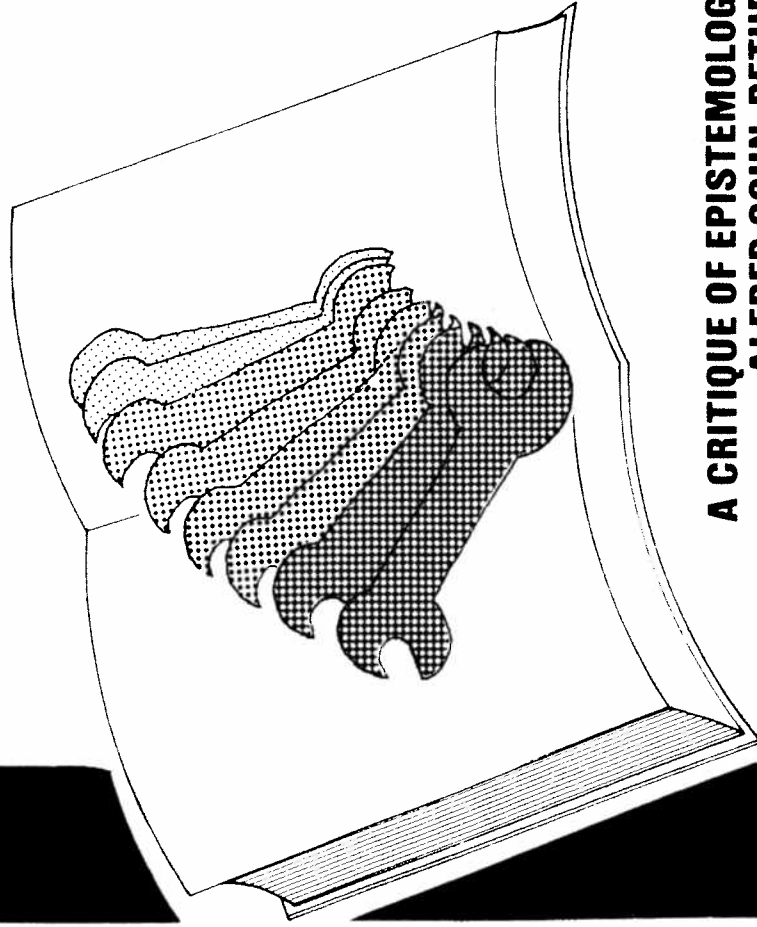


INTELLECTUAL AND MANUAL LABOUR



A CRITIQUE OF EPISTEMOLOGY
ALFRED SOHN-RETHEL

Critical Social Studies

Editors: JOCK YOUNG and PAUL WALTON

The contemporary world projects a perplexing picture of political, social and economic upheaval. In these challenging times the conventional wisdoms of orthodox social thought whether it be sociology, economics or cultural studies become inadequate. This series focuses on this intellectual crisis, selecting authors whose work seeks to transcend the limitations of conventional discourse. Its tone is scholarly rather than polemical, in the belief that significant theoretical work is needed to clear the way for a genuine transformation of the existing social order.

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CRITICAL
SOCIAL
STUDIES

INTELLECTUAL AND
MANUAL LABOUR

A CRITIQUE OF
EPISTEMOLOGY

Alfred Sohn-Rethel



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Translator's Foreword

Increasingly, those with concern for the future of science -- in the final resort, all of us -- have to watch helplessly as its course is plotted ever further away from our control. The results of 'man's mastery of nature' are effectively concealed from us. Although official and surreptitious propaganda make claims to the contrary we are quite unable to confirm these claims and often end by resignedly accepting them.

However, some of the most concerned people have begun to look behind the curtain shrouding technology and, in the horror at the travesties it conceals, search desperately for some means to tear it down. A brick hurled through the window of some nuclear research establishment? . . . or, more effective perhaps, a home-made bomb? It is all too plain that these are totally unavailing protests, for the march of science will go on unabated, celebrated in trade agreements worth millions of pounds -- for example, the Federal German trade agreement of 1975 to supply Brazil with 40 billion marks' worth of atomic stations by 1990.

By now, science and technology have gained such an ascendancy over the common man's understanding that his mere incomprehending anger can in no way hold them in check. And yet it is supposedly to reproduce him and his labour that this technology has been developed. This is now nothing but a blatant fiction. We know the real motive power behind it is the maximisation of power and profit. It has become clear beyond question that the heads which plot the path of technology and the hands which operate it and which should benefit from it have undergone the most total schism.

When did this schism first occur? Without any clue to its origin the opponent of rampant technology can only rant and rave; he is ill equipped to envisage any remedy. But how can he set out to trace this alienation, this division of head and hand back to its real point of historical departure? How can he begin to unravel

the tangled web of relations between man and machine, between society and science, which now threatens to strangle him?

This book attempts to do just that. But in doing so it has of necessity to deal with matters of exasperating abstractness; it has of necessity to delve into areas of such unaccustomed complexity that it might seem all too easy to lose sight of the crucial issues which give rise to the book in the first place. I say 'of necessity' because it is precisely the abstractness and complexity with which the core of the schism is lodged in its historical roots that make us so blind to the overall pattern of perversion traced by technology today. The whole transaction, as it were, has been completed behind our own and our ancestors' backs.

Thus the difficulties of the book are no mere adjuncts but are inherently essential to achieve a truly cogent analysis, in historical materialist terms, of the split between head and hand and of the emergence of abstract thought. The development of modern science and technology has everything to do with these phenomena and until their historical secrets are unravelled before our very eyes technology will continue to ride rough-shod over us.

We ask the reader to be clear what is at stake. If he is, the unavoidable difficulties of the analysis will surely fall into perspective and instead of presenting insurmountable barriers to the book's conclusions will give the key to their proper understanding. But it takes an infinitely deeper theoretical effort to dispel the fetishism of the intellect than it does to continue its worship. This is the use of theory we know from Marx: its use in the service of practice.

MARTIN SOHN-RETHEL

Preface

This enquiry is concerned with the relationship between base and superstructure in the Marxian sense. This, to a large extent, leads into new territory. Marx and Engels have clarified the general architecture of history consisting of productive forces and production relations which together form the material basis for consciousness as superstructure. But they have not left us a blueprint for the staircase that should lead from the base to the superstructure. And it is this with which we are concerned, or at least with its barest scaffolding of formal precision. To continue with our metaphor, the staircase must be given a firm anchorage in the basement, and this, for commodity-producing societies, can only be found in the formal analysis of commodity itself. This analysis, however, requires considerable enlargement and deepening before it can carry the full weight I intend to place on it. For Marx it served to carry the critique of political economy. For us it must carry in addition the critique of the traditional theories of science and cognition.

What is new and bewildering in the present undertaking is that it must lay hand upon the commodity analysis as we have it from Marx, and thus upon that part of his theory commonly regarded as the untouchable foundation stone. It may therefore not be amiss to preface the theoretical presentation with a short sketch of 'thought-biography' to show how the deviating offshoot originated and has taken shape. Moreover it may also be necessary to explain why the investigation has taken fifty years to mature before reaching the light of day.

It began towards the end of the First World War and in its aftermath, at a time when the German proletarian revolution should have occurred and tragically failed. This period led me into personal contact with Ernst Bloch, Walter Benjamin, Max Horkheimer, Siegfried Kracauer and Theodor W. Adorno and the writings of Georg Lukacs and Herbert Marcuse. Strange

though it may sound I do not hesitate to say that the new development of Marxist thought which these people represent evolved as the theoretical and ideological superstructure of the revolution that never happened. In it re-echo the thunder of the gun battle for the Marstall in Berlin at Christmas 1918, and the shooting of the Spartacus rising in the following winter. The paradoxical condition of this ideological movement may help to explain its almost exclusive preoccupation with superstructural questions, and the conspicuous lack of concern for the material and economic base that should have been underlying it. As far as I was concerned, though not a member of the Spartacus movement, I was stirred by the political events, partaking in the discussions at street-corners and public meeting-halls, lying under window-sills while bullets pierced the windows — experiences which are traced in the pages to follow.

My political awakening started in 1916, at the age of 17 and still at school, when I began reading August Bebel and Marx. I was thrown out of home and was part of the beginning of the anti-war rebellion of students in my first university year at Heidelberg in 1917, with Ernst Toller as a leading figure. For us the world could have fallen to pieces if only Marx remained intact. But then everything went wrong. The Revolution moved forward and backward and finally ebbed away. Lenin's Russia receded further and further into the distance. At university we learned that even in Marx there were theoretical flaws, that marginal utility economics had rather more in its favour and that Max Weber had successfully contrived sociological antidotes against the giant adversary Marx. But this teaching only made itself felt within the academic walls. Outside there were livelier spirits about, among them my unforgettable friend Alfred Seidel, who in 1924 committed suicide.¹ Here, outside the university, the end of the truth had not yet come.

I glued myself to Marx and began in earnest to read *Capital*, with a relentless determination not to let go. 'Lire le Capital' as Louis Althusser says so rightly! It must have taken some two years when in the background of my university studies I scribbled mountains of paper, seizing upon every one of the vital terms occurring in the first sixty pages of *Capital*, turning them round and round for definitions, and above all for metaphorical significance, taking them to pieces and putting them together

again. And what resulted from this exercise was the unshakeable certainty of the penetrating truth of Marxist thinking, combined with an equally unshakeable doubt about the theoretical consistency of the commodity analysis as it stood. There were more and other things in it than Marx had succeeded in reaching! And finally, with an effort of concentration bordering on madness, it came upon me that in the innermost core of the commodity structure there was to be found the 'transcendental subject'. Without need to say so, it was obvious to everybody that this was sheer lunacy, and no one was squeamish about telling me so! But I knew that I had grasped the beginning of a thread whose end was not yet in sight. But the secret identity of commodity form and thought form which I had glimpsed was so hidden within the bourgeois world that my first naive attempts to make others see it only had the result that I was given up as a hopeless case. 'Sohn-Rethel is crazy!' was the regretful and final verdict of my tutor Alfred Weber (brother of Max), who had had a high opinion of me.

In these circumstances there was of course no hope of an academic career either, with the consequence that I remained an outsider all my life with my *idée fixe*. Only a few isolated spirits, outsiders like myself, had kindred ideas in their minds, and none more sympathetically so than Adorno, who in his own manner was on the same track. We checked up on this together in 1936. He in his whole mental make-up was occupied with completely different matters rather than the analysis of commodity and economics. Therefore even my contact with him was only partial and I was thrown back on my own resources for unravelling my thread of truth.

That this process was full of deadlocks and long periods of interruptions, both for reasons of money-earning and because of other difficulties, goes without saying. The interruptions, periods of complete recession, add up to even longer durations than the periods of theoretical work.

The time between 1924 and 1927 was spent in Italy, mainly in Capri where Benjamin and Bloch were staying; then to Davos for an international university course, where I met Heidegger, Ernst Cassirer, Alexander Koyré and others, but had to remain for two and a half years for a cure of tuberculosis. When I returned to Germany to face the slump, with absolutely no financial

resources, I was lucky to find work in an office of big business in Berlin.²

There I was also engaged in illegal anti-Nazi activities, escaping from arrest by the Gestapo to reach England in 1937. In Birmingham I met Professor George Thomson, the only other man I have known who had also recognised the interconnection of philosophy and money, although in a completely different field from my own – in ancient Greece. I finally finished a long manuscript, 'Intellectual and Manual Labour', in 1951, which, despite strenuous efforts by Thomson and Bernal, was turned down by the publishers Lawrence & Wishart as being too unorthodox for them, and by bourgeois publishers as being too militantly Marxist!

Until 1970 only three small texts of mine were published.³ Since 1970 several of my books have appeared in Germany (see p. 213), as a result of which I was appointed Guest Professor at the University of Bremen from 1972 to 1976.

For the present English version of this book I am particularly indebted to Dr Wilfried van der Will for reading my script and for his unstinting advice and critical comment; also to my son Martin for his work as translator, and to the late Sigurd Zienau for stimulating discussions during many years of friendship.

My inextinguishable gratitude is due to Joan, my wife, for her untiring effort and unflagging devotion to my work, which has become ours in common.

ALFRED SOHN-RETHEL

Introduction

Our epoch is widely regarded as 'the Age of Science'. Indeed science, and especially scientific technology, exerts an influence upon production and through production upon the economics and the class relations of society. The effects of this have thrown into disarray the historical expectations and conceptions of people convinced of the need for socialism. We are no longer sure of our most trusted ideas of 'scientific socialism' or of our theoretical image of capitalism. How is the progressive destruction of money through inflation in accord with the labour law of value? Are the profits of multinational corporations in keeping with the mechanics of surplus-value? What are the social implications and economics of a technology which tends to absorb the work of human labour? Does this technology widen or narrow the gulf between mental and manual labour? Does it help or hinder a socialist revolution? How does the profit and loss account on the balance sheets of capital relate to the balance between man and nature? Is modern technology class-neutral? Is modern science class-biased?

Has Marxist analysis kept up with the changes of society we have witnessed since the two World Wars? Our insights must reach sufficiently deep to enable us to understand our modern world in Marxist terms and guide our revolutionary practice. Historical materialism was conceived by Marx as the method of the scientific understanding of history. No other position can offer an alternative.

The present study has been undertaken in the belief that an extension to Marxist theory is needed for a fuller understanding of our own epoch. Far from moving away from Marxism this should lead deeper into it. The reason why many essential questions of today cause such difficulties is that our thinking is not Marxist enough – it leaves important areas unexplored.

We understand 'our epoch' as that in which the transition from

capitalism to socialism and the building of a socialist society are the order of the day. In contrast, Marx's epoch was engaged in the capitalist process of development; its theoretical perspective was limited to the trends pushing this development to its limits.

It is clear that this change of historical scenery shifts the Marxist field of vision in a significant way. The transition from capitalism to socialism means, according to Marx, 'the ending of pre-history' - the transition from the uncontrolled to the fully conscious development of mankind. To understand society in its final capitalist phase one needs a precise insight into the causality and interrelationships between the growth of the material productive forces and the social relations of production. Marx's *Capital* certainly contains countless references to the mental superstructure determined by the social basis and also to the indispensable intellectual foundations of production, but the problem of the formation of consciousness is not the primary concern of Marx's main work. In our epoch, however, it has assumed crucial importance.

We speak of these intellectual foundations because a historical materialist insight into present-day technology and its scientific basis is essential for the possibility of a consciously organised society. In fact Marx did not focus his attention on a historical-materialist understanding of natural science. In the famous methodological guide-lines of 1859 science is not mentioned as part of the mental superstructure, but it should indeed provide the guide-line for a standpoint of thinking which is itself scientific. Marx saw his own viewpoint as historically conditioned and as anchored in the labour theory of value; it is scientific because it corresponds to the standpoint of the proletariat. But natural science was not given a place as either belonging to the ideological superstructure or the social base. The references to science in *Capital* appear to take their intrinsic methodological possibilities for granted. The historical-materialist omission of the enquiry into the conceptual foundation of science has led to a schism of thought within the contemporary Marxist camp.

On the one hand, all phenomena contained in the world of consciousness, whether past, present or future, are understood historically as time-bound and dialectic. On the other hand, questions of logic, mathematics and science are seen as ruled by timeless standards. Is a Marxist thus a materialist as far as

historical truth is concerned but an idealist when confronted by the truth of nature? Is his thought split between two concepts of truth: the one dialectical and time-bound, the other undialectical, consigning any awareness of historical time to oblivion?

That Marx's own thinking was not rent by any such incompatibilities goes without saying. Extensive proof is found in his early writings, and in the *Communist Manifesto*. Particularly illuminating are the references to the sciences in the *Economic and Philosophic Manuscripts of 1844* (p. 111),¹ which prove that in his historical-materialist conception the sciences were originally included. The relevant evidence and arguments are contained in Alfred Schmidt's outstanding study *The Concept of Nature in the Theory of Marx*.²

Even in the Foreword of the first edition of *Capital* Marx calls the 'evolution of the economic formation . . . a process of natural history' and he explains that his own method of approach is calculated to bring out the truth of this statement. But he did not clarify the issue sufficiently to prevent the thought of his successors and followers splitting into two contradictory concepts of truth. Whether the split is overcome or not is vital for the modern theory and practice of socialism. The creation of socialism demands that society makes modern developments of science and technology subservient to its needs. If, on the other hand, science and technology elude historical-materialist understanding, mankind might go, not the way of socialism, but that of technocracy; society would not rule over technology but technology over society, and this not only applies to the western world where technocratic thought is based on positivism;³ it is no less true of some socialist countries which revere technocracy in the name of 'dialectical materialism'. Thus a historical-materialist explanation of the origins of scientific thought and its development is one of the areas by which Marxist theory should be extended.

There is furthermore a lack of a theory of intellectual and manual labour, of their historical division and the conditions for their possible reunification. In the 'Critique of the Gotha Programme' Marx makes reference to this antithesis that a 'higher phase of communist society' becomes possible only 'after the enslaving subordination of individuals under division of labour, and therewith also the antithesis between mental and

physical labour, has vanished'.⁴ But before understanding how this antithesis can be removed it is necessary to understand why it arose in the first place.

Clearly the division between the labour of head and hand stretches in one form or another throughout the whole history of class society and economic exploitation. It is one of the phenomena of alienation on which exploitation feeds. Nevertheless, it is by no means self-apparent how a ruling class invariably has at its command the specific form of mental labour which it requires. And although by its roots it is obviously bound up with the conditions underlying the class rule the mental labour of a particular epoch does require a certain independence to be of use to the ruling class. Nor are the bearers of the mental labour, be they priests, philosophers or scientists, the main beneficiaries of the rule to which they contribute; they remain its servants. The objective value of their function, and even the standard of truth itself, emerge in history in the course of the division of head and hand which in its turn is part of the class rule. Thus objective truth and its class function are connected at their very roots and it is only if they can be seen thus linked, logically and historically, that they can be explained. But what implications does this have for the possibility of a modern, classless and yet highly technological society?

This question leads on to the need for a further extension of Marxist theory which did not arise at an earlier epoch: what is in fact the effective line of differentiation between a class society and a classless one? They are both forms of social production relations but this general concept does not convey the difference on which depends the transition from capitalism to socialism, and the varying shades of socialism. What is needed is a specific and unambiguous criterion of social structure, not of ideology, by which a classless society should be recognisable as essentially different from all class societies.

The three groups of questions raised here stand in an inner relationship to each other. The link connecting them is the *social synthesis*: the network of relations by which society forms a coherent whole. It is around this notion that the major arguments of this book will revolve. As social forms develop and change, so also does the synthesis which holds together the multiplicity of links operating between men according to the division of labour.

Every society made up of a plurality of individuals is a network coming into effect through their actions. How they *act* is of primary importance for the social network; what they *think* is of secondary importance. Their activities must interrelate in order to fit into a society, and must contain at least a minimum of uniformity if the society is to function as a whole. This coherence can be conscious or unconscious but exist it must – otherwise society would cease to be viable and the individuals would come to grief as a result of their multiple dependencies upon one another. Expressed in very general terms this is a precondition for the survival of every kind of society; it formulates what I term 'social synthesis'. This notion is thus nothing other than a constituent part of the Marxian concept of 'social formation', a part which, in the course of my long preoccupation with historical forms of thinking, has become indispensable to my understanding of man's social condition. From this observation I derive the general epistemological proposition that the socially necessary forms of thinking of an epoch are those in conformity with the socially synthetic functions of that epoch.

It will, I think, help the reader's comprehension of the somewhat intricate investigation contained in this book if I give a broad outline of the underlying conception.

'It is not the consciousness of men that determine their being, but, on the contrary, their social being that determines their consciousness.' This statement of Marx is not meant as the pronouncement of an intrinsic truth, but is part of the précis of general methodological tenets characteristic of the materialistic conception of history given in the Preface of 1859.⁵ This précis indicates *how* the determination of men's consciousness by their social being can be established in any particular instance. My investigation is in strict keeping with the Marxian outline. But, while in that outline the reference is to 'the legal, political, religious, aesthetic or philosophical – in short, ideological forms' in which men become conscious of their social conflicts and fight them out, my preoccupation is with the conceptual foundations of the cognitive faculty *vis-à-vis* nature which in one form or another is characteristic of the ages of commodity production from their beginnings in ancient Greece to the present day. It is for this purpose that I deem it useful to interpret the Marxian concept of 'social being' in accordance with my notion of the

'social synthesis'. This will depend, of course, on how it justifies itself as a methodologically fruitful concept.

In societies based on commodity production the social synthesis is centred on the functions of money as the 'universal equivalent', to use Marx's expression.⁶ In this capacity money must be vested with an abstractness of the highest level to enable it to serve as the equivalent to every kind of commodity that may appear on the market. This abstractness of money does not appear as such and cannot be expected to 'appear' as it consists of nothing but form - pure abstract form arising from the disregard of the use-value of the commodities operated by the act of exchange equating the commodities as values. That which constitutes the appearance of money is its material, its shape and size, and the symbols stamped on it; in short, all that makes money into a thing that can be carried about, spent and received. But that which makes this thing 'money' in the sense of value and of equivalence is of a quality radically different from all the properties that can be seen or felt or counted or otherwise perceived. The human labour that has gone into the production of the thing serving as money and into the commodities it serves to exchange determines the magnitude of their value, the proportion in which they are exchanged. But to be labour products is not a property which accrues to the commodities and to money in the relationship of exchange where the abstraction arises. The abstraction does not spring from labour but from exchange as a particular mode of social interrelationship, and it is through exchange that the abstraction imparts itself to labour, making it 'abstract human labour'. The money abstraction can be more properly termed 'the exchange abstraction'.

The peculiar thesis, then, argued on the following pages is to the effect that (1) commodity exchange owes its socially synthetic function to an abstraction which it originates, (2) that this abstraction is not of one piece but is a composite of several elements, (3) that these elementary parts of the abstraction can be separately defined, and (4) that, if this is done in sufficient detail, these constituent elements of the exchange abstraction unmistakably resemble the conceptual elements of the cognitive faculty emerging with the growth of commodity production. As conceptual elements these forms are principles of thought basic to Greek philosophy as well as to modern natural science. In this

intellectual capacity they can be labelled by the convenient Kantian term of 'categories *a priori*', especially as this can all the more drastically contrast our materialist account of the categories with the idealistic one of Kant.⁷ Additional argumentation will attempt to show that not only analogy but true identity exists between the formal elements of the social synthesis and the formal constituents of cognition. We should then be entitled to state that the conceptual basis of cognition is logically and historically conditioned by the basic formation of the social synthesis of its epoch.

Our explanation thus argues that the categories are historical by origin and social by nature. For they themselves effect the social synthesis on the basis of commodity production in such a way that the cognitive faculty they articulate is an *a priori* social capacity of the mind; although it bears the exactly contrary appearance, that of obeying the principle of *ego cogito*. Kant was right in his belief that the basic constituents of our form of cognition are preformed and issue from a prior origin, but he was wrong in attributing this preformation to the mind itself engaged in the phantasmagorical performance of 'transcendental synthesis *a priori*', locatable neither in time nor in place. In a purely formal way Kant's transcendental subject shows features of striking likeness to the exchange abstraction in its distillation as money: first of all in its 'originally synthetic' character but also in its unique oneness, for the multiplicity of existing currencies cannot undo the essential oneness of their monetary function.

There can be little doubt, then, that the historical-materialist explanation adopted here satisfies the formal exigencies of a theory of cognition. It accounts for the historical emergence of the clear-cut division of intellectual and manual labour associated with commodity production. And by accounting for its genesis it should also help us in perceiving the preconditions of its historical disappearance and hence of socialism as the road to a classless society. As for Kant's idealistic construction, and that of his followers, it becomes clear that they serve to present the division of head and hand as a transcendental necessity.

If this thesis can be argued convincingly it would dispose of the age-old idea that abstraction is the exclusive privilege of thought; the mind would no longer be enshrined in its own immanence. It would give room for a completely different appreciation of

science and of mental labour generally laying all intellectual activity open for an understanding of it in terms of the social formation of its epoch and critically evaluating its conceptual structure as well as its functional application in the light of the pertinent social conspectus.

It is clear, on the other hand, that a thesis of this nature cannot draw on factual evidence for its verification but must rely primarily on arguments of reason. So also does the Marxian theory of value and of surplus-value. The facts of history tell in its favour only when viewed in the light of the categories established by the Marxian analysis of the conditions that endow them with the historical reality of valid facts. Our theory is directly concerned only with questions of form, form of consciousness and form of social being, attempting to find their inner connection, a connection which, in turn, affects our understanding of human history. The pivot of the argument lies with the structural form of social being, or, more precisely, with the formal characteristics attaching to commodity production and to the social synthesis arising from it. Thus the Marxian critique of political economy and our critique of bourgeois epistemology are linked by sharing the same methodological foundation: the analysis of the commodity in the opening chapters of *Capital* and, prior to it, in the 'Contribution to the Critique of Political Economy' of 1859. And the salient point of the argument is that this link is one of formal identity. Nevertheless, the difference in scope implies differences in the procedure of the analysis which amount to more than mere shifts of emphasis.

Marx was the first to discover the 'commodity abstraction' at the root of the economic category of value and he analysed it from the twofold viewpoint of form and of magnitude. 'The exchange process gives to the commodity, which it transforms to money, not its value, but its specific form of value', he states in the chapter on 'Exchange'. The form and the magnitude of value spring from different sources, the one from exchange, the other from labour. The critique of political economy hinges upon the understanding of how they combine to become the 'abstract human labour' constituting at once the form and the substance of value. Thus the commodity abstraction or, as we would say, the exchange abstraction is interpreted by Marx foremost as being the 'value abstraction' without involving the need to explore in any detail

the source from which the abstraction springs. This is in perfect keeping with Marx's purpose of a critique of political economy. For our purpose, however, we must concentrate in the first place on the formal aspect of value, not only in preference to, but even in separation from its economic content of labour. Or, to put it differently, we have to proceed from the commodity abstraction to the source from where the abstraction emanates and must carry through a painstakingly accurate and detailed analysis of the formal structure of exchange as the basis of its socially synthetic function.

Thus, notwithstanding their common methodological foundation, the critique of political economy and the critique of philosophical epistemology have to pursue their tasks in complete independence of each other, in strict accordance, that is, with the diverse systematic nature of their subject-matters. The fields of economics and of natural science have not a term in common, and it would be a hopeless endeavour to try to cope with the critique of epistemology by grafting it on to the Marxian critique of political economy. It must be undertaken as an investigation standing on its own ground to be judged by its own standards. This does not prevent both these critical pursuits from being inseparably bound up with each other in the results they yield for our understanding of history. The class antagonisms which commodity production engenders in all its stages – in Marx's terms 'the ancient classical, the feudal, and the modern bourgeois modes of production'⁸ are intrinsically connected with closely corresponding forms of division of head and hand; but how this connection operates will become recognisable only when the form analysis of the exchange abstraction has been accomplished.

PART I
CRITIQUE
OF PHILOSOPHICAL
EPISTEMOLOGY

I
The Fetishism of
Intellectual Labour

A critique needs a well-defined object at which it is directed; we choose philosophical epistemology. What is the salient feature which marks it as our particular object? Which philosophy most significantly represents it and is most rewarding to criticise? From the Introduction it is clear that our choice has fallen upon the Kantian theory of cognition. This does not, however, mean that the reader must be a specialist in this particularly daunting philosophy – far from it.

Marx clarifies the object of his critique as follows: 'Let me point out once and for all that by classical political economy I mean all the economists who, since the time of W. Petty, have investigated the real internal framework of bourgeois relations of production, as opposed to the vulgar economists. . . .'¹ Classical political economy in the sense of this definition culminated in the work of Adam Smith (1723–90) and David Ricardo (1772–1823) and accordingly the discussion of their theories bulks largest in Marx's critical studies – for instance those collected as 'Theories of Surplus Value'. This does not, however, oblige anyone to embark upon a study of Smith and Ricardo before reading Marx, even though, conversely, it is essential to have read Marx before looking at Smith and Ricardo. Marx's work in economics starts where the peak of bourgeois economics reaches its limits.*

Can we draw any parallel to this framework of the Marxian critique to elucidate our own undertaking in the field of philosophical epistemology? I understand by this name the

* In Part IV the reader will find more on the methodological significance of this order of things.

hands, by no means prevents him from being the first to present its general form of working in a comprehensive and conscious manner. With him it is standing on its head. It must be inverted, in order to discover the rational kernel within the mystical shell.⁴ True, this is what Marx says of Hegel in regard to the dialectic, but some Marxists have joined issue with Marx himself for leaving this vital subject so incompletely elucidated. I must say that I have never felt quite convinced that to advance from the critical idealism of Kant to the critical materialism of Marx the road should necessarily lead via the absolute idealism of Hegel. There should be the possibility of connecting Kant and Marx by a direct route at least systematically which would also yield an understanding of dialectics as the critical, and self-critical, approach without first presenting it in the misleading guise of a system of logic. Nevertheless I admit that the dialectic as evolved by Hegel affords a way of thinking which is infinitely superior to the fixed dualism of Kant. But the complaint about its dualism can affect the Kantian mode of thought only as bourgeois philosophy. And there it does it a service. For the unyielding dualism of this philosophy is surely a more faithful reflection of the realities of capitalism than can be found in the efforts of the illustrious post-Kantians striving to rid themselves of it by drawing all and everything into the redeeming 'immanency of the mind'. How can the truth of the bourgeois world present itself other than as dualism?

Hegel realised that the ideal of the truth could not acquiesce with it as the ultimate state of affairs and he engaged on dialectics as a road transcending the bourgeois limitations. Therein lies his greatness and the importance of the impulse that emanated from the dynamic of this conception. But he could not himself step out of the bourgeois world at his epoch, and so he attained the unity outraging Kant only by dispensing with the epistemological critique, and hence by way of hypostasis. He did not *make* 'thinking' and 'being' one, and did not enquire how they could be one. He simply argued that the idea of the truth *demands* them to be one, and if logic is to be the logic of the truth it has to start with that unity as its presupposition. But what is the kind of 'being' with which 'thinking' could be hypostatized as one, and their unity be a system of logic? It was nothing more, and nothing more real, than the 'being' implied when I say 'I am I', since after

epistemology which since the time of Descartes (1596-1650) seized upon the newly founded natural science of the mathematical and experimental method established by Galileo (1564-1642). Thus we describe philosophical epistemology as the theory of scientific knowledge undertaken with the aim of elaborating a coherent, all-embracing ideology to suit the production relations of bourgeois society. This endeavour culminated in the main works of Kant (1724-1804), especially his *Critique of Pure Reason*.² I therefore confine my main attention to Kant's philosophy of science which I consider to be the classical manifestation of the bourgeois fetishism of intellectual labour. Smith and Kant have in common that each is the first to have placed his respective discipline on a systematic foundation. Kant might at his time have been introduced to an English public as the Adam Smith of epistemology, and at the same period Smith could have been recommended to a German audience as the Immanuel Kant of political economy.

However, in the light of Engels's *Ludwig Feuerbach and the Outcome of Classical German Philosophy*³ and his survey of 'the whole movement since Kant' one might feel inclined to rank Hegel (1770-1831) above Kant, especially since Ricardo is frequently placed on a level with his contemporary, Hegel, in comparison with Smith and Kant. While both the latter, in their own fields, evolved the postulates which a fully fledged bourgeois society should be expected to realise, Ricardo and Hegel, independently of each other, faced up to the inherent contradictions revealed by that society upon the achievement of this realisation, brought about by the advent of the French Revolution of 1789-94 and its Napoleonic aftermath. But there is one important difference which sets Hegel on a plane apart from Ricardo. He discarded the epistemological approach altogether and outstripped the limitations of the critical standards of thinking observed by Kant and adhered to by Ricardo in order to lift himself to the height of 'speculative and absolute idealism'. This gave him free rein to carry philosophy to its consummation, but it makes him unsuited as the object for my own critique.

Many a good Marxist will want to join issue with me on this apparently disparaging treatment of Hegel. For was not Hegel, after all, the discoverer of dialectics and does not Marx accept him as such? 'The mystification which dialectic suffers in Hegel's

all, 'am' is the first person singular of the verb 'to be' in its present tense. And so Hegel starts his dialectics by a process of the mind within the mind. The Hegelian dissolution of the Kantian antitheses is not achieved by dissolving them, but by making them perform as a process. The Hegelian dialectics has no other legitimacy than that it is a process occurring. Questioned as to its possibility it would prove impossible. Adorno was perfectly right in saying: 'If the Hegelian synthesis did work out, it would only be the wrong one.'

When Marx in the last of his *Theses on Feuerbach*⁵ wrote: 'The philosophers have only *interpreted* the world in various ways; the point however is to *change* it', Hegel must have been foremost in his thoughts, because in his philosophy the very dialectics of the real change is wasted on merely ontologising 'the Idea'. What else could this Idea be as an outcome of the dialectic as Logic, but the idealisation of the bourgeois world rising to the height of 'thinking' and 'being' embracing each other in the perfection of the bourgeois State as the Prussian paragon of the constitutional monarchy. A similar treatment is meted out to all the spheres to which Hegel extended his speculation, that of the law, the mind, aesthetics, religion, history and even nature. To them all the same pattern of Logic could be made applicable by modifying the kind of 'being' that entered into unity with 'thinking' in each particular field.

I am well aware that stressing only its negative side distorts Hegel's philosophy out of recognition by suppressing the immense wealth and depth of content it owes to the revolutionary impulse of the dialectic. Hegel's is a philosophy which might be said to be wrapped in twilight from beginning to end, and I do not want my few remarks to be misunderstood as being a general condemnation of this outstanding work. My concern is narrowly confined to one question only: the treatment of the Kantian epistemology by Hegel on the one hand and Marx on the other.

Thus it is easy to see what Hegel's interest was in dispensing with the epistemological enquiry of Kant, but it was surely not the Marxian interest to do likewise. The Hegelian motivation was rooted in the mystification of the dialectic which aroused Marx's criticism. Marx's elimination of the Kantian kind of enquiry should not be understood simply as an imitation of Hegel's. Marx must have had his own independent reasons for it,

grounded in his materialistic conception of the dialectic, not in the idealistic one of Hegel.

The Kantian enquiry was aimed at an explanation of the phenomenon of the human intellect such as it manifested itself in the mathematical science founded by Galileo and perfected by Newton. What was wrong with Kant's enquiry was that he looked into the nature of the human mind for an answer. Marx could only be satisfied with an answer drawn from natural history and the human departure from it in social and economic developments arising from man's producing his own means of livelihood. This kind of answer could not possibly be gained from Hegel's philosophy. But it is this answer that we have in mind when we suggest a direct cut-through from Kant to Marx by way of a critical liquidation of Kant's enquiry, rather than by purely discarding it.

2

Can there be Abstraction other than by Thought?

Forms of thought and forms of society have one thing in common. They are both 'forms'. The Marxian mode of thought is characterised by a conception of form which distinguishes it from all other schools of thinking. It derives from Hegel, but this only so as to deviate from him again. For Marx, form is time-bound. It originates, dies and changes within time. To conceive of form in this way is characteristic of dialectical thought, but with Hegel, its originator, the genesis and mutation of form is only within the power of the mind. It constitutes the 'science of logic'; form processes in any other field, say nature or history, Hegel conceived only in the pattern of logic. The Hegelian concept of

philosophical tradition is itself a product of the division between mental and manual labour, and since its beginning with Pythagoras, Heraclitus and Parmenides has been a preserve of intellectuals for intellectuals, inaccessible to manual workers. Little has changed here, even today. For this reason the testimony of this tradition, even if unanimous, does not carry the weight of authority for those who take their stand with the manual worker. The view that abstraction was not the exclusive property of the mind, but arises in commodity exchange was first expressed by Marx in the beginning of *Capital* and earlier in the *Critique of Political Economy* of 1859, where he speaks of an abstraction other than that of thought.

3

The Commodity Abstraction

The form of commodity is abstract and abstractness governs its whole orbit. To begin with, exchange-value is itself abstract value in contrast to the use-value of commodities. The exchange-value is subject only to quantitative differentiation, and this quantification is again abstract compared with the quantity which measures use-values. Marx points out with particular emphasis that even labour, when determining the magnitude and substance of value, becomes 'abstract human labour', human labour purely as such. The form in which commodity-value takes on its concrete appearance as money – be it as coinage or bank-notes – is an abstract *thing* which, strictly speaking, is a contradiction in terms. In the form of money riches become abstract riches and, as owner of such riches, man himself becomes an abstract man, a private property-owner. Lastly a society in which commodity exchange forms the *nexus rerum* is a purely abstract set of relations where everything concrete is in private hands.

dialectic finally entitles the mind not only to primacy over manual work but endows it with omnipotence.

Marx, on the other hand, understands the time governing the genesis and the mutation of forms as being, from the very first, historical time – the time of natural and of human history.⁶ * That is why the form processes cannot be made out in anticipation. No *prima philosophia* under any guise has a place in Marxism. What is to be asserted must first be established by investigation; historical materialism is merely the name for a methodological postulate and even this only became clear to Marx 'as a result of my studies'.

Thus one must not ignore the processes of abstraction at work in the emergence of historical forms of consciousness. Abstraction can be likened to the workshop of conceptual thought and its process must be a materialistic one if the assertion that consciousness is determined by social being is to hold true. A derivation of consciousness from social being presupposes a process of abstraction which is part of this being. Only so can we validate the statement that 'the social being of man determines his consciousness'. But with this point of view the historical materialist stands in irreconcilable opposition to all traditional, theoretical philosophy. For this entire tradition it is an established fact that abstraction is the inherent activity and the exclusive privilege of thought; to speak of abstraction in any other sense is regarded as irresponsible, unless of course one uses the word merely metaphorically. But to acquiesce in this philosophical tradition would preclude the realisation of the postulate of historical materialism. If the formation of the consciousness, by the procedure of abstraction, is exclusively a matter for the consciousness itself, then a chasm opens up between the forms of consciousness on the one side and its alleged determination in being on the other. The historical materialist would deny in theory the existence of this chasm, but in practice has no solution to offer, none at any rate that would bridge the chasm.

Admittedly it must be taken into consideration that the

* We know only one science, the science of history. History can be regarded from two sides: the history of nature and the history of man. Neither side, however can be separated from time. . . . (*The German Ideology* (in German: *Frühschriften*, ed. S. Landshut and J. P. Mayer, p. 10).) The paragraph that begins these lines is crossed out in Marx's handwritten manuscript, but they retain their value as an essential expression of his thought.

The essence of commodity abstraction, however, is that it is not thought-induced; it does not originate in men's minds but in their actions. And yet this does not give 'abstraction' a merely metaphorical meaning. It is abstraction in its precise, literal sense. The economic concept of value resulting from it is characterised by a complete absence of quality, a differentiation purely by quantity and by applicability to every kind of commodity and service which can occur on the market. These qualities of the economic value abstraction indeed display a striking similarity with fundamental categories of quantifying natural science without, admittedly, the slightest inner relationship between these heterogeneous spheres being as yet recognisable. While the concepts of natural science are thought abstractions, the economic concept of value is a real one. It exists nowhere other than in the human mind but it does not spring from it. Rather it is purely social in character, arising in the spatio-temporal sphere of human interrelations. It is not people who originate these abstractions but their actions. 'They do this without being aware of it.'

In order to do justice to Marx's *Critique of Political Economy* the commodity or value abstraction revealed in his analysis must be viewed as a *real abstraction* resulting from spatio-temporal activity. Understood in this way, Marx's discovery stands in irreconcilable contradiction to the entire tradition of theoretical philosophy and this contradiction must be brought into the open by *critical confrontation* of the two conflicting standpoints. But such a confrontation does not form part of the Marxian analysis.

I agree with Louis Althusser that in the theoretical foundations of *Capital* more fundamental issues are at stake than those showing in the purely economic argument. Althusser believes that *Capital* is the answer to a question implied but not formulated by Marx.⁸ Althusser defeats the purpose of his search for this question by insisting 'que la production de la connaissance . . . constitue un processus qui se passe *tout entier dans la pensée*'. He understands Marx on the commodity abstraction metaphorically, whereas it should be taken literally and its epistemological implications pursued so as to grasp how Marx's method turns Hegel's dialectic 'right side up'. The unproclaimed theme of *Capital* and of the commodity analysis is in fact the real abstraction uncovered there. Its scope reaches further than

economics — indeed it concerns the heritage of philosophy far more directly than it concerns political economy.

Some people go further and accuse Marx of having ignored the epistemological implications of his own mode of thinking. Here I agree that, if one takes up these implications and pursues them consistently, epistemology itself undergoes a radical transformation and indeed merges into a theory of society. However I believe that the fallacies of the epistemological and idealistic tradition are more effectively eliminated if one does not talk of 'the theory of knowledge' but the division of mental and manual labour instead. For then the practical significance of the whole enquiry becomes apparent.

If the contradiction between the real abstraction in Marx and the thought abstraction in the theory of knowledge is not brought to any critical confrontation, one must acquiesce with the total lack of connection between the scientific form of thought and the historical social process. Mental and manual labour must remain divided. This means, however, that one must also acquiesce with the persistence of social class division, even if this assumes the form of socialist bureaucratic rule. Marx's omission of the theory of knowledge results in the lack of a theory of mental and manual labour; it is, in other words, the theoretical omission of a precondition of a classless society which was seen by Marx himself to be fundamental.

The political implication heightens its theoretical importance. For not only must the conception of history be broadened to include science, but also its method must be a consistently critical one. For Marx arrives at the correct understanding of things only by critically tracing the causes that give rise to the false consciousness operating in class society.

Thus, to the conditions of a classless society we must add, in agreement with Marx, the unity of mental and manual labour, or as he puts it, the disappearance of their division. And the present study maintains that an adequate insight can only be gained into the conditions of a classless society by investigating the origin of the division of head and hand.

This involves a critique of philosophical epistemology which is the false consciousness arising from this division. The Marxian concept of critique owes its parentage to Kant in his *Critique of Pure Reason*. We now apply in full circle the principle of critique in

this sense to the Kantian epistemology. This is the classical manifestation of the bourgeois fetishism embodied in the mental labour of science. We must trace the division of mental and manual labour back to its earliest occurrence in history. This origin we date from the beginnings of Greek philosophy because its antecedents in Egypt and Mesopotamia are pre-scientific.

Our task, now, amounts to the critical demonstration of the commodity abstraction. This is only a reformulation of what was previously referred to as 'critical confrontation'. We have to prove that the exchange abstraction is, first, a real historical occurrence in time and space, and, second, that it is an abstraction in the strict sense acknowledged in epistemology. This enquiry must be preceded by a description of the phenomenon under investigation.

4

The Phenomenon of the Exchange Abstraction

The Marxist concept of commodity abstraction refers to the labour which is embodied in the commodities and which determines the magnitude of their value. The value-creating labour is termed 'abstract human labour' to differentiate it from concrete labour which creates use-values. Our main concern is to clarify this 'commodity abstraction' and to trace its origin to its roots.

It must be stated from the outset that our analysis of exchange and value differs in certain respects from that of Marx in the opening of volume 1 of *Capital* without, for that matter, contradicting his analysis. Marx was concerned with the 'critique of political economy', while our subject is the theory of scientific

knowledge and its historical-materialist critique. However, Marx himself has defined the aspect of exchange as it concerns our purpose:

However long a series of periodical reproductions and preceding accumulations the capital functioning today may have passed through, it always preserves its original virginity. So long as the laws of exchange are observed in every single act of exchange – taken in isolation – the mode of appropriation [of the surplus – S.-R.] can be completely revolutionised without in any way affecting the property rights which correspond to commodity production. The same rights remain in force both at the outset, when the product belongs to its producer, who, exchanging equivalent for equivalent, can enrich himself only by his own labour, and in the period of capitalism, when social wealth becomes to an ever-increasing degree the property of those who are in a position to appropriate the unpaid labour of others over and over again.⁹

Hence the formal structure of commodity exchange, in every single act, remains the same throughout the various stages of commodity production. I am concerned exclusively with this formal structure, which takes no account of the relationship of value to labour. Indeed where labour is taken into consideration we are in the field of economics. Our interest is confined to the abstraction contained in exchange which we shall find determines the conceptual mode of thinking peculiar to societies based on commodity production.

In order to pursue our particular purpose of tracing to its origin the abstraction permeating commodity exchange we slightly modify the starting base of the analysis. Marx begins by distinguishing use-value and exchange-value as the major contrasting aspects of every commodity. We trace these aspects to the different human activities to which they correspond, the actions of use and the action of exchange. The relationship between these two contrasting kinds of activity, use and exchange, is the basis of the contrast and relationship between use-value and exchange-value. The explanation of the abstraction of exchange is contained in this relationship.

The point is that use and exchange are not only different and

contrasting by description, but are mutually exclusive in time. They must take place separately at different times. This is because exchange serves only a change of ownership, a change, that is, in terms of a purely *social status* of the commodities as owned property. In order to make this change possible on a basis of negotiated agreement the physical condition of the commodities, their *material status*, must remain unchanged, or at any rate must be assumed to remain unchanged. Commodity exchange cannot take place as a recognised social institution unless this separation of exchange from use is stringently observed. This is a truth which need only be uttered to be convincing, and I regard it as a firm basis on which to build far-reaching conclusions.

First, therefore, let us be clear as to the specific nature of this particular restriction of use. For there are, of course, countless situations apart from exchange where the use of things is stopped, hindered, interrupted or otherwise disputed. None of these have the same significance as exchange. Things may be stored for later use, others put on one side for the children, wine may be kept in the cellar to mature, injured bodies be ordered a rest, and so on. These are stoppages or delays of use decided upon by the users themselves and done in the service of their use. Whether they happen in a private household or on the wider basis of production carried on in common with other people, cases of this kind are not on a level comparable with exchange, because use here is not forbidden by social command or necessity. But social interference occurs wherever there is exploitation without for that reason alone being necessarily similar to exchange. Long before there was commodity production exploitation assumed one of the many forms of what Marx has termed 'direct lordship and bondage'. This is exploitation based on unilateral appropriation as opposed to the reciprocity of exchange. In ancient Bronze Age Egypt, for instance, priests and scribes and other servants of the Pharaoh were engaged to collect surplus produce from the Nilotic peasants and put it into storage. Once the produce was collected neither the peasant producers nor the collectors had access to these goods for their own use, for the power and authority for the collection emanated from the Pharaoh. There was a transference of property, but a public, not a private, one, and there was the same immutability of the material status of the

products held in store for disposal by the ruling authorities which applies in the case of commodities in exchange. There were significant formal similarities between Bronze Age Egypt or Babylonia and Iron Age Greece, and we shall find in the second part of this study that the proto-science which emerged in the ancient oriental civilisations can be accounted for on these grounds. But the great difference is that the social power imposing this control over the use of things was in the nature of the personal authority of the Pharaoh obeyed by every member of the ruling set-up. In an exchange society based on commodity production, however, the social power has lost this personal character and in its place is an anonymous necessity which forces itself upon every individual commodity owner. The whole of the hierarchical superstructure of the Egyptian society has disappeared, and the control over the use and disposal of things is now exercised anarchically by the mechanism of the market in accordance with the laws of private property, which are in fact the laws of the *separation* of exchange and use.

Thus the salient feature of the act of exchange is that its separation from use has assumed the compelling necessity of an objective social law. Wherever commodity exchange takes place, it does so in effective 'abstraction' from use. This is an abstraction not in mind, but in fact. It is a state of affairs prevailing at a definite place and lasting a definite time. It is the state of affairs which reigns on the market.

There, in the market-place and in shop windows, things stand still. They are under the spell of one activity only; to change owners. They stand there waiting to be sold. While they are there for exchange they are there not for use. A commodity marked out at a definite price, for instance, is looked upon as being frozen to absolute immutability throughout the time during which its price remains unaltered. And the spell does not only bind the doings of man. Even nature herself is supposed to abstain from any ravages in the body of this commodity and to hold her breath, as it were, for the sake of this social business of man. Evidently, even the aspect of non-human nature is affected by the banishment of use from the sphere of exchange.

The abstraction from use in no way implies, however, that the use-value of the commodities is of no concern in the market. Quite the contrary. While exchange banishes use from the

actions of marketing people, it does not banish it from their minds. However, it must remain confined to their minds, occupying them in their imagination and thoughts only. This is not to say that their thoughts need lack reality. Customers have the right to ascertain the use-value of the commodities on offer. They may examine them at close quarters, touch them, try them out, or try them on, ask to have them demonstrated if the case arises. And the demonstration should be identically like the use for which the commodity is (or is not) acquired. On standards of empiricism no difference should prevail between the use on show and the use in practice. This, however, is the difference that matters in the business standards which rule in the market. Of a commodity in the market the empirical data come under reservations like those argued in subjective idealism; material reality accrues to them when the object is out of the market and passes, by virtue of the money paid, into the private sphere of the acquiring customer.

It is certain that the customers think of commodities as objects of use, or nobody would bother to exchange them (and confidence tricksters would be out of business). The banishment of use during exchange is entirely independent of what the specific use may be and can be kept in the private minds of the exchanging agents (buyers and sellers of sodium chlorate might have gardening in mind or bomb-making).

Thus, in speaking of the abstractness of exchange we must be careful not to apply the term to the consciousness of the exchanging agents. They are supposed to be occupied with the use of the commodities they see, but occupied in their imagination only. It is the action of exchange, and the action alone, that is abstract. The consciousness and the action of the people part company in exchange and go different ways. We have to trace their ways separately, and also their interconnection.

As commodity production develops and becomes the typical form of production, man's imagination grows more and more separate from his actions and becomes increasingly individualised, eventually assuming the dimensions of a private consciousness. This is a phenomenon deriving its origin, not from the private sphere of use, but precisely from the public one of the market. The individualised consciousness also is beset by abstractness, but this is not the abstractness of the act of exchange at

its source. For the abstractness of that action cannot be noted when it happens, since it only happens because the consciousness of its agents is taken up with their business and with the empirical appearance of things which pertains to their use. One could say that the abstractness of their action is beyond realisation by the actors because their very consciousness stands in the way. Were the abstractness to catch their minds their action would cease to be exchange and the abstraction would not arise. Nevertheless the abstractness of exchange *does* enter their minds, but only after the event, when they are faced with the completed result of the circulation of the commodities. The chief result is money in which the abstractness assumes a separate embodiment. Then, however, 'the movement through which the process has been mediated vanishes in its own result, leaving no trace behind'.¹⁰ This will occupy us more fully later on. Here we want to return once more to the separation of exchange from use and to its basic nature.

When looking at use and exchange as kinds of human practice it becomes plain to see in what manner they exclude each other. Either can take place only while the other does not. The practice of 'use' covers a well-nigh unlimited field of human activities; in fact it embraces all the material processes by which we live as bodily beings on the bosom of mother earth, so to speak, comprising the entirety of what Marx terms 'man's interchange with nature' in his labour of production and his enjoyment of consumption. This material practice of man is at a standstill, or assumed to be at a standstill, while the other practice, that of exchange, holds sway. This practice has no meaning in terms of nature: it is purely social by its constitution and scope. 'Not an atom of matter enters into the objectivity of commodities as values; in this it is the direct opposite of the coarsely sensuous objectivity of commodities as physical bodies.'¹¹ The point is that notwithstanding the negation that exchange implies of the physical realities of use and use-value, the transfer of possession negotiated under property laws in no way lacks physical reality itself. Exchange involves the movement of the commodities in time and space from owner to owner and constitutes events of no less physical reality than the activities of use which it rules out. It is indeed precisely because their physical reality is on a par that both kinds of practice, exchange and use, are mutually exclusive

it. In exchange, *the action is social, the minds are private*. Thus, the action and the thinking of people part company in exchange and go different ways. In pursuing point (b) of our theses we shall take the way of the action of exchange, and this will occupy the next two chapters. For point (c) we shall turn to the thinking of the commodity owners and of their philosophical spokesmen, in Part II of the book.

5

Economics and Knowledge

How does society hold together when production is carried out independently by private producers, and all forms of previous production in common have broken asunder? On such a basis society can cohere in no other way than by the buying and selling of the products as commodities. Private production becomes increasingly specialised and the producers become increasingly dependent upon one another according to the division of labour reigning between them. The only solution to their interdependence is commodity exchange.

The nexus of society is established by the network of exchange and by nothing else. It is my buying my coat, not my wearing it, which forms part of the social nexus, just as it is the selling, not the making of it. Therefore, to talk of the social nexus, or, as we may call it, the social synthesis, we have to talk of exchange and not of use. In enforcing the separation from use, or more precisely, from the actions of use, the activities of exchange presuppose the market as a time- and space-bound vacuum devoid of all inter-exchange of man with nature.

What enables commodity exchange to perform its socialising function -- to effect the social synthesis -- is its abstractness from

in time. It is in its capacity of a real event in time and space that the abstraction applies to exchange, it is in its precise meaning a real abstraction and the 'use' from which the abstraction is made encompasses the entire range of sense reality.

Thus we have, on the basis of commodity production, two spheres of spatio-temporal reality side by side, yet mutually exclusive and of sharply contrasting description. It would help us to have names by which we could designate them. In German the world of 'use' is often called 'the first or primary nature', material in substance, while the sphere of exchange is termed a 'second, purely social, nature' entirely abstract in make-up. They are both called 'nature' to point to the fact that they constitute worlds equally spatio-temporal by reality and inextricably interwoven in our social life. The ancient legend of King Midas, who wished for everything he touched to turn to gold and died upon having his wish fulfilled, vividly illustrates how contrasting in reality and yet how closely associated in our minds both these natures are.

This, in the briefest way, is the foundation on which I shall base my historical and logical explanation of the birth of philosophy in Greek society of slave-labour, and of the birth of modern science in European society based on wage-labour. To substantiate my views three points have to be established: (a) that commodity exchange is an original source of abstraction; (b) that this abstraction contains the formal elements essential for the cognitive faculty of conceptual thinking; (c) that the real abstraction operating in exchange engenders the ideal abstraction basic to Greek philosophy and to modern science.

On the first point, it is necessary to recapitulate the points made so far: commodity exchange is abstract because it excludes use; that is to say, the action of exchange excludes the action of use. But while exchange banishes use from the actions of people, it does not banish it from their minds. The minds of the exchanging agents must be occupied with the purposes which prompt them to perform their deal of exchange. Therefore while it is necessary that their action of exchange should be abstract from use, there is also necessity that their minds should not be. The action alone is abstract. The abstractness of their action will, as a consequence, escape the minds of the people performing

everything relating to use. Our question could thus also be rephrased in the paradoxical form: how is 'pure' socialisation possible? - the word 'pure' here conforming to the same criteria of 'purity' which Kant applies to his concept of 'pure mathematics' and 'pure science'. In this wording our question offers a time- and space-bound and historical corollary to the Kantian enquiry into the conditions by which pure mathematics and pure science are possible. Kant's enquiry was an idealistic one. Translated into Marxist terms it reads: How is objective knowledge of nature possible from sources other than manual labour? Formulated in this way our questions aim directly at the pivotal point of the division between mental and manual labour - a division which is a socially necessary condition of the capitalist mode of production.

These remarks should show how our form analysis of the commodity abstraction can serve the historical-materialist critique of the traditional theory of knowledge as a complement to Marx's critique of political economy. This merits further elucidation.

In commodity exchange the action and the consciousness of people go separate ways. Only the action is abstract; the consciousness of the actors is not. The abstractness of their action is hidden to the people performing it. The actions of exchange are reduced to strict uniformity, eliminating the differences of people, commodities, locality and date. The uniformity finds expression in the monetary function of one of the commodities acting as the common denominator to all the others. The relations of exchange transacted in a market express themselves in quantitative differences of this uniform denominator as different 'prices' and create a system of social communication of actions performed by individuals in complete independence of one another and oblivious of the socialising effect involved. The pivot of this mode of socialisation is the abstraction intrinsic to the action of exchange. This abstraction is the dominating form element of commodity exchange to which we give an even wider significance than did Marx, who was the first to discover it.

The chief difference distinguishing the Marxian treatment of economics from the bourgeois one lies in the importance accorded to the formal aspects of economic reality. The understanding of form as attached to being and not only to thinking

was the main principle of dialectics which Marx drew from Hegel.

Political economy has indeed analysed value and its magnitude, however incompletely, and has uncovered the content concealed within these forms. But it has never once asked the question why this content has assumed that particular form, that is to say, why labour is expressed in value, and why the measurement of labour by its duration is expressed in the magnitude of the value of the product.¹²

This Marxian sense of the objective necessity and the anonymity of the formal developments of economic life in its sheer historical reality excels in the analysis of the commodity and of the genesis of its monetary expression.

Thus the difference between the Marxian critique of political economy and our critique of idealistic epistemology cannot be confined to the simple contrast between the economics of the magnitude of values and the formal aspect of value and commodity exchange. Both are inseparably linked in the Marxian analysis. Our interest centres on the conversion of the forms of the social being in the epochs of commodity production into the forms of cognition peculiar to these epochs. Marx clearly indicates the way in which this conversion takes place. The separation of action and consciousness of people engaged in exchange make it impossible for the forms of exchange to impart themselves to the human mind at the source of these forms. The abstraction applying to the mere action of exchange produces its own practical results, the principal one of which is the emergence of money. Marx has analysed this process in great detail in the first chapter of *Capital* and sums it up again as follows:

The historical broadening and deepening of the phenomenon of exchange develops the opposition between use-value and value which is latent in the nature of the commodity. The need to give an external expression to this opposition for the purposes of commercial intercourse produces the drive towards an independent form of value, which finds neither rest nor peace until an independent form has been achieved by the differentiation of commodities into commodities and money.

At the same rate, then, as the transformation of the products of labour into commodities is accomplished, one particular commodity is transformed into money.^{13*}

It might be argued, however, that Marx's analysis of the commodity rules out a purely formal analysis of the exchange abstraction because, to Marx, the abstractness of value always transmits itself to labour and finds its real meaning in abstract human labour as the economic substance of value. On the other hand, there are places where Marx contemplates the exchange relation between commodities taking a certain shape independently of the quantitative aspect. But even where the form of value is considered as related to labour this relation is often presented as an implication consequent upon the formal characteristics of exchange. Particularly is this the case where the law of value is shown in its actual mode of operation.

Men do not therefore bring the product of their labour into relation with each other as value because they see these objects merely as the material integuments of homogeneous human labour. The reverse is true: by equating their different products to each other in exchange as values, they equate their different kinds of labour as human labour. They do this without being aware of it.¹⁴

And more clearly:

The production of commodities must be fully developed before the scientific conviction emerges, from experience itself, that all the different kinds of private labour (which are carried on independently of each other, and yet, as spontaneously developed branches of the social division of labour, are in a situation of all-round dependence on each other) are continually being reduced to the quantitative proportions in which society requires them. The reason for this reduction is that in the midst of the accidental and ever-fluctuating

* Translation slightly modified by me S.-R. The creation of coined money first occurring around 680 B.C. on the Ionian side of the Greek Aegean is a safe indication that the conversion of products into commodities and the technical needs of commercial practice had reached an advanced stage. We shall refer to this fact later.

exchange relations between the products, the labour-time socially necessary to produce them asserts itself as a regulative law of nature. In the same way, the law of gravity asserts itself when a person's house collapses on top of him. The determination of the magnitude of value by labour-time is therefore a secret hidden under the apparent movements in the relative values of commodities.¹⁵

Surely the exchange relations must have the formal ability to weave a web of social coherence among the mass of private individuals all acting independently of one another before, by the action of these exchange relations, their labour spent on all the multi-variety of products can be quantified proportionately to the social needs.

Very probably a case could be made for either interpretation from the text of Marx's writings, but neither shall I employ the length of time required for such a Marxological controversy, nor shall I make my conviction dependent upon its outcome. I shall define the purely formal capacity of the exchange abstraction and its social function as I see it and proceed to prove its reality on the evidence of detailed analysis. This conviction of mine, that the 'commodity form', to use Marx's expression, can be analysed as a phenomenon of its own, in separation from the economic issues, does mark a difference from the Marxian theory but only in the sense that it adds to this theory. The formal analysis of the commodity holds the key not only to the critique of political economy, but also to the historical explanation of the abstract conceptual mode of thinking and of the division of intellectual and manual labour, which came into existence with it. One thing is certain, the rights or wrongs of my deviation from Marx cannot be decided in the abstract, but only in the light of the results.

People become aware of the exchange abstraction only when they come face to face with the result which their own actions have engendered 'behind their backs' as Marx says. In money the exchange abstraction achieves concentrated representation, but a mere functional one — embodied in a coin. It is not recognisable in its true identity as abstract form, but disguised as a thing one carries about in one's pocket, hands out to others, or receives from them. Marx says explicitly that the value abstraction never assumes a representation as such, since the only expression it ever

6

The Analysis of the Exchange Abstraction

(a) STATING THE QUESTION

In commodity-producing societies the significance and historical necessity of the exchange abstraction in its spatio-temporal reality is that it provides the form of the social synthesis. None of the activities of production and consumption, on which the life of every individual depends, could take place in the social system of the division of labour without the intervention of commodity exchange. Every economic crisis is an object lesson of the truth that production and consumption are disrupted in proportion to the degree that the exchange nexus fails. Here we shall abstain from entering into any economic aspects of the problem which lie outside the scope of our argument. It is enough to assure ourselves that the synthesis of commodity-producing societies is to be found in commodity exchange, or, more precisely, in the exchange abstraction itself. Thus we must carry out the form analysis of the exchange abstraction in answer to the question: *How is social synthesis possible by means of commodity exchange?*

At first sight the phrasing of the question is one that resembles Kant more clearly than it does Marx. There is, however, a good Marxist reason for this. The implied comparison is not between Kant and Marx but between Kant and Adam Smith — between the disciplines they founded: epistemology and political economy. Adam Smith's *Wealth of Nations* of 1776 and Kant's *Critique of Pure Reason* of 1781 are, above all others, the two works which, in completely unconnected fields and in total systematic independence from each other, strive towards the same goal: to prove the perfect normalcy of bourgeois society.

finds in the equation of one commodity with the use-value of another. The gold or silver or other matter which lends to money its palpable and visible body is merely a metaphor of the value abstraction it embodies, not this abstraction itself.

But I set out to argue that the abstractness operating in exchange and reflected in value does nevertheless find an identical expression, namely the abstract intellect, or the so-called 'pure understanding' — the cognitive source of scientific knowledge.

To prove this to be the true historical explanation of the enigmatic 'cognitive faculties' of civilised man we must carry out an isolated analysis of the formal characteristics of commodity exchange in complete methodological separation from any consideration of the magnitude of value and the role of human labour associated with it. These considerations are concerned with the economics of exchange and have been dealt with by Marx in his critique of political economy, and remain unaffected by our enquiry. Equally unaffected are the forms of consciousness which are part of the economic life of society and all those mental forms residing under the name of 'ideologies'. These do not concern our present study, which is to be understood as an attempt purely at a critique of idealistic epistemology, complementary to Marx's critique of political economy, but based on a systematic foundation of its own.

Assuming that it is in the nature of human labour to produce commodity values, Adam Smith proves that society is best served by allowing unimpeded freedom to every private owner to do as he pleases with his property. Whether for the good of society, as Adam Smith was convinced, or for its undoing, as Ricardo began to suspect, they believed this was in conformity with the norms inherent in human society. We know Marx's commodity analysis served to demolish this very basic assumption on which rests the whole system of political economy, and from his critique Marx uncovers the true inner dialectic of bourgeois society.

Kant's work does not presuppose that it is in the nature of the human mind to perform its labour in separation from manual labour, but it leads to that conclusion. Certainly he seldom mentions manual labour and the 'labouring classes', although he never doubts their social place. But this place in society has no bearing upon the possibility of the workings of the human mind. The theory of 'pure mathematics' and of 'pure science' triumphs in the very fact that it owes no debt to manual labour. Indeed Kant's task was to explain how these two disciplines were possible, on an *a priori* basis in the mind. The empiricist arguments of Hume impeded Kant because they cast doubt upon the apodictic value of the categories of the pure understanding and only this value could warrant the division of knowledge according to principles *a priori* and principles of *a posteriori*. This meant the singling out of a part of our being which is undervivable from our physical and sensorial nature, and which carries the possibilities of pure mathematics and pure science. Thus a bourgeois order of society understood as a division between the educated and labouring classes would form naturally if left to itself, without having to rely on privileges from birth or religion and without curtailing freedom of thought. The fewer obstacles placed in the way of men's public activities the better served will be the common weal by morality, justice and intellectual progress.¹⁶ This, according to Kant, is the only way, founded on reason, by which society can maintain itself in keeping with the conditions of freedom. That this order concealed within itself the class division was a fact hidden to Kant as it was to the other philosophers of the bourgeois enlightenment. Marx called Kant's contribution 'the philosophy of the French Revolution', not least because of this illusion. But the division between the 'educated'

and 'labouring' classes was the concept under whose auspices the bourgeois society of economically undeveloped Germany continued to take shape, in contrast to the concepts of capital and labour in the West, where political economy ruled bourgeois thinking. What place here has our own 'critique of epistemology'?

The presuppositions of Kant's epistemology are quite correct in so far as the exact sciences are indeed created by manual labour in total separation from and independence of the manual labour carried on in production. The division between head and hand, and particularly in relation to science and technology, has an importance for bourgeois class rule as vital as that of the private ownership of the means of production. It is only too evident in many of the socialist countries today that one can abolish property rights and still not be rid of class. The class antagonism of capital and labour is linked intrinsically with the division of head and hand. But the connection is hidden to consciousness. In their conceptual terms they are disparate, and it is for that reason that the critique of epistemology must be undertaken independently from that of political economy.

We could phrase our question, omitting the word 'synthesis', by asking: 'How is a social nexus possible by means of commodity exchange?' But the use of the word 'synthesis', in a meaning strange to English readers, allows the convenient adjective 'socially synthetic', which is crucial for our purpose. Moreover the term 'synthetic society' distinguishes the 'man-made' structure of exchange society from primitive tribal society. But I use this term in a different sense and with another range of meaning from that of 'social synthesis'. The first 'synthetic' applies only to commodity societies, the second 'social synthesis' is understood as a general and basic condition of human existence, with no historical limits. In this last sense the word 'synthesis' is used to arm the formulation of my enquiry with a spearhead against Kant's hypostasis of an *a priori* synthesis from the spontaneity of mind, and thus to pay transcendental idealism back in its own coin.

It must be pointed out that none of these meanings of 'synthesis' is absolutely essential to our argument. The deduction of the pure understanding from the exchange abstraction can be presented without anti-idealist thrusts, but the polemical per-

spective offers the advantage of emphasising the critical character of Marxian thought. The present-day authority-based dogmatism of Marxism permits it to legitimise an unavowed existence of class division. If its critical force is restored it should help to free Marxism from ossification and renew its creative power.

Some measure of accord underlies our polemical opposition to Kant. We agree that the principles of knowledge fundamental to the quantifying sciences cannot be traced to the physical and sensorial capacity of experience. The exact sciences belong to the resources of an epoch of production which has finally outstripped the limitations of individual pre-capitalist handicrafts. Kant compiles knowledge dualistically from principles *a posteriori* and principles *a priori*. Of these the first correspond to the contribution of the individual senses which never extend beyond the 'receptivity' of our five senses, and the second to the universal scope of concepts linked to mathematics. The scientific experiment strictly corresponds to this dualism of Kant. It is often misinterpreted as an activity of manual labour complementing the intellectual labour of the mathematical hypothesis to be tested. But in fact the experiment is constructed to reduce the individual action to little more than reading the data from scientific instruments. The evidence only has certainty for the individual who reads the data, everyone else must take it on trust. But the concepts based on mathematics are universally valid for the whole of society. The human factor must be eliminated for the sake of scientific objectivity. Logical necessity attaches exclusively to the mathematical hypothesis and the inferences drawn from it. The duality of the sources of knowledge we accept as an incontrovertible fact. The question we ask is, what is the historical origin of our logical ability to construct mathematical hypotheses and the elements contributing to them?

Neither Kant nor any other bourgeois thinker has pursued this enquiry consistently. In the opening sentence of the Introduction to the second edition of the *Critique* the question is intimated but subsequently fades out. Kant gathers the contributory factors into one fundamental principle: the 'originally synthetic unity of the apperception', but for this principle itself he knows no better explanation than to attribute it to a 'transcendental spontaneity' of its own. The explanation turns into the fetishism of what was to

be explained. From then on, in the idealist's mind, a time- and space-bound account of the 'capacity of pure understanding' simply cannot exist. The mere suggestion becomes one of the holiest taboos in the tradition of philosophical thought. Nietzsche's scorn over Kant's question 'How are synthetic, *a priori*, judgements possible?' and his answer 'through a capacity' — is totally justified. Nietzsche himself had nothing better to offer. The taboo presupposes that the existing division between head and hand is in its very nature timeless — and this said, bourgeois order must run according to its self-appointed norms until the end of time.

We now confront Kant's question with our own: 'How is social synthesis possible in the forms of commodity exchange?' This question stands outside the entire epistemological sphere of reference. Were it not that we lay some store by a phrasing parallel to Kant's, we could just as well ask: 'Where does the abstractness of money originate?' Both wordings are confined to the time- and space-bound framework of historical-materialist thought and yet both focus on form abstractions which straddle both economics and science. It seems unlikely that we shall fail to find a connection between them if we pursue our question to its roots.

(b) PRACTICAL SOLIPSIISM

At first sight it is not obvious how commodity exchange serves as the means of the social synthesis between individuals possessing commodities in private ownership. For commodity exchange is itself a relationship ruled by the principles of private property. Marx writes

Things are in themselves external to man and therefore alienable. In order that this alienation [*Veräußerung*] may be reciprocal, it is only necessary for men to agree tacitly to treat each other as the private owners of those alienable things, and, precisely for that reason, as persons who are independent of each other. But this relationship of reciprocal isolation and foreignness does not exist for the members of a primitive community of natural origin. . . .¹⁷

From this it might appear that the legal concept of private

property took precedence over the actual relations of exchange in contradiction to our historical-materialist mode of thinking. In reality, however, it is just the reverse. The concept of property is itself only a conceptualisation of the factual necessity of keeping use and exchange separated. The need to exempt from use objects entered for exchange is a simple fact of experience; if it is ignored exchange must cease. But because the content of the experience is a negation there arises from it a prohibition of use which extends to everyone involved in the transactions and becomes the norm for all other similar instances. Only by coming into touch with the practice of exchange does the fact of possession assume the meaning of a general law of property. Exchange has this consequence because it is a relationship between human beings. They cannot relate to each other as they do to nature, for instance killing and robbing each other as they do to animals. Instead they must speak to each other, communicate by signs, or in any case recognise each other as human beings. This, too, is still a simple fact but one that gives rise to norms, because it breaks through the basic relation with nature, replacing it with a social relation between groups. The course of this last process has been convincingly reconstructed by George Thomson in the first chapter of his book *The First Philosophers* and the same idea is expressed by Marx — The owners or 'guardians' of the objects for exchange

must behave in such a way that each does not appropriate the commodity of the other, and alienate his own, except through an act to which both parties consent. The guardians must therefore recognise each other as owners of private property. This juridical relation, whose form is the contract, whether as part of a developed legal system or not, is a relation between two wills which mirror the economic relation. The content of this juridical relation (or relation of two wills) is itself determined by the economic relation.¹⁸

To put this in other words, the state of reciprocal independence exists on the basis of commodity production. On this basis, all commodities are used, whether for production or consumption, exclusively in the private sphere of the commodity owners. The social synthesis, on the other hand, seen purely

formally, is effected only through the exchange of commodities by their owners, in actions separate from their use. Thus the formalism of the exchange abstraction and of the social synthesis which it creates must be found within the confines of the exchange relation.

A transaction of commodity exchange, for example by process of barter, is the exercise by the two exchanging parties of a reciprocal exclusion of ownership concerning two lots of commodities. It is a relationship of appropriation regulated by reciprocity. Every move in the contest, every proposition made by one party and countered by the other, actuates the principle: mine — hence not yours; yours — hence not mine. What is reciprocated is the exclusion of ownership. The agreement upon which the parties settle signifies a delineation of the separate realms of property of each of them at this particular point of contact. Thus there seems to be nothing between the owners but segregation. How, then, does this operate a social synthesis?

The principle, moreover, also taints the relationship of each party to the objects they exchange. For the interest of each is his own interest and not that of the other; similarly the way each one conceives of his interest is his own, the needs, feelings, thoughts that are involved on both sides are polarised on *whose* they are. A piece of bread that another person eats does not feed me. This is the truth that determines the issues at stake in commodity exchange.

Not *what* two people need or feel or think, but *whose* need, feeling or thought will prevail is what shapes the relationship. Thus one can justifiably say that commodity exchange impels solipsism between its participants. Accordingly commodity exchange does not depend on language, on *what* we communicate to each other. Nothing regarding the essence of things need be communicated. Some semantics for 'yes' and 'no', for pointing to this or that, and to indicate quantity, is sufficient to the essentials of a transaction of exchange whether it is carried on between two village gossips or between two strangers who do not speak each other's language. Ethnologists are acquainted with the incidence of 'silent trade'. To put it in the words of Bertrand Russell it is 'that all my data, in so far as they are matters of fact, are private to me . . .'¹⁹

Thus one can justifiably say that commodity exchange impels

solipsism. The doctrine that between all people, for every one of them, *solus ipse* (I alone) exist is only a philosophical formulation of the principles that in practice regulate exchange. What the commodity owners *do* in an exchange relation is practical solipsism – irrespective of what they think and say about it. This practical solipsism does not need to coincide with self-interest. Someone who takes part in an act of exchange on behalf of another must obey exactly the same principles. If he does not, then the resulting relation is no longer exchange, but one that is qualitatively different, for instance charity. The principles which concern us here belong to the form of interrelation of commodity exchange, not to the psychology of the individuals involved. It is rather this form that moulds the psychological mechanisms of the people whose lives it rules – mechanisms which they then conceive of as inborn, human nature. This makes itself apparent in the way that those in subservience often act to the advantage of those above them. They consider themselves to have acted in self-interest although in fact they have merely obeyed the laws of the exchange nexus.* The practical solipsism of commodity exchanging owners is nothing but the practice of private property as a basis of social relations. And this is not by people's choice but by the material necessity of the stage of development of their productive forces – the umbilical cord that ties human to natural history.

The principle we call 'practical solipsism' is described above as a reciprocal exclusion of ownership. As the two parties mutually recognise each other as private property owners, each exclusion of property in one direction is answered by an equal one in the other. For what in fact makes them agree to the exchange is that the mutual change of possession which they negotiate leaves their opposing areas of property unimpaired. Commodity exchange can thus be formulated as a social interrelationship between sharply delimited, separate areas of property, or, as Marx puts it, a relation between strangers ('ein Verhältnis wechselseitiger Fremdheit'); it opposes people to each other as strangers. All that matters is that, finally, two lots of commodities actually change

* Here is not the place to examine the superstructure of advanced capitalism, but a materialist social psychology of the future would certainly be strengthened by integrating the causal relationship between the abstractions of exchange and thought into the theories of Reich, Fromm, Marcuse, etc.

hands. In exchange the action is social, the mind is private. The outcome is a change in the social status of the commodities as owned property.

In what capacity, then, we ask, do the commodities change hands? In what form, precisely, are commodities exchangeable between separate owners?

(c) THE FORM OF EXCHANGEABILITY OF COMMODITIES

Commodities are exchangeable between their private owners exactly in the capacity in which they are the objects of a mutual exclusion of ownership on the part of their owners. This capacity should plainly be the one that makes it impossible for a commodity to be owned simultaneously by two people in separate ownership. The answer seems too trite to put down on paper: it is that every commodity is one as against the rivalling claims of two owners.

However, we have to be careful how we define this oneness. Is it really the commodity that is one? It cannot be the indivisibility of the commodity as a material body. Goods traded as materials, for instance, are divisible down to any fraction of a quantity. The reason why a given object cannot be separately owned by different people has nothing to do with the nature of the object; it is neither its physical oneness or indivisibility, nor its uniqueness in kind, its irreplaceability. If we probe into the matter with sufficient care it is not difficult to see that it is not the oneness of the *commodities* at all that is important, but the singleness of their *existence* – the fact that the commodity is not, like its use-value, the exclusive private datum of a solipsistic self, but belongs to a single world which is common to all the private selves. Although the perception of a thing is as multiple as the people perceiving it, its existence is one. If the existence of one object were divisible the object could indeed be owned simultaneously by separate owners. Each owner could not only experience the world as his 'private datum' but own it as his exclusive property. Everybody could own the world as Robinson Crusoe does his island. We therefore state: that which constitutes the form of exchangeability of commodities is *the singleness of their existence*.

The question remains: how does this form of exchangeability contribute in effecting the social synthesis through exchange?

The answer is simply that it gives the social synthesis its unity. When trading in commodities has reached the stage where it constitutes the all-decisive *nexus rerum* then the 'duplication of the commodity into commodity and money' (Marx) must already have occurred. But the reverse is possible too — that this duplication very soon leads to commodity exchange becoming a decisive medium of social synthesis (a stage first reached in Ionia in the seventh century B.C.) Money, then, acts as the concrete, material bearer of the form of exchangeability of commodities. That this form can be expressed as the oneness of the commodities' existence explains why there attaches to money an essential, functional unity: there can, at bottom, be only one money in the world.^{20*} There can, of course, be different currencies, but so long as these do effective monetary service within their own orbit, they must be interchangeable at definite rates and thus communicate to become one, and only one, universal money system.[†] Thus all communicating societies of exchange effect a functional unity. This applies even to geographically isolated places where exchange systems, when contact with each other is being made, will sooner or later coalesce to form one extended economic nexus. Needless to say, without this essential oneness of the exchange nexus, the very viability of exchange itself breaks down.

The form of exchangeability applies to commodities regardless of their material description. The abstraction comes about by force of the action of exchange, or, in other words, out of the exchanging agents practising their solipsism against each other.

* If two different commodities, such as gold and silver, serve simultaneously as measures of value, all commodities will have two separate price-expressions, the price in gold and the price in silver, which will quietly co-exist as long as the ratio of the value of silver to that of gold remains unchanged, say at 15 to 1. However, every alteration in this ratio disturbs the ratio between the gold-prices and the silver-prices of the commodities, and this proves in fact that a duplication of value contradicts the function of that measure.

† There can be exceptional circumstances making for more than one rate. This was so in the 1930s as a result of foreign-exchange controls and before that in 1923 in the German runaway inflation, when the Mark ceased to do effective monetary service before the introduction of the 'Reutemark'. The devaluation of currency went on at such a pace that large firms even paid wage-bills in company currency of their own issue; for instance, 'in Osram money' if I remember right — in terms of Osram bulbs. Neither these private currencies nor the remaining official one had effective general exchangeability within their own home market and no international rate either. Germany then offered the very rare picture of a modern exchange society without a socially synthetic currency.

The abstraction belongs to the interrelationship of the exchanging agents and not to the agents themselves. For it is not the individuals who cause the social synthesis but their actions. And their actions do it in such a way that, at the moment it happens, the actors know nothing of it.

These are some of the extraordinary paradoxes of a relationship in which men act of their own will, among themselves, with no external interference from nature nor from outside sources. Nothing seems to be beyond their ken; their actions are by mutual agreement for their own benefit, and yet they are enmeshed in the most unsuspected contradictions. We face a pure abstraction but it is a spatio-temporal reality which assumes separate representation in money, a relationship which is formalised only on standards of purely human understanding. Money is an abstract thing, a paradox in itself — a thing that performs its socially synthetic function without any human understanding. And yet no animal can ever grasp the meaning of money; it is accessible only to man. Take your dog with you to the butcher and watch how much he understands of the goings on when you purchase your meat. It is a great deal and even includes a keen sense of property which will make him snap at a stranger's hand daring to come near the meat his master has obtained and which he will be allowed to carry home in his mouth. But when you have to tell him 'Wait, doggy, I haven't paid yet!' his understanding is at an end. The pieces of metal or paper which he watches you hand over, and which carry your scent, he knows, of course; he has seen them before. But their function as money lies outside the animal range. It is not related to our natural or physical being, but comprehensible only in our interrelations as human beings. It has reality in time and space, has the quality of a real occurrence taking place between me and the butcher and requiring a means of payment of material reality. The meaning of this action registers exclusively in our human minds and yet has definite reality outside it — a social reality, though, sharply contrasting with the natural realities accessible to my dog. Here we have the spheres of the 'first' and 'second nature' which we distinguished earlier side by side, and unmistakably divided.

(d) ABSTRACT QUANTITY AND THE POSTULATE OF THE EXCHANGE EQUATION

Penetrating further into the exchange abstraction we notice that there are indeed two abstractions interlocked with each other. The first springs from the separation of exchange from use and has already been discussed. The second operates within the very relationship itself, and results from the interplay of the exchanging parties as solipsistic owners. It attaches directly to the act of exchange itself.

Exchange contains a postulate of the equality of the two lots of commodities to be exchanged. How do we define this equality? The equality is not the identity of the commodities since only *different* commodities are exchanged for one another. Nor are they equal in the evaluation of the exchanging agents, as it would reduce their action to an absurdity if they did not see an advantage to themselves in performing it. Moreover, evaluations are comparable only within one person's consciousness; between persons they are incomparable. But the essence of the postulate of equality in exchange is precisely that it cuts across the gap of experience that separates the exchanging owners. The postulate of equality in exchange does not spring from their experiences at all. They merely agree that two lots of commodities are exchangeable. Acting upon this agreement they transfer these commodities from one to the other. One lot moves from *A* to *B*, the other from *B* to *A*, both property transfers being interlinked by each being the condition for the other to take place. The fact that the transfers occur upon this basis equates the two lots of different commodities. They are equated by virtue of being exchanged, they are not exchanged by virtue of any equality which they possess. In this way the relationship between the exchanging persons is transferred to the commodities and expressed as equality between these objects.

It might be said, of course, that given commodities at certain ratios could not be exchanged, unless they were the products of equal amounts of labour. This is a rule dictated by the necessities of the economy within the context of an entire society and its external trade relations. Viewed from this economic aspect it is true to say that commodities exchange in accordance with the

amount of labour stored up in them. Our analysis, however, is not concerned with the economics of exchange, but solely with exchange as a peculiar form of social interrelationship between individuals. Their quantitative exchange relation is at first determined purely by chance.³¹ There is nothing in the formal constitution of exchange that could predetermine its quantitative relationship. A man dying of thirst in the desert would 'exchange' his worldly possessions for a drink of water.

Let us be quite explicit then, that the transference of human relations to relations between things, in other words, the 'reifying' (*verdinglichende*) property of exchange is bound up with the equating effect which the act of exchange exercises upon the objects. The underlying reason for this alienating effect of exchange is that, on the basis of commodity production, it is property, not the labour of production, which governs the social order by operating the social synthesis.

The act of exchange postulating the equality of the commodities could be preceded by a barter in which each of the commodity owners haggles for 'more to take' and 'less to give'. True, commodities are traded in lots measured in dimensional quantities of tons or gallons or acres, etc. But the comparatives of 'more' and 'less' used in a deal of exchange do not imply a quantitative comparison between, say, tons of coal and reams of paper, or of acres of land and yards of linen. The interrelational equation posited by an act of exchange leaves all dimensional measurements behind and establishes a sphere of non-dimensional quantity. This is the pure or abstract quality of cardinal numbers, with nothing to define it but the relation of greater than ($>$) or smaller than ($<$) or equal to ($=$) some other quantity as such. In other words, the postulate of the exchange equation abstracts quantity in a manner which constitutes the foundation of free mathematical reasoning.

According to this argument mathematical reasoning should be found to emerge at the historical stage at which commodity exchange becomes the agent of social synthesis, a point in time marked by the introduction and circulation of coined money. And it is interesting to note that Pythagoras, who first used mathematical thought in its deductive character, followed after the first spread of coinage in the seventh and sixth centuries B.C. and is now believed to have himself been instrumental in

thing that makes up history, human and even natural history. The entire empirical reality of facts, events and description by which one moment and locality of time and space is distinguishable from another is wiped out. Time and space assume thereby that character of absolute historical timelessness and universality which must mark the exchange abstraction as a whole and each of its features.

(f) THE CONCEPT OF VALUE

The contradiction between the postulated equality and the empirical difference of the commodities is such that it could not be handled without the invention of the term 'value' so that the equality can be denoted as 'equivalence' related to exchange. But value does not create the equality, it only applies to it *post festum*. The term by itself, as value in exchange, has no thought content of its own, no definable logical substance. It simply articulates contradictory social relations uniformly by quantitative differentiation of things according to the facts of exchange.

Marx repeatedly emphasises that the concept of value bears no inherent reference to labour. The reference of value to labour, or rather the determination of value by labour, is not a conscious one, but takes place blindly, by the functional effect of the social exchange process as a whole:

by equating their different products to each other as values, they equate their different kinds of labour as human labour.

They do this without being aware of it. Value, therefore, does not have its description branded on its forehead; it rather transforms every product of labour into a social hieroglyphic.²²

And in a footnote he adds:

When, therefore, Galiani says: 'Value is a relation between persons, . . . he ought to have added: a relation concealed beneath a material shell.' The determination of the magnitude of value by labour-time is . . . a secret hidden under the apparent movements of the relative values of the commodities. Its discovery destroys the semblance of the merely accidental

instituting a system of coinage in Kroton, where he emigrated from Samos around 540 B.C.

But the discussion of how the form-elements of the exchange abstraction are reflected in consciousness must be postponed as we are still engaged with the analysis of the real abstraction itself.

(e) ABSTRACT TIME AND SPACE

The abstraction of pure quantity gains in importance by its association with a corresponding abstraction occurring to time and space when they apply to acts of exchange instead of to acts of use. In use, understood as the entire sphere of man's interchange with nature, time and space are inseparably linked with the events of nature and the material activities of man, with the ripening of the crops, the sequence of the seasons, the hunting of animals, with man's birth and death and all that happens in his life-span. The business of exchange enforces abstraction from all this, for the objects of exchange are assumed to remain immutable for the duration of the transaction. This transaction takes its time, including that of the delivery of the commodities and the act of payment upon the conclusion of the deal. But this time is emptied of the material realities that form its contents in the sphere of use. The same applies to space, say to the distance which the commodities have to travel when changing owners. Exchange empties time and space of their material contents and gives them contents of purely human significance connected with the social status of people and things. These are contents of man's own making over which he ought to exercise unimpeded control.

While commodities travel a distance for delivery to their new owners, the equation between the two lots prevails at every one spot and every one moment the same as at every other one. Time and space when applying to exchange are thus supposed to be absolutely homogeneous. They are also continuous in the sense that they allow for registering any interruption occurring in the progress of the commodities in order not to upset their exchange equation.

Time and space rendered abstract under the impact of commodity exchange are marked by homogeneity, continuity and emptiness of all natural and material content, visible or invisible (e.g. air). The exchange abstraction excludes every-

determination of the magnitude of the value of the products of labour, but by no means abolishes that determination's material form.²³

In a famous letter addressed to Kugelmann on 11 July 1868 the rationale of this social mechanism is expressed in very simple terms. Any human society, regardless of its formation and material stage of development, is viable only if it succeeds in directing the available social labour force in the right proportion to serve the existing social needs. In a society based on what Marx calls a communal mode of production where work is carried out in a directly social way, i.e. collectively, or if done separately, in a manner permitting every worker to know what every other one is doing, this socially indispensable direction of social labour is done by the labourers themselves, or on their behalf by agreement and by planning. But commodity production arises when, because of the development of the productive forces, these communal ties break up and the producers work as private producers acting independently of each other. Then the social network depends on the activities, not of the producers, but of the owners, activated by the interest in their property. This activity takes on, in one way or another, the form of exchange. 'And in a society where the network of social labour establishes itself through the private exchange of the individual products of labour, the form in which this proportional distribution of labour ensues is precisely the exchange value of the products.'²⁴

Hence any society based on private production must be governed by the laws of exchange in order to survive. This holds true regardless of the stage of commodity production.

These indispensable laws of exchange, which hold out a promise of parity under the postulate of equivalence, do not lose their grip on society when they turn into their opposite, namely into laws of the imparity of surplus-value for capital out of labour. The laws of exchange apply to the labourer forced to sell his labour-power as commodity to a capitalist wanting to use that commodity to his own advantage under the same formal principle as they do to the selling and buying of any other commodity. However, measured by the economic realities of the case, the principle of equivalence proves to be nothing more than form — a form in contradiction to its content and therefore

amounting to a sham and yet remaining no less indispensable for that reason.

The relation of exchange subsisting between capitalist and labourer becomes a mere semblance belonging only to the process of circulation, it becomes a mere form which is alien to the content of the transaction and merely mystifies it [... and yet] however much the capitalist mode of appropriation may seem to fly in the face of the original laws of commodity production, it nevertheless arises, not from violation, but, on the contrary, from the application of these laws.²⁵

In fact so little does the capitalist exploitation of labour constitute a breach of the formal principles of exchange that it is only 'from the moment there is a free sale, by the worker himself, of labour power as a commodity . . . that commodity production is generalised and becomes the typical form of production; it is only from then onwards that, from the first, every product is produced for sale and all wealth produced goes through the sphere of circulation. Only where wage-labour is its basis does commodity production impose itself upon society as a whole; but it is also true that only there does it unfold all its hidden potentialities.'²⁶ Marx does not specify what 'potentialities' he had in mind when he wrote this. But the developments of science and technology might well have been part of them.

One must realise the importance of the distinction which Marx draws in his analysis of the commodity between the 'form of value' (or 'form of commodity') and the 'magnitude of value'. The changing form of labour, as slave-labour, serf-labour, wage-labour, and the corresponding differences in the determination of the magnitude of value are decisive for the system of economy prevailing in the different stages of development of commodity production. The unvarying formal features of exchange, on the contrary, constitute a mechanism of real abstraction indispensable for the social synthesis throughout and supplying a matrix for the abstract conceptual reasoning characteristic of all societies based on commodity production. While in history the economy on the one hand, and the forms and tasks of reasoning on the other, interact in intricate ways, it is profitable for historical materialism to analyse both aspects of commodity exchange in

detail. Marx's analysis shows that it is impossible to understand the economics of commodity production without a great deal of attention to its formal characteristics and contradictions, and Marx never tires of stressing their importance and of blaming the bourgeois mentality for its imperviousness to them.

The formal features of commodity exchange and of value play a part which not only permit but demand separate analysis. And the need for such an analysis lies in the exposure of the fetish character of intellectual labour in its division from manual labour.

(g) SUBSTANCE AND ACCIDENTS

It has been shown that the forms of the exchange abstraction are parts of the act of exchange; they constitute the laws by which exchange operates. The commodities must not be exposed to physical change. Their condition is thus materially constant, and although this is merely a postulate, it is a socially necessary one. That means that on the standard of the act of exchange, the commodities are positively qualityless. On the other hand, as they are only exchanged for the purpose of use they present themselves to the exchanging agents in the garb of their use-values. Thus they exist in a twofold capacity on the market; in that of the qualityless condition and in the qualitative splendour of their use-value. The property of qualitylessness is what gives them their reality in exchange, while their use-properties are only stored in the minds of people.

In the course of the evolution of exchange the necessities of trade enforce 'the differentiation of commodities into commodities and money'. As a result the intrinsic duality of the commodity as such takes on the shape of an external contrast. The qualityless abstractness of the object of exchange is semi-concealed in the uniformity of money. As non-descriptive matter does not exist in nature, gold, silver, copper, etc., or simply paper must stand in for it. These empirical materials serve their abstract function, however, in a purely metaphorical capacity and cannot, therefore, impair the duality at its root.

Later on we shall recognise in this duality the well-known relationship of substance and accidents. These are conceptual terms, whereas our analysis here is still concerned with the

exchange abstraction in its real state only.

(h) ATOMICITY

In order that this non-descriptive substance can stand as equivalent for every exchangeable commodity and in any proportion of it the material of money must, in apparent contradiction to its qualityless integrity, be adaptable according to every possible quantity of value. It must therefore be divisible *ad lib.* Money must be divisible in order to leave the commodities undivided. This is one of the contradictions with which the social function of money confronts the mind through the mediation of its form. The abstract materiality of value or of the subject of the exchange-equation figures as an integral whole in every single incident of exchange, and in order to be able to serve all incidents in this capacity it must, on the contrary, allow for any degree of divisibility, or as the corresponding philosophical term has it, for sheer atomicity.

'As a value, every commodity is equally divisible; in its natural existence this is not the case.'²⁷ What brings the unlimited divisibility of matter into play is 'value' and the exchange abstraction underlying it; it is not the natural existence of things material.

(i) ABSTRACT MOVEMENT

How do we have to describe the actual transfer of the commodities which their owners have agreed to exchange? We know that it is a physical act which must leave the physical state of the commodities unchanged. True, this is no more than a postulate, but without it exchange would be rendered impossible. It must therefore serve as the standard for the description of the act by which the exchange agreement concluded between the owners of the commodities is carried out. Accordingly the act of exchange has to be described as *abstract movement through abstract (homogeneous, continuous, and empty) space and time of abstract substances (materially real but bare of sense-qualities) which thereby suffer no material change and which allow for none but quantitative differentiation (differentiation in abstract, non-dimensional quantity)*. Being the aim of the whole relationship and of the separation of exchange from

usc, this description of the movement of the commodities in their circulation comprises the exchange abstraction in all its elements. It also shares the same conversion of the actual historical happening into historical timelessness and universality which attaches to the abstractness of time and space as dimensions of commodity exchange.

The movement of the commodities can vary, it can suffer interruptions or take devious ways, while time and space maintain their abstract uniformity. But whatever the vicissitudes of their movement through the processes of circulation may be, the commodities are supposed to retain throughout the value at which they were bought. While this constancy of their exchange-value conveys an overall continuity to the act of transfer, the movement can at any place and time be stopped and the state and value of the commodities be reascertained, and this provision cuts their movement into discrete moments. Both continuity and discreteness attach to the abstract movement of the commodities side by side. This contradictory nature accrues to the movement of the commodities from the social origin of its abstractness. In antiquity it has given rise to the paradoxes of Zeno, whereas in modern times it has been absorbed in the analysis of movement by means of the calculus.

(J) STRICT CAUSALITY

The exchange abstraction is not the source of the concept of causality — that goes back much further. It does, however, seem to be the root of the cause and effect equation which characterises strict causality. As we see it, strict causality is the form in which physical change affects objects which are up for exchange on the market under the postulate exempting them from material change. Changes caused by human beings which infringe this postulate are outlawed by the police authority presiding in the market. The concept of exemption from material change is in effect nothing more than a fiction whereby the reality of material change is not excluded but is subjected to a specific conceptual form. This is the form of the exact, mathematically formulatable equation between cause and effect by which the process of causality, if it can be isolated as a specific single event, submits, before and after its completion, to the postulate negating

material change. The negation of change would accordingly be the logical postulate from which the strict equation between cause and effect derives its necessity as thought.

Here there becomes visible the root of a new concept of nature and of natural change sharply distinct from any magical and mythological modes of thinking. It is the concept of processes which occur not only purely naturally, without any human interference, but which gain ground in the market despite all measures to the contrary and despite the social postulate exempting commodities from all material change. In such processes nature operates as a force transcending all collusion with man, a force totally separated from the human sphere; nature is, in other words, nothing more than pure object world. The concept of pure causality is thus related to this as a process of cause and effect occurring solely within the object world.

This conception of nature is unmistakably at odds with the nature experienced by man in the labour process of which Marx says that man, when he acts upon nature, is a force of nature himself. As an agent of the market, man is hardly less divided from nature than the value of the commodities themselves.

The concept of causality and its strict form expression contain, of course, just like any other 'category of pure reason', not the slightest trace of any such social origin; indeed any thought of such an origin appears as a complete impossibility. But this is in no way an objection to the present analysis. It will be shown that this genetic blindness of the categories of understanding finds its fitting explanation in the reflection of the exchange abstraction, for the content of this abstraction has in all its features a strictly timeless form which is irreconcilable with any thought of a specific origin. From being historical and geographical in character these features become subject solely to mathematical determination.

Causality, or, more exactly, its form determination as strict causality, constitutes an exception among the categories examined here. It is not part of the exchange abstraction, but a consequence, a corollary of it. The action of exchange permits of no material change to the objects whether the cause of this change be considered adequate or not. Thus strict causality, so far as I can see, performs no socially synthetic function. It has been included in the analysis only so as to forestall criticism of its

omission among the 'categories of pure reason'. And indeed the principle of causality is never directly employed in mathematical science; it occurs only as a means of experimentally verifying hypotheses of motion. It is the pure scheme of motion that is the actually operative form abstraction generated by the abstraction of exchange.

(k) CONCLUDING REMARKS TO THE ANALYSIS

The pattern of movement inherent in the exchange abstraction introduces then a definitive concept of nature as material object world, a world from which man, as the subject of social activities, has withdrawn himself. We said that, in terms of the exchange abstraction, time becomes unhistorical time and space un-geographical space; indeed they become abstract time and abstract space, endless time and limitless space. In terms of this form determination time and space provide the setting for a conception of nature which is in antithetic contrast to society. This idea of nature is novel to eras of commodity production and incompatible with any of the anthropomorphisms of tribal societies based on communal modes of production.

We noticed that the exchange pattern of abstract movement has a peculiar contradiction at its root. In exchange, abstraction must be made from the physical nature of the commodities and from any changes that could occur to it. No events causing material changes to the commodities are admissible while the exchange transaction is in progress. On the other hand, the act of property transfer involved in the transaction is a physical act itself, consisting of real movements of material substances through time and space. Hence the exchange process presents a physicality of its own, so to speak, endowed with a status of reality which is on a par with the material physicality of the commodities which it excludes. Thus the negation of the natural and material physicality constitutes the positive reality of the abstract social physicality of the exchange processes from which the network of society is woven.

What I distinguish here as two contrasting 'physicalities' — the one, concrete and material, comprising commodities as objects of use and our own activities as material, inter-exchange with nature; the other, abstract and purely social, concerning

commodities as objects of exchange and quantities of value — these two can, as we have said in German, be termed 'erste Natur' (primary or elementary nature) and 'zweite Natur' (second and purely social man-made or synthetic nature). Both are real in time and space; primary nature is created by human labour, second nature is ruled by relations of property.

We must now establish the great importance of the following, initially elusive fact: by its own physicality in terms of spatio-temporal action the abstraction from natural physicality, which exchange enforces by its separation from use, establishes itself as a physicality in the abstract or as a kind of *abstract nature*. It is devoid of all sense reality and admits only of quantitative differentiation. Furthermore it is understandable solely to people acquainted with money and engaged in the use and acquisition of it — that is, only to members of that thoroughly synthetic society which Friedrich Engels classes as 'civilisation' and which first begins with classical Greek antiquity.²⁸ This abstract and purely social physicality of exchange has no existence other than in the human mind, but it does not spring from the mind. It springs from the activity of exchange and from the necessity for it which arises owing to the disruption of communal production into private production carried on by separate individuals independently of each other.

This real abstraction is the arsenal from which intellectual labour throughout the eras of commodity exchange draws its conceptual resources. It was the historical matrix of Greek philosophy and it is still the matrix of the conceptual paradigms* of science as we know it. Basic changes occurring in these paradigms indicate major changes of this matrix, and vice versa, because the socially necessary forms of cognition in any epoch have no source from which they can originate other than the prevailing functionalism of the social synthesis. Up to the nineteenth century this functionalism has undergone important modifications, but only in the twentieth century and from the beginning of monopoly capitalism has it suffered structural changes.

* I use this term in the sense of Thomas S. Kuhn's *The Structure of Scientific Revolution* (Chicago: Univ. of Chicago Press, 1962). Kuhn has successfully distinguished different paradigms. I believe that it is also possible to explain them.