sense perception can only comprehend the sensual appearance of things, whilst the reasoning of the mind cognises the intangible essence of a thing. This epistemological illusion leads to the idealist view that the definition of a thing is unconnected to its sensual material attributes. But the mind, as a representation of matter, can only ontologically express the world in terms of its unity between mind and matter, and this means there is an epistemological connection between sense perceptions, conceptual reasoning, and the ontological nature of the objective material content of phenomena within the material world:

“It will now be clear that mind is not a “thing in itself” independent of thoughts, and which thinks thoughts or produces them out of its inmost recesses; in reality, it is the brain which generalises sense perceptions into ideas, and these ideas, taken altogether, constitute the mind. It will also be clear that matter is not a “thing in itself” independent of its forms, and which takes first one form, then another; it is the brain which generalises selected sense perceptions of material attributes into the idea of matter, so that in reality all attributes taken together constitute matter. So mind consists of the sum total of thoughts, and matter consists of the sum total of its forms; consequently mind and matter *considered as separate entities* (things existing by themselves) are nothing but mental generalisations, produced instinctively, but, because the understanding did not understand itself, it did not know how it got them and thought they represented definite parts of objective reality.” [50]

However, sense perception is not identical to conceptual reasoning, or thinking and understanding, because whilst sensation consists of recognising parts within nature as the material world, it is thought that organises these sensations in terms of the relations between the parts and establishes the general features of the parts within the material world. Sense

perception on its own, could not conceive of the absolute straightness in nature, or the exact mathematical unit. It is necessary to apply thought to construct the conceptual understanding of straightness and exactness from sense-perceived material. This approach does not lead Casey to the anti-realist conclusion that because things are defined by conceptual reasoning (which is a part of matter), this means that the principles of things (their qualities?) cannot be conceived outside of the role of thought. So matter is not independent of its definition by thought, but thought is a part of the primacy of the material world. [51]

The concepts of light, sound, silence, motion, stillness, power, force, matter, and energy, are all generalised expressions of aspects of the material world as defined by logical thinking, which suggests this phenomena cannot be conceived as independent from concepts originating out of theoretically organised sense perception. [52]

So the ultimate basis for the theoretical importance of concepts is the material world. For example, he defends materialism when considering that the world cannot be caused by God, because this cannot be an entity ontologically distinct from the material world and its capacity to be known by sense perception and conceptual reasoning as thought: “[b]ut, when we remember that *all ideas*, including that of cause, are abstract mental generalisations of sense perceptions, it becomes a waste of time to think about a first cause that is *independent* of a material basis, for it is obvious there cannot be any such thing. The idea is a wrong generalisation of parts that have no corresponding generalisation in reality. Nature as the great uncaused cause, *consists of the sum total of all the smaller or special causes*, so there is no *one* cause except as a mental abstraction.” [53]. Hence the concept of God is an abstract generalisation concerning reality, or represents: “the abstract form of man’s material relations between himself and other natural objects. And since this mental combination does not exist *as a combination* outside the human head, notwithstanding that its parts exist and are separately sense perceived, it follows that we perceive God merely as an abstraction.” [54]. God is not ontologically tenable in materialist terms, but the mind develops a concept of God in connection with the character of material social relations. Thus idealist ideas are not false but are rather a material product of society.

Casey also defends realism against idealism in his understanding of the concept of life. Life is not defined primarily by the mind, but is instead an ontological expression of the dynamic forms of material reality that is conceptualised by the mind as another aspect of life. [55]. The mind

shows that life is an active and changing process of the material world and the aspiration for immortality after death is an abstraction not ontologically located within the material world, even if there are material causes for this aspiration, such as religious ideology. [56]

Casey brilliantly shows the difference between realism and anti-realism concerning the aspiration for perfection and beauty. This aspiration may be materially generated within social reality, but there is no objective ontological criteria to differentiate between perfection and imperfection, except in terms of individual subjective preference. Thus we can differentiate between objectively unified material reality and idealist illusions which do not define reality: "With our explanation we see these latter ideas to be mere mental abstractions, the unity exists in the mind only, there being no corresponding unity outside the mind. It is not the senses that perceive perfection but the understanding, though it could not do this without the material supplied by the senses. Outside the mind the only perfection that exists is contained in the many concrete instances of perfection which themselves consist of small mental generalisations of sense-perceived facts, having for their base that which is admirable because desirable. Therefore, *human wants lie at the bottom of the absolutely perfect*, it being nothing but the abstract mental reflection of the general desires of mankind." [57]. So a conception of beauty is generated within sense perceived material reality, but it remains abstract and subjective because material reality itself does not provide the ontological criteria to establish an objective concept of beauty. Thus consciousness cannot define reality in terms of an objective concept of beauty, which remains an idealist illusion.

The above analysis of Casey's views shows that he does not deny the essential philosophical difference between materialism and idealism – materialism has an emphasis upon a primary material world, whilst idealism has a primary emphasis upon consciousness – but he follows Dietzgen in showing that it is possible to overcome the one-sided errors in the relationship between materialism and idealism. This does not mean that he makes philosophical concessions to idealism. On the contrary. Instead he outlines that because thought is material in monist terms this means that materialism is philosophically superior to idealism. However he does not adhere to Lenin's rigid division between materialism and idealism which suggests that it is not possible to overcome some of the differences between materialism and idealism. This means Casey is concerned (following Dietzgen) to show the importance of thought within the material world. In other words he accepts the idealist view that thought is important (and not just a

reflection of reality) but he locates the role of thought within a primary material world. Hence whilst allowing for the importance of idealism (as an expression of thought within a material world) he has made no concessions to the idealist view that thought is primary over matter. This standpoint is ontologically and epistemologically unviable in a monist material world.

Is Jackson right (outlined in the following section on Jackson) that Casey's interpretation of dialectical materialism has no role for revolutionary practice? Casey argues that what is considered reasonable as the basis for human activity will differ according to the expression of the antagonistic class interests of capitalist society. Accordingly there is no objectively located general interest of society, but rather there are the general interests of the particular contending classes. Casey does maintain that in an ontologically unified and connected world, human activity does express a necessary inter-relation with nature. So whilst social practices, ideology, customs and beliefs, are relatively located and explained within particular class relations, this still represents a part within the ontological universality and unity of social reality and its distinct relation to nature. But the different location of classes within social practices means there is no universal morality, or consensus, about how society should function. [58]

Thus there are no general, universal and agreed ends within capitalist society, rather different and particular classes have general and opposed interests and ends. Hence there is no one and universally agreed conception of democracy, or humanitarian principles that all classes can agree to and adhere to. There may be a sensually perceived basis to this abstract and illusory conception of democracy and humanitarianism within the material conditions of capitalism, but democracy and humanitarianism only acquire an explanatory ontological content in terms of the different class interests within society:

“There is, therefore, no such thing as true democracy, nor can there be under class rule. The idea exists as a generalised abstraction in people's minds; it is based upon facts that are sense perceived, but since those facts are not capable of being generalised outside the mind so long as capitalism lasts, the generalisation is for the present untrue because *it is too general for the existing conditions.*” [59]

Whether an idea corresponds to material reality in terms of its possible realisation, or whether it is a materially generated illusion, depends upon its level of explanatory truthfulness within

capitalist society: "All ideals have a material base, whether they be true or false, but they are useful only when they correspond with those material conditions that may make their realisation possible." [60]. Bourgeois ideological education can lead to the illusion that the special interests of the capitalists represent the general good of society, and this expresses a false idea because the ruling class are opposed to historical progress, whilst special education for and by workers is truthful because it shows the particular interests of the workers represent the general interests of society. The universality of the working class does not mean socialism is inevitable, or an autonomous act of free will, but rather there is a determined context for workers to act to realise socialism. There is a general need within society for the socialisation of production on the basis of workers domination of society, and so action by the workers is a necessary means to realise this end. [61]. The exploitation of the many by the few, on the basis of the extraction of surplus value, shows the ontological validity of social transformation in the general interests of society. [62]. Hence Casey is establishing the ontological conditions for the necessity of a revolutionary theory and practice.

Thus on the basis of elaborating an ontology of the material relations between the part and the whole, within the totality and unity of material reality, Casey (following Dietzgen) has elaborated an epistemology for understanding the relationship between reality and thought. He is also to develop a social ontology which shows that the particular class interests of the proletariat enable it to develop a scientific, revolutionary and explanatory understanding of the general interests of society and the necessity for social transformation. He does occasionally accommodate to an idealist equation of consciousness defining reality, but overall he maintains the realist stance that material reality (and ideas are material) is the ontological and explanatory basis for understanding the world.

TOMMY JACKSON'S CRITIQUE OF CASEY

Tommy Jackson is concerned to defend a traditional conception of dialectical materialism against innovators such as Dietzgen and Casey. [63]. Jackson argues that Casey claims that the superiority of dialectical materialism is connected to the work of Joseph Dietzgen. But, says Jackson, Casey upholds the claim not in relation to the ontological importance of practice and the human transformation of nature, but rather that dialectical materialism is an inherently correct method which is not connected to understanding social reality. Hence dialectical

materialism is conceived as an a priori correct method that is not related to social reality. But the philosophical validity of dialectical materialism is in its unity of theory and practice:

“And the basis upon which that claim stands or falls is the claim that in Dialectical Materialism alone is achieved the indispensable unity of Theory and Practice. If it *could* be shown that Dialectical Materialism does not in fact effect a correspondence between the Subjective Thought-Activity of Men and the objective activity of the material Universe of Nature and Human Society, the claims of Dialectical Materialism would be refuted at their source.

Now that very statement of the claim of Dialectical Materialism to be superior to all alternative modes of conceiving reality carries with it (by necessary implication) a repudiation of any *absolute* superiority for Dialectical Materialism *a priori*. It is *in practice* that the superiority of Dialectical Materialism is manifest, not in any *a priori* superiority in its *inner* logical consistency. And this, in turn, carries with it the further implication that no claims can possibly be advanced *a priori* to the *absolute* finality of any opinion or conception, advanced or elaborated, by *any individual exponent* of Dialectical Materialism - not even for Marx, Engels, or Lenin. In this essay we have defended Marx, Engels, and Lenin against criticism; but never on the ground that their method, considered a priori, was “correct” and all alternative methods, *a priori*, “incorrect”. This very juxtaposition of “correct” and “incorrect” is a repudiation of the Dialectical standpoint, which recognises, for instance, that bourgeois philosophy and politics are “correct” within bourgeois limits.” [64]

Jackson suggests that Dietzgen and Casey’s philosophy is not an authentic elaboration of dialectical materialism. To Jackson, Casey upholds dialectical materialism in an a priori idealist manner that lacks ontological vindication. This is an astounding claim given that Dietzgen and Casey sustain their version of dialectical materialism in terms of the ontological coherence, unity, and interconnections of the material world. On this ontological basis it is possible to comprehend human activity and thought as distinctive material aspects and parts within an interconnected material world. Hence their epistemological premises do not express the aspirations of autonomous reason, or the primacy of ideas, for defining reality. Rather their epistemology is an elaboration of the ontological basis of thought, and so ideas are a material expression of a related material world.

However, unlike Jackson, to Dietzgen and Casey practice is not the defining aspect for explaining social reality. For practice cannot occur without consciousness and the elaboration of conceptual reasoning as thought and logic. So theory is essential for developing effective practice, and practice is the objective confirmation of theory, or the basis to elaborate theory in order to develop more effective practice and so on. Jackson's formal emphasis upon the unity of theory and practice does not explain the distinctive ontological (material) role of theory within social reality.

When Dietzgen and Casey refer to the importance of logic for understanding dialectical materialism, this does not imply a repudiation of the importance of practice, and nor does it represent an attempt to counterpose an 'inherently correct' a priori logic, based upon idealist premises, in opposition to a genuine materialist dialectic. On the contrary, the materialist character of social practice requires a logic (which is located within the material world) as the basis to understand practice, and to thereby elaborate the theoretical possibility to enhance the transforming and revolutionary possibilities of practice. In contrast, Jackson seems to be advocating practice without theory, because he cannot provide any ontological and epistemological reasons to uphold the importance of theory. Hence, this is why he seems to suggest that any emphasis upon the significance of theory is inherently idealist.

Dietzgen and Casey do not attempt to justify an a priori rationalist, or idealist logic. Instead their logical premises are based upon the primacy of the objective and universal material world. Indeed, they could agree with Jackson that no viewpoint is inherently and absolutely correct, or incorrect, because the changing material world is the ultimate arbiter of the level of truth, or error, of a given standpoint. However, they would also claim that elaboration of a dialectical materialist logic (the crucial role of thought) can facilitate the epistemological capacity to understand the ontological complexity of the primary material world. In contrast, Jackson's mistrust of the significance of logic, and his alternative emphasis upon practice, seems to accommodate to the pragmatist disdain for epistemology. For if his perspective is carried to its logical limits it seems to deny the possibility that a logical theoretical truth can be an objective philosophical truth about the world. This is because an emphasis upon the ontological primacy of practice, and the connected differential forms of social practice, leads to a relativist acceptance of the validity of the many different types of subjective opinions. In other words the plurality of 'equally valid' opinions are an expression of these varied practices. Such a

viewpoint when carried to its logical limit denies logical and objective philosophical truth because of the differential forms of social practice, and the connected forms of complex and incommensurable subjective opinions. This approach of ontological relativism maintains that logic is unable to explain and accept independent material reality, and so represents the approach of pragmatism.

To Jackson Casey upholds the revisionist view that Marx and Engels did not substantiate the philosophical validity of dialectical materialism, and so Casey differentiates dialectical materialism from Marxism. So only Dietzgen has systematically developed dialectical materialism, and Plekhanov, Lenin and Bukharin, have justified an idealist and non-dialectical conception of dialectical materialism. [65]. Marxism as a dialectical method was based upon the importance of practice. This has not required any extra philosophical justification: "As we have shown in this essay by means of the relevant documents, Marxism began in the practical-critical problem, how can the world be changed? The practical-critical development of the solution of this problem hinged philosophically upon the problem of the nature of knowledge, upon the relation of Thinking to Being, upon the objective criterion of Truth, upon the *unity* of Theory and Practice on *the basis of the primacy of practice. This is the logical essence of Marxism*, and we have proved that it was the actual, historical, starting -point for the whole development of Marxist Theory and Practice. There was, therefore, no such *gap* in the Marxian system as the *neo*-Dietzgenians allege that Dietzgen filled. Their whole fabric of allegation and inference is built upon a baseless assertion totally at variance with the facts. And, what is more, it is an assertion which could only be made *honestly* in total ignorance of the actual nature and scope of the Marxian world-conception. It can, of course, be made, *dishonestly*, with a full consciousness of hostility to Marxism as a *practice* - a hostility which it is not deemed expedient to avow." [66]

In other words, Jackson is contending that the traditional dialectical materialist emphasis upon practice does not require any extra-philosophical justification, and so Dietzgen and Casey's elaboration of dialectical materialism is unnecessary. But even if we accept the importance of practice for Marxist philosophy, (which has already been elaborated by Marx) why cannot it be supplemented in ontological and epistemological terms? Or, is Jackson actually suggesting that Marxism is a closed philosophical system? Or, alternatively, is Marxism only a

limited philosophy, and is it primarily a science of historical materialism and political economy, which means that Dietzgen and Casey's elaboration of dialectical materialism is superfluous in relation to the more important scientific claims of Marxism? Even more importantly, is Jackson's real objection to Dietzgen's form of dialectical materialism an indication that there are two contesting and alternative conceptions of practice? It could be argued that Jackson is essentially claiming that Marx has a revolutionary conception of practice, whilst Dietzgen philosophically minimises the importance of practice and has a more contemplative understanding of practice than Marx. Hence, Jackson is effectively suggesting that Dietzgen's philosophy is essentially a regression to the contemplative materialism of Feuerbach, and so represents a rejection of Marx's *Theses On Feuerbach*.

So Jackson is basically upholding the view that Marxism is a narrow philosophical system that primarily upholds the role of practice, and this means the necessity of dialectical materialism is mainly for substantiating and defending Marxism as a science. Hence Marxist philosophy is essentially about upholding the *Theses On Feuerbach*, and this standpoint is what is being defended by Engels's elaboration of dialectical materialism, which in turn has been supported by Plekhanov, Lenin, and Bukharin. But Dietzgen and Casey could refute the equation of their form of dialectical materialism with Feuerbach's materialism, in that they do not uphold a dualist eclectic division between a materialist philosophy (in regards to the relation between being and thought) and simultaneous support for an idealist philosophy of history. Rather Dietzgen and Casey maintain that the ontological unity of the material world shows that there is a material relationship between being and thought, and this means history is ontologically conceived in these material terms. The historical development of social reality represents the ontological conditions for social antagonism and class struggle, and this shows the ontological necessity for transforming revolutionary practice, or the expression of theory through material premises.

Thus Dietzgen and Casey's philosophical development of dialectical materialism seems to represent a welcome elaboration of Marxism, which Jackson couldn't possibly object to? So why does Jackson insist upon his opposition to Dietzgen and Casey's form of dialectical materialism? After all, they seem to have answered Jackson's main points about practice? (They do not deny the significance of practice). Ultimately, Jackson's objections against Dietzgen and Casey represent idealist and epistemological elitism. Only a chosen few have the

inherent right to define what constitutes principled Marxist theory and practice. So, ironically, and tragically, Jackson the self-educated worker, denies the philosophical importance and contribution of Dietzgen, the self-educated tanner.

Jackson argues that Dietzgen does not transform Marxism into an 'enduring whole' as dialectical materialism. [67]. Furthermore, dialectical materialism is based upon the epistemological and ontological importance of practice, which contrasts with Dietzgen's emphasis upon correct formulas, such as the identity of matter with mind in terms of the material content of the world:

"As we have seen, Dialectical Materialism does not *begin with an a priori* affirmation: it begins with the *fact* that men exist and *must* (as their everyday practice proves) *do* certain things in order to continue in existence. Materialism reinforced by the Dialectic method differs from the older, mechanical materialism in two basic respects: (1) as just stated, it begins with the concrete fact of actual material *human* existence; and rejects the metaphysical method of beginning with an *a priori* postulate about the Universe - as for instance, whether it is "One" or "Many", whether it is Continuous or Discontinuous and so on; (2) in emphasising the reflectional character of all perceptions, conceptions, etc., it emphasises the objectively *practical* character of all mental activity. Thoughts are thus not at all *passive* reflections: they are the resultants in actively interacting subjective states and processes of the active practical interconnection between living human beings and the interconnected totality of an incessantly active, and *therefore* developing material reality. Whereas mechanical materialism treats the universe as a *closed* system analogous to a machine, dialectical materialism treats it as infinitely creative *process*.

Thus Dialectical Materialism distinguishes itself and its point of view from *Idealism* by its affirmation, on the basis of actual, everyday *human practice*, (a) of the reality and knowability of the world of material reality; and (b) of the inseparable *connection* (unity in opposition) between the subjective activity of Man and the objective material activity, the reality, which it *reflects* - as well as grows out of - and is therefore inseparably linked with. From "mechanical" and "metaphysical" materialism it distinguishes itself, as we have seen, by affirming the Dialectic character of the *unity* of Being and Thinking: i.e., it affirms the *oppositional* nature of that unity as well as the primacy of Being therein; and it affirms no less the *active* aspect of Being, its *Becoming*, as the primary, practical basis out of which this developing *unity* of Theory and Practice arises *on the basis of practice*." [68]

Jackson shows that his ontology of the change and becoming of the material world is based upon practice, and the epistemology to affirm this ontology is reflection theory. Hence he considers it a priori and metaphysical to have a starting point of the universe, which presumably is a passive ontological abstraction that does not establish the dynamic role of practice. Jackson's enthusiastic aspiration to diminish Dietzgen and Casey's version of dialectical materialism means that he seems to gloss over Engels's ontological starting point of matter in motion and the material content of the universe. Indeed to Engels, Dietzgen, and Casey, practice is only explicable if it is ontologically considered within the material content of physical and social reality. Thus how could nature be transformed (within given social relations) by practice if nature did not have an objective material character? Jackson would not dispute this point, and yet his ontology is effectively abstracted out from a wider material context, and consequently he gives a subjective and narrow emphasis to practice. This is why Jackson defines the objective and material in terms of practice, and so in an idealist manner human activity and thought constitute the main ontological aspects of reality.

So, Jackson does not uphold the realist conception that independent material reality is the basis to explain transforming human activity and thought. In contrast, Dietzgen and Casey's so-called 'correct formulas' concerning the relationship between the material and mind (along with Engels) uphold the realist ontological stance that primary material reality explains the material content to human activity and thought. Hence dialectical materialism is not primarily contrasted to idealism in relation to practice. Many forms of idealism uphold the dynamic role of practice, as an expression of autonomous reason. Rather to Engels, Dietzgen, and Casey, the ontological premises of the world as material, dynamic, and changeable, explains the possibility for a significant and transforming role to both theory and practice.

The philosophical differences between Engels with Dietzgen and Casey essentially refer to the epistemological significance of reflection theory. Engels seems to consider that the objective material world is reflected in thought and concretely expressed in practice. Whilst, to Dietzgen and Casey, reflection is a limited metaphor which does not indicate the importance of thought as logic and understanding. For thought organises sense perceptions about the material world into concepts and theories. In other words reflectionist epistemology does not sufficiently express the importance of thought as a distinctive part of the material world, and which means thought

has the capacity for comprehending, explaining, and facilitating the transformation of the primary material world. Engels's adherence to reflection theory is an acceptance of the empirical perspective that thought reflects the world in a reductive and non-dynamic manner. This stance seems to be at variance with his emphasis upon the dynamic role of practice, because how can practice be transforming if theory is passive? Jackson extends Engels's epistemological limitations, and so uncritically adheres to the ontological primacy of practice together with support for the contemplative stance of reflection theory. In contrast, Dietzgen and Casey ontologically and epistemologically connect theory and practice as being material, dynamic, and significant within a unified material world.

MATERIALISM AND REVOLUTIONARY PRACTICE

Jackson argues that Casey's denial of the importance of practice means that the difference between materialism and idealism is conceived in terms of two different types of thought within the total material expression of thought: "Idealism and Materialism are not compared as alternative methods of subjective *practice*, as alternative and mutually exclusive modes of approach to Reality, but merely as two different kinds of one and the same thing, namely, abstract theoretical systems." [69]. Thus Casey does not establish the antagonistic character of materialism and idealism, which is expressed in actual and differing conceptions of practice. On the contrary, these two philosophical trends: 'form a part of the "One" of Universal Existence'. [70]

Hence materialism and idealism represent two aspects of one thought process within a single material world. This philosophical standpoint relies upon an abstract world that does not explain the antagonistic forms of practice that generate the differences between materialism and idealism. Casey's method represents the justification of subjective, logical and general abstractions about materialism and idealism that replace the class located differences between materialism and idealism, as expressed in the objective practice of social relations. Thus to Casey, given everything is material, this means idealism is a mis-understanding of materialism, which results in the ultimate subjective idealist standpoint that everyone is an idealist, apart from Casey who uniquely understands materialism:

·In Casey's "understanding" of Materialism and Idealism, the difference between them is that Materialism is *true* understanding and Idealism a *mis*understanding. This, if it means anything, means that *every* misunderstanding is "idealism" and *every* true understanding is Materialism. Since every man must in real life be constantly guilty of mis-understanding, everyman must be more or less an "idealist". And since the biggest fool that ever lived is bound in practice to understand truly something, sometimes, if it is only the way to his own mouth, every man is bound to be more or less a materialist. That is to say that Idealism and Materialism coexist necessarily in *every* individual and their difference is *purely* relative, a mere matter of "the way you look at it". For Casey, they are not rival conceptions of the relation between Thinking and Being, historical Party names denoting significant divisions and struggles between real men in a real world. The difference between Idealism and Materialism is for Casey simply the subjective empirical difference of the degree to which men do, or do not, employ Casey's Patent "Method" in thinking!

That this is not merely *subjectivism* (and therefore Idealism at its worst) but also egoism inflamed to the bursting point, must already be apparent. It is, in fact, *solipsism*, since for Casey (all his talk about "brains", "physical processes" and the rest of it, notwithstanding) nothing exists except as an abstract logical category, and abstract categories can "exist" only in a world of abstract mentality." [71]

Jackson contends that Casey does not effectively accept that there is a philosophical, practical, and politically antagonistic relationship between materialism and idealism. Hence, Casey does not establish that materialism expresses the class viewpoint of the proletariat, and idealism is the class viewpoint of the bourgeoisie. But, Casey has never denied that differing philosophical perspectives can have connected political and class-located reasons. However, Jackson's attempt to differentiate between materialism and idealism in rigid, and politically partisan terms, has limited ontological and epistemological substantiation. Indeed, Jackson's starting point of materialism versus idealism is based upon the dualist premise that matter is primary and so mind is secondary and immaterial. This dualist approach essentially denies the ontological unity of the world as material, whilst ontological monism establishes that mind is a distinctive part of the material world. This does not mean that idealism is merely a misunderstanding of materialism, (which Jackson suggests is Casey's position) because idealism can (in opposition to materialism) justify speculative philosophical systems that aspire to autonomously differentiate and separate reason from the material world. Hence, there is an important philosophical difference between

materialism, which upholds the ontological and epistemological primacy of the material world, and idealism. However, the philosophical basis for idealism is located within the material world. So, whilst many forms of idealism may formally express their independence from the material world they cannot ontologically and actually be disconnected from their origins within the material world. In this ontological sense both materialism and idealism are products of the material world, but this does not amount to an epistemological denial of the differences between materialism and idealism.

Casey would maintain that it is necessary to show that materialism is ontologically coherent when it expresses a monist stance about the unity and interconnectedness of the material world, which means mind is a distinct part of the material world. In contrast, Jackson is too concerned to show the primacy of the material, which is why he seems to suggest that mind and consciousness are secondary and immaterial. This is an untenable ontological and epistemological stance. In other words, Jackson cannot refute the ontological coherence of Casey's materialist monism, and so he tries to use the epistemological claim concerning the primacy of matter over mind, as the basis for thought, in order to provide a philosophical alternative to Casey. However the result is dualism.

Jackson maintains that Casey essentially reduces the differences between materialism and idealism to a misunderstanding. This is because both materialism and idealism come to be considered as expressions of a unified material world. Jackson argues that the ultimate expression of this stance is subjective idealism, because only Casey understands what is materialism, or idealism. But Jackson's reductive and deductive reasoning glosses over the fact that to Dietzgen and Casey the ultimate criteria for comprehending all types of ideas, whether materialist or idealist, is the ontological primacy of the material world. This creates the theoretical basis for objective epistemological clarity about defining materialism, or idealism. Hence if a philosopher tries to deny the objective ontological primacy of the material world, this would suggest adherence to idealism. Jackson, in actuality, does not disagree with this epistemological criteria and differentiation between materialism and idealism. However, where he does disagree with Casey concerns ontological monism, which Jackson, which Jackson tries to suggest is the logic of subjective idealism; even though subjective idealism upholds an ontology of extreme dualist and atomised fragmentation! Thus Jackson's reduction of Casey's

standpoint to subjective idealism, is a formal and logical abstraction that tries to gloss over the materialist ontology and epistemology of Casey.

Jackson also contends that to Casey everyone is a type of materialist because the world expresses a monist materialist character, and this means idealism is a limited type of materialism. Consequently, Casey's stance represents a denial of the objective content of practice in differentiating between materialists from idealists. But, Casey never denies that a different class location within social practice expresses an important objective basis to generate materialist ideas within the working class and idealism within the bourgeoisie. Ironically, this situation shows that the material character of social reality, (within universal material reality) and its objectively expressed class antagonisms, generates the basis for both materialism and idealism, and therefore idealism has a material content, even if it is opposed to materialism.

Nevertheless, Casey would still contend that practice is not the ultimate criteria for the correctness, or incorrectness, of ideas. Rather the ontological unity and coherence of the material world is the ultimate basis to evaluate the level of truth, or error, within ideas about reality. This is why both Dietzgen and Casey emphasise the philosophical significance of the relationship between part and general for evaluating truth claims about reality. Hence, if a part is defined in over-generalised terms this represents error, and if a part is defined too specifically this also represents error. Consequently, Jackson's emphasis upon the significance of practice is an example of equating an important part with the general, and thereby denying the ontological primacy of material reality for explaining the significance of practice, as a part of an interconnected material world.

Jackson maintains that Casey's emphasis on the unity of theory and practice is a denial of the primacy of practice. Casey denies the dynamic dialectical unity of theory and practice, in which theory is a crucial aspect of practice. Instead Casey conceives of the activity of theory and practice without change and development. Casey's view that all theories express something true about the world because they are theories of a material character, and about a material world, is a contemplative denial of practice as the criteria of truth about the world: "That truth grows "out of date" (as all Bloomsbury proclaims) is not due simply to the fact that the material world changes *in itself*. It is due even more to the fact that the world is constantly *being changed by the practical activities of Men*, who change themselves in the active practice of changing the

world. Thus theories must be changed not because Truth as such has *qualitatively* altered, but because there is *quantitatively more and more to know*. When Casey denies that it is possible to discover “the truth” piecemeal, or that “there can be any bits or portions of such truth”, he denies the whole basis of the materialist theory of cognition - the affirmation of the *knowability* of external world. If the external world is knowable it can be such only through its changes, and knowledge of it in general and in detail *can* only be gained bit by bit and in *progressive practice*. The alternative view is the idealist view *that Truth and the connection between the separate facts of the external world is wholly and solely a mystical creation of the Mind.*” [72]

Jackson’s philosophical approach upholds practice as primary concerning truth claims (and the defining ontological criteria) when describing the material world, which is not independent of practice. Hence the dynamic and knowable character of the world is established through practice. For Jackson, the only epistemological alternative to this approach is idealism and an emphasis upon the mind. However, Jackson can only assert that Casey’s philosophical approach denies the significance of practice in relation to the objectivity of truth claims. For, to Casey, the ontological materiality and unity of the world shows the specific importance of practice as a part of the material world. Thus, ultimately, Jackson can only sustain his criticisms of Casey through defending a rationalist stance. Whereupon, a primary emphasis upon practice is identical to truth, and all other philosophical stances represent error. Casey avoids this type of rationalist epistemological dogmatism because his ontological monism can show that all views represent varying levels of truth because they are an integral part of the same material world.

Jackson could reply and argue that Casey’s ontology does not establish a dynamic and changeable conception of the world, which is represented by transforming practice. But, Dietzgen and Casey outline an ontology of the material world on the basis of contradiction and transformation. This creates the objective material basis for social reality - the relations between humans and nature - to express dynamic human practice. Nevertheless, practice still remains only an important part of the material world, and so unlike Jackson’s approach, the part does not define the general material unity of the world.

Jackson argues that Casey contends that matter as the whole is the basis for mind as its part, and so everything is a special and particular form of matter. Hence Lenin’s division between mind and matter is dualist. Consequently Casey equates existence, the material world and mind. This

is a denial of the primacy of the material world as the basis of mind and instead, claims Jackson, matter is conceived in idealist terms as a subjective expression of mind:

“It is the negation of Materialism because it begins by repudiating the reflex-oppositional relation between the objective material world and the subjective world of thought which is the presupposition of all Materialism. If Thought does not *derive* its reality and force from the *primary* reality of the material universe, only one possibility remains as an alternative - the Mind itself must be the *primary* reality and the very existence of the material world sinks to rank of a hypothesis, and the status of a figment in a delirium. In contesting the *primacy* of Matter Casey repudiates Materialism.

Likewise, in affirming the equal claims of Theory and Mind to “primacy” as against Practice and Matter, he not only makes “primacy” itself a *purely* subjective “valuation”. He, in effect, denies the *reality* of *objective development*. In effect he affirms that *no new thing can ever come into existence*. He admits “change” of a relative kind. He denies that development is absolute, i.e., objective and real.” [73]

Jackson contends that because Casey equates matter and mind as two aspects of the material world, this means he denies the primacy of the material over the mind, and so Casey is effectively upholding the primacy of mind over the material in idealist terms. But, Jackson’s approach represents a reductive and logical epistemological standpoint that does not refute the ontological coherence of Casey’s materialist monism. Dietzgen and Casey have outlined why everything in the universe has a material existence, and so mind cannot be ontologically primary over the material. Hence mind is a distinctive part within the material world, and it cannot define the general material content of the world in autonomous and primary terms. Thus Jackson’s epistemological claim about the primacy of matter as the basis of thought, can either uphold a dualist separation between matter and mind in order to be ontologically distinct from Casey, or, alternatively, Jackson can accept Casey’s ontological criteria (the relation of the general to the part) for the material and mind relation.

Jackson argues that Casey’s ontology of universal openness becomes the basis for defining things in terms of abstract generalities that deny their particular concrete quality. [74]. Casey also tries to define freedom without an objective basis in purposive activity in given social

circumstances. Casey's reduction of freedom to a logical abstract category is a denial of the ontological significance of practice:

"[C]asey cannot accept this! Why? Because it entails admitting that the unity of Theory and Practice - their interaction - is established on the basis of the *primacy of practice*. It entails admitting that it is from the practical experience that we can do some things and cannot do others that men derive the concepts of both Freedom and Necessity. It entails admitting the primacy of Matter over Mind and of material practice, of practice through objects, as the generating source of men's conceptions both of Mind and of Matter, and of their active interrelation - through bodily practice.

Since Casey denies all this, he must deny likewise that men *can, if* (in and through practice) *they have learned how*, change objective reality progressively in such a way that their actual personal power of self-disposal will be multiplied out of all recognition; that positively and relatively they will become increasingly *free* the more they attain to a *real* power of command over the forces of Nature.

That this can be done only in, through, and by means of Society is the basis of the materialist case for the proletarian fight for "emancipation", i.e., for freedom. But, since this conception makes the attainment of freedom by the workers contingent upon the "knowledge", the practical "recognition" of the necessary conditions in which alone this freedom can be attained, it will be, according to Casey, "no freedom at all"!

Thus Casey's "method" not only *begins* by repudiating the standpoint of Marx; it ends by repudiating his revolutionary conclusion - repudiating not only all possibility of, but all desire for such a *necessitated* process as a proletarian revolution!" [75]

Jackson maintains that Casey's equation of theory and practice is idealist, because it bestows an idealist primacy to ideas in the process of transforming reality. But, to Casey, there is an ontological materialist basis to this unity of theory and practice. For given that the world is a material unity, this means theory has a material content, and so practice is the material effect of theory, and then it becomes the cause for developing theory, etc. Hence to equally unite theory and practice is not idealist. The real idealism resides with those who try to separate theory and practice, because such a separation means to deny an important material aspect (part) of the objective possibility to develop dynamic human practice. Practice is made ontologically and

materially possible as part of an interaction and interrelation with theory, which is an important material cause of practice, and then practice becomes the cause of theory.

Jackson maintains that Casey's ontological monism denies the importance of the particular and concrete qualities of things. On the contrary, Dietzgen and Casey's ontology tries to show that the ontological material unity of the world is based upon the significant relationship between the parts to the whole. However, in order to understand the part it is necessary to establish their general qualities and relations to the other parts. For an atomised and dualist approach does not succeed in connecting the parts to the interrelations of a monistic and material world.

Jackson argues that Casey's opposition to the primacy of practice means that he cannot establish an objective ontology of freedom, and instead freedom becomes a logical necessity. This also means Casey cannot establish an objective material perspective of proletarian revolution as the basis of freedom. But just because Casey has a different conception of practice, in comparison to Jackson, does not mean he has an idealist conception of freedom, and thereby rejects a revolutionary political perspective. Rather Casey establishes that the dynamic role of theory acts as the basis for establishing the ontological criteria for political practice. Hence theory can show that the proletariat is the class which ontologically represents the general interests of all society, whilst the capitalist class represents the interests of a particular elite grouping. So, theoretical study of the capitalist social relations establishes the necessity of revolutionary practice by the proletariat, which represents the objective material basis for human emancipation and freedom. Casey advocates the establishment of working class education in order to challenge the domination of bourgeois ideology, and this development of a revolutionary political culture within the proletariat will facilitate the theoretical basis to gain political support for the revolutionary transformation of society.

Jackson maintains that Casey's ontology is based upon an abstract unity in the world that excludes opposition, and therefore justifies a formal logic of identity and denial of difference. In contrast, dialectical materialism shows that practice is the basis of dialectical logic and its connection to formal logic. [76]. Formal logic and dialectical logic have a necessary conceptual relation, but whilst formal logic is important for conceptual classification, dialectical logic shows the contradictory conflict and oppositions within phenomena: "Movement, development, and struggle are basic and primary postulates for the Dialectic (and in that sense *absolute*) precisely

because the Dialectic differs from *formal* logic in that, while formal logic is adequate for all purposes where the phenomena to be classified can be treated and given once and for all....” [77]

Plus: “Given movement and its transformation as the subject of study and Dialectics is indispensable. On the other hand, where the persistencies of form, substance, and inter-relation are relatively constant, formal logic is the technique of reasoning required.” [78]. Thus: “The indispensable worth of the Dialectic in contrast with Formal Logic lies in the fact that, while the latter deals only with that which *is* (i.e., with things and qualities treated as fixed, unchangeable, and *absolute*), Dialectics deals with things as *fluid*, as perpetually coming into being and going out of being. From the standpoint of Dialectics the *existence* of any particular thing, or relation between things, is therefore the *persistent* element in a movement distinguished as a variable constant from the components which, as constant variables, beget in their interaction the *developing* “existence” of the thing *as a resultant movement*.” [79]

Jackson argues that Casey’s ontology of ‘abstract unity’ cannot establish the contradiction, conflict, becoming, and oppositions of reality. In other words, Casey’s approach is closer to the static standpoint of formal logic than the dynamic epistemological qualities of dialectical logic. But the ontological approach of Dietzgen and Casey aims to show the actuality of contradiction, becoming, conflict, and oppositions, as ontological aspects of the material world. They do not uphold a monolithic, static, or abstract and undifferentiated ontology. On the contrary, the relationship between the various parts of the material unity and whole of reality, presupposes dynamic ontological processes of constant change and transformation. But, unlike Jackson, they do not start with the epistemological importance of dialectical logic in order to explain the ontological character of reality. Instead they elaborate an ontological conception of the world in order to understand how knowledge occurs and develops. This conception of dialectical materialism is comparable to the main aspects of Engels’s dialectical materialism. The neglect of Dietzgen and Casey’s form of dialectical materialism has meant epistemological, positivist, and idealist versions of dialectical materialism have become dominant.

ENGELS AND DIETZGEN - A COMPARISON

THE PHILOSOPHICAL PROBLEMS OF ENGELS

This section will attempt a comparison between Engels's and Dietzgen's conception of dialectical materialism. The purpose of this comparison will be to show that Dietzgen overcomes the limitations within Engels's dialectical materialism. In the first two chapters the merits of Engels's ontological conception of dialectical materialism have been brought out, but this section now attempts to indicate important epistemological problems within Engels's philosophical works.

The first philosophical problem in *Anti-Duhring* is related to Engels's conception of the relation between being and thought. [80]. Engels has an inconsistent epistemology when trying to explain the being/thought relation. On the one hand he affirms in an emphatic manner the view that thought is a reflection of reality. [81]. On the other hand he contradicts this view and maintains that reflection is a limited and metaphorical conception that cannot adequately explain the relation between being and thought. He comments: "But an adequate, exhaustive scientific exposition of this interconnection, the formation of an exact mental image of the world system in which we live is impossible for us, and will always remain impossible." [82]. And: "Each mental image of the world system is and remains in actual fact limited, objectively by the historical conditions and subjectively by the physical and mental constitution of its originator." [83].

It could be argued that Engels is not rejecting the most orthodox type of reflection theory: the view that thought is in a correspondence with reality. The adherents of a correspondence approach argue that thought is not an illusion, nor dominated by error, but rather has an inherent tendency to approximate to truth about reality. But Engels does not seem to be arguing this. Instead he seems to agree with Richard Rorty that a correspondence and reflection approach is problematic because it relies upon mirror imagery, or a copy theory of reality, and the related epistemological guarantee of the correctness of thought in its relation to reality. [84]. Indeed

Engels provides an alternative epistemology to reflection theory as mirror imagery, in that his emphasis upon the relative and historical context of knowledge means that there is no automatic mirror or copy relation of thought to reality. Instead, even if we utilise even the highest forms of scientific practice in order to comprehend reality, this still amounts to an irreducible opinion that does not have the status of a firm, reliable and objectively located reflection of reality.

This relativist standpoint is confirmed in relation to Engels's extended discussion of the relative and historical character of truth. [85]. Engels maintains that even the most sophisticated forms of natural science can only establish the immutable and absolute objectivity of the most banal and limited facts. For science is dependent upon theory, and rival theories produce different and competing interpretations of the facts. Hence it can be argued that no one theory has an exclusive and absolute claim to the truth, whilst another theory is considered to be entirely false. Indeed truth and falsity are not in a relation of mutual exclusivity of an either/or antithesis, but rather they are in a relation of constant interaction and transformation. For example, Boyle's law about gas pressure and temperature is only true under definite conditions, and is false in different circumstances. [86]. Furthermore, what is contentious about natural science is even more so when trying to understand social reality, which is complicated by different ideologies and competing class interests. So 'truth' within social science is a question of the range of different opinions of a historically conditioned character. Thus it is an idealist fallacy to assume it is possible to construct a complete philosophical system of eternal, accurate and immaculately conceived truths about reality. [87].

It would seem that Engels has constructed a formidable critique of reflection theory, and shown that his own adherence to reflection theory is purely formal. This view is reinforced in a comment in an obscure preface to *Anti-Duhring*, which describes reflection as an estranged and limited metaphor that actually explains why limited and illusory views about reality are perpetuated:

"In natural science itself, however, we often encounter theories in which the real relation is stood on its head, the reflection is taken for the original form, and which consequently need to be turned right side up again. Such theories quite often dominate for a considerable time." [88].

In other words, far from reflection being an expression of a correspondence and approximation between truth and reality, it is instead a metaphor of an alienated and falsely triumphant cognition that thinks truth has been located about reality when instead thought is actually perpetuating false views. So reflection actually represents an inverted, or subjective view of the world that projects in an alienated manner an illusory view that the subject knows the object, but objectively the subject knows the object in idealist terms that do not explain the materialist content of the object. This seems to be an emphatic rejection of reflection theory, because reflection is actually a metaphorical description to show that thought can equate form with content, and so does not adequately explain the content; or else means that reflection is a term that projects limited, superficial and alienated cognitive premises into an illusory expression of accurate and objective knowledge.

Yet despite these fundamental objections to reflection theory, Engels seems to uncritically and eclectically adhere to it in his *Dialectics of Nature*. [89]. Engels now seems to advocate an uncritical adherence to reflection theory, because the inverted and alienated conception of reflection is now exclusively projected onto philosophical idealism, such as Hegel's dialectic. In contrast, a materialist dialectical approach shows that the primary material world is reflected in thought:

"This mystical element lies in Hegel himself, because the categories appear as pre-existing and the dialectics of the real world as their mere reflection. In reality it is the reverse: the dialectics of the mind is only a reflection of the forms of motion of the real world, both of nature and history." [90].

An important philosophical question now arises: if reflection is an expression of idealist alienated thinking that inverts the relation between the real and the ideal and logical, why does this not apply to its utilisation by the adherents of the materialist dialectic? Engels can only formally answer this question by maintaining that the materialist dialectic contains its own inherent epistemological guarantee that the role of a materialist theory of knowledge will result in the production of objective knowledge about the material world. But the philosophical problem of alienated thinking - which he himself has indicated - remains. For the dogmatic adherence to the view that thought reflects reality can lead to the generation of illusory and alienated truths about reality, and an adherence to a materialist theory of knowledge does not

resolve, but rather creates new forms of this problem. Engels does not address this difficulty, but instead intensifies the tensions within his increasingly uncritical adherence to reflection theory. For in order to dogmatically sustain reflection theory he has to rigidly assume that nature has an inherently dialectical nature which is expressed in thought:

“Dialectics, so-called objective dialectics, prevails throughout nature, and so-called subjective dialectics, dialectical thought, is only the reflection of the motion of opposites which asserts itself everywhere in nature, and which by the continual conflict of the opposites and final passage into one another, or into higher forms, determines the life of nature.” [91].

The first two chapters show that Engels has an ontological approach that contrasts with these epistemological limitations. In the present context it is necessary to show that Engels's increasing adaptation to reflection theory can facilitate ontological dogmatism. For in order to show that thought has a correct and inherent relation of reflection with material reality it is necessary to generalise and project in a priori terms ontological attributes onto reality, such as a dialectics of nature. This is precisely the type of alienated and idealist reasoning which Engels has already warned about in *Anti-Duhring*, in terms of reflection representing an epistemological metaphor that facilitates the inversion of the objective and material relation between being and thought. But in his *Dialectics of Nature* he seems to be indifferent to this problem, and if anything is systematically upholding the alienated limitations of reflection theory. Yet even in the *Dialectics of Nature* Engels is still ambivalent about the validity of reflection theory. In one comment he both affirms and raises a problem about reflection theory, because he accepts that theory can both reflect and also be in error about reality: “This shows, however, that laws of thought and laws of nature are necessarily in agreement with one another, if only they are correctly known.” [92]. Thus Engels has not entirely rejected his previous stance that truth is not in a mutually exclusive relation to error, and that it is quite possible for theory not to be in an automatic relation of correspondence and reflection of reality. However, despite this eclectic tension between affirmation of reflection theory and continued reservations about reflection theory, Engels is generally in support of this epistemological approach. For what the above comment also shows is that in order to sustain reflection theory, Engels is generally asserting that there is a reductive identity between being and thought. In order for it to be possible that the object corresponds to the subject, this is taken to mean that there is an inherent unity and relation between the object and subject. On this view error seems to be not an expression of a dynamic

dialectical relation to the truth, but is rather an aberration, and represents indifference towards this epistemological capacity to know and reflect the truth. Nevertheless Engels has not entirely and eclectically rejected his relative, historical and conditional approach towards understanding truth. He comments: "Taken historically the thing would have a certain meaning: we can only know under the conditions of our epoch and as far as these allow." [93]. This suggests that truth is not an inherent reflection of reality, but rather truth and error are in a more fluid, changeable, and transforming relation. But in an eclectic manner Engels does not explain how he can reconcile his increasingly dogmatic reflectionist epistemology with lingering support for a relativist approach.

So, despite his concessions to relativism, it is not surprising that in the *Dialectics of Nature* Engels systematically elaborates the view that not only does thought reflect reality, but it also means that this epistemological capacity owes itself to a rigid identity and unity of the laws of nature and thought: "The fact that our subjective thought and the objective world are subject to the same laws, and hence, too, that in the final analysis they cannot contradict each other in their results, but must coincide, governs absolutely our whole theoretical thought." [94].

Consequently, not only does thought reflect reality, because the objective world has the capacity to be reflected in thought, rather Engels is extending this standpoint into a rigid dogma which maintains that it is not possible for thought to be in a non-correspondence with reality because they are both in a law-governed relation of symmetry, identity and inherent unity. Thus it is not surprising that Engels philosophically concludes with the assumption that dialectics has an almost a priori methodological status to know reality - given his emphasis upon a rigid unity between the laws of nature, history and thought. This seems to suggest that he has accepted the alienating and idealist view that he criticised in *Anti-Duhring*, of accepting that reflection is an inverted guarantee of truth through the estranged projection of logical premises onto reality, and then 'materialistically' and epistemologically assuming that these premises correspond to and reflect reality: "In the present work dialectics is conceived of as the science of the most general laws of motion. This implies that its laws must be valid just as much for motion in nature and human history as for the motion of thought." [95].

Given this increasing acceptance of a reflection theory in the *Dialectics of Nature* it is not surprising that Engels comments: "All ideas are taken from experience, are reflections - true or distorted - of reality." [96]. Now it is one thing to suggest as Dietzgen does (as outlined later)

that all ideas have a material origin and are related to the material world, but it is another thing entirely to suggest that all ideas, as ideas, have an omnipotent relation of truth about the world. In other words, Engels has gone from an acceptance of the relative, conditional, historical, and changeable nature of truth and falsity, to a dogmatic and rigid view that all ideas 'must' have an inherent relation of truth concerning the world. But how then do we differentiate and develop criteria to show which ideas are more explanatory and valid than others about reality? Hence Engels's dogmatic defence of reflection theory has ended up with an epistemological absurdity of logical inconsistencies that seem to justify scepticism. Nevertheless Engels also admits that the capacity to correctly reflect reality has been undermined by alienated material conditions and the role of alienated ideology. [97]. However, this acknowledgement does not amount to an immanent critique and reevaluation of the epistemological rigidities and limitations of his uncritical adherence to reflection theory. Instead these types of corrections are to be located within Dietzgen's conception of dialectical materialism.

Secondly, there are problems in Engels's conception of the relation between materialism and idealism. On the one hand Engels in *Anti-Duhring* seems to have a very critical and negative assessment of idealism. In philosophical terms, idealism has an approach which projects the logical onto the real, rather than starting from the primacy of the material world. This means that idealism cannot provide valid explanatory premises for understanding the world because of its methodological limitations and alienated premises:

"Logical schemata can only relate to forms of thought, but what we are dealing with here is solely forms of being, of the external world, and these forms can never be created and derived by thought outside of itself, but only from the external world. But with this the whole relationship is inverted: the principles are not the starting-point of the investigation, but its final result; they are not applied to nature and human history, but abstracted from them; it is not nature and the realm of man which conform to these principles, but the principles are only valid in so far as they are in conformity with nature and history. That is the only materialist conception of the matter, and Herr Duhring's contrary conception is idealistic, makes things stand completely on their heads, and fashions the real world out of ideas, out of schemata, schemes or categories existing somewhere before the world, from eternity - just like a Hegel." [98].

This comment seems to contend that materialism and idealism are mutually exclusive and antagonistic polar opposites. Idealism can only contribute an obscurantist conception of reality and the relation between being and thought. Whilst a materialist approach is the only valid and explicable basis to develop a viable understanding of reality and the relation between being and thought. On the other hand, this view seems to be modified and qualified by Engels's praise for Hegel's dialectical approach. This is not to suggest that Engels was unaware of the limitations of Hegel's idealist dialectic. He precisely outlined the problems of Hegel's conception of reality, and its justification of the idealist primacy of the absolute idea. [99]. Simultaneously Engels was also full of praise for the methodological capacity of Hegel's dialectic, and its ability to develop a dynamic and historical ontology of reality within both nature and society. [100]. So did this mean that the modern materialism of Marx and Engels was somehow reconciled with idealism because of the praise for and theoretical significance of Hegel's dialectic? Or, were materialism and idealism still opposed, and consequently Hegel's importance for materialism was an aberration from the norm? In *Anti-Duhring* Engels does not seem to resolve this important epistemological question.

The *Dialectics of Nature* seems to favour the more negative view of idealism, which is initially described as a philosophical and ideological product of alienated material conditions.

Consequently, idealism as religion is essentially an illusory or 'fantastic' expression of the real relations of reality. [101]. Hence Engels does not seem to attribute any important philosophical significance to idealism, and instead he looks forward to the sociological and political resolution of the theoretical problems posed by idealism. This is why he argues that the increasing historical harmony and unity between humanity and nature will overcome the alienated divide between mind and matter, which has resulted in the alienating domination of idealism. [102].

But Engels also seems to contradict this essentially negative conception of idealism as alienated ideology. He outlines how Greek philosophy was basically orientated towards a materialist philosophy of science before idealist theoretical regression took place. But he then comments that despite this idealist regression it is epistemologically important not to deny the scientific and philosophical advances that have been made about understanding the world within an idealist form:

"But between those ancient Greeks and us lie more than two thousand years of an essentially idealist outlook on the world, and so the return to self-evident understanding is more difficult

than it appears to be at first sight. For it is by no means a matter of simply throwing overboard the entire thought content of those two thousand years, but of a criticism of it, of extracting the results - that have been won within a form that was false but which was inevitably idealistic for its time and for the course of evolution itself - from this transitory form. And how difficult that is, is proved for us by those numerous natural scientists who are inexorable materialists within their science but outside it are not merely idealists, but even pious and indeed orthodox Christians." [103].

So the materialist aspects of science have been subsumed within a hegemonic idealist philosophy of science, and this means it is necessary not to reject - and rather indeed to extract - the theoretical advances that have been made. Consequently, in this conception idealism is not viewed entirely negatively, and instead it is important to indicate the theoretical achievements made by idealism. This standpoint seems to be more compatible with the frequent references to the importance of Hegel's dialectic in the *Dialectics of Nature* in relation to interpretation of scientific advance. Furthermore, Engels also contends that it would be dogmatic to claim that materialism has been inherently superior to idealism within the history of philosophy. Instead previous forms of materialism have often adapted to idealism and its alienated starting point of projecting the logical onto the real:

"The general results of the investigation of the world are obtained at the end of this investigation, hence are not principles, points of departure, but results, conclusions. To construct the latter in one's head, take them as the basis from which to start, and then reconstruct the world from them in one's head is ideology, an ideology which tainted every species of materialism hitherto existing; because while in nature the relation of thinking to being was certainly to some extent clear to materialism, in history it was not, nor did materialism realise the dependence of all thought upon the historical material conditions obtaining at the particular time." [104].

Consequently, the *Dialectics of Nature* does not resolve the epistemological tensions in Engels's differing and changing conception of the relation between materialism and idealism. On the contrary, his philosophical contradictions on this question are raised to a new level of intensity, inconsistency, and lack of resolution.

Thirdly, although the following chapters elaborate the basically anti-positivist content of Engels's elaboration of dialectical materialism, there is still the ongoing philosophical problem of a tension between positivism and anti-positivism. In *Anti-Duhring* Engels claims that there is no longer any theoretical validity for an independent role for philosophy, except in terms of a distinctive elaboration of the laws of logic. [105]. On this view the tasks of philosophy have been subsumed by those of science. However, in *Dialectics of Nature* this view is emphatically opposed. Engels refers to the dependence of natural science on the role of philosophy to initiate, develop and interpret scientific practice. He indicates that Leibniz, Kant, and Hegel had a crucial role of going beyond the spontaneous empirical limits of natural science and developing explanatory theories about reality. [106]. Furthermore, there is a vital independent role for dialectics as a philosophy of science; a task which is necessary if natural science is not to adapt to the worst type of philosophy:

“Natural scientists may adopt whatever attitude they please, they are still under the domination of philosophy. It is only a question whether they want to be dominated by a bad, fashionable philosophy or by a form of theoretical thought which rests on acquaintance with the history of thought and its achievements.” [107].

But this stance does not refute Engels's alternative positivist claim about the increasingly superfluous role of an independent philosophy. This is because he eclectically combines his anti-positivist premises with the view that Hegel's dialectic has culminated in an end to the distinctive autonomous tasks of philosophy: “The Hegelian system was the last and most consummate form of philosophy, in so far as the latter is represented as a special science superior to every other. All philosophy collapsed with this system.” [108]. Once again Engels has not resolved the tension between two logically contradictory standpoints, but instead he proposes an ambiguous and eclectic approach.

Fourthly, Engels upholds specific and precise ontological limitations. Firstly, in *Anti-Duhring* his rudimentary comments about the relation between matter and mind could be said to be reductionist and express an effective denial of the important role of mind. Engels seems to suggest that thought is nothing more than a particular and distinctive expression of the role and character of the material world as nature:

“But if the further question is raised what thought and consciousness really are and where they come from, it becomes apparent that they are products of the human brain and that man himself is a product of nature, which has developed in and along with its environment; hence it is self-evident that the products of the human brain, being in the last analysis also products of nature, do not contradict the rest of nature’s interconnections but are in correspondence with them.” [109].

As a comment which indicates that mind has a material origin and content this seems to be satisfactory and non-problematical. But without being developed and elaborated it could suggest that thought is nothing more than an automatic and mechanical expression of (correspondence with) the natural and social environment. For what is not explained is how the material origin and content of thought can be the objective basis for it to have a dynamic role. In other words, in rejecting the idealist emphasis upon the primacy of an autonomous mind that is projected onto reality Engels may have found himself only being able to envisage a materialist alternative in terms of a passive reduction of the role of mind to material conditions.

Secondly, the *Dialectics of Nature* shows that Engels has significant theoretical problems in relation to constructing explanatory principles for understanding reality. On the one hand Engels claims that matter and motion are nothing more than the general concepts of the totality of the sense-perceived objects within reality. This standpoint could suggest that reality is reduced to what can be epistemologically perceived, and has no meaningful material actuality outside of this act of perception. Hence Engels seems to be adapting to an empiricist ontology: “Matter is nothing but the totality of material things from which this concept is abstracted, and motion as such nothing but the totality of sensuously perceptible forms of motion; words like matter and motion are nothing but abbreviations in which we comprehend many different sensuously perceptible things according to their common properties.” [110]. In other words, Engels seems to be ontologically denying the realist standpoint that matter can have an intangible and independent nature that is not reduced to human sense perception and consciousness. On the other hand Engels also accepts that matter is a theoretical abstraction and concept that is not reducible to the sensuously perceived things within it. This seems to allow for a realist ontological approach: “N.B. Matter as such is a pure creation of thought and an abstraction. We leave out of account the qualitative differences of things in lumping them together as corporeally existing things under the concept matter. Hence matter as such, as distinct from definite kinds of matter, is not anything sensuously existing.” [111].

Does Engels's important philosophical article entitled *Ludwig Feuerbach and the End of Classical German Philosophy* resolve the above theoretical questions? [112]. Firstly, in relation to reflection theory, Engels reaffirms the significance of the relative and historical character of knowledge. [113]. But this relativism is justified in terms of showing a direct relation to reflection epistemology. In other words, the changing and transitory nature of knowledge is no longer posed in terms of a complex dialectical relation of truth and error changing into each other, but instead the very historical, conditional, and fluid nature of knowledge has an inherent relation of correctness about reality because it cannot be anything other than a reflection of objective truth extracted by dialectics: "It reveals the transitory character of everything and in everything: nothing can endure against it except the uninterrupted process of becoming and passing away, of ascending without end from the lower to the higher. And dialectical philosophy itself is nothing more than the mere reflection of this process in the thinking brain." [114]. It could be said that Engels is maintaining that dialectical philosophy is the basis to develop objective truth in comparison to the falsity of other philosophical trends. But this interpretation would be in contradiction with Engels's claim that no single philosophical system is in an exclusive relation to the truth. Furthermore, Engels's emphasis is upon the epistemological capacity of thought to reflect reality, and this suggests that non-dialectical philosophical trends can develop truths about reality, but it is dialectical philosophy which develops these truths in the most profound and explanatory manner.

Engels also upholds the view that thought can reflect reality in his discussion of the thing-in-itself. Engels argues that practice can bring about knowledge in the process of transforming reality: "If we are able to prove the correctness of our conception of a natural phenomenon by bringing it about ourselves, producing it out of its conditions and making it serve our own purposes into the bargain, then the ungraspable Kantian "thing-in-itself" is finished." [115]. But it could be argued that practice does not establish a consistently objective criteria of the possibility of truth about reality, but rather shows that truth is in a constant process of historical change in relation to the transforming criteria of practice. Hence practice can be just as cogently connected to a relativist and subjective evaluation of truth, and is not necessarily a consistent upholder of the reflection theory of truth, which seems to rely upon omnipotent, static and immutable truths if it is to have any real epistemological consistency. But instead of trying to resolve this epistemological tension Engels only succeeds in systematically intensifying the

contradictions between his relativist and reflectionist approaches. On the one hand he continues to reaffirm his relativism and repeats the view that the true and the false are in a dialectical flux of constant change in accordance with the historical character of knowledge. In this context the capacity to reflect and produce images of things is only transitory and subject to constant change:

“The great basic thought that the world is not to be comprehended as a complex of ready-made things, but as a complex of processes, in which the apparently stable things, no less than their mental images in our heads, the concepts, go through uninterrupted change of coming into being and passing away.....is now scarcely to be contradicted.” [116].

On the other hand, Engels’s conception of the ontological and epistemological identity of being and thought challenges this relativist and historical epistemology. For the capacity of thought to reflect reality in an objective and correct manner is because thought can ultimately do nothing else than comprehend reality because it is in a basic unity with reality. This is precisely why the Hegelian dialectic was a correct reflection of reality, but in an inverted and alienated manner. Hence what is necessary is to materialistically transform the Hegelian dialectic so that it can reflect reality in a more adequate and comprehensive manner. Alienated and ideological philosophical trends can historically obscure the epistemological capacity to reflect reality in the most objective manner, but thought has an inherent capacity to bring about a correspondence with reality. This means the reflectionist standpoint is ultimately dominant in a contradictory manner in Engels approach, as the following comment indicates:

“We comprehended the concepts in our heads once more materialistically - as images of real things instead of regarding the real things as images of some or other stage of the absolute concept.....Thereby the dialectic of concepts itself became merely the conscious reflection of the dialectical motion of the real world and thus the Hegelian dialectic was placed upon its head; or rather, turning off its head, on which it was standing, and placed upon its feet.” [117].

Secondly, Engels’s discussion of the relation between materialism and idealism seems to definitely reject his previous emphasis on the negative role of idealism both philosophically and ideologically. However, this point is obscured by the theoretical significance that has been given to Engels’s definition of the important differences between materialism and idealism in terms of

the primacy of nature or mind. [118]. This could suggest that Engels still maintains that materialism and idealism are mutually exclusive and counterposed opposites. But this would be a very one-sided interpretation because the major emphasis of Engels is upon the philosophical similarities between materialism and idealism. Hence in his discussion of Feuerbach's philosophical contribution Engels's major criticism is of Feuerbach conceiving materialism in terms of an absolute opposition to idealism. Feuerbach had correctly struggled to reestablish the supremacy of materialism over idealism, but this was carried out in terms of an absolute negation of the importance of Hegel's dialectic. This Feuerbachian standpoint represented an anti-epistemological approach that rejected as a totality the achievements of Hegel's dialectic. Feuerbach was correct to reject Hegel's idealist emphasis on the unity of thought and being in terms of the primacy of the absolute idea, but he was dogmatically incorrect to reject the possibility to extract and develop the rational kernel and method of Hegel's dialectic:

“Feuerbach broke through the system and simply discarded it. But a philosophy is not disposed of by the mere assertion that it is false. And so mighty a work as Hegelian philosophy, which had exercised so enormous an influence on the intellectual development of the nation, could not be disposed of by simply being ignored. It had to be “transcended” in its own sense, that is, in the sense that while its form had to be annihilated through criticism, the new content which had been won through it had to be saved.” [119].

Engels could maintain that his approach is not making concessions to Hegel's idealism, because Hegel's approach is an inverted materialism: “Thus, ultimately, the Hegelian system represents merely a materialism idealistically turned upside down in method and content.” [120]. But what is possible for Hegel's dialectic - its materialist transformation - seems to suggest that idealism itself could be an expression of a limited or implicit materialism. In other words, Engels could be trying to outline how the material character of the world means that even the most idealist of philosophical trends has materialist aspects. On this view the divide between materialism and idealism is not absolute, but is instead an expression of a unity of opposites, and is not an absolute conflict of opposites. Unfortunately, Engels does not develop and theorise this point, and instead the philosophical merits of idealism seem to be represented exclusively by Hegel's dialectic. This means Engels's philosophical stance uneasily expresses two contradictory stances, the view that materialism and idealism are in irreconcilable conflict, and the view that materialism and idealism are in some form of unity.

Engels essentially contrasts Feuerbach unfavourably with Hegel. Feuerbach is said to have adapted to mechanical materialism, and primarily he has a non-historical and abstract approach for explaining social reality. [121]. Thus it is not surprising that Engels shows the greater philosophical importance of Hegel in comparison to Feuerbach: "He could not cope with Hegel through criticism; he simply cast him aside as useless, while he himself, compared with the encyclopaedic wealth of the Hegelian system, achieved nothing positive beyond a bombastic religion of love and a meagre, impotent morality." [122]. This conclusion leaves open an important philosophical question. If such a significant philosophical materialist as Feuerbach has such a problematic ontology and epistemology in comparison to Hegel's idealist dialectic, what does this imply about the materialist and idealist theoretical relationship? Unfortunately, Engels does not broaden and generalise from his analysis of the relation between Feuerbach and Hegel in order to answer this question. Consequently, he leaves the relation between materialism and idealism in an unresolved and problematic state.

Thirdly, the question of positivism. Engels argues that Hegel's dialectical method shows that the role of philosophy as eternal, complete, rigid, and countenanced systems has come to an end. The autonomy of philosophy was linked to the idealist role of individuals constructing a system or trend which superseded and transcended previous philosophical trends. But, claims Engels, Hegel's dialectic has brought to an end this individual system building because its methodology can be applied within the particular sciences in order to develop knowledge of reality and thought. Hence Engels essentially agrees with Hegel that he has realised the end of philosophy and that its role is subsumed within science:

"One leaves alone "absolute truth", which is unattainable along this path or by any single individual; instead, one pursues attainable relative truths along the path of the positive sciences, and the summation of their results by means of dialectical thinking. With Hegel philosophy comes to an end altogether: on the one hand, because in his system he sums up its whole development in the most splendid fashion; and on the other hand, because, even if unconsciously, he shows us the way out of the labyrinth of systems to real positive cognition of the world." [123].

This standpoint seems to be a conclusive remark in favour of a positivist approach - the view that philosophy has been superseded by the role of science. Engels seems to have resolved the tension and oscillation between conceiving the methodological status of dialectics as representing an independent role for philosophy, and alternatively indicating that the dialectical method is fully incorporated within science. There no longer seems to be any ambiguity in Engels's stance, and the role of philosophy as a philosophy of science is not as an independent underlabourer for science, but is rather as an incorporated aspect of science. Engels seems to confirm this positivist conception of the rejection of an independent and distinctive role for philosophy with the following comment:

“For philosophy, having been expelled from nature and history, there remains only the realm of pure thought, so far as anything is left of it: the theory of the laws of the thought process itself, logic and dialectics.” [124].

In other words, for philosophy to construct a philosophy of history, or a philosophy of nature, is an expression of an inherently idealist approach of projecting a priori and logical premises onto the real. A materialist approach has the alternative starting point of scientifically constructing an understanding of reality from an a posteriori methodology. This is why the explanatory gains of philosophy are subsumed within science, and philosophy only has a limited epistemological role in constructing a logic to explain thought. This may seem to be a conclusively positivist approach, but Engels's standpoint still has ambiguities and tensions. Primarily, if dialectical materialism - the materialist inversion of Hegel's dialectic - has a crucial importance for developing a scientific understanding of reality, how is it possible to avoid the problem of constructing a distinctive philosophy of history, and nature, using the dialectical method? Hence to formally suggest that dialectics can be limited to the understanding of logic is an implausible and impossible contention. Indeed, it can be argued (as the earlier comments on reflection theory showed) that Engels projects the premises of dialectical logic onto reality, and this only goes to show that the laws of logic cannot be limited to exclusively understanding logic. Alternatively, Engels has contradicted in an idealist manner his own positivist standpoint that logic cannot be philosophically applied to the scientific understanding of material reality. Whichever standpoint we take on this question of the relation of logic to the methodology for understanding reality, it will continue to be a matter of philosophical dispute, and so Engels's view that establishing a closer relation between philosophy and science has

resolved outstanding philosophical questions is a positivist illusion. Furthermore, the complex task of developing a scientific understanding of reality will continually generate philosophical disputes, and lead to rival interpretations between different philosophies of science. Hence to contend that philosophy has been subsumed by science is an acceptance of a positivist illusion by Engels, and epistemologically contradicts his generally anti-positivist elaboration of dialectical materialism, as was shown in the first two chapters.

Fourthly, and specifically, Engels has not resolved the problem of reductionism. He reaffirms support for Feuerbach's stance that mind is a distinctive part of matter: "Matter is not the highest part of the mind, but the mind itself is merely the highest product of matter. This is, of course, pure materialism." [125]. But, once more, this comment does not explain whether and how mind could have a dynamic rather than a mechanical, automatic, and passive relation to the material world. Is mind essentially a reaction to developments in the material world, or does it represent a greater capacity to shape and transform the material world? We have no definite answer from Engels on this question, apart from the view that ideas do not primarily create the material world. But does this mean that ideas have no dynamic role in history, and do not actively help to transform the material world? Instead of an epistemological answer to this question, Engels does outline an ontology that relates consciousness and individual will to the often unintended consequences and complex causes of class struggle. [126]. This still does not represent an adequate understanding of whether mind, as the conscious part of the material world, has a dynamic or a more mechanical relationship to changes within the material world. In relation to the question of the ontological tension between empiricism and realism, the article on Feuerbach adds nothing of significance.

HOW DOES DIETZGEN OVERCOME THE PHILOSOPHICAL LIMITATIONS OF ENGELS?

Engels has briefly argued that mind is a part of matter, but because he has not articulated this in more detail it could be maintained that mind is nothing more than a mechanical expression of the material world. Dietzgen's view is apparently the same as Engels. He shows that the connected relation of mind to matter means that mind is a distinctive part of the same ontological substance as matter: "[m]ind and matter, in spite of all their differences, are two parts of the same whole. two expressions of the same universal reality." [127]. This does not mean that mind is merely

the passive expression or reflection of matter. On the contrary, mind is unique in that it is able to conceptualise about the material world, and no other aspect of the material world has this epistemological ability. But the objective basis for mind to be able to express and think about reality is that it is part of that reality and has an ontological character that is not distinct from the material world. Thus it is a contradiction in terms to conceive of mind as spirit that is somehow different to the material world: "The function of the brain and its product, the understanding, is likewise inseparable from the universal interdependence of things." [128]. In contrast, Dietzgen shows that the approach of mechanical materialism is to deny the importance of mind as dynamic activity, and the ambiguity of Engels on this question could mean that he has not fully overcome this epistemological limitation. [129]. Hence Dietzgen has provided epistemological clarity about the relation between matter and mind whereas Engels's lack of elaboration seems to have upheld ambiguity and accommodation to a mechanical standpoint that denies the importance of mind as thought. As if in anticipation of these problems, Dietzgen is trying to show that to establish the inherent ontological unity of matter and mind is not to deny the importance of mind, but is instead the objective basis to show why mind is far more than a supposedly passive reflection of the world. However, Dietzgen is also attempting to overcome the idealist view that equates the dynamic role of mind with the justification of the standpoint that mind is primary or autonomous from the objective material world.

Thus it is not surprising that Dietzgen rejects the mechanical materialist approach. By implication he is rejecting Engels's adherence to reflection theory - Engels sometimes argues that mind is nothing more than the passive effect of the cause expressed by the material world. Dietzgen's more dialectical view is that: "Not alone does physical development produce intellectual development, but vice versa, the understanding reacts on the physical world. The one is not merely a cause, nor the other merely an effect. This obsolete distinction does not suffice for the full understanding of their interrelations." [130]. So in contrast to Engels, Dietzgen is not content to accept the rigid one-sidedness of reflection theory which defines the externality of the material world as the constant primary cause of a reaction at the level of mind. Instead he wants to show that the materiality of mind means that it can be the cause of developments within the material world. Indeed, he wants to overcome, firstly, the epistemological rigidities of idealism, which defines mind as the constant cause of changes within the material world, and, secondly, the similar but opposite limitations of traditional materialism. Instead he argues that there is a more complex and dialectical relation between

mind and matter, in that it is not possible - unlike reflection theory - to suggest in predetermined terms whether mind or matter will be dominant in relation to developments within the material world. Instead precise and changing circumstances will show whether mind or the wider material world is dominant, and what is dominant in one situation will become subordinate in another. Thus in criticising reflection theory, Dietzgen is not only challenging the one-sided reflection theory of materialism and its reduction of mind to a passive effect of matter, but he is also rebuking the idealist version of reflection theory, which reduces the material to a passive reflection of the mind. Rather there is a complex dialectical interaction and transformation of matter and mind, an epistemological standpoint which is reminiscent of Marx's *Theses On Feuerbach*:

“However, the idealist philosophers...are still more or less under the mistaken impression that the process of thinking is the true process and the true original, and that the true original, nature, or the material universe, is only a secondary phenomenon. We now insist on having it understood that the cosmic interaction of phenomena, the universal living world is the truth and life.” [131].

So Dietzgen's effective rejection of a materialist reflection theory epistemology does not lead him to conciliate and uphold idealism. On the contrary, he is critical of idealism precisely because it upholds an inverted form of a materialist reflection theory. For instead of thought being a reductive and derivative reflection of the material, the material is conceived as a passive reflection of the ideas of thought. In contrast, Engels can be shown to have inverted an idealist reflection theory and made the material the cause instead of the secondary effect. Rejecting this false dilemma, Dietzgen is showing that both standpoints are epistemologically flawed because they have a rigid and unilinear conception of the relation of cause and effect. But Dietzgen is doing considerably more than showing the non-dialectical one-sidedness of traditional reflection theory. He is also indicating that the relation of ideas to the world is not an expression of rigid epistemological guarantees as defended by reflection theory - rather the material content of ideas represents an ontological capacity to represent the similar material character of the world. So ideas do not have an other-worldly origin and content, but are an expression of a distinctive though similar ontological character as things:

“The idealist incarnate contends that all things are ideas, while we strive to make him see that ideal things and material things are two species of the same genus, and that they should be given a common family or general name beside their special name, on account of their common nature and for the purpose of a sound logic. Wherever this understanding has been acquired, the quarrel between idealists and materialists appears in the light of a mere bandying of words.” [132].

Hence the idealist and materialist emphasis on the primacy of ideas or matter represents an ontological misunderstanding that tries to bestow an ontological autonomy of ideas or matter, and does not recognise the basic ontological unity and connection between ideas and matter. The result is that this ontological limitation is expressed by an epistemological limitation that has a one-sided emphasis on the importance of ideas to the exclusion of matter, or has an equally rigid emphasis upon matter and downgrades the significance of ideas. So although Dietzgen agrees with Engels that materialism is philosophically more coherent than idealism, he tends to avoid Engels’s tendency towards rigidly demarcating between materialism and idealism. Instead as both materialism and idealism have an epistemological history of one-sidedness and rigidity, the history of philosophy has been unnecessarily polarised between materialism and idealism. Thus the question of uniting materialism and idealism, is not as it is for Engels an exceptional question of extracting the materialist aspects of Hegel’s dialectic, but is rather made possible by the very advances of philosophy itself, which has shown the feasibility of this unity. This does not mean that materialism is conciliating idealism, but rather the possibility of a closer unity between materialism and idealism is made plausible without substantial epistemological concessions by materialism. Materialism can indeed show the dynamic role of ideas in a principled and flexible manner. On this basis materialism is enriched and deepened. It is able to incorporate the advances of idealism and show that idealism is essentially a form of materialism that has not recognised itself. In other words, the demarcation between idealism and materialism was essentially one of ‘exaggerated distinctions’ because of a lack of philosophical development, development which could show how the similarities between idealism and materialism transcended the differences:

“We lack the right terms for designating the relationship between spiritual phenomena, such as our ideas, conceptions, judgements and conclusions and many other things on the one side and the tangible, ponderable, commensurable things on the other. True, the reason for this lack of

terms is the absence of understanding, and for this reason the dispute is not one of mere words, although it can be allayed only by an improvement of our terminology.” [133].

Thus Dietzgen has a rich and dialectical conception of the relationship between materialism and idealism. On the one hand the differences between materialism and idealism have been unavoidable because they expressed the historical situation and context of the development of idealism and materialism, and this was represented by antagonism and opposition. On the other hand the changing and relative character of knowledge had by then created the possibility for these differences between materialism and idealism to be transcended in terms of a new appreciation of the role of ideas within the material world. Hence Dietzgen seems to be systematically articulating and theorising what is still ambiguous and untheorised in the work of Engels, because Engels is both showing the similarities between materialism and idealism in terms of the philosophical importance of Hegel’s dialectic, and yet Engels is also epistemologically committed to showing the continued differences and antagonism between materialism and idealism. On the view argued here, Dietzgen has resolved these ambiguities in the work of Engels. Dietzgen shows that Hegel’s idealist dialectic is not an exceptional aberration within a continued polarisation between materialism and idealism, but instead Hegel’s dialectic is a philosophical expression of the potential for the growing unity between materialism and idealism. Hegel’s capacity to develop a dynamic ontology of the material world in terms of change and becoming, is a specific and historical expression of the increasing unity between materialism and idealism. [134]. Hegel’s understanding of the dynamic importance of categories is an important, but still limited recognition of the dynamic role of ideas within the material world. Dietzgen sees that it is necessary to develop Hegel’s dialectic and realise its full philosophical potential in relation to the task of uniting materialism and idealism in closer terms.

In his ‘Letters on Logic’, Dietzgen elaborates an understanding of logic that shows an alternative to Engels’s tendency to reduce philosophy to the principles of science. Dietzgen is concerned to develop a logic, but he is aware that previous types of logic have often expressed the idealist tendency to project the logical onto the real. Hence he focusses on establishing the materialist starting point that: “Philosophical brains have developed the science of logical thought only to the extent that the material development of the world has stimulated them to do so.” [135]. Thus the objective theoretical basis for logic is being, or the theoretical basis to enhance an understanding of material reality: “Our logic which has for its object the truth of the universe, is

the science of the understanding of the universe, a science of universal understanding or conception of the world.” [136]. Dietzgen has emphasised the scientific nature of logic, but unlike Engels he is not justifying a reduction of philosophical principles to the premises and concepts of science. Rather, the development of logic as the elaboration of concepts and categories that facilitate our understanding of the world is connected to the highest of all philosophical principles, the aspiration to realise reason in the process of thinking about the world. Hence even if we are trying to establish the most scientifically coherent knowledge of the world, this cognitive process cannot be differentiated from the important and distinctive role of philosophy as reason. For without the application of reason, the epistemological capacity to arrive at scientific knowledge would be seriously limited and undermined. Dietzgen therefore concludes, if logic is the highest form of reason, the greater the development of logic the more likely that thought will arrive at scientific knowledge of the world:

“All our knowledge must be connected and combined into one understanding, one system, one realm and this is the realm of reality, of truth, of life.

Systematic classification is the task of logic. The first requirement for this purpose is the awakened consciousness of the indivisibility of the universe, of its universal unity.” [137].

Dietzgen is not trying to deny the need for specialised scientific knowledge, but what he is showing is that the development of logic is crucial for the purposes of interpreting and showing the methodological importance of the multifaceted and diverse forms of knowledge about the world. In other words, he is showing that philosophy has a role as a theory of knowledge that is able to critically assess, using logic, the historical development of understanding about the material world. In terms of philosophical practice, Engels does not differ from Dietzgen - Engels also uses dialectical logic in order to critically interpret new and changing knowledge about the world. But in theory, Engels contradicts this epistemological emphasis upon logic as a theory of knowledge because in a positivist manner he subsumes logic into scientific reasoning. To this Engels philosophy seems to no longer have an independent and distinctive role. Dietzgen shows an alternative to the positivist tensions, ambiguities and limitations of Engels’s epistemological approach.

However, what Engels and Dietzgen most definitely have in common is an emphasis upon the importance of ontology, or a conception of being. (In relation to Engels, this point will be outlined in the following chapters). Dietzgen is emphatic about the importance of being. He shows that knowledge cannot be possible unless it is located within this ontological context: "Consciousness, the knowledge of being, must be present, before any special knowledge can be acquired. Consciousness signifies the knowledge of being. It means having at least a faint inkling of the fact that being is the universal idea. Being is everything, it is the essence of everything. Without it there cannot be anything, because it is the universe, the infinite." [138]. This seems to be such a rudimentary thing to argue that it is almost not worth pointing out, but what Dietzgen was trying to oppose was the epistemological turn within philosophy, as with Descartes, Kant, and Hegel, that placed emphasis on thought rather than being. Instead of starting with the philosophical ego and its cognitive abilities, Dietzgen is showing that the very capacity of thought is dependent upon the objective actuality of the universe. This is why the role of thought cannot be envisaged outside of this ontological context of being. Thus the question of the validity of reason, understanding, and the possibility of truth, is not an expression of an immaculate epistemological relation of reflection between thought and the world, but instead the universe as infinite shows the epistemological limitations of the finite and fallible role of thought. The infinite complexity of being means that thought will often be in error, even though we are part of nature and have the potential capacity to know the world. [139]. Indeed, both truth and error have a paradoxical epistemological relation to the ontological complexity of the world. [140]. Consequently, Dietzgen's most powerful argument against Engels's adherence to reflection theory is the seminal critical realist view that the complex nature of being means that knowledge is constantly changing and there is no inherent and rigid relation between being and thought: "Truth is the real universe from which errors and lies are not excluded." [141].

Stuart Macintyre is critical of Dietzgen for his supposedly uninspiring and confused conception of dialectical materialism: "From this brief summary it should be evident that Dietzgen had provided a turgid and far from clear attempt to spell out a materialist world view, but one relying on the dialectical tradition for its inner dynamic." [142]. This seems to be a very harsh comment given, as the above material shows, that Dietzgen provides a lucid, precise, and imaginative conception of dialectics that both overcomes deficiencies within Engels's version and enriches the ontological and epistemological premises of dialectical materialism. In contrast, Jonathan Ree is more complimentary about Dietzgen: "[h]e had amassed impressive credentials as the

sovereign philosopher of Marxism.’ [143]. However, Ree also considers that Dietzgen upheld a rigid realism based upon a reflection or pictorial epistemology. [144]. But despite occasional concessions to a reflectionist epistemology, Dietzgen’s overall stance is to be critical of a reflectionist approach, as has been elaborated in this chapter. Thus neither Macintyre nor Ree show the depth and originality of Dietzgen’s version of dialectical materialism. Hence the thesis is more sympathetic to the following conclusion of Anton Pannekoek in his work *Lenin as Philosopher*: “Marx stated what realities determine thought; Dietzgen established the relation between reality and thought.” [145]. Unfortunately, Pannekoek does not really elaborate this insight beyond a brief description of the connection between mind and matter. Consequently, it is an aim of the thesis to comprehensively show the breadth and extent of Dietzgen’s contribution to Marxist philosophy. Sadly, this contribution has been obscured by political controversy and the increasing philosophical conformity of Marxism in the 1930s. [146].

CHAPTER SEVEN: THE CONTEMPORARY IMPORTANCE OF DIETZGEN'S DIALECTICAL MATERIALISM

It is important to show that Dietzgen's version of dialectical materialism with its strong emphasis on the unity of matter and mind can help to oppose the development of idealism within Bhaskar's dialectical critical realism. (This is an extension of his early philosophical approach of transcendental critical realism).

THE QUESTION OF MATERIALISM VERSUS IDEALISM IN BHASKAR'S *PLATO ETC.*

In *Plato Etc.*, Bhaskar outlines the history of philosophy in terms of problems generated by the complexities of the relationship between reality and thought. [1]. Thus the Platonic/Aristotelian fault line is an expression of how Platonic forms and Aristotelian logic cannot sustain ontological depth for explaining the world. [2]. Bhaskar explicitly rejects Plato's attempt to overcome these philosophical problems by the idealist resolution of the: "recollection of knowledge acquired in a previous life (a viciously circular argument – for how was such knowledge thus established?) indicating the immortality of the soul." [3]

Bhaskar seems to be suggesting that realism and materialism are more explanatory about reality than the various forms of idealism. But at the same time Bhaskar maintains that the disputes within philosophy, such as materialism versus idealism, are 'dialogical' 'constitutive antagonisms' that show the internal inability of traditional philosophy to resolve its questions by an extra-philosophical appeal to reality. [4]. This suggests that materialism lacks the criteria of dialectical critical realism (DCR) and so cannot sustain its premises by an appeal to the world outside philosophical discourse. On this view materialism has its own self-sufficient epistemological premises that don't overcome the Platonic and Aristotelian problem of a lack of ontological depth, or a lack of extra discursive ontological validity. Consequently the dispute between materialism and idealism is not primarily ontological, or about competing theories concerning reality, but is instead a struggle between two flawed views about reality that represent contradictory epistemological premises, the primacy of matter or mind. Consequently, DCR is not an extra addition to materialism, in terms of providing more ontological validity (depth) to materialism, but is instead the philosophical resolution of the anti-realist (irrealist)

tendencies within both materialism and idealism. DCR is an umpire, rather than a partisan player in the materialist and idealist conflict. Idealism is not the only form of irrealism because materialism is also irrealist, and both materialism and idealism lack the ontological depth of the DCR four level conception of reality. (1M - non-identity, 2E - negativity and absence, 3L - totality, 4D - agency).

Bhaskar's approach is a relativist (the contemporary versus the past) and individualist standpoint because by definition all logical and ontological philosophy before Bhaskar elaborated his new dialectical ontology had a lack of ontological depth, and was therefore limited and incomplete. This meant in ontological and epistemological terms virtually all past philosophy was irrealist in different ways. For example, there was a lack of causality in comparison to Bhaskar's complex conception of causality, absence and agency. So the history of philosophy is not considered by Bhaskar to be a contribution to the ontological development of DCR, but instead there are different types of theory-and-practice inconsistency, the Hegelian Unhappy Consciousness, etc. In general, the history of philosophy represents ontological monovalence and rigidity in comparison to DCR.

This criticism of Bhaskar's rejection of the philosophical significance of materialism does not mean to suggest that Bhaskar does not use materialist arguments in order to reinforce his DCR. The concept of referential detachment is the epistemological premise used to uphold the independent externality of the world, which cannot be reduced to human centred discourse: "This is the detachment of the act by which we refer to something from that to which it refers, or of reference from referent. Discourse must be *about* something other than itself, at the very least potentially, for us to be able to refer at all." [5]. But this point is not extended by Bhaskar to the stage where materialism is considered to be ontologically explanatory because it upholds referential detachment. Instead, by implication materialism sustains referential detachment despite its irrealist ontological problems. Nevertheless Bhaskar is ready to accept that materialism is not considered anti-scientific because science corresponds to referential detachment and the perspective that external reality (the primary material world) is the basis of human activity. Furthermore, causality has a materialist and realist ontological content, in comparison to empirical and positivist conceptions of reality. [6]

Bhaskar is prepared to contrast subjective idealist, inward, and internalised forms of the philosophical subject to the alternative of realism, which is not counterposed to materialism: "Solipsism has been an endemic problem-field since Descartes inwardized and subjectivized rationalist criteria of knowledge. The *ego-present-centric* standpoint readily lends itself to scepticism about the existence of an external world, of other minds, of my body, my past states and thus of myself and hence of any thought at all, including doubt (so that Cartesian doubt is no exception), and so about anything and hence about everything." [7]. This point is not elaborated upon and remains untheorised, and so materialism is only a silent (and suppressed) ally of DCR at best, and at worst materialism is a diverse expression of irrealism.

Yet Bhaskar does occasionally allow for flexibility and change in his analysis of the history of philosophy before DCR. He contends that Kant's philosophy could have opened the way for transcendental realism, such as ontologically locating the thing-in-itself in causal and real terms:

"It could be argued that had Kant made the distinction between transcendental arguments and transcendental idealism, he could have deployed a transcendental argument to establish the knowability of the transcendental subject who synthesized or categorized the phenomenal world and thus avoided blocking off the transcendental subject and the understanding-in-itself *and* the transcendental object and the world-in-itself from the experiencing human ego. However, such a move would have unlocked the floodgates. There would have been no reason to deny the applicability of the categories to things-in-themselves, or to deny that we have (partial, fallible) knowledge of being not just phenomena. Kant's opposition to ontology *per se* would have collapsed and, in the vein of contemporary critical realism, he could have allowed that we had geo-historically relativized and domain-specific synthetic a priori knowledge of the world, establishing, for instance, by transcendental argument from experimental and applied scientific activity that the world must be structured, differentiated and changeable (and changing). As it is, he did not make this move; but declared an embargo on ontology as such, not just in the styles practised by Leibniz or Locke, but quite generally, so that Hegel could bemoan the spectacle of a people 'without metaphysics'." [8]

This flexibility towards Kant is not a consistent expression of Bhaskar's epistemology, rather it is an eclectic admission that things could have turned out differently within the history of

philosophy, but this still would not alter the actuality of the domination of philosophy by irrealism. Consequently the various trends of philosophy (whether materialist, or idealist) could not generate the internal premises to regenerate philosophy, and this has remained the situation until the development of DCR out of philosophical and scientific realism.

Bhaskar argues that all philosophical trends have an implicit or explicit ontology, and this can be considered in terms of empirical and idealist ontologies that oppose realism, but are actually limited forms of realism. [9]. Irrealism has a human centred anthropic fallacy, and an ontic fallacy, or the definition of being by the subject as being, which is to conflate ontological knowledge with being, and irrealism also has the epistemic fallacy, or the definition of being with an attribute of the conceptual premises of the human being, such as reason and experience. This irrealism is ultimately defended by the TINA (inconsistent) compromise formation. [10]. This irrealist approach undermines the independent intransitivity of things, and so is defended by the analysis of being in terms of discourse about being, or the linguistic fallacy. [11]

This epistemological starting point is compatible with defending materialism against idealism, in that Bhaskar is showing that irrealism is the durable content of idealism, which elevates the subject above the object and defines objective reality by the premises and concepts of a dominant subject. Irrealism does not uphold materialism against idealism in that the material world has no intransitive independence for irrealism, and instead the world becomes a specific expression of the anthropic fallacy, ontic fallacy, epistemic fallacy, linguistic fallacy, or of all of them together. This means being, world, and reality, is defined by the conceptual limitations of an illusory omnipotent cognising subject, and so reality has no material independence outside of the premises, significance, and role of the cognising subject.

Why has philosophy tended to uphold idealism in Bhaskarian terms? There has been a constant tendency to merge a theory-independent world (the intransitive) with the transitive social world of theory formation. This explains idealism in that the intransitive is incorporated into the cognitive realm of the subject, and the objective independence of the intransitive becomes subsumed. Consequently theory becomes primarily a socio-cultural construct (in the transitive) that has no more objective significance to explain the world than any other theory. In other words, theory acquires the incommensurable quality of the requirements of a distinct and

culturally constructed subject, and so the object becomes nothing more than the expression of the conflicting requirements of diverse and incompatible theories. [12]. In contrast, DCR can explain that a theory can change constantly about the object (the relative and social content of knowledge) but the basic intransitivity of the object remains because it can never be reduced to descriptions about it. This is why the object is not reduced to the conflicting requirements of the competing subjects of philosophical and scientific inquiry and knowledge formation. This does not mean the subject is unimportant to DCR, but the subject does not dominate the object because it recognises the intransitive quality of non-identity between a subject and object. Such a philosophical perspective does not justify a dualist and unknowable separation between object and subject, because the subject can be part of the intransitivity of the object being cognized. However, the subject is secondary and not dominant in relation to the external, intransitive, and independent content of the object. We always refer to something outside of us, even if we are in an inter-dependent relationship to the object being referred to.

What is the alternative to the idealist philosophical relationship between subject and object? The expression of the secondary nature of the philosophical subject in relation to the object is referential detachment: "This is the detachment of the act of reference from that to which it refers. This establishes at one and the same time the existential intransitivity of a being and the possibility of another reference to it, which is the condition of any intelligible discourse at all." [13]. The object is always distinct from our discourse about it, even though the object generates the possibility for discourse because of its intelligible, explanatory, or partially knowable character. The subject would have no coherence, and no capacity to construct ontological and epistemological premises, if it wasn't for the intransitivity of the object, which facilitates the possibility to be known in thought, or known in transitive terms. In other words, if it wasn't for the primacy of the material world it would not be possible to develop the crucial capacity of the cognitive subject to produce objective knowledge about this world. Thus the philosophical subject is only sustainable and consistent when it accepts "transcendental detachment of what exists independently (absolutely or relatively) of any representation of it." [14]. In contrast, the various forms of idealism reduce knowledge to an attribute of primary human faculties and so end up with a sociological, cultural construct of transitory, limited and incommensurable knowledge.

Bhaskar rejects an important principle of Lenin's understanding of materialism, in terms of the potential knowability of the world: "There is no necessity that the world should be knowable to us, even if it is understandable why it should seem to be so. We are contingent temporary flotsam on a sea of being." [15]. To Bhaskar, intransitivity does not uphold 'cognitive triumphalism' in that the world as intransitive can defy explanation. [16]. This is true, the world can be unknowable, and aspects of it may remain unknowable because there is no necessary cognitive link between the human subject and the external world as object. But the material world has also expressed the potential to be known by the subject, and to accept this situation is not to accommodate to cognitive triumphalism, rather it shows that the ontological coherence of reality can be upheld by the explanatory potential of the thought (as theory) processes of the cognitive subject.

To Bhaskar absence is an expression of ontological polyvalence (openness) versus ontological monovalence (rigidity), and this means 'absence has ontological primacy over presence'. [17]. Certainly absence has an important ontological role within reality. The absence of Lenin, Luxemburg, Connolly, Maclean, and Trotsky, is the absence of a leadership that is necessary for building a revolutionary party and for challenging capitalism. But is this absence the main reason why capitalism remains? In order to obtain a detailed answer we would have to analyse the present and material structures of the reproduction of capitalism at the level of economics, politics, ideology, the role of Stalinism and Social Democracy. Stalinism is subjectively a product of the absence of Lenin, and Lenin wanted to challenge Stalin's bureaucratic domination of the party, but we can never objectively evaluate whether Lenin's continued presence could have brought about Stalin's downfall. This is because Lenin's absence from 1924 cannot be altered. So it is an act of nostalgic sentiment to argue that if Lenin had not been absent Stalinism could have been smashed. Instead we have to tackle the actual and present conditions and ask: 'could Trotsky have overthrown Stalin'? Locating the best answer to this question will require analysis of the existing objective conditions of the degenerating October revolution. This does not mean that the rise of Stalinism was inevitable, but rather we have to provide an ontological analysis within the context of social and political conditions. The alternative to this approach is to justify the idealist nostalgia about Lenin's leadership, which is no longer possible.

The overextension of the conception of absence is used in order to justify the view that split between materialism and idealism is a philosophical 'mistake'. [18]. This split is represented by the absence of a plausible ontology of causality: "Similarly the opposition between materialism and idealism, as applied to human agency, appears in the form of a split between physicalistic reductionism (reification) and spiritualistic dualism (effective disembodiment), to both of which philosophers of the first persuasion tend to need to be committed (to sustain their own discursive agency). The roots of this split lie in the *absence* (again) of the concept of embodied *intentional causal agency*; and more generally of emergent powers materialism." [19]. Let us assume that this more dynamic type of materialism (emergent powers) was present 150 years ago. This hypothetical situation would only have modified the materialist and idealist split, it would not have overcome this divide. For the idealists may have accepted this ontological advance, but they would still have defined the relations between object and subject in terms of the domination of the cognising subject, which has an ultimate transcendental, or pantheistic content. The scientific advances by Newton that enabled the world to be considered on the basis of matter in motion, and then Darwin's evolutionary conception of natural history, did not overcome the materialist and idealist philosophical division. Instead idealism started to reluctantly accept the actuality of a materialist conception of the universe, but the subject becomes more irrational, mysterious, fragmented, (an expression of will, intuition, and emotional energy) in order to maintain its (untenable) omnipotence over the material world.

Furthermore, scientific advance in the 20th century has not overcome the materialist and idealist philosophical divide, and so the terms of this division have once again only become modified. For example, atomic theory and quantum mechanics are interpreted in anti-materialist terms, such as observation defines reality, and the validity of the external intransitivity of the world is still denied. Hence it is a utopian and idealist illusion of Bhaskar's to believe that overcoming the absence of a less reductive materialist ontology will supersede the materialist and idealist division. Even overcoming the absence of this ontological limitation will only create new forms of the features of the materialist and idealist divide.

Bhaskar may not be wrong to argue that a new elaborated materialist ontology can overcome ontological monovalence and therefore facilitate creative praxis. [20]. Thus the absence of a transformative praxis because of the absence of an open ontology is a credible proposition. But

this does not mean that the ontological clarification provided by an improved materialism can overcome the materialist and idealist divide. For idealism may have to oppose an ever-changing and improving materialism, but idealism still remains the dominant ideology within capitalism and on that basis it has an objective existence, plus a renewable durability, to oppose a new and changing materialism.

Bhaskar defines his non-reductive materialism:

“The form of ‘ontological’ materialism to which critical realism is committed asserts:

(a) the unilateral ontological dependence of social upon biological and thence physical forms; but (b) the taxonomic and causal irreducibility of social to biological (and thence physical) forms, defining what may be characterized as a *synchronic emergent powers materialism*.

It does not deny the geo-historical emergence of organic from inorganic matter or of human beings from hominids, but it contends that reference to properties *not* designated by physical theory or biological theory is necessary to explain those physical states which are the result of or are mediated by intentional agency. The human world is an irreducible and causally efficacious dependent mode of matter. This illustrates once more the value in philosophy in thinking the duality, or, more precisely, articulation, of distinctions and connections within a posed dichotomy or opposition, such as society and nature (in the sense of the cosmos as a whole rather than, say, countryside) or mind and body. In the case of the mind-body dualism we avoid the extremes of physicalistic reductionist materialism and idealist dualistic disembodiment in the concept of *intentional causality* manifest in embodied agency. The reductionist materialist is vulnerable to the charge of theory/practice inconsistency or performative contradiction for what is his eliminative claim but an intentional self-cancelling act? Idealistic dualism, on the other hand,....as has been repeated in countless forms (discourse theory, non-naturalistic hermeneutics, social constructionism), makes causal agency impossible. We have in effect here in this polarity the ‘unity of opposites’ in two forms of *de-agentification* - one issuing in *reification* and the other leading, via disembodiment, to effective *voluntarism*. This is already prefigured in the close association of the former with (Laplacean) determinism and the latter with advocacy of (unconstrained) ‘free will’ - as in the Kantian injunction ‘ought implies (NB: not presupposes) can’.” [21]

So to Bhaskar a materialism that upholds a non-reductive relationship of the physical to the social, and sustains causal agency and praxis, can overcome the divide between rigid, physicalist and determinist materialism, from idealist dualism, that is voluntarist. Neither of these extremes can sustain praxis, and so gives way to a materialism that can uphold praxis. But, it is a matter of historical fact that ever since Marx's *Theses on Feuerbach*, *Holy Family*, and *German Ideology*, there has been established a new non-mechanical and non-reductive materialism, and this has upheld a causal and transforming praxis within a primary material world. This situation did not lead to the overcoming of the materialism/idealism division, and instead the idealist subject/ego was defended against the supposed cognitive triumphalism of materialist inclined natural science. What was occurring was that idealist conceived praxis was being transformed and manifested in the changing philosophical subject as a nostalgic and intuitive protest against the scientific subject of modern materialism. Idealism was also a protest against the revolutionary material potential of the praxis of the working class. In this manner Nietzsche protested about the spirit of revenge of philosophy since Socrates, which challenged the wisdom of the elite.

In other words, the philosophical and scientific advances concerning what constituted materialism did not overcome the philosophical split between materialism and idealism, but instead what happened was an intensification of this division. In actual philosophical terms Marx did reconcile Hegelian idealism with materialism, in that the dialectical method was shown to have important theoretical relevance for understanding social reality, but this discovery did not reconcile the idealists to Marxism. On the contrary. The idealists rejected Hegelianism because of its relationship to Marxism, and they developed more subjective and irrational forms of idealism that still attempted to refute the primacy of the object over the subject when explaining the relationship between being and thought. In modern times Bhaskar's ontological polyvalent conception of reality, that is based upon absence and intentional causality, can show the ontological limitations of idealism, but it is still an illusion to maintain that this philosophical development has overcome the idealist and materialist divide. This is because this divide cannot be overcome primarily by logical exposition and the elaboration of philosophical reasoning. Rather this divide can be challenged by extra-philosophical advances that undermine the domination of idealist bourgeois ideology. The causal efficacy of materialist philosophy is

expressed by the extent to which it gains support, and is then able to improve the possibility (both practical and theoretical) to provide an alternative to idealism.

CAN BHASKAR'S VERSION OF MATERIALISM UPHOLD MATERIALISM FROM THE PERSPECTIVE OF DIETZGEN?

In *Plato Etc.* Bhaskar formally sustains philosophical materialism. He upholds an epistemological materialism that defends intransitivity and ontological materialism (the dependence and emergence of the social from the biological). He also adheres to practical materialism, or the significance of human transformative agency, and he defends geo-historical materialism, the approach that sustains a realist view of causal activity. [22]. On the other hand Bhaskar is opposed to what he defines as reductive and deterministic central state materialism (CSM) and in opposition to CSM he upholds synchronic emergent powers materialism (SEPM). Thus: "On the synchronic emergent powers materialism (SEPM) I defend, mind is conceived not as a substance, whether material (reductionism) or immaterial (dualistic idealism), but as a complex of powers." [23]

This new materialist approach is an attempt to transcend the materialist and idealist divide and replace this philosophical demarcation with a new and 'improved' philosophical formulation. The advocates of CSM might deny the significance of the mind and its causal importance, but the alternative is not to differentiate mind from matter (as Bhaskar does) in terms of a 'complex of powers'. For this conception of the complex of powers is idealist and dualist unless it represents the connection of mind to matter, in that mind is a specific expression of the material, or a distinct form of a material substance. Bhaskar is possibly right to argue that CSM advocates do not sustain intentional causal agency of the mind because they reduce mind to being a passive form of the material, but the alternative to this reductionism is not to differentiate mind from matter in terms of phrases such as complex of powers, or emergence. For such phrases uphold the domination of an idealist immaterial subject over the material phenomena of reality. In this idealist philosophical manner, the object (material) becomes considered to be derivative of the (ideal) subject. If the complex of powers is to mean anything in materialist terms, it has to outline how material phenomena represent the objective basis of all types of

activity and causal actions. But instead, to Bhaskar, the complex of powers is a compromise formulation that accommodates to idealism and so suggests that the mind could have immaterial origins, even if Bhaskar is still reluctant to definitely define the material by the immaterial.

Bhaskar argues that SEPM is the only viable alternative to reductionist materialism, because it sustains causality: “In fact what other theories lack and SEPM has is a robust theory of *intentional causality*. If we link this to the...question of how human beings make things happen, i.e. change the world, both individually and collectively, accepting that emergence is a widespread phenomenon and a realist analysis of causality, there is no need to resort either to a Cartesian pineal gland, or to talk, as I once did, of transcategorical causality.” [24]. This view may have ontological credibility, but it still does not alter Bhaskar’s epistemological attempt to transcend the materialist/idealist divide through an effective denial of the materiality of mind. There is a theoretical conflict between Bhaskar’s ontological claims - about defending a new and improved materialism against materialist reductionism - with his epistemological premises that evade, or don’t consistently and effectively defend the material relation between the material world and mind.

Bhaskar argues that reductive materialists try to deny the significance of the cognitive subject: “Contemporary materialists want no truck with a thinking self and are content to rely on purely bodily criteria. But thought experiments, not too distinct from actualization, cast doubt on this line.” [25]. This point could be said to be philosophically indisputable, but Bhaskar’s alternative to these ontological and epistemological limitations is to try and gloss over (deny?) the material content of thought. Why cannot he both uphold the dynamic role of the cognitive subject and defend the materiality of this subject as mind and thought? His apparent failure to equate the significance of cognition with a material content, means that his alternative must be an accommodation to an idealist (non-material) content of the subject, even if this is not his formal philosophical intention.

Bhaskar contrasts Hegel’s idealist dialectic to Marx’s practical materialist dialectic, but Bhaskar’s conception of the relationship between material reality to thought remains problematic. Bhaskar does emphasise that thought is a part of reality: “Such *dialectical*

contradictions do not violate the principle of non-contradiction, for they may be consistently described; nor are they scientifically absurd, for the notion of a real inverted, or otherwise mystificatory, misrepresentation of a real object, generated by the object concerned, is readily accommodated within a dialectical critical realist, *stratified* and *totalizing* ontology in which thought is included within reality, not hypostatized.” [26]. This statement still leaves materialism in an ambiguous condition and open to question: ‘is thought, that is part of the ontology of reality, an expression of distinct material content, which is part of primary material reality’? Bhaskar's comments would seem to suggest that the answer to this question is yes, because the alternative would be to elevate the cognising subject above and outside of material reality, in terms of an idealist relation between thought and reality. However the philosophical logic of his preceding comments is still to define thought as somehow in an immaterial relation to reality. (A complex of powers). Bhaskar has not contradicted this dualist, or eclectic stance, that tries to reconcile ontologically both materialism and idealism through the formulation of thought and reality as a causal process of a complex of powers. Therefore he glosses over the epistemological distinction between materialism, that gives primacy to the object (matter) over the subject, (thought as matter) from idealism, which bestows primacy to the subject (immaterial thought) over the material world.

Nevertheless Bhaskar still makes comments that can only be interpreted in materialist terms. For example: ‘that every feature in the transitive dimension can be made existentially intransitive in respect of some act (e.g. of cognition)’. [27]. This suggestion that cognition of a transitive quality is ultimately transformed into an intransitive content could mean that the cognising subject is part of a primary intransitive and material world, and this means cognition also has an intransitive and material content. Alternatively, if Bhaskar is not relating the transitive character of cognition to the intransitive objective world in materialist terms, it could mean a big concession to idealism, in that the distinction between the intransitive and the transitive is being undermined, or even overcome by the primary role of the (immaterial?) cognitive subject. Thus the intransitive is no longer external, independent, and primary, but is instead being defined by the omnipotent transitive subject. So the social and theoretical role of cognition not only interprets the intransitive, but also bestows upon the intransitive its essential character. Therefore the intransitive is no longer independent of the descriptions of the cognising role of the subject in the transitive, and this means the transitive is actually the main philosophical

(ontological) basis of the intransitive. Possibly, this latter interpretation of Bhaskar's idealist relation between the intransitive and transitive is premature, but it is still a potential philosophical problem given that he has not defined the transitive and cognising subject as a material aspect of a primary material world. This means he has created the possibility for the transitive subject to become primary and the basis to define (create?) the intransitive in a manner in which the intransitive loses its independence to the subject.

Bhaskar does emphasise that realism is about the philosophical standpoint of the importance of material objects, and irrealism is a belief in God. [28]. But his own ambiguity about materialism, in terms of not defining the cognising subject as material, leaves open the possibility that the basis of the subject is immaterial, and therefore God-like. Bhaskar argues that those irrealist philosophers who refuse to establish the intransitivity of the world, and consequently do not accept referential detachment between themselves as subjects with the intransitive. This means they can only justify an egotistical conception of the cognising subject. [29]. But Bhaskar has committed a similar philosophical error because he has not located the material content of the subject as part of the independent, material and intransitive world. Hence it is questionable whether he actually uses referential detachment to epistemologically connect his cognising subject to a primary intransitive realm. Instead there is the possibility that the subject (which seems to be immaterial) is also connected to the intransitive in an egotistical manner, as with various forms of irrealism.

Bhaskar maintains that transforming praxis cannot be sustained if there is a: "lack of the concept of intentional causality and more generally of an emergent powers materialism." [30] This suggests that praxis is dependent upon a subject that is not necessarily material, but which is necessary in order to realise the material transformation of social conditions. For the emergence of the causal 'complex of powers' has an origin that produces material effects, but which does not necessarily have an ontological material starting point and content. Thus the dynamic cognitive subject of the complex of powers could have a causal intentionality that originates from the immateriality of spirit, or God. Hence praxis has a transforming starting point with spirit, or God. This is why Marx's conception of praxis is based upon labour (and its interaction with nature) as the philosophical transformation of Hegelian spirit. Labour is the material form, that has a praxis content in subject as spirit, which materially transforms the

objective world. Consequently, there are to Bhaskar three competing types of idealist philosophy. The Hegelian, Marxist and DCR. Hence Bhaskar's main objection to Hegel is not his idealist reduction of the material world to a secondary expression of the subject, but rather that Hegel cannot sustain emancipatory praxis. Whilst Marx's promethean conception of labour as praxis does not overcome Hegelian idealism. In contrast the praxis of DCR replaces these irrealist conceptions of labour as spirit with a philosophical subject that can sustain a concrete utopia and overcome master-slave relations. But the ultimate inspiration for, and basis of transcendence of oppression, can still be a subject defined idealistically, or a subject that is more powerful than the objective material conditions. Hence the subject incorporates the object, and transforms it according to its aspirations and cognitive triumphalism.

Bhaskar is aware that the ultimate and primary basis for the resolution of the problems of philosophy is in the objective, material, and social world. [31]. But his ontological and epistemological premises end up justifying a type of philosophical subject that can dominate this wider objective reality. This does not mean Bhaskar is incorrect in outlining in imaginative detail the various forms of philosophical irrealism that are structured into existing social practices and thereby uphold exploitation and oppression. However, Bhaskar's philosophical and emancipatory alternative tries to sustain realism, but has its own irrealist limitations. For the starting point of the philosophical subject is possibly considered to be immaterial and therefore has an idealist (primary) relation to material reality. This philosophical problem could undermine the realist premises of Bhaskar who formally (but not always effectively) locates the subject within a primary intransitive reality. In other words, his idealist epistemological premises, in which the subject subsumes the object, are a challenge to his realist ontology of human emancipation.

This chapter shows the continuing importance of dialectical materialism in general and Dietzgen's version of dialectical materialism in particular, for upholding materialism against idealism. Bhaskar has done much to develop materialism and realism but in order to overcome his idealist errors the dialectical materialist approach remains relevant.

CHAPTER EIGHT- PRINCIPLES OF A CONCLUSION

There have been many conflicting views about the relationship between Hegel, Marx and Engels. Marx is said to have developed a practical materialist dialectic based upon the transforming role of labour in its relationship with nature, whereas Engels is held to have merely justified another form of Hegelian idealism. "By remarking that in Hegel's idealist philosophy 'the real relation was inverted and stood on its head' Engels the materialist made himself less than clear, since he failed to specify the terms of the relation and the way that they were related so that we could know what was inverted and what was stood on its head."

(1). For Engels is said (e.g. by Terrell Carver) to have conceptually imposed three dialectical laws onto reality (unity and interpenetration of opposites, negation of the negation, and quantity into quality) as an expression of an idealist schema that is considered as a formal manifestation of materialism. (2). But Engels is actually following the approach of Marx, that the necessary and principled attitude towards past philosophers is based upon the need to explain reality. Marx was originally very critical of Hegel's idealism in works such as *The Holy Family* and *The Poverty Of Philosophy*, but he began to change his mind when he was working upon his *Grundrisse* and *Capital*. He drastically changed and rewrote the logical sequence of Hegel's dialectic in order to establish a method (from the abstract to the concrete) that would help us to understand the material centrality of the capital-labour relationship, which is based upon the production of commodities by abstract labour. (3). In a similar manner Engels returned to Hegel when he elaborated dialectical materialism in order to explain the ontological principles of the world as matter in motion. This did not mean that Engels was no longer critical of Hegel's idealism, but rather he tried to establish that the ontological complexity of the world had a material and dialectical content.

Does this mean that there are no philosophical problems in the ontology of Engels? Certainly not. Roy Bhaskar's transcendental (critical) realism has shown that the major problem within the history of philosophy is that of the epistemic fallacy, or the imposition of epistemological premises onto our ontological conceptions. In this context the question still remains: does Engels impose the laws formulated by dialectical logic onto reality, and is there a reductive identity between nature, society and thought? By this route we come back to Carver's criticism of Engels in a new philosophical manner. Furthermore, is there a tension between materialism and idealism in the dialectical materialism of Engels, in that the supposed primary epistemological premises of the philosophical subject seem to dominate and define the material world? The answer to this question is complex and contradictory.

Unfortunately, Carver's answer is reductive and dogmatic in that he equates the very development of dialectical materialism with idealism. In contrast it is necessary to show the tension between Engels's general commitment to the materialist ontology of matter in motion, a commitment which is resolutely materialist, and on the other hand the specific subject matter of this ontology, which is based upon the three main dialectical laws. These dialectical laws could be considered to be an idealist and schematic imposition onto reality. This is not to suggest that they are inherently idealist and lack ontological and material content, but nevertheless it is still possible to generally contend that Engels has uncritically and conceptually imposed them onto material reality. In other words there is a tension between the materialist ontology of Engels and the possible primary epistemological and idealist adherence to the aspirations of a philosophical subject, aspirations which are imposed onto reality in the form of dogmatic adherence to dialectical laws defining reality.

This raises the question about whether we can overcome the problem of idealism and the cognitive triumphalism of the philosophical subject, a problem Althusser raised in his last work *The Future Lasts a Long Time*. Does idealism always ultimately triumph over materialism? The point to be made here is that this dilemma does not just apply to Engels's version of dialectical materialism (and its problematic inversion of Hegel's dialectic) but seems to be located in terms of the problem of the solitary Cartesian philosophical subject that individually and omnipotently defines the nature of reality. (4). Habermas has tried to overcome this problem in terms of the cooperative role of communication, dialogue and consensus. (5). But we still come back to the problem that Habermas as a philosophical subject has possibly bestowed ontological and epistemological priority on these aspects of being and social reality, and so assumes that his thoughts reflect reality in an idealist and defining manner.

It has been argued by Roy Bhaskar (see chapter seven) that the problem of the philosophical subject is ontological. The development of an explanatory and emergent theory of human evolutionary and historical development is the primary basis to overcome idealism and irrealism within the history of philosophy. Obviously such a theory will be of benefit in opposing idealism, but Bhaskar accommodates to idealism himself in that his formulation of the "complex of powers" could be considered as a philosophical means to still uphold the omnipotence of an idealist philosophical subject. In other words the role of the ontological is not sufficient to uphold materialism against idealism. We still need an epistemological form

of materialism that defends a materialist philosophical subject as the basis for understanding the ontological principles of the world.

A possible answer to the idealism within Engels's version of dialectical materialism, and the idealism within the history of philosophy, is provided by Joseph Dietzgen. He tries to establish and develop the materialist ontological principles that show that thought is a distinctive part of the material world. On this view the omnipotence of the idealist philosophical subject is an illusion generated within the material, contradictory and complex character of social reality. To Dietzgen dialectical logic is a dynamic expression of the ontological relations of the world as the representation of the connection of part to whole. If thought is considered as the primary whole that defines the part (the material world) then this is an idealist approach which denies the real ontological and epistemological connections between material thought and reality. But if, on the other hand, we reductively equate the material whole with the part (the material world is known to thought as sensation) then the dynamic role of mind and thought as a distinctive part of the material world is denied, and this represents mechanical materialism. Hence it is necessary to construct a materialist dialectical logic on the basis of definite and precise ontological principles (the finite and infinity, part and whole, universal and particular, etc) that can express the complexity of the world in a non-idealist manner. In other words, Dietzgen is not inverting Hegel's dialectic in a wholesale and uncritical manner and then imposing it onto the world. Rather, following Marx, Dietzgen is fragmenting Hegel's dialectic in order to reconstruct the dialectic in an explanatory, ontological and materialist manner.

It has been argued (as Jackson does) that Dietzgen's formulation that thought is material is an expression of reductionism which denies the dynamic role of thought, and instead reduces thought to the expression of the material world as substance. Certainly, Dietzgen has a monist conception of the world as the alternative to eclectic idealism and dualism, but he still contends that the logical and conceptual quality of thought shows that the material content of the world cannot be understood without the interpretive and transforming role of thought, as expressed in practice and in human social relations. Unfortunately the overcoming of the possible idealist tensions within Engels's dialectic has not taken place on the basis of the elaboration of the ontological principles of Dietzgen because dialectical materialism has become reduced to the political requirements of world historical individuals, and because Dietzgen was considered to uphold a form of heretical and superfluous dialectical materialism.

Alan Woods and Ted Grant consider dialectical materialism not as a dynamic doctrine with contending viewpoints, but instead as a summation of the advances made by science. This approach, which reduces dialectical materialism to the collection of facts about reality, is actually a denial of the important epistemological role of dialectical materialism as a theory of knowledge. This role was defined by the Soviet philosopher Theodore Oizerman: “Dialectical materialism, a philosophical *theory of development*, is itself a developing system of philosophical knowledge and, therefore, though created over a hundred years ago, it remains the philosophy of today. Critically summing up the preceding development of philosophy, dialectical materialism also answers questions posed by today’s philosophical doctrines. Marxist philosophy offers theoretical interpretations and scientific solutions not only to its own philosophical problems; its outlook sums up the most important accomplishments in all fields of fundamental research, practical activity, and mankind’s historical experience.” (6).

The point that is being made here is that dialectical materialism is either a dynamic philosophy that is continually and critically relating to other theoretical developments within science and philosophy; or else it is a dogmatic and orthodox philosophical trend that tries to absolutely uphold its principles in timeless and unreflective terms; or alternatively it will tend to adapt to other philosophical and scientific trends. Indeed some variants of dialectical materialism have been capable of both of these limitations simultaneously! Thus George Novack is trying not to be heretical and so he defends orthodox philosophical materialism and the notion that material reality is reflected and expressed in thought, and he maintains in contrast that pragmatism inverts the relationship between practice and objective material reality in idealist terms. But because he does not establish a materialist ontology, in which practice is the part and not the whole, he also adapts to pragmatism’s idealist inversion and practice becomes a justification for an idealist and teleological philosophy of history. Hence Novack may epistemologically differ from John Dewey’s pragmatism and formally uphold materialism versus idealism, but the lack of ontological clarity in his approach means that he still essentially defends idealism against materialism.

How then is it possible to explicitly uphold a materialist ontology of matter in motion? One specific possibility is represented by Bukharin’s theory of equilibrium. This theory has been criticised for not emphasising the internal dialectical contradictions of phenomena. (7). However, Bukharin’s theory does not dismiss the importance of the internal contradictions of

class struggle within dynamic social relations. On the contrary what Bukharin is trying to do is enrich and concretise Engels's ontology of matter in motion and thereby show that the external contradiction of the relationship between nature and human activity, as expressed in the level of development of the productive forces, shows the objective basis for revolutionary change at the level of the internal contradiction of social relations. Bukharin is arguing that if the external contradiction enters into a situation of disequilibrium then this creates the possibility of change at the level of internal relations. However the political and ideological superstructure of the internal relations can have a dynamic role in undermining this objective and material necessity for the revolutionary transformation of the social relations. Thus the realisation of the objective possibility for change is ultimately dependent upon the balance of class forces and the level of consciousness within the exploited and potentially revolutionary class, the working class. In this manner Bukharin does not reduce material reality to the expression of an idealist philosophical subject, but instead he elaborates the ontological principles for understanding social processes in terms of material contradictions and their objective and subjective expression.

Does this mean that the philosophical tension between materialism and idealism within dialectical materialism can be resolved by an emphasis upon the approach of historical materialism, the theory of the material relations of historical development? Alex Callinicos in his work *Social Theory* counterposes the sociological significance of historical materialism to the inherently idealist philosophical subject. (8). This point is made in relation to the supposedly increasingly irrationalist history of philosophy. Callinicos asks whether, despite his brilliant critique of Nietzsche, Habermas has underestimated the philosophical problem of Nietzsche who stands in opposition to the role of enlightenment, reason and understanding reality in an intelligible manner? Callinicos outlines the considerable philosophical challenge of Nietzsche in relation to the possibility of emancipatory historical progress. Nietzsche's epistemological and idealist objection to the ideas of an emancipatory slave morality is, Callinicos argues, upheld by an ontology of flux based upon the changing relations of the will to power: "Reality is therefore inherently plural: it has no single essence, no inner purpose from which all else flows. It is also inherently ambiguous. The world is constituted by a set of shifting relations of force. It follows that, depending on one's position within these relations, the interpretation that one puts on the world is likely to be different. Indeed, there is 'no limit to the way in which the world can be interpreted'." (9). This means views and values about reality express specific perspectives, and different and conflicting types of artistic expression. Callinicos notes that Nietzsche also denied historical progress in terms of

his notion of eternal recurrence. In this manner, Callinicos elaborates, Nietzsche developed a powerful critique of the enlightenment and modernity: "The force of his rejection of modernity lies in its not being undertaken in the name of an idealized past. Nietzsche replaced the vista of historical progress evoked by the Enlightenment and evolutionists such as Spencer and Kautsky with the grim panorama of an endless struggle for domination, and at the same time he offered the artistic life - or life as a work of art - as the best way of responding to this situation. In doing so, he posed questions which continue to press on us." (10).

With this analysis Callinicos shows that whilst Nietzsche may not have overcome the problem of the philosophy of the subject, he still poses important philosophical questions, such as: can we overcome the problems of philosophical relativism and ontological flux? The implication of this book by Callinicos is that if we cannot develop an important ontological and epistemological alternative to Nietzsche, the role of progressive philosophy may become seriously questioned. This point can be made in relation to sociology in Nietzsche's time. Emile Durkheim tried to defend the concept of objective truth against the pragmatic emphasis upon practical utility as a replacement for the unobtainable relation of reality to truth. But, Callinicos argues, Durkheim's epistemological alternative to pragmatism is to justify a relativist equation of truth with the changing perspectives of a socio-cultural context: "So society makes sentences true. This hardly seems like a convincing answer to James and his co-thinkers. A contemporary pragmatist such as Richard Rorty might readily concede the point, but then proceed to subvert it by pointing out that society itself constantly changes. What is warrantably assertible at one time is thus undermined by successive 're-descriptions' bound up with larger social changes. Truth then becomes a protean concept, its content constantly changing along with the society from which it derives its power of imposition; it is, moreover, hard to resist the suspicion that too rapid a series of re-descriptions might weaken this power." (11). Thus despite Durkheim's aspiration to construct sociological models of society, he also concedes, at least partially, to Nietzsche's epistemological scepticism and relativism.

Max Weber accepts Nietzsche's ontology of a chaotic reality that consists of power struggles between conflicting values, or forms of the will to power. But, notes Callinicos, Weber tries to reconcile this ontology, and its relativist premises, with a commitment to a rational scientific epistemology: "The methods of scientific research may thus be objective, but they operate within an inherently subjective framework, since the objects of study, the purposes

for which specific researches are pursued, and the overall cultural role of science itself all derive from value-ascriptions which are subject to no rational adjudication. The famous 'value neutrality' of social science comes down to the requirement that scholars should sharply distinguish between the objective means they employ and the subjective goals they pursue." (12). Callinicos points out that in his studies of the development of capitalism Weber argues that one-sided causal explanations are wrong because they do not establish the complex and value aspects of reality, and its inherent subjectivity: "Reality is infinitely diverse; our theories simply pick out those aspects whose study is relevant to our values. A theory of history which, like Marx's, claims to have discovered the underlying structure of social reality, seeks to impose an inappropriate 'nomological' conception of scientific explanation on the infinite variety of cultural phenomena. Rather than seek a one-way causal chain linking the economic base to the ideologico-political superstructure the *Geisteswissenschaften* must seek to capture the historically variable interactions between different, relatively autonomous aspects of social life..." (13). Thus, to Weber, a realist explanation of underlying structures is ontologically flawed because it cannot appreciate the value aspects of human activity. Realism, for Weber, also expresses epistemological dogmatism about what constitutes scientific practice because it excludes the importance of recognising the subjective (value) aspect. Ultimately, argues Callinicos, this means Weber upholds the relativist argument of: "[t]he doctrine of value pluralism, according to which there is no objective, rationally defensible criterion on the basis of which one can accept or reject evaluative judgements." (14).

Weber's work consists of an epistemological rejection of philosophies of history, whilst also constructing an ontology of instrumental rationality to define modern capitalism. He gives his imprimatur to both scientific objectivity and the irrational charismatic subject that might transform the world in artistic Nietzschean terms. Weber's work expresses the conflict between the rational values of traditional modernity and the increasingly hegemonic Nietzschean irrational, cultural, and philosophical subject. Georg Simmel is another theorist, Callinicos notes, who equates 'reality' with values and appearances, in Simmel's case in terms of the economic, political and ideological importance of money, which is said to have a symbolic and cultural significance that virtually defines reality. (15). This effective, and growing, criticism of the conception of objective reality independent of human subjectivity and values leads to opposition to the conception of a rational philosophical subject.

The work of Sigmund Freud disputes the actuality of a coherent, integral, or holistic philosophical subject, because to Freud the subject is an expression of fragmented, conflicting, and often unconscious motivations and repressed emotions. Callinicos argues that Freud's answer is to try and utilize scientific rationality in order to understand the subject: "At one level, psychoanalysis appears to represent a major blow to the Enlightenment project. The Cartesian subject is cracked open, revealing hidden desires and drives as the main source of human motivation. Yet Freud regarded his own discoveries as a great victory for scientific reason and an enlargement of its own domain. Moreover, he believed that therapy guided by them could help individuals to gain control over their suffering by allowing them to understand its origins in the secret course of their own personal history. This is a thoroughly Stoic conception of reason, consisting as it does in the recognition of the necessary patterns traced by the human passions, and in the acceptance of the unhappiness that these make inevitable, but it marks a major extension, and not the abandonment, of the Enlightenment project." (16).

The question (which Callinicos does not ask) still remains: if the subject is inherently contradictory, emotional, and repressed, how can it establish the objective criteria for understanding reality? The logical trajectory of scientific thought seems to have saddled us with the conclusion that Nietzsche's irrational and passionate philosophical subject has triumphed over epistemological rationality and ontological realism.

Callinicos tries to provide an ontological answer to these unresolved epistemological questions about the plausibility of the hegemonic irrational philosophical subject. The 1917 October Revolution showed, affirms Callinicos, that there was a real revolutionary alternative to the contradictory problems of modernity. (17). Callinicos outlines how Georg Lukacs envisages in Hegelian terms the proletariat as the transforming subject-object of contemporary historical development: "The position of the proletariat within capitalist relations of production thus represents a vantage-point from which the nature of the social whole can be rationally understood. Historical materialism is the theoretical articulation of proletarian class consciousness, and therefore 'the self-knowledge... of the capitalist society'." (18). Hence: "What is distinctive about the role of the proletariat in this process is that any effort on its part to understand its own situation drives it towards an understanding of the whole. This understanding is, moreover, not purely intellectual, but develops through a series of class struggles in which workers both literally 'disrupt the reified structure of existence', and attain a deeper insight into the nature of this structure. The socialist

revolution which is the culmination of this process is not the 'irresistible necessity' Kautsky and Plekhanov claimed it to be....". (19).

However, as Callinicos shows, this approach ultimately relates the specific class location and perspective of the proletariat to its potential to explain and transform society, in Hegelian teleological terms. This is because Lukacs's approach is idealist: "Social reality is the creation of a macro-subject, the proletariat." (20). Lukacs's approach is not substantiated in terms of rigorous scientific procedures. It could also be argued (but Callinicos doesn't) that Lukacs's emphasis upon the proletariat as the basis of social and historical explanation equates truth with the relativist premises of socio-cultural considerations, and this does not represent adequate criteria for objectively defining truth about reality. Indeed, the Marxist equation of truth with the practice of the proletariat ultimately ends in justifying Nietzsche's relativist, sceptical, irrational, and ideologically specific philosophical subject of the will to power.

Callinicos demonstrates that Antonio Gramsci also upholds a praxis and relativist conception of truth connected to the hegemony of bourgeois ideology, the actuality of class conflict and divergent class-located social practices: "Indeed, he owes to Croce a radically pragmatist conception of truth, according to which '[o]ur knowledge of things is nothing other than ourselves, our needs and interests'. This epistemology allows him to think of theory and practice as intimately related. Thus Gramsci takes up a formula of Croce's: 'Everyone is a philosopher, though in his own way and unconsciously, since even in the slightest manifestation of any intellectual activity whatever, in "language", there is contained a specific conception of the world.' Each conception of the world is 'a response to certain specific problems posed by reality', one that represents a more or less theoretically rationalized articulation of the practice of a particular class." (21). Hence, Callinicos continues, the proletariat may accept two conflicting conceptions of reality - the bourgeois ideological standpoint and the proletarian approach: "Bourgeois ideological domination is therefore a consequence not of the indoctrination of a largely passive mass, but of the relative balance of rival conceptions of the world within the composite consciousness of the working class. Similarly, the attainment of revolutionary class consciousness involves strengthening and articulating the socialist conception of the world implicit in workers' everyday practice within the process of production....." (22).

Consequently, Gramsci seems to be arguing (again ignored by Callinicos) that realising the hegemony of the proletarian conception of reality is not an expression of establishing and strengthening a scientific explanation of reality, but is instead about showing the praxis content of proletarian and social class practice. On this view the proletariat has a potentially more dominant will to power than the bourgeoisie within a fluctuating and contested reality. This is why Gramsci's praxis standpoint also does not challenge, but rather accepts, Nietzsche's epistemological relativism for circumscribing the role of the subject, and the subject's defining and creating of reality. In other words, despite Callinicos's summary of the problems of the history of the idealist philosophical subject, and its increasing irrationalist trajectory, his attempt at an historical materialist ontological alternative – the validity and significance of the October Revolution - does not represent an epistemological alternative. For he has not shown that the philosophical interpretation of the praxis of the October Revolution can be interpreted in materialist terms in which the subject does not dominate the object upon idealist premises. Instead he can only describe the shortcomings of the praxis idealism of Lukacs and Gramsci and yet he does not come up with a philosophical resolution of this form of idealism and its concessions to a will to power ontological and epistemological approach. This shows that Callinicos's positivist approach - the contrast between historical materialism as a science with the inherently idealist content of philosophy – does not actually resolve the tension between materialism and idealism in favour of materialism. What Callinicos has not tackled is that it is possible to empirically interpret the October Revolution as an important material fact, and yet still justify it philosophically in idealist terms. His historical materialist approach relies upon an emphasis on the materiality of the empirical, and yet he does not overcome the ontological and epistemological idealism of the justification of the October Revolution by Gramsci and Lukacs.

A possible resolution of Callinicos's historical materialist failure to overcome philosophical idealism is provided by Oizerman, who shows that a Marxist theory of knowledge tries to constantly overcome ontological problems in the understanding of reality, and on that basis materialism is upheld against idealism: "That which cannot be cognized at one level of cognition becomes cognizable at a different historical stage. That is why all ontological definitions of objective reality should also be seen as limited by the level of knowledge attained, and therefore subject to change, correction, etc. Thus Marxist philosophy epistemologically interprets ontology and any knowledge at all, thus preventing it from becoming dogma and stimulating its further development." (23).

Lukacs carried out this type of self-correction of his idealist identity reasoning in his recently discovered work: *Tailism and the Dialectic: a defence of History and Class Consciousness*. (24). Lukacs is still opposed to dualist and fatalistic separation of the subject from the object in a manner which denies the revolutionary and transforming role of the proletariat. (25). But he accepts that the proletariat is not in an automatic correspondence with the objective situation and the possibility for revolution. (26). The alienated condition of the capitalist social relations of production can both obscure and undermine the historical necessity of revolutionary class activity, and so challenges the conception of the teleological inevitability of the ontological totality of *History and Class Consciousness*. (27). The objective material conditions do produce the potential for social change because thought dynamically expresses the contradictions of social reality, but the spontaneity of existing material reality will not automatically become an expression of revolutionary class consciousness unless there has been an active and consistent process to relate Marxist theory to the objective requirements of the working class. (28). Hence without this establishment of the unity of party and class, which is not an inevitable and mechanical process, the capitalist system will continue, and the proletariat will not become a class-for-itself capable of revolutionary change. The subject will not be able to transform the object. So without the objective knowledge of historical and material conditions, as outlined by Marxism, the proletariat will not be able to become a revolutionary class-for-itself. “We pointed earlier to Marx’s assertion that historical knowledge depends on the self-criticism of a society, on insight into the material foundations of its existence and the knowledge that has grown on its basis. In this respect, the transition from pre-capitalist forms of society to capitalism is markedly different to the transition from capitalism to socialism.” (29). But there is the ontological possibility that capitalist social relations may undermine the advance of this historical knowledge and thereby the subject will not be able to transform the object. Consequently, Lukacs is now, in ontological, epistemological, and historical materialist terms, elaborating a conception of the relationship between the subject and object that is not idealist.

In summation dialectical materialism still has an important philosophical role. Firstly, as Engels and Dietzgen broadly outlined, it can develop the process of ontological clarification, and advance the theoretical possibility to develop explanatory principles that enrich our understanding of reality. Secondly, dialectical materialism has an epistemological role in showing the limitations of existing ontological theories about the world, and on this basis tries to elaborate distinctive and independent criteria as the basis to overcome philosophical ontological problems. This is not to say dialectical materialism does not need to be

supplemented and enriched by other philosophical trends, such as Bhaskar's critical realism. But the one-sidedness of these philosophical trends, as with Bhaskar's emphasis upon ontology to the neglect of epistemology, can be overcome with the continued principled and flexible development of dialectical materialism. Dialectical materialism has not ended with the demise of the Soviet Union. Instead a new chapter in the history of dialectical materialism is entirely possible if dialectical materialists are self-critical, reflective, and above all dedicated to continuing the work inaugurated by Engels and Dietzgen.

FOOTNOTES

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