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MARXISM
AND MODERN THOUGHT

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CONTENTS

	PAGE
PREFACE	vii
MARX'S TEACHING AND ITS HISTORICAL IMPORTANCE: N. I.	
BUKHARIN	I
I. The Philosophical Synthesis of Marx	11
II. The Theory of Historical Materialism	29
III. The Theory of Capitalism	46
IV. The Theory of Proletarian Dictatorship and Scientific Communism	65
KARL MARX AND THE PRESENT: A. M. DEBORIN	91
I. On the Forecasts of Marx and Engels	91
II. The Contemporary Crisis of Capitalism and the Ideology of Fascism	98
III. Fascism and Social-Fascism	123
MARXISM AND NATURAL SCIENCE: Y. M. URANOVSKY	136
THE OLD AND THE NEW PHYSICS: S. I. VAVILOV	175
I. On Certain Tasks of the History of Science	175
II. Classical Physics and the New Physics	180
III. Experiment and the Theoretical Methods of the New Physics	184
MARX AND ENGELS ON BIOLOGY: V. L. KOMAROV	190
I. Remarks on Darwin in the Marx-Engels Correspondence	192
II. Engels on Darwin in <i>The Dialectic of Nature</i>	198
III. Engels on Darwin in <i>Anti-Dühring</i>	216
IV. Does the Darwinian Theory have any Meaning from the Point of View of the Social Sciences?	223
V: The Influence of the Ideas of Marx and Engels on the Further Development of Evolutionary Doctrine	227
MARXISM AND BOURGEOIS HISTORICAL SCIENCE: A. I. TIUMENIEV	235
I. Marxism-Leninism and Bourgeois Historical Science.	235

CONTENTS

	PAGE
II. The Natural-Scientific Tendency and Methods of Science in the Seventeenth and Eighteenth Centuries	239
III. Bourgeois Historical Science and the Great French Revolution	244
IV. The Turn of Bourgeois Historical Science towards Reaction. Positivism	250
V. The Historical School in Germany : Ranke, Schmoller, Rickertianism	264
VI. The Crisis of Bourgeois Ideology and Science in the Epoch of Imperialism	273
VII. The Dominance of Scholasticism in the Fascist Countries. Historical Science in Modern Germany and Italy	281
VIII. The Crisis in the Positivist Tendency	289
IX. The Crisis of the Economic Historical Tendency	304
X. Conclusions	318
NOTES	321
INDEX	337

PREFACE

THIS book is the first attempt to give a complete survey of modern thought in the light of Marxism. It is, indeed, of more than ordinary interest because of the great scope attempted by the authors, one of the advantages of collective work which academic institutions in more individualistic countries may envy.

The long essay by Bukharin is the first complete post-war restatement of Marxism which we have had, and is both learned and deeply thought out. The question of planning, for example, which now excites so many minds, is here placed in a light that cannot fail to be revealing to the reader, whatever his personal opinions. The theory of the state, to the discussion of which Professor Laski has given such stimulus by his recent book, is also profoundly worked out in all its implications and much confusion cleared away in the process.

In these discussions on philosophy, science and history the authors all reach a similar conclusion—that the general tendency of modern thought is to abandon the historical method and to deny progress. Whether or not the tendency is universal, as the authors with a wealth of authorities argue, its existence and popularity can hardly be denied. As to the obvious conclusion, that Marxism is the only historical and progressive outlook in science, philosophy and history to-day, it must be left to the critics to judge the justice of the claim. At least it is here made with a seriousness of argument and sweep of learning which are not easy to resist.

The book is, as its title implies, chiefly a criticism of modern thought, but that it is very far from being a merely negative one, a glance at the brilliant essay of Professor Vavilov will at once reveal. Rarely have so many fruitful and interesting ideas on the history of science been packed into such small compass.

PREFACE

English readers will regret that English philosophy and history are but little dealt with here. In justification of the authors it must, however, be admitted that in recent years we have not produced historians, economists or philosophers whose names have such a world reputation as those of Max Weber, Werner Sombart, Edward Meyer, Oswald Spengler, Gentile, Croce, or William James.

This book, entitled in English *Marxism and Modern Thought*, was recommended for translation in whole or part by Mr. N. I. Bukharin, during a discussion with Mr. J. G. Crowther.

There is a scarcity of books available in English on the philosophical ideas of the thinkers responsible for the direction of the tremendous developments in the U.S.S.R. Mr. Crowther asked whether there were recent works which, if translated, would help to provide readers of English with a better understanding of the intellectual basis of the reconstruction of society progressing in the U.S.S.R. Mr. Bukharin suggested that the Soviet Academy of Science's Memorial Volume on the fiftieth anniversary of the death of Karl Marx contained information which readers of English might find instructive.

A selection of the material of that volume has, accordingly, been translated and published in English. In order to permit of a really wide selection, certain unimportant cuts have been made in the essays chosen. In the essay by Bukharin a number of footnotes are omitted, but the text is kept intact. In the essays by Deborin, Uranovsky and Tiumeniev certain portions of interest chiefly to the Russian reader, and a number of footnotes, have been omitted. The other essays are printed in full.

MARXISM AND MODERN THOUGHT

N. I. BUKHARIN

MARX'S TEACHING AND ITS HISTORICAL IMPORTANCE

INTRODUCTION

IN the harsh and terrible epoch of the catastrophic collapse of capitalism, of wars, of revolutions, of proletarian Sturm und Drang, revolutionary Marxism as it appears in its developed and enriched form as Marxism-Leninism, stands out as a system of ideas which emerges from the chaos at once powerful, energetic, destructive and creative. Even the sworn enemies of the proletariat cannot deny this, even those who see in the heroic struggle and cyclopean creative efforts of the new class as it marches to world dominion nothing but the gloomy approach of the commencement of the reign of Lucifer and who look upon the bloody suppression of the contemporary emancipation movement of the proletariat as the elementary premise for the illusory renewal of a rotten bourgeois civilisation. Marxism is, in fact, *the great doctrine of our time*. The teaching of "the red doctor", as the London philistines called the genius of the proletarian revolution, has mastered millions. It has mastered the mass and the mass has mastered it. But the revolutionary proletariat is very far from the "vita contemplativa". It is the banner-bearer of the "vitæ activæ", of stormy and practical life. It expresses the full tension and the full liberating "torment" of social matter; it expresses in its victory the decisively

N. I. BUKHARIN

tragic character of a vast historical struggle. It is for just this reason that Marxism has grown up as its class system of ideas. Marxism is the world outlook of the proletariat which has grown out of the practice of its struggle and, after smelting all the valuable conquests of the age in the retort of revolutionary criticism till they form a precious alloy, it emerges as the perfect practical weapon for the revolutionary re-shaping of the world. Marxism is "not a dogma, but a guide to action".

Here before us is an unprecedented vista of masses in praxi. The whole of the really revolutionary movement of the century is moving under this banner, in every continent, in every state, throughout every race and nation.

Marxism is the profoundest revolutionary teaching in the whole history of humanity. Like the proletarian revolution itself, it presents two aspects of a single whole: the destructive side, the sharp edge of which is aimed against the whole world order of capitalism, from its economic foundations to its poisonous philosophical and religious reflexes¹; and its creative side, the forces of which are directed to the construction of new socialist forms of social life and to a new, socialist civilisation. In the U.S.S.R., Marxism has become an ideology recognised by the state and the whole of its concentrated power is a splendid weapon for the vast construction of a new society. The "aggregate", "collective" worker in the U.S.S.R., that is the unification of the various labour powers of this construction, is the collective "philosopher" who not only "explains" the world, but also "changes" it in the most decisive fashion.

With its enormous mass influence and its powerful, revolutionary and transformatory character, Marxism is in itself an original and exceptional phenomenon. Yet its opponents and class enemies often treat it simply as a new mass religion. It is, of course, true that humanity has, at different stages in its development, in the person of absolutely different classes, advanced ideal tendencies which have lifted themselves like great mountain ridges above the surface of social life and become dominant in the world of ideas over long periods of history. To these belong in the first place those religious-philosophical conceptions which

MARX'S TEACHING

have mastered the minds of millions, the so-called "world religions": the religions of Egypt and Babylon, Parseeism, the religion of Jehovah, Christianity, Buddhism, Confucianism, the teaching of Mahomet: to these belong the modern European ideologies, in the first place the ideology of so-called "enlightenment". The last great philosophical doctrine of the European bourgeoisie, Hegel's all-embracing system, can in no way compare with them in the breadth and depth of its actual influence. Indeed, it never even pretended to look upon itself as being, for example, a rival to historically developed Christianity. On the contrary, it declared itself to be its philosophical support. Marxism transcends all these limits, both from its social genesis, its logical composition and its social significance. At the same time it makes pretensions to exclusiveness. It is a militant doctrine, it is "intolerant" (although it assimilates critically all the really valuable heritage of bourgeois culture): it looks upon itself as the only consistent continuer of all the progressive tendencies of the age which are being strangled by capitalism. Its sociological self-cognition is expressed in the formula: the way out from capitalism is the way out from the former modes of thinking, the change of the "mode of presentation". Marxism recognises its world-historical right to the ideological hegemony of the centuries. And in spite of this, or rather, partly because of this, it becomes a world-historical mass force.

One of the most widespread forms of ideological class struggle against Marxism is its treatment as an eschatological doctrine, with all its accompaniments of chiliasm, of soteriology, of myth. From this point of view the theory of the crisis of the capitalist system, of a revolutionary uprising, etc., is represented as the apocalyptic "last things" (*τὰ ἔσχατα*): communism, as the "millenary kingdom of the chiliasts"; the proletariat, as the Messiah, the saviour, *Σωτήρ*: the forecasts of Marx, as "prophecy" or "promises"; the analysis of capitalist contradictions, as the denunciation of the sins of the world; the transition to socialism, as its "transformation", etc.³ All these analogies are playing with words. It is true that different types of eschatological ideologies (national-revolutionary, revolutionary and even

N. I. BUKHARIN

counter-revolutionary)³ were connected with more or less important national and social movements. The "heretical" movements in Asia, the Judæan "prophets", primitive Christianity, the immense Islamic movement, the mediæval Anabaptists, the English "true Levellers" and a whole number of other movements "for the faith" in fact reflected deep changes in the social order. But this is just what Marx's opponents did not understand. Whereas in fact what was formerly treated from the standpoint of sovereign religious thought is completely subject to a scientific treatment which can be only historical materialist.⁴ Consequently the above historical "analogy" must be turned against the theological historical conceptions which, in the religious forms of struggle that are historically inevitable at definite stages of social development, overlook the material content of that struggle, the movement of "social matter" which has its class agents with historically adequate ideological "forms of knowledge".

However, the general proposition which states that any ideology, any world outlook, any religion and any doctrine has its earthly roots, is far from being an argument for a summary, lifelessly empty and abstract, extra-historical examination of these systems of ideas. On the contrary, their socially determined character is connected with problems of a morphological kind, problems of the concrete phase of historical development, of a concrete "mode of production", of a concrete "mode of presentation", of concrete national and social class groupings, of concrete problems in a concrete historical struggle. This is from the sociological aspect. The logical composition corresponding to its sociological equivalent permits of concrete analysis in just the same way. Scientific judgment is only possible after such an analysis.

1. Sociologically, Marxism is the ideology of the revolutionary proletariat, of the chief exploited class of capitalist society, with its powerful technique, its specific historical and economic formation, its immense culture in general and its scientific culture in particular, with its specific "laws of move-

MARX'S TEACHING

ment", with its specific contradictions and with its specific prospects of transition into another social and historical phase of development.) However we may praise the cyclopean structures of Egypt or Assyria, the Roman roads and aqueducts, Indian architecture, the textiles of China, not one of these "techniques" of the historical formations of the past can be in the slightest degree compared with the technique of machine capitalism, with its steam engines, diesel-motors, high-tension electrical machines, with the system of perfected machine-tools, telephones, wireless, aviation, motor-transport, television or cinema. However carefully we may analyse the development of money economy and the germs of usurer's and trading capital in Babylon and China, in Greece and Rome, in Carthage and on the shores of Asia Minor, these elements can in no way be compared with the modern world market. (However we estimate the importance of slave "manufactories" like the Greek "ergasteria", or the insignificant scraps of wage labour in past historical epochs, nevertheless, and this is the main thing, only our own period has created a specific relationship between the owner of the means of production and the non-possessor, the relationship of wage labour on a mass scale as the basis of an absolutely specific form of exploitation. The proletarian is neither the ancient slave, nor the lumpen proletarian of Rome, nor the artisan of Greece, nor the serf, nor the colonist. The proletariat is a class deprived of the means of production, selling its labour power, a class concentrated in huge masses, schooled by the mechanism of capitalist production, capable of organisation, of independent action and of independent revolutionary thought. And in just the same way the capitalist bourgeoisie is neither the Egyptian theocrats nor the Greek traders of the days of Aristophanes. These are new social categories, new classes of a new mode of production. Finally, however we may estimate the learned men of ancient China, the brilliant guesses of the Greek natural philosophers, the Alexandrine inventors, the Egyptian geometricians, the algebra of India or the Arabs, the astronomy of Babylon, these are only embryos of what the powerful exact science of modern

N. I. BUKHARIN

capitalism can give us. Marxism is the product of an absolutely peculiar epoch and the system of ideas of an absolutely special class which former ages did not know.⁵ }

2. Logically, Marxism is a scientific system, a scientific outlook and scientific practice, and for this reason alone cannot be stupidly "compared" to the prophets of Judæa, to the mediæval Taborites, etc., with their corresponding eschatologies. It is utterly foolish to compare Marx's scientific forecasts to eschatological Utopias. All efforts at the logical destruction of Marxism, at refuting its forecasts, all attempts at so-called scientific proofs of its logical inconsistency have themselves collapsed spectacularly beneath the heavy blows of reality. It now only remains for the dreaming bourgeois to declare the very fact of a general crisis of capitalism, the very fact of proletarian revolutions, the very fact of the existence of the U.S.S.R. to be a myth. But this means standing the real world of real relationships on its head. (Werner Sombart wrote in 1909, "In 1883 Marx was considered by all theoreticians of bourgeois tendency as having been long ago 'refuted'." ⁶ In the same work he declared: "Marx has theoretically and practically been surpassed (überwunden), he has exhausted his historical mission." ⁷ But in 1923 his disciple Arthur Prinz reaches the following conclusion :

If ever any "one simple thought" has given another form (Gestalt) to the centuries, if ever any one man by what has come from him has given specific features (das Gepräge) to a whole epoch (Zeitalter), then it is Karl Marx and his theory of the collapse of capitalism. If a third of the globe from the Pacific Ocean to the Atlantic is now in dreadful convulsions, which Marx would welcome as the birth-pangs of a new society, then his works are one of the chief causes of this.⁸ }

Marxism from the point of view of its logical genesis was a creative synthesis of genius which arose on the basis of the most precious products of thought of the age. The great idealist philosophy of Germany, critically refashioned and stood on its feet, the surmounting of Feuerbachism and the creation of the theory of dialectical materialism, the revolutionising of English political economy from Sir William Petty to Ricardo and the

MARX'S TEACHING

construction of a remarkable economic theory, French socialism and the "conversion" of socialism from a Utopia into a Science, these are the main lines of the ideological genesis of Marxism which had its social roots in the growth and formation of the industrial proletariat as a class. (On the basis of an astonishingly complete acquaintance with all disciplines, on the basis of an obstinate study of modern natural science, from mathematics to geology, of an exceptional acquaintance with the literature and the history of all ages and peoples, of stubborn original work upon primary sources, of a first class knowledge of world literature and world art, Marxism grew as the all-embracing system of ideas of a titanic class, formed by the titanic genius of Marx. Therefore the eschatological fantasies of the movements of revolt of the past millenniums have the same relation to Marx's scientific forecasts as the magic formulas of a witch-doctor to wireless telegraphy, or as books on elementary alchemy to Mendeleev's table. Dialectical materialism, as the doctrine of the general connections and laws of being and becoming; the theory of historical materialism, as the doctrine of the laws of social development; the theory of capitalist economy, its development and collapse; the theory of proletarian revolution and the dictatorship of the proletariat; the scientific anticipation of genius of further development (dictatorship of the proletariat, socialism, communism)—this is an immensely great scientific outlook such as no preceding age has known. And it is just for this reason that Marx's revolutionary theory, by organising, welding together, and leading into battle millions of proletarians, has had such an exceptional influence on the whole course of historical development.

Not only is his influence great over the whole international Labour movement, but also over official bourgeois science. It is expressed in various ways. Marxism is now the object of violent criticism, for no one can ignore it; or it is the cause of antithetic systems, and its powerful resistance is shown in theories in which each one of its principal arguments is taken over with another logical mark; or else it serves as a source

N. I. BUKHARIN

from which separate parts are taken and all their revolutionary corners planed off ; or else it is " accepted " in order to be crushed by the embrace, and so on. Marx in his lifetime, passionately hating the bourgeoisie and their ideologies, and mortally hated by them in turn, was, as is well known, surrounded by a conspiracy of silence. His " recognition " began with recognition as an economist, then passed into the sphere of history and the methodology of history, and to-day is showing more and more influence on philosophy and natural science. Adolf Held,⁹ one of the few economists who knew the works of Marx, wrote in 1878 that we must distinguish two aspects in him : " on the one hand, the element of economic socialism, i.e. the theory of value and income, which, if we look at it in itself, is, it is true, incorrect and utopian (! N.B.) though fully deserving of discussion, and, on the other hand, the political, revolutionary element and the materialist tendency opposed to all recognised laws of morality, which lies behind it." This god-fearing professor, from whom, by the way, Sombart drew his teaching on the dual nature of Marx the scientist and Marx the revolutionary, did not suspect that very soon it was to be just this " tendency " which would grip even his colleagues in the iron claws of its unshakable logic, and that even the most important theological historians of religion like E. Tröltzsch would have to make declarations similar to the following : " New problems grew up out of all existing decisions. . . . And then the Marxist teaching on basis and superstructure gripped with immense force. . . ." ¹⁰ Since Marx, who gave a powerful weapon into the hands of the proletariat, bourgeois social science is passing through a chronic decline. Its really valuable aspects, insofar as they exist at all, to a great degree have Marx for their source, who is the more harshly criticised, the more he is an object for cowardly plagiarism or conscious distortion. In the sphere of economic literature, it is enough to mention Böhm-Bawerk as an example of an anti-theoretical system based on a " criticism " of the foundations of Marxian theory, a doctrine which at one time prevailed very widely in official university circles. Vilfredo Pareto and M. Pantaleoni are similar cases. The exceptional influence of Marx on

MARX'S TEACHING

Werner Sombart and Tugan-Baranovski, Bücher, F. Oppenheim, is well known. In European economic literature there is no writer of any importance who would dare to-day simply to "keep quiet" about Marx. In the field of history and the methodology of history, there is no one to-day who would decide to pass over the so-called "economic factor". All the most distinguished historians fall in some way or another under the influence of Marx's genius: Maxim Kovalevsky, Edward Meyer, Lamprecht, L. Humplovich, Von Below, Dopsch, Mathiez, Héritier, Seligman, Wipper and others. The methodologists and philosophers of history, and even the philosophers, pay tribute to the genius of the proletariat, Benedetto Croce, Stampler, Max Weber, Trölsch, Tönnies, Simmel, Loria, R. Michels, Gentile (the present official philosopher of fascism)—all these have eaten of the fruit of the tree of knowledge of good and evil. Even the philosophers of ultra-modern systems, such as Max Scheler, theoretician of the Catholic philosophy of to-day, draw to a great extent on the treasure-house of Marx's genius for "their" ideas. Whole schools in other spheres of knowledge which border on history sometimes develop under the fascination of Marxist doctrine. Such, for example, is the whole anthropological school in Italy led by Enrico Ferri.¹¹ Last of all, very recently, under the influence of Russian Marxist literature, the penetration of Marxism into the sphere of theoretical natural science has begun. If this was once chiefly to be seen in connection with biological questions (especially the theme, Marxism and Darwinism), now the representatives of theoretical physics (e.g. Ph. Franck) are beginning to be drawn into the orbit of the Marxist presentation of different methodological questions. The special critical literature on Marxism is inexhaustible.¹² Marx is the central problem of the ideological life of to-day in exactly the same way as communism is the central problem of the whole social-historical development of our time.¹³

It follows that Marx's influence on official science has another more important aspect. Bourgeois science, both of itself, and by means of the theoreticians of social-democracy, that agency of bourgeois influence over the proletariat, falsifies and distorts

N. I. BUKHARIN

Marx. It castrates him, it corrodes the revolutionary content from him, it distorts him unrecognisably. There are real barricades of ideas between revolutionary Marxism and official science in this respect. But the very fact that it is compelled to take some weapons out of the arsenal of its adversary shows how great is the ideological power of Marx's theoretical creation.

Marxism is the synthesis of revolutionary theory and revolutionary practice. If the importance of Marx's theoretical conception is unusually great, if to-day millions are marching under the banner of scientific communism, some to the storming of the capitalist world, others straining their muscles and nerves on the practical problems of socialist construction, then from this also is the social and functional importance of Marxism assumed. Humanity is living through a most critical period. The catastrophe of capitalism is developing. The world is split. The powerful mountain ranges of the new socialist world order are already being formed as the result of the creative effort of the victorious proletariat in the U.S.S.R. Marxism is beginning to conquer ever new spheres for itself. Marx, so many times slain by his critics and falsifiers, rises again in his full stature as the all-embracing genius of the centuries. Marxism is directly transformed into the theoretical practice and the practical theory of the greatest of social revolutions. Against it, all the terrorist and militant forces of the old, dying world, led by fascism, all their allies, all their reserves, are massing in a furious class struggle. Fascism's slogan, destroy Marxism, has therefore a very deep historical significance. Hegel says that philosophy is an epoch expressed in thought. But our epoch is one of bifurcation on the grand scale, for it is an epoch of the birth of a new social system, socialism; for it is an epoch in which the class struggle is lifted up to such heights of principle as never before; for it is an epoch in which a new class, the proletariat, already appears on the stage of history as its coming demiurge, a class already grasping the helm of power, of economy and of culture in the vast territory of the Soviet Union; for it is an epoch in which the contradictions of a capitalism that has outlived itself have brought its organism to the unparalleled convulsions of an

MARX'S TEACHING

unprecedented crisis ; for it is an epoch in which all the real forces and potentials of a new world are marching with the slogans of a new, mercilessly bold, scientific and yet revolutionary doctrine which embraces the whole sum of the problems of our time, an outlook whose creator and founder was Karl Marx. The bourgeoisie, scared and without confidence in the security of its régime, is going over to mysticism and inventing its own apocalyptic, counter-revolutionary eschatology.¹⁴ The proletariat marches under the banner of revolutionary science.

I

THE PHILOSOPHICAL SYNTHESIS OF MARX

Not very long ago it was extremely fashionable among official men of learning to say that Marx had really produced nothing new in the philosophical sphere. Such a well-known philosopher as Wilhelm Wundt in his *Introduction to Philosophy* wrote : " This lack of clarity in its metaphysical premises (i.e. of Marxism. N.B.) has a comprehensible basis in the fact that practical questions alone interest sociological materialism. Therefore the system does not even possess the necessary theoretical foundation, which it openly leaves to physiological materialism to work out."¹⁵

It would be hard to find an argument so utterly ignorant and untrue as the above-quoted argument of Wundt. However, the course of the social struggle and of vast ideological changes which, like the overwhelming movement of geological formations, express the depth of the conflict within the perishing world of capitalism, has compelled consideration of the question of Marx the philosopher. Since the publication of new works by Marx and Engels (above all the *German Ideology* and Engels' *Dialectic of Nature*) it has become quite clear how right were the orthodox Marxians when they considered that in the philosophical field also Marx fills the place due to him.

Indeed Marx is the creator of a great philosophical synthesis with which none of the latest and most fashionable philosophical systems can be compared. Marx, as we know, reached dialectical

N. I. BUKHARIN

materialism from Hegel through Feuerbach, including all the rational elements of the preceding thousand years of philosophical development in his system. He had a splendid knowledge of the history of philosophy and there are no more brilliant historical and philosophical characterisations (both from the point of view of the social conditioning of doctrines and that of their "immanent" logic) than certain of Marx's characterisations.¹⁶

In order to show the full originality of Marx's philosophical creation it is right to begin our analysis with the question of the relation of subject and object in which it at once becomes apparent that Marx has started an absolutely new epoch in the historical development of philosophy.

Marx started from the premise of the objective reality of the outer world independent of the subject (in opposition to the subjective, idealist philosophical tradition of the Berkeley-Hume school, the consistent development of which leads to solipsism). Marx was the adversary of objective idealism and philosophical identity when he stood the Hegelian philosophical conception on its feet. Hence Marx was a materialist. But his materialism differs sharply in its starting-point from the mechanistic materialism of the great encyclopædists, from the "vulgar materialism" of Büchner and Moleschott and from Ludwig Feuerbach's anthropological doctrine.

In Marx's philosophy the object is treated in an absolutely exceptional manner.

1. It is an historically developing "quantity". The world, the cosmos, has its history. Nature is not an unchanging "datum". On the contrary, it changes dialectically, its laws are also historical.
2. It is not abstract, qualityless, grey matter, as it appeared to mechanistic materialism. It includes a variety of qualitative definitions with different forms of movements passing one into the other.¹⁷
3. The object, as object, is historical in another sense also, and that is: it grows in accordance as the penetration of man into nature expands. "Even objects of the

MARX'S TEACHING

simplest 'sensual authenticity' are only given it (the subject. N.B.) thanks to social development, thanks to industry and commercial relations. It is well known that the cherry tree . . . only appeared in our zone a few centuries ago thanks to commerce. . . ." ¹⁸

4. The object is historical since it is to a certain degree itself the product of the historical activity of the historical subject. Feuerbach, for example, "does not discern that the sensual world about him is not something directly given from eternity, a thing always equal to itself, but the product of industry and a social state, the product in the sense that in each historical epoch it is the result of the activity of a whole number of generations, each of which stands on the shoulders of the preceding generations. . . ." ¹⁹ "Of course," Marx adds, having in mind the clever people who may absolutise these arguments, inflate them and convert the process of the "humanising" of nature into a proof of the absence of the objective world, "at the same time the priority of external nature is preserved, and, of course, this has no relation to the primal men born by means of generatio æquivoca." ²⁰

1. It is not the abstraction of the intellectual side of human activity brought into independent existence. In fact, the subject of bourgeois philosophy is a castrated subject, deprived of the completeness of its vital functions. The subject of Marxist philosophy is a complete subject. The dull and intellectual abstraction of the merely intellectual side of man is a reflection of the division of social labour in which the functions of thought congeal into definite social groups, when the so-called "spiritual production" is separated from the material, i.e. from "the direct production of life", when the relative cleavage in social life evokes a cleavage and absolutising of the category of thought and creates the illusion of a separate intellect.

2. Subject is not an isolated human atom but "socialised" man. "We" is already contained in the pores of the philosophical "I". Philosophical Robinsonades are just as impermis-

N. I. BUKHARIN

sible as Robinsonades in the social sciences.²¹ "The individual is a social being. Therefore his manifestation of life (even if not expressed directly in the form of a collective expression of life taking place simultaneously with others) is a manifestation and expression of social life."²² It is, as expressed above, a whole. But this is a whole of a socialised, social man. The Feuerbachian position starts from anthropology, whereas the real basis is here not the biological species (*homo sapiens*), but a new form of being, a specific, qualitatively different form, the form of human society. "Therefore," Marx defines brilliantly, "although man is to a certain extent a separate individual, and it is precisely separation which makes him an individual and a real individual social being—he is also a whole . . . the subjective being of a society thought and felt for itself, just as he exists in reality, on the one hand, as contemplation and the real spirit of social being, and on the other as the completion of the human manifestation of life. Thus, though being and thinking differ from one another, they are at the same time in unity with one another."²³

3. But the subject is not merely social subject, but also social-historical subject. Society is concrete historical society, it passes through different phases of its historical development. Feuerbach "examines 'man in general', instead of 'real historical man'".²⁴ The peculiarities of social structure, of the historical mode of production, have also peculiarities of the adequate "mode of presentation", the special forms of thinking, in dependence on the historical phase of social development, of the class dominants in life, etc. Thus the subject is not an abstraction of man, not a personified "species" or "kind" and not even social man in general. The subject is social-historical man.

4. It also follows from the above that the subject is an active subject, and above all practically active, producing the direct conditions for its own existence. The deepest cleavage in society is the division between mental and physical labour.

The division of labour becomes a real division of labour only when the division between material and spiritual labour begins. From this moment consciousness can really imagine itself to be

MARX'S TEACHING

nothing but the consciousness of existing practice. From the moment consciousness really begins to represent something which represents nothing real, from that moment it is in the condition where it emancipates itself from the world and passes on to the formation of "pure theory", of theology, philosophy, morality, etc.²⁵

Before Marx, it was just this separated theoretical consciousness of the crippled and dissociated individual whose very dissociation is a social-historical fact, which congealed into the philosophical subject. The thinking and contemplative functions, torn away from the active and practical, thinking about the world which had relatively got away from the practice of changing the world, evoked the illusion of an independent and sovereign "movement of the soul", with its independent "immanent" logic for this movement.

From the above there follows also Marx's special position in the question of the relationship between subject and object. It is particularly necessary to dwell on this question because the problem of the reality (i.e. unreality) of the external world is connected with it, as well as the problem of the knowledge of the latter and the question of the criteria of knowledge, i.e. almost all the main questions of philosophy.

The fact is that in pre-Marxian philosophy the relations between object and subject were only looked upon as relations between the abstraction of the intellect and the object of knowledge. This relationship it was which made the starting-point for all further analysis. Here Marx fundamentally changed the whole approach to the question. Particularly striking is the point of view he formulates in the following criticism of A. Wagner's methodological approach.²⁶ Marx writes :

. . . In this doctrinaire professor the relations of man to nature appear from the very beginning not as practical relations, i.e. founded on actions, but as theoretical ones. . . . But men in no wise begin by "standing in theoretical relation to the objects of the external world". Like other animals, they "begin" by eating, drinking, etc., i.e. they do not "stand" in any relation but act vigorously, and with the aid of action they master certain objects of the external world and in this way satisfy their needs (consequently they begin with production).

N. I. BUKHARIN

So with Marx both the historical and the logical prius is practice. This is far from implying that theoretical questions did not interest Marx (a hyper-foolish statement which academic philosophy expressed through Wilhelm Wundt). This means that profound theory advances the theoretical argument which exposes the main, real, actual connections. The prius is practice, practical activity, the practical changing of the world as the chief function of living, social, historical man. "Consciousness (bewusstes Sein)", as Marx with genius points out, "can never be anything else but conscious being, and the being of men is the real process of their life." Consequently the social-historical consciousness of social, historical man grows on the basis of practice.

These arguments completely upset the usual starting-points of school philosophers. In fact the primary datum to "me" of "my" "sensations" is considered logically irrefutable. If this is the starting-point, the material, etc., of the process of knowledge, then it is impossible to extricate oneself from the circle of this "datum", just as it is impossible to extricate oneself by the hair from a bog.

But this "starting-point", which is actually the product of a complicated analysis, is not the real starting-point, the subject has no unmixed "pure sensations", unless he is some mythical primitive Adam. Along with sensations, in connection with them, and so on, conceptions are present which are a social product. Behind every conception stands the whole path of social-historical development (just because the subject is a socialised subject; behind "I", "we" is already concealed). Not the passive reception of sensations but active, practical doing²⁷ is the primal and initial. So in the usual so-called irrefutable proof of the subjectivity of the primal "datum" we are "given" extremely important logical gaps which refute the whole line of this proof. A Robinsonade with a passively contemplative character is the "starting-point" of the dissected "starting-point" of academic philosophy.

But the further theses of Marxism arise from this and are in their turn connected with it.

MARX'S TEACHING

The external world (the object) and the social-historical subject are placed in a relationship of reciprocity, while the main feature of this reciprocity is the active changing of the world. Hence the question of the gnoseological importance of practice in general and of technics in particular. With Marx the question of the possibility of knowledge is connected with the question of the possibility of changing the world. The praxiological moment is directly interwoven into gnoseology. Goethe's Faust is right when he says in his philosophical monologue :

Tis written : *In the beginning was the Word.*
Already I stick, and who shall help afford ?
The *word* at such high rate I may not tender ;
The passage must I otherwise render.
If rightly by the Spirit I am taught,
Tis written : *In the beginning was the Thought.*
By the first line a moment tarry,
Let not thine eager pen itself o'er hurry !
Does *thought* work all and fashion all outright ?
It should stand : *In the beginning was the Might.*
Yet even as my pen the sentence traces,
A warning hint the half-writ word effaces.
The Spirit helps me—from all doubting freed,
Thus write I : *In the beginning was the Deed.*

The question may be put in this way. (The problem of the relationship between subject and object is the problem of the process of mastering the object. But mastery may be either practical or theoretical. Practical mastery (the starting-point) engenders theoretical mastery, which is also checked by practice, which enriches practice and, in its turn, receives from practice supplementary impulses on a new basis. Practice and theory are activity. They are, while practice remains primary, mutually connected ; they " reciprocate ", they pass into one another, here there is no identity but there is unity. If, therefore, the theory *a* is connected with the practice *a*, which produces a given change in the external world *x*, then that is the checking of practice by the truth of theory.) The " accursed " question of " things in themselves " which Kant declared to lie on the other side of knowledge, was discredited by Hegel as being objectless, for " the thing in itself " is an abstraction from any relationship to another, i.e. is something, " wahrheitslose leere Abstraktion ".²⁸

Marx²⁹ formulates this problem from the point of view of his theory of knowledge as being : " The question if objective truth is possible to human thought is not a theoretical but a practical question. In practice man must prove the truth, that is the reality and force of his actual thoughts. The dispute as to the reality or non-reality of thought separated from practice, is a purely scholastic question." This is not naïveté, as certain naïve (or make-believe naïve ?) critics of Marx pretend. It is the profoundest form in which the problem can be put, the placing of it on a new, unusual basis.³⁰ In the circle (practice-theory-enriched practice), theory is the aspect of this, figuratively speaking, enlarged reproduction of life, this enlarged process of mastering nature. There cannot be such mastery (i.e. an expedient " changing of the world ") unless an adequate practice corresponds to it. There can be no successful practice unless its theoretical expression (" conscious practice ") is " true ", i.e. adequate to reality. This by no means excludes contradictions between the links of the process of mastering nature taken as a whole. But this does not immediately make clear the question of the criteria of truth, for the criterion of correspondence with reality and the so-called " practical criterion of truth " (if it is a matter of the practice of real change of the real world) coincide, while the " power of thought ", its truth, its adequacy are proved by the process of real mastery of the world, by the process of its change. [Marx in this way lifted materialism to unparalleled heights. The limitation of old-fashioned materialism, its purely quantitative theorems, its mechanistic character, the qualityless character of its matter, the absence of understanding of the specific forms of movement and specific laws, its anti-historical nature, its passively-contemplative nature, etc., were all overcome by Marx. He succeeded in doing this because he made a synthesis of materialism and dialectics. He raised the dialectical method to its highest degree, refashioned it critically, turned upside down the vastness of the Hegelian philosophical conception and finished for ever with Hegelian panology with its " drunken " philosophical speculation. The movement of conceptions which formed the essence of the historical process with Hegel has been transformed

MARX'S TEACHING

by Marx into the ideological reflex of the history of real human life, the dialectic of thought into the reflex of the dialectic of material social development. But the dialectical forms of movement, embracing nature, society and thought itself, have become with Marx the main element of his splendid philosophical system.)

The deepest revolutionary historicism which penetrates all Marx's teaching from its most generalised heights down to the immediate practical conclusions, is genetically connected with a critically refashioned Hegelian dialectic. The compressed description of dialectic which Marx makes in the preface to Volume I of *Capital* is well known :

My own dialectical method is not only fundamentally different from the Hegelian dialectical method, but is its direct opposite. For Hegel, the thought process (which he actually transforms into an independent subject, giving to it the name of "idea") is the demiurge (creator) of the real; and for him the real is only the outward manifestation of the idea. In my view, on the other hand, the ideal is nothing other than the material when it has been transposed and translated inside the human head.

Nearly thirty years ago, when Hegelianism was still fashionable, I criticised the mystifying aspect of the Hegelian dialectic. But at the very time when I was working at the first volume of *Das Kapital*, the peevish and arrogant mediocrities who nowadays have the ear of the educated public in Germany, were fond of treating Hegel much as in Lessing's day the world of Moses Mendelssohn used to treat Spinoza, namely as a "dead dog". That was why I frankly proclaimed myself a disciple of that great thinker, and even, in *Das Kapital*, toyed with the use of Hegelian terminology when discussing the theory of value. Although in Hegel's hands dialectic underwent a mystification, this does not obviate the fact that he was the first to expound the general forms of its movement in a comprehensive and fully conscious way. In Hegel's writings, dialectic stands on its head. You must turn it right way up again if you want to discover the rational kernel that is hidden away within the wrappings of mystification.

In its mystified form, dialectic became the fashion in Germany because it seemed to elucidate the existing state of affairs. In its rational form it is a scandal and an abomination to the bourgeoisie and its doctrinaire spokesmen, because, while supplying a positive understanding of the existing state of things, it at the same time furnishes an understanding of the negation of that state of things, and enables us to recognise that that state of things will inevitably break up; it is an abomination to them because it regards every

N. I. BUKHARIN

historically developed social form as in fluid movement, as transient ; because it lets nothing overawe it, but is in its very nature critical and revolutionary.³¹

The main lines of the synthesis are compressed into this little extract, but the synthesis is anything but a mechanical juxtaposing of materialism and dialectic. Matter is primary. Consciousness is a new property, a new quality of a special form of matter. The material is "expressed" in consciousness. Therefore knowledge is adequate to reality. But this "expression"³² is not a passive expression. Knowledge is active and effective. It is far from being the statement of sensations received from the external world and the formation of "complexes" of these sensations, on the basis of which, as the "mere empiricists" of to-day affirm, nothing but tautologies are erected. On the one hand, insofar as human practice develops, the very material of knowledge is enlarged, its "raw material", and the radius of knowledge increases in length. On the other hand, knowledge actively refashions this material, thought gnaws into it (the problem of "inferred knowledge"), and the results of this process, its products, much more truly "express" objective reality (and therefore theoretical and really scientific knowledge is higher, truer, deeper than superficial empiricism). Never absolutely, always more or less one-sidedly, asymptotically, it approaches the "whole" truth—in this is the process of historical development. But the richer and more many-sided it is, the "truer" it is, the more successful, the wider is the practice on the basis of which it grows and which it fertilises in its turn. The "ideal" is consequently "the material transposed and translated inside the human head". Dialectic becomes materialist. It examines from this point of view "every historically developed form in movement", that is "from its transient aspect".

The importance attributed to dialectic by Marx and Engels is also evident from another side. If in the extract quoted above Marx emphasised the necessity of making dialectic materialist, then Engels with no less force emphasises the necessity of making materialism dialectic. In criticising the so-called "natural-scientific" materialism he makes the remark that it is essential

MARX'S TEACHING

"to go over to dialectic. There are two philosophical tendencies, the metaphysical with unchanging categories and the dialectic (Aristotle and particularly Hegel) with 'fluid' ones." ³³ "Hegel, whose synthesis and rational grouping of natural science are a greater affair than all the metaphysical nonsense taken together." ³⁴ There is no contradiction here. On the contrary, such an approach shows that it is a question of the organic synthesis made by Marx's creative genius.

The transitory character of every form, its arising, its development and destruction; the absence of absolute limits and at the same time the zig-zag character of development, the passing of quantity into quality; quantitative continuity and qualitative interruption; the division of the one, the inner contradictoriness of each whole; the development of this contradiction, the struggle of opposites as the immanent law of movement; the passing of one opposite into another, the negation of the old form and its co-presence in the new in "sublated form", the contradiction between form and content; the relation of each thing to others, the many-sidedness of connections, the universality of connections; the different types of connections (not only of causal order but also of coexisting connections) and other general laws of being and becoming make up the distinctive peculiarities of dialectic which fixes and formulates these laws theoretically. ³⁵

"Briefly dialectic may be defined as the teaching of the unity of opposites. The kernel of dialectic is grasped in this," Lenin remarks. ³⁶ And this is absolutely just. It is precisely for this reason that dialectic, dialectical historicism and the dialectical teaching on development are fundamentally different from the bourgeois "theory of evolution" as it flourishes in the natural and social sciences of the bourgeoisie. It is just because of this that dialectic is the "algebra of revolution" if we strip it of its mystical skin of specific Hegelianism ("Hegelei", as Marx called it). Bourgeois historicism and evolutionism arose to a certain degree as a reaction against the theory of catastrophes and revolutionary rationalism of the encyclopædists. Gradualness, continuity, "organology" were brought forward as heavy artillery

against the " leaps " in social history. The very idea of historicism stands far above abstract rationalism. But it had an inner weakness and even with Hegel the Prussian state held up the current of history, while the contradiction between the essentially revolutionary method and the conservative system was the inner cause of the decay and doom of this astonishing philosophical conception. Marx abolished these contradictions. In his materialist doctrine dialectic became an organic component part, the basis of the whole conception. We have seen above how, in distinction from all preceding philosophers, Marxism sharply emphasises the historical nature of the object, which itself develops dialectically, and the historical nature of the subject which also goes through the phases of its own dialectical development. The main laws of dialectic appear in the very relation between object and subject. (Object and subject are a unity, for society is not a supernatural quantity. But this unity is not an identity ; object and subject are opposed. The struggle of these opposites drives on history, while these opposites interpenetrate one another (the process of the influence of nature on society, the process of the " humanising " of nature) : society has in the last resort grown out of nature but it is not dead matter and not a biological species. It is matter with a specific quality in that its relation to nature is an active relationship, practical and theoretical. Theory and practice are a unity but a contradictory unity. Society itself is a unity, but again a contradictory one. The contradiction between its form and content (productive forces and productive relations) expressed in the opposition of classes (in class society) is the motive force of historical development, and so on. In this way materialist dialectic formulates the general connections and laws of nature, society and thought itself.) Materialist dialectic is the basis of the whole doctrine of Marx and at the same time a general method of investigation. It stands in the same relation to formal logic, with its shamefaced, statistical categories, as higher mathematics to lower. It is the logic of contradictory processes and universal connections in which abstractions are concrete, analysis and synthesis indivisible, boundaries conditioned and conceptions flexible to the maximum degree.

MARX'S TEACHING

Thus dialectic, when it became materialist dialectic, entered a new stage in its development.

✓“ In its really logical sense ”, even Tröltzsch has to write, “ dialectic has been preserved and further developed in a considerable and fruitful manner, beyond Hegel's limits of the knowable, only by Marxism.”³⁷ In this respect the dialectic of Marx and Engels has appeared “ astonishing, their statement of the problem is one of the most revealing which the century has produced.” Thus “ the new conception of dialectic ” has above all a protracted value.³⁸

Marxism's theory of knowledge, as appears from what has gone before, has its own absolutely exceptional peculiarities, since its starting-points are not like those of other philosophical systems, even including the materialist: there is another object, another subject, and a different relationship between them. ✓Marxism's theory of knowledge is sociological. Its abstractions are abstractions of a logical order completely different from the usual abstractions of philosophy. In connection with this Marxism is confronted with the special problem of the forms of knowledge which are produced from the forms of material life. In other words, if a definite “ mode of presentation ” corresponds to a definite “ mode of production ”, then this problem of the “ mode of presentation ” in its connection with an historical class subject, the agent of this or that “ mode of presentation ”, is a problem sui generis. The relation between a socially-conditioned mode of presentation and the degree of adequacy of knowledge consists, on the whole, in the fact that the class which is the agent of a higher mode of production (i.e. of a mode of production in which the productive forces are more powerful, in which the process of mastering nature is going on more intensively and the productivity of labour is higher) is also the agent of a higher “ mode of presentation ” (i.e. of such a mode of presentation as permits of more rapidly and adequately knowing the objective world).

Marxist philosophy as the most perfect of philosophical systems owes this in the first place to materialist dialectic, with its wide horizons, its historicism and variability in past, present and future, whereas the bourgeoisie is drawn to “ eternal categories ”, with its

N. I. BUKHARIN

bold statement of the problem of interruption and continuity, whereas the bourgeoisie dreads "leaps", with its strict determinism which infinitely broadens the field of science, as opposed to the indeterminism of bourgeois-idealist doctrines, with the doctrine of the infinite possibilities of knowledge as opposed to the different forms of agnosticism and the Kantian teaching of the unknowability of the thing in itself, etc. This dual nature of the forms of consciousness of our age is the reflection of the antagonistic mode of production and of the opposition between the bourgeoisie, whose modes of thought have become fetters on its future development, just as the forms of capitalist society have become fetters on the development of productive forces, and the proletariat, which advances new forms of thought, a new "mode of presentation", formulated theoretically as dialectical materialism.

There are grains of reason in every system. The bourgeoisie could not exist if its theory was only nonsense in all its parts, from beginning to end. Only rationalists and metaphysicians can argue in this way. But this does not prevent it from being reactionary in relation to the theory of the proletariat. Therefore, whenever the ideologues of the bourgeoisie advance a "fashionable" doctrine, in our age, the age of intense strains, of crises, of decay of capitalism, it is usually a reactionary, mystical doctrine and its rational grains are already contained in rational form in the Marxist conception. Here are a few examples to clarify our thought.

1. At present so-called axiology, "the philosophy of values" (Rickert and others)⁸⁹, has a certain importance in official bourgeois science. Growing out of the problems of the "philosophy of history" and the methodology of the social sciences, it has become a whole metaphysical system. As is well known Rickert stands for a general demarcation from the natural sciences in the methodology of history. The natural sciences are generalising in method, while the social sciences are historical. Their object is non-repetitive and individual. This individual choice must go along the line of correspondence with values, i.e. "cultural values". Hence a refined doctrine of values as a result of which

MARX'S TEACHING

all philosophy is transformed into a doctrine of values. Logically the whole of this theory cannot stand criticism. Nature has its history, just as society does, although the history of nature is not the same as the history of society. Therefore the whole justification for two methods, different in principle, is fundamentally untrue. The introduction of the teleological value aspect is in principle quite impermissible. Its concrete expression is simply impossible, since the criteria of values (which with these ideologues all tend towards one or another variation of Kantian morality) are quite undefined. The whole doctrine degenerates into the moralising metaphysic and metaphysical morality of "axiology". Here, however, there is concealed in mystical form a real problem, the problem of the social and cultural function of knowledge (both of the natural and social sciences). But Marxism solves this problem splendidly with its teaching of the relations of theory and practice, of the social and vital functions of knowledge, while at the same time it shows the door to any kind of teleology.

2. Not very long ago in the general aggregate of bourgeois ideology pragmatism played a very important part (W. James in the first place).⁴⁰ Pragmatism emphasised with energy the practical criterion of truth, the "instrumental" point of view. The "truth" of any premise is measured by its practical benefit. James examines religious—sit venia verbo—"truths" from this point of view. They comfort and are therefore true, because beneficial. In experience, including religious experience, in mystical illumination, in ecstasy, in any "experience", these truths are shown to be valuable and beneficial⁴¹ just as much as in the rough empiricism of daily life. This doctrine is logically unsustainable. It expands the conception of experience to include any kind of individual experience, a point of view which makes, for example, the existence of hallucinations equivalent to the existence of any material object, God the same kind of reality as the President of the United States and the practice of prayer, the commerce of stocks and shares, ore mining, in no way different from one another in principle. The chief mistake in pragmatism is the fundamentally incorrect conception of practice as a theoretic-

cally-knowable factor. In reality only such a practice may here have meaning as changes the material world (Marx's "revolutionary Praxis"). Only in such a case is the criterion of practice not separated from the criterion of correspondence with reality. Only in such conditions can the problem of the adequacy of knowledge be correctly stated and correctly solved (and this, after all, is the decisive gnoseological question). A grain of reason was concealed in the mystical formulations of pragmatism, that fashionable reactionary doctrine of the end of the nineteenth and beginning of the twentieth century. But this factor already exists in Marx in its real meaning and is fully worked out as one of the most important main parts of his philosophical synthesis.

3. Recently a great re-orientation from quantitative to qualitative analysis has been taking place along the whole front of philosophy and the higher sciences. The idea of "totality", "the whole", "the all" (Totalität, das Ganze, Ganzheit, etc.), the idea of a qualitatively special complete form (Gestalt), is at present the most fashionable idea. This is expressed philosophically in the resurrection of Fichteanism and Hegelianism ("Neo-Hegelianism"), in the transition from the causal method to the so-called "organic" and teleological, and so on.

The "Whole" frequently assumes the form of a super-sensitive substance, unapproachable by rational knowledge and only approachable by "intuition", "sensitiveness", by mystical forms of direct "vision". It is on this foundation that Driesch's biological metaphysics has arisen, with its doctrine of the organic whole, its doctrine of entelechy which gives "aim and direction" to development. It is on this foundation that such systems as O. Spann's "Universalism" arise in the economic sciences. Thus the anti-mechanistic idea of a qualitatively specific whole assumes an idealist, teleological and even theological character. Quality is here absolutely separated from quantity, the whole is absolutely separated from its parts and is hypostasised as a supernatural category lying outside the objects of rational knowledge. All such constructions are ultra-reactionary and a merciless war is necessary against them. But, rationally understood, the idea of the whole, that is taken in its relative opposition to its parts,

MARX'S TEACHING

in its materialist characteristic, is correct. It is, however, in such an interpretation found completely in Marx's dialectical materialism. The real dialectic of the whole and the parts, of quantity and quality, of form and content, is given in Marx, and what is more, given on a materialist basis. This synthesis is infinitely higher than the modern pitiful efforts at deep thought whose only "deep thought" consists in serving the practice of the most reactionary classes of our time and of the vilest obscurantism.

4. Finally, it is worth while mentioning the philosophical problems connected with the crisis of modern mathematics and physics. Carnap ⁴² writes in this connection: "Even more insistent has become the necessity for a new logical system as soon as the definite contradictions ('antinomies') became noticeable first of all in the mathematical sphere, and which then rapidly revealed themselves as contradictions of a general logical significance. They could only be overcome by a fundamental reorganisation of logic." Like ideas are developed also by a whole number of outstanding physicists who similarly issue the call for a "new logic".

The development of mechanics (the quantum theory) has put before us the problem of the relation between interruption and continuity, which, since they are contradictory, go beyond the limits of formal academic logic ("dualism" of the wave-particle). Outside the bounds of formal logic there also pass the problems of dynamic and static law, of the whole and its parts, of matter and energy, of time and space, of mass on the one hand and time and space on the other, etc. All this vast series of problems recently brought forward by the development of the exact sciences can no longer be contained within the one-sided, immobile, rational categories of the old logic, the laws of which are only significant in definite and limited conditions. The "antinomies" of modern natural science made a powerful call for a methodological approach corresponding to the new, more complex, many-sided, objectively dialectical forms of the real connections and laws of being and becoming.⁴³ Hence on the basis of bourgeois forms of thought, with all the sociological premises of to-day, there takes place a transition to an a-logical, super-rational,

N. I. BUKHARIN

irrational and even religious treatment of the object. But this transition itself conceals, as we have seen, a real scientific treatment of the series of problems by covering it with the heavy clouds of the new mysticism. A real solution of the problem can however be given here also on the basis of the positive application of the method of dialectical materialism worked out by Marx.

Thus, Marxian philosophy appears before us as a grand philosophical synthesis, as a mighty theoretical system which has included all that is really of value that has been produced by the development of human culture and human thought. This immense synthesis could only arise as the system of ideas of a class which is practically compelled in its work and its struggle to overcome, first of all from within and then throughout society, the cleavage of the capitalist social order, and, in consequence, the cleavage and absolutising of its mental categories and their metaphysical static character. Subject and object, theory and practice, thought and action, presentation and will, are all taken not only in their opposition, but also in their unity. Philosophy for the first time reaches its sociological self-knowledge. It becomes at the same time a powerful weapon of proletarian struggle ; it is critical and revolutionary to the highest degree ; it overthrows all the idols and fetishes of the old world ; it is anti-theological, anti-teleological, anti-idealist ; it is active ; it is full of the optimism of knowledge and contemptuously rejects any principle of " Ignorabimus ". On the background of the present collapse of bourgeois ideology in general and of bourgeois philosophy in particular it grows as the only theoretical generalisation which embodies the whole future of humanity.

Bourgeois society by continually developing its inner contradictions has reached such a critical point that its latent division has become open and is tearing the whole capitalist covering. The proletariat, the child of capitalism, is really becoming its gravedigger. Bourgeois society reached the highest form of its self-knowledge in Hegel's universal system. In developing its contradictions this system gave birth to Marxism which became the system of ideas of the proletariat. To-day the bourgeoisie is again seizing on the conservative side of the once mighty system

MARX'S TEACHING

of its greatest philosopher and, purging it of any really valuable elements, is coming out under the flag of neo-Hegelianism. But it is not Chronos who devours his own children. This is only an old myth. The proletariat strikes a mortal blow at capitalism. Marxism liquidates the outworn mental categories of the capitalist world.

II

THE THEORY OF HISTORICAL MATERIALISM

The laws of materialist dialectic are all-embracing, general laws of becoming. As we have seen, a deep and all-embracing historicism is at their basis, that is to say, a historicism which can embrace all forms of movement. This Marxist dialectical method is much wider and more universal than the idealist dialectic of Hegel, the limitation of which does not merely lie in exalting a limited sphere of consciousness into the substance of the universal. The limitation of the Hegelian dialectic also lies in its two most important qualities. Firstly, with Hegel nature has no history.⁴⁴ Secondly, history itself settles down with the bourgeois landlord state (here Hegel's system in fact conflicts with his method). Both these limitations, which are of quite exceptional importance, are undoubtedly connected with the idealist character of Hegelian dialectic. Hence, by the way, the unsurpassably wretched poverty of those "thinkers" ("manufacturers of ideology", as Marx called them), who suggest that the difference between the Marxian and Hegelian dialectic is simply a matter of a change of label and that in fact Marx remained a Hegelian to the end of his life.⁴⁵ Whereas Marxian dialectic as a doctrine of historical development was the first to conquer the whole sphere of nature comprehended from the point of view of an historical process, and broke those fetters which Hegel put upon the understanding of social development. This remarkable expansion of outlook proceeds entirely from Marx, a thing which bourgeois investigators cannot understand. Even very recently this sort of gap between nature and society played, and still plays to this day, a very important part. The whole conception of the Rickert school proceeds from the his-

torical character of society and the unhistorical character of nature. The whole laborious differentiation between the generalising method of the natural sciences and the individualising method of the social sciences, between nomothetics (or nomology), on the one hand, and ideography on the other, between "natural laws" and "reference to worth" is founded in the last resort on the absolute rupture between society and nature. This is, in essence, a softened and refined theology, converting human society into a super-natural quantity. Whereas society and nature are a unity, but a contradictory unity. Society itself is a product of the historical development of nature, but a product which relatively is in opposition to nature, reacts upon it and even in the process of historical development transforms external nature itself into its product (the so-called cultivated landscape). Therefore Marx said that in fact there is one science, the science of history, which embraces both the history of the inorganic world, and the history of the organic world and the history of society.⁴⁶ In the sphere of the natural sciences this meant a decisive break with mechanistic-mathematical rationalism which in Marx is bound up with the criticism of mechanistic materialism.

Natural matter was conceived as being all of the same kind, as only a quantitatively defined quantity, as a combination of qualitatively similar parts. Diversity of quality was from this point of view merely an illusion of a subjective character.

- - Matter as such is a pure creation of thought and an abstraction. In bringing under the conception of matter the things examined by us as bodily existing we are distracted from the qualitative differences in them. Therefore matter as such, in distinction from *definitely existing matters* (our emphasis, N.B.), is not something existing sensually . . . It (this point of view, the "onesided mathematical point of view", N.B.) is even a return to Pythagoras who already regarded number, quantitative definition as the essence of things.⁴⁷

In other words qualityless matter would bring us back to the position of so-called logical realism, in opposition to nominalism. It does not, however, in any way follow from this that "matter has disappeared". It only follows that, objectively and independently of our consciousness, it exists in all the wealth of

MARX'S TEACHING

its qualitatively different and varied forms, with an historical process of transition from one form to another, with specific forms of movement and, consequently, with specific laws for this movement. Even in the limits of inorganic nature mechanical movement and chemical movement are distinct, although they pass into one another. The organic world grows out of the inorganic in the process of historical development, but, once it has arisen, it develops its specific forms of movement. Society arises historically from the biological species, through the herd, but once it has arisen, it develops in turn through its conditioned laws. It passes through different stages of development. It is always historical, that is it exists really only in its historical form, with its own historically defined laws, etc. In this way we here have all the wealth and all the variety of the world which in the historical process of thought, on the basis of the historical process of the development of social practice, is ever more adequately "grasped" by this thought. Every new form of moving matter thus has its own special laws. But this enriched form and these new laws are not cut off by a Chinese wall from those historically preceding them. The latter exist in these in "sublated form". Herein lies the historical succession of processes. On the other hand, variety does not exclude unity. So it is no question of a flat monism of knowledge for which variety has no meaning and to which all cats are grey, nor is it a matter of pluralism for which unity does not exist, but of dialectical and materialist monism, which is adequate to the real unity in variety and variety in unity, with all its forms of contradiction, with its ruptures and catastrophes, with its transition of one form into another, which is adequate to the mighty and general historical process of development.

The historical view of society therefore presupposed the breaking down of the mathematical-atomistic-individualist conception of rationalism. However, here the essence of the matter did not lie at all in the fact (as the Kantians argue)⁴⁸ that society must be torn out of (absolutely) its natural historical environment and converted into a substance creating the world out of its spiritual depths and dictating its laws to the cosmos, but in the ascertaining

N. I. BUKHARIN

of specific social laws on the basis of an historical view of nature itself. The great limitation of the natural scientific theories before Marx lies in the "eternity" of the laws of nature, i.e. in the supposition that the connections between things and processes are constant. This presupposed the constancy and unchangingness of things. Whereas "the eternal laws of nature are more and more becoming transformed into historical laws. That water is liquid from 0° to 100° is an eternal law of nature, but in order that it may have any force there must be: (1) Water, (2) a given temperature and (3) a normal pressure . . ." ⁴⁹ So here there is no difference in principle between society and nature. The Kantians and idealists generally have to make use of a sophism. They wish, starting from a correct notion of the originality of social development, to draw the conclusion that this originality is principally in the sense of the supernatural character of society. Just as "spirit" is in no way an efflorescence of matter but the real substance of matter, so human society is a special quantity insofar as it is not relatively but absolutely opposed to nature. So the laws of social development, if they exist at all, are supernatural laws having nothing in common with the laws of nature. Their specific character here in fact becomes a supernatural character which serves in its turn as a bridge to God.

So it is obvious how Marx's peculiar terminology is explained. Marx frequently, beginning with the first volume of *Capital*, speaks of the social process as a "natural historical" process, of the laws of social movement as "natural laws like the law of gravity", etc. On the other hand, Marx energetically emphasises the specific nature of social relationships and the corresponding laws ("Nature does not create the owners of money on the one hand and the owners of nothing but their own labour power on the other. This relation is anything but natural-historical" (*ibid.*)). But only stupid minds can deduce from this an "inconsistency" in Marx. For it is clear where his main approach lies. Society is the link in the chain of the general historical development of the world, a link which develops according to

MARX'S TEACHING

law like the development of nature (in this sense the laws of society are natural-historical laws however "critically thinking persons" might wish to jump out into a world of supernatural being). But this law is a special law. It is not a law of either physical, chemical or biological type. It is a specifically social law which must be "theoretically grasped" in precisely this specific character. In the one case (against the idealists) Marx emphasises the connection with nature. In the other (against mechanistic materialism, the "organology" of the biological school of sociologists and positivists of Comte and Spencer and their epigones) he emphasises the specifically social character, the new quality. Even a very slightly thoughtful attitude towards the subject makes the full wealth of the Marxian method absolutely clear in comparison with all other schools and tendencies. The overcoming of the "naturalist" point of view (which does not start from the unity of society and nature, together with their opposition, but from their identity) is far from implying an obligatory (which the bourgeois ideologists reach) transition to the standpoint of idealist metaphysics. The idea of historicism is far from being the private property of the idealist tendencies in thought. Historical "laws of movement" of society can in fact be discovered only by means of materialist dialectic.

So the laws of social development are specific laws. It is therefore, for example, fundamentally incorrect and methodologically impermissible to transfer mechanically laws of a biological order into processes of social development. Society has developed historically out of the animal herd but it is itself no longer a herd. The "way of life" of an animal species, that is the uniformity of vital behaviour of animals of one species, is still not a "mode of production". The natural organs of an animal differ fundamentally from artificial technique which is itself the product of active labour, that is of active adaptation to environment. And so on and so on.⁵⁰ The transition from the herd to productive society is, from the point of view of world history, a leap, although this in its turn was a whole immense and lengthy historical period. But, insofar as society has already formed as a new link in the general and universal historical process, it develops its special

contradictions and discloses a special form of movement. "It was necessary in this case, therefore, just as in the realm of nature, to set aside these artificial inter-relations by the discovery of the real, a task which finally culminated in the discovery of the universal laws of movement which established themselves as the dominating ones in the history of human society."⁵¹ These "universal laws of movement which established themselves as the dominating ones in the history of human society" were formulated by Marx in his theory of historical materialism, a doctrine of genius the creation of which certainly marks a new epoch in the development of the social sciences. So the general laws of dialectic here found a special, concrete, social form of manifestation. Society was included as a link in the universal chain of history, in full correspondence with objective historical reality.

But it is just in this that the superiority of the bold, fearless, revolutionary and materialist dialectic of Marx showed itself with striking power. We must once again emphasise with all force the originality of Marxist historicism in comparison with the historicism of the "historical school" in all its various manifestations. It is well known how viciously Marx flayed it.⁵² In practice taking its direction from the eternalising of the datum, in theory it simply included any "interruption in gradualness," whereas Marx's revolutionary dialectic starts from the inevitable change of social forms, including an historically conditioned contradictoriness of development, the sharpening of inner contradictions, the class struggle, the catastrophic transition of one social form into another by means of revolution, etc.

The strict knowledge of the objective laws of social development is a long way from presupposing in Marx, despite the numerous critics who wage a permanent guerilla warfare of dwarfs against the giant of thought and action, any kind of "destiny" or "fate". With Marx history itself is a long way from hypothesising and is not transformed into a peculiar subject standing above human beings. On the contrary, as long ago as the time of his controversy with Bruno Bauer Marx demolished such a treatment of the problem. "History", he wrote in the *Holy Family*, "is not some kind of special personality which man makes

MARX'S TEACHING

use of to attain his ends. History is simply the activity of man pursuing his ends." ⁵³ Another circumstance should be remarked here. Marx is often transformed into a vulgar apostle of "progress". This also does not correspond to fact. "In spite of the pretensions of 'progress' cases are always to be observed of retrogression and round-about movement." ⁵⁴ So in Marx there is not on the one hand a trace of fatalism, nor of Panglossian teleology on the other. ⁵⁵

But it does not follow from the fact that "men make history" that human activity is outside the control of any laws. Society is not a sum of isolated and mechanically united individuals. It is a definite whole, divided and contradictory, with a variety in its elements. So objective social laws do not correspond with subjective aim-purposes and they cannot be deduced from individual "motivisations". On the contrary, every individual is already born "socialised" and his activities are determined by the aggregate of his conditions of life. He already finds this environment of his life ready for him, although he also reacts upon it. So for Marx it was important to discover the "laws of movement" of the special form of combination human society, and moreover, of historical society. It is interesting to note that a number of Marx's critics who attack him for his so-called mechanistic approach to society, also reproach him with starting from society and not from the human unit. Whereas it is just from the surpassing of the mechanistic, qualityless, quantitatively mathematical conception of society that there arises the originality of the laws of the specific whole ("Totalität"); of a whole (and not its "parts") specifically social (and not generic, special, biological, physico-chemical).

But Marx does not take this whole, society, as an empty abstraction.

If, for example, we begin our analysis with population, then this will be an abstraction if we leave out classes; classes are an abstraction ("leeres Wort") unless we know their elements, and so on.

If [says Marx] we start out therefore with population, we do so with a chaotic idea of the whole, and by closer analysis we shall

N. I. BUKHARIN

gradually arrive at simpler ideas ; thus we shall proceed from the represented concrete to less and less complex abstractions, until we get at the simplest conception. This once attained, we might start on our return journey until we would finally come back to population, but this time not as a chaotic notion of an integral whole, but as a rich aggregate of many conceptions and relations.⁵⁶

The method of this transition, from the chaotic conception of the concrete to the simplest abstract and then back to the enriched concrete aggregate, is Marx's method, a method which cannot be contained within the formal—logical and usual oppositions of induction and deduction, analysis and synthesis, concrete and abstract. So the concept of society with Marx is no longer an empty abstract and extra-historical concept, but a concept which includes the whole divided variety of its concrete historical definitions, which are given in their development, in correspondence with the real course of the real historical process. Here Marx really solves that problem of knowledge which Rickert considered specific for human history, the problem of the " individual " and the " typical ". Marx, on the basis of a painstaking study of history, reached a conception of the economic structure of society which is the morphological principle of all the social whole, of " the mode of production ", both historically of the " individual " (and at the same time the " typical "), and of the specific stage of historical development. Max Weber had already remarked that the " individual " cannot be understood without " nomological knowledge ".⁵⁷ But it is impossible to imagine the individual, even of a " minor order ", as a Kantian thing in itself, without relation to an " other " ; as outside of all connection with others, outside of the social aggregate. Weber is therefore forced to restore the " generalising method " buried by Rickert on the basis of Rickertian premises which have an absolutely definite social sense, as do all the tendencies of the Kantian " practical reason ",⁵⁸ and to have recourse to the construction of so-called " ideal types ", of a bad, idealistically deformed copy of the Marxian " economic formations " (" economic structures ", i.e. " means of production "), whilst, as Trötsch justly points out, an " intellectual contemplation (Anschauung)

MARX'S TEACHING

of the great sociological complexes and evolutionary relations " 59 predominates in him.

So :

1. With Marx society is a part of nature, but a part in opposition to it, a special and specific part which arises historically (thus here is a unity, but not an identity ; the division of the one).

2. It actively influences nature and changes it (mutual interpenetration of opposites).

3. It has its specific laws (social laws) which differ qualitatively from the laws of the inorganic world and the laws of biology (a new quality arising historically) but which are anything but " laws " of a supernatural kind (materialism).

4. Society is taken in the variety of its historic definitions and in the process of its historical development (the dialectic of the abstract and concrete).

5. There is no teleological " world conception " in Marx (" aims of history ", " progress ", " united humanity " ; " in fact what is meant by the words ' purpose ', ' aim ', ' germ ', ' idea ' in previous history is nothing but the abstraction of later history, the abstraction of the active influence exercised by past history on later history ").⁶⁰

The most remarkable explanation of the theory of historical materialism, with the exception of the brilliant and monumental introduction to *The Critique of Political Economy*, is undoubtedly the *German Ideology*, particularly that part of it which is devoted to the criticism of Feuerbach.

From the very beginning the authors place the whole problem within the widest limits. " We know one science alone, the science of history. History can be examined from two aspects and divided into the history of nature and the history of man. But it is impossible to separate these two aspects from one another. So long as men exist the history of nature and human history will condition one another." ⁶¹ In the last instance the whole further movement also conditions this division of a simple nature into opposing principles. The movement of this opposition, the struggle of society with nature, the growing process of " humanising " nature, the constant penetration of the one opposite into

the other, lies at the bottom of the whole movement. This is the law of development of the productive forces of society and the basis of its self-movement. The relation to nature is an active, practical relation, it is labour, the process of production. Social man is above all, not an animal rationale, but homo faber, a tool-making animal. Thus the first premise is the "bodily organisation of individuals and the connection with nature given thereby". The production of the means of life and means of production is the production of material life. But this production is not the mechanical juxtaposition of separate labouring individuals, but production of which the subjects are social individuals in a definite type of social connection. The types of this connection are explained by empirical observation. This is the "productive relations", the main social division (in class society, division in the first place into classes), that basis on which the political, moral, philosophical, religious, etc., "superstructure" grows up. Practice engenders theory, material production gives off spiritual; the latter, with the growth of a manifold division of labour and the fixation of the divided functions in classes (which are distinguished from one another by their relationship to the means of production, in the first place by their position in the process of production and distribution), is relatively split off from its foundation and creates the illusion of sovereign independence in the consciousness of its agents. So there arises the illusion of an "independent" history of religion and morality, of law and philosophy, of science and art, etc. Men, social-historical men "as they are conditioned by the means of production of their material life", "are the producers of their own imaginings, ideas, etc."⁶² The latter are thus "the ideological reflections and expressions of this vital process".⁶³ Which far from excluding, on the contrary, presupposes their active character. Thus society acts on the arena of history in its concrete historical definitiveness. Its productive forces (the unity of means of production and labour power), its economic structure corresponding to the technical production basis and the level of productive forces; its state organisation, its "mode of presentation", comprise a definite morphological unity. So this historical social whole (Totalität)

MARX'S TEACHING

appears as a concrete subject of history with a multitude of its own concrete qualities and corresponding definitions. The task of science is "to represent the whole thing in the aggregate and therefore the reaction of these different aspects on one another". But all this aggregation of influences and connections has its material basis even for the cloudiest sublimations: the material mode of production and consequently, in movement, the process of direct material production of life, active social practice, which gets its expression in social consciousness.

It is not social consciousness which determines social being, but, on the contrary, social being as the foundation determines social consciousness.

But historical society is itself a dialectical unity of opposites. The process of the production of life, that is the process of labour, the process of the growth of productive forces, is its material content, fundamental and direct. The "economic structure of society" is its content form in which the movement of productive forces takes place concretely and historically. The opposition of form and content becomes a contradiction. When this contradiction between productive forces and productive relations breaks up the whole unity, social revolution takes place, society passes from one stage into another. The juridical relations of property (the juridical translation of productive relations), the state superstructure, the old "modes of presentation", all collapse and give place to new forms.⁶⁴ The old forms were once "forms of development". They have been dialectically converted into "fetters on development", into their own opposite. This contradiction is "cancelled" in the process of revolution. But the process of revolution is not an automatic process: men make their own history.⁶⁵ However, the laws of social development revealed by Marx tell us how great masses of people, divided and united by common conditions of life, behave when these conditions of life change. The contradiction between the mode of production and the development of productive forces is shown and expressed in a number of other contradictions which lay bare the opposition of classes, intensify class polarisation, sharpen class interests, produce an ideological demarcation of classes, force on the forma-

N. I. BUKHARIN

tion of the class self-consciousness of the revolutionary class and its allies, and through the revolution of living people, through the struggle of the revolutionary class against the class which fortifies the old productive relations in the concentrated form of its state power, through the destruction of this power and the smashing of its opponents' forces, through the emancipation of productive forces and the organisation of new forms of movement of these forces, society passes into another form of historical being.

So Marx looks at society as an historically concrete society, the historical form of which is a transitional form. The "general laws" of historical development therefore include the laws of the transition of one social form into another and presuppose specifically historical special laws for different social-economic formations.

There lies at the basis of the theory of historical materialism the materialist premise that all the vital wealth of society, the whole content of its complete process of life, is in the long run determined by the level of power over nature, by the degree of real mastery (and thus of real change) of the external world, i.e. by the movement and self-movement of productive forces, by the process of material labour which always takes place in a concrete historical social form, that is to say, which is continuously connected with the economic structure of society. In relation to the material, productive, motive forces and the changing economic structure of society, the natural premises are, as such, a relative constant, although an extremely important constant as being historically the starting-point of development. Moreover, the movement of these natural premises, as premises of social development, is derived from the movement of productive forces. The hidden, so-called "natural resources" do not function socially. They must cease to be "hidden". Only when they are transformed from matter into material, from "things in themselves" into "things for us", entering the stream of artificial material transformation, that is the stream of the material labour process, becoming objects of change, are they changed (both qualitatively and quantitatively), as "elements" of social development. But this quantitative and qualitative change is a consequence of the

MARX'S TEACHING

development of productive forces. It is just the same also with biological "human nature", that is with the other aspect of "the natural premises" for social development. "Corporeal organisation", man of the "race" or "species", is the historical premise of social and historical man, and a relatively constant one. Once again, a change in "human nature" (either a corporeal one or its spiritual correlation) is derived from social development. The law of its development is determined by the law of the development of society as a whole at the basis of which lies the law of the development of productive forces, that is a specifically social law. In this way one-sided "geographical materialism" which deduces all historical development from climatic conditions, the soil, rainfall and water supply, and such factors, is rejected, as also is biological materialism (i.e. positivism) which mechanically transfers biological laws to society and deduces the laws of social development from so-called "human nature" as its biological nature. But the materialist conception of history in the first place strikes a mortal blow at all forms of idealism in the social sciences. Phenomena of social consciousness are derived from the phenomena of social being. The material fact of the process of the development of productive forces (or their decline) in its social-historical form, that is the changes in the productivity of social labour and in human relations in the process of that labour (productive relations), these are the main determinants which in the last resort, either directly or indirectly, immediately or through a number of intermediate links, condition the changes in the whole sphere of superstructures, political, juridical, moral, scientific, æsthetic, philosophical. The morphological unity of society (although contradictory and moreover developing these inner contradictions in different directions) is conditioned precisely by the fact that it has a single material basis. The superficial idealist point of view in the social sciences starts from a different species of the forms of social consciousness, without even posing the problem of the objective determinants of this consciousness. The materialist conception of history, on the other hand, analyses just these material determinants, the movement of which determines the movement of the corresponding

N. I. BUKHARIN

thought forms. "According to the different modes of production in different countries in different epochs, a hierarchy of soul, mind and understanding corresponds to the definite economic hierarchy. . . . The psychology of classes corresponds to the hierarchy of social relations and the economic development of classes." ⁶⁶ The class struggle fills the whole history of class societies, is the vital nerve of the historical process. But this struggle itself, the disposition of class forces, their concrete combination, is conditioned by the development of a definite mode of production. It breaks out, on the other hand, not only in the realm of the struggle of direct material interests, but also in the highest realms of ideas. Even the general forms of thought in an age express and reflect its specific style and its class division, that is, in the long run they express the mode of production together with the level of productive forces.

Marx's doctrine of the movement of social-economic formations is far from being an artificial intellectual system. It generalises an enormous practical and theoretical experience. Of course "economic structures" and their superstructures cannot express all the fullness of the concrete historical stream of full life in all its variety. But, as has already been remarked earlier, while poorer than life, these generalisations are richer than the mosaic offered by banal empiricism which is usually spiced with a dose of "morality". They express the main and decisive relationships, those which determine the routes of historical movement. "Pure capitalism" is, undoubtedly, an abstraction, though in many cases a very useful abstraction. But "impure" capitalism is the reality, both as a combination of "capitalisms" and as "world capitalism" in whose pores the relics of pre-capitalist formations are also contained. Its "pure class structure" is, of course, an abstraction. But the class structure of real capitalism is actually such a structure that the masses are composed of wage workers while the monopolists of the means of production command economy (and the state). The "pure proletariat" is an abstraction. But the living unity of the mass of proletarians of various qualifications with its outer circumference and with a strong, real core, is a reality which is really struggling for its real rule. Therefore the

MARX'S TEACHING

doctrine of the change of historical and economic formations, as a doctrine of the process of " history ", adequately expresses the real historical process. The Wundtband-Rickert opposition of " history " to " theory " must be put away in the archives. History as a mechanical load of separate facts is not history as a science. The co-ordination of individual facts and their ranking under the teleological and theological command of the Kantian categorical imperative is not a science. " Zweckwissenschaft " à la Stammler, Stolzmann, etc.,⁶⁷ is not a science. On the other hand, there can be no scientific system which merely gives a bare scheme of abstract character. But the question of the empty abstract character of this or that theory is a concrete question, a question of the factual analysis of that theory, a question of checking it. The opposition of " theory " and " history " is a relic of the outlook which supposed that nature has no history and therefore that its laws are eternal. " Natural " eternal law and the shame-faced system of relations fixed by these " eternal laws " is the basis of " theory ". " Theory ", according to this view, is a system of " eternal laws " brought into connection and formulated. History, on the other hand, is the outflow of the free creative spirit which creates the new, producing chiefly ever new ethical values. So human history is, as Stammler expresses it, " Gegenstück " with regard to nature, while the sciences of the spirit are " Gegenstück " with regard to the natural sciences. Together with the destruction of the dualism in principle of nature and society, of natural and social laws, there also goes the opposition in principle of theory and history.

So the materialist conception of history is materialist dialectic in its specific and enriched form ; it is the dialectic of a social and historical process which reveals its objective dialectic. Marx was the first to deduce the laws of historical development on the basis of a wealth of material, a great sea of facts, a vast acquaintance with the historical material of various ages and peoples, an unusually rich experience of modern European history and of the practice of the social class struggle of which he was himself a great master in all its spheres. This is a monumental theoretical structure the like of which the world has never seen. Where

N. I. BUKHARIN

formerly "chance" ruled, the actions of warriors and kings, Cleopatra's nose or Napoleon's stomach, where man saw an incomprehensible struggle of abstractions and symbols, a bloody carnage for the forms of religion or the sign of cross against crescent, where idealist philosophy gave a substitute for explanation by compelling the "spirit" to embody itself permanently in the real historical process, here for the first time real science assumed its place, destroying the illusory connections of things and processes and putting actual connections in their place. Society, historical society, was scientifically "discovered" as alive and complex, internally contradictory and mobile, connected with nature and actively influencing it, a unity developing its contradictions and passing from one qualitatively defined formation to another, with peculiar specific laws. So the general laws of social and historical development (Engels) already melt into themselves the special laws of the movement of specific social and historic formations expressing the specific forms of moving contradictions. The laws of the development of feudalism, for example, are not the same as the laws of the development of capitalism. The laws of movement of each such formation are original, although they also "act" on the basis of general laws, established by the theory of historical materialism. Nor can it be otherwise, for the productive forces are different (both qualitatively and quantitatively), the economic structures are different, the classes are different, the whole vital unity and all its contradictions are different. Therefore, for example, it would be foolish to look for the law of periodical crises of over-production in natural forms of economy—just as it would be foolish to look for flexible forms of scientific thought in stagnant societies. This is not the consensus of Comte, with its wooden hierarchical categories. Here everything is contradictory, mobile, dialectic, here vital historical life is at play. Marx established an infinite variety of general and partial laws of "the second order" besides the vast and mighty generalisations which form the "core" of the materialist conception of history. His brilliant analysis of the groups within a class, of ideologues and practitioners; his analysis of the division of labour and the influence of this division on the

MARX'S TEACHING

whole structure of thought ; his analysis of the different forms of superstructure and, in the first place, his teaching on the state, which is in itself a whole revolution in thought and the sharpest weapon in the practical political struggle of the proletariat,⁶⁸ and so on, and so on, these are all most important achievements in science. It can be said without any exaggeration that his very footnotes (the theoretical ones, of course) have nourished a whole pleiade of the most important minds in the camp of official science. Take, for example, his remark about the rôle of Protestantism in the genesis of capitalism,⁶⁹ which has evoked a whole literature (Sombart, Max Weber, in particular, Trötsch, etc.).

In the theory of historical materialism the teaching on classes and class struggle has particular importance. Classes are the living collectors and agents of the contradictions of each (class, i.e. presupposing class society) mode of production. The movement of these contradictions and their revolutionary solution runs through the class struggle in its triune economic, political and theoretical form. Certainly the dominant ideas are the ideas of the dominant class and the dominant "mode of presentation" (or "Wissensform", as Max Scheler calls it "for originality") is the "mode of presentation" characteristic of it. Thus here are formed within society its living Totalitäten, classes of which one in the course of development becomes the revolutionary class par excellence. Under definite historical conditions it becomes the grave-digger of the old society.

The materialist conception of history, with its doctrine of class struggle and revolution, is an objective scientific theory. It explains, by starting from the most general laws of being and becoming (materialist dialectic or dialectical materialism), the general objective laws of human history. This is not a subjectivist structure. It is not a voluntarist theory with the will as primal and all-determining factor. The will is limited at each given moment by definite conditions. But this theory is in the highest degree active and revolutionary. It has nothing in common with the disgusting fatalistic caricature on Marxism of which social-democracy is the organised apostle. The "objectivism"

N. I. BUKHARIN

of this caricature is historical fatalism, which is, in its turn, the weapon of Fascist activism. The Marxist doctrine of the laws of social development is an instrument for the overthrow of capital. It gets its further interpretation in the theory of capitalist development, in which the general laws of social dialectic assume an even more concrete form as the laws of the development and doom of capitalist society and the laws of its inevitable transition into socialism through the revolution of the proletariat and its dictatorship.

III

THE THEORY OF CAPITALISM

Marx takes capitalist society as a specific historical category. It is a society working on a machine technique of which the economic structure possesses peculiar distinguishing marks. It is a society producing for the market (commodity production); it is a society in which the means of production belong to a special class purchasing labour power (the capitalist bourgeoisie) and which is in opposition to its antipodes, deprived of the means of production and selling its labour power (the proletariat). Only in the combination of these conditions do the means of production become capital, the decisive mass of products and labour power, value, labour, the producer of surplus value. In such conditions social production is capitalist production, the process of the self increase of capital. A special "law of motion" of this specific society is discovered and is the task of theoretical economy in "the narrow sense" (in distinction from political economy in "the broad sense", which also embraces other historical-economic formations).⁷⁰ The very statement of the problem is a complete revolution in science, for before Marx (and after Marx insofar as it is a question of bourgeois science) the categories of political economy were taken as the "eternal" and "natural" categories of any productive process. In this lies "all the wisdom of modern economists who are trying to prove the eternal nature and harmony of existing social conditions".⁷¹ Thus "Capital is not a thing. It is a definite interrelation in social production

MARX'S TEACHING

belonging to a definite historical formation of society. This interrelation expresses itself through a certain thing and gives to this thing a specific social character".⁷² Only when the means of production (things) are means of exploitation, and even then on the basis of commodity production, of hired labour power, do they become capital.⁷³ Marxism rejects any general, unhistorical, eternal statement of the problem, either a vulgarly naturalistic one derived directly from the thing, or a "psychological" one derived from the relation of man to the thing. The laws of economic theory are social-historical laws. But Marxism also inevitably rejects attempts to separate social relations from things and thus to spiritualise these relations. Capital is not a thing but a relationship appearing in things, that is, not a bare relationship between people outside of any material relatedness to things. A thing would not be capital if there were not a definite social relationship. But, on the other hand, if it were not for "things" (means of production) there would not be capital. In relation to the process of labour as such, the social-historical structure is the form. In relation to the historical structure labour is the content. But this content is always given in its concretely historical form. Outside of it, it becomes simply meaningless, an empty and contentless abstraction. Hence it follows that the object of the economic theory of capitalism is the process of production and reproduction in its historical form. For the Marxist theory of capitalism does not work on idealist sociology but on the materialist conception of history. As we have seen, the materialist conception of history embraces theoretically the "general laws" (Engels) of social development, including at the same time the "laws of movement" of different historical structures as a whole, the reproduction of the whole of social life, from its materialist basis to its ideological sublimations. Economic theory analyses the reproduction only of these materialist foundations. The economic theory of capitalism (political economy in "the narrow sense") analyses the specific "laws of movement" only of one historically limited structure, the laws of movement of capitalist economy, i.e. the reproduction (understood in its arising, development and inevitable end) of the material basis of

N. I. BUKHARIN

capitalist society. Thus the materialist conception of history is logically the premise of the theory of capitalism. Here too is shown the great compactness of the theoretical building which Marx constructed. ' Consequently the attempts to separate Marx's economic theory from his sociological theory are absolutely stupid, just as it is stupid to separate his sociological doctrine (the theory of historical materialism) from his philosophical doctrine (the theory of dialectical materialism). If the labour process has such an immense importance from the point of view of the theory of historical materialism, then it is perfectly clear that it must also have a decisive importance in the theory of political economy. If the conception of the mode of production is one of the main conceptions of the theory of historical materialism, then it is perfectly clear what importance this category must have for economic science. It is of course not accidental that Marx gave his classical exposition of the historical-materialist conception as the preface to *The Critique of Political Economy*. It is not here just a matter of external form. The profoundest inner meaning is present here. The materialist conception of history is the premise (the " preface " in the broad meaning of the word) of economic theory in general and the economic theory of capitalism in particular. Consequently all kinds of theoretical economic idealism, of subjectivism, of non-historical views, are absolutely alien and deeply hostile to Marxism. " The relations between people " are here taken not as forms of a psychological connection, but as being objectively the historical presentation of the labour process. The separation of this historical form from its content leads inevitably to its separation both from materialism and dialectic. For the chief contradiction lies in the sphere of the conflict between this content and its form. The analysis of this objective, real contradiction is the core of the whole theory. The categories of political economy must therefore reflect the material process of production in its specifically historical social form.⁷⁴

Capitalist production is the generalised form of commodity production, when labour power also becomes a commodity which gives an absolutely original appearance to the whole economic structure. Commodity production in general has an extremely

MARX'S TEACHING

important peculiarity, unknown in any form of natural economy. This peculiarity lies in the fact that the social connection between the different commodity producers is formed through exchange. The social character of labour in this divided social whole, of which the agents are formally independent of one another, is not recognised by the subjects participating in economy. Here we have a spontaneous character in development, its "blind" course. Here the spontaneous and irrational social law is in direct opposition to the separate commodity producer. So here we have a special connection between the causal and teleological range of phenomena. Commodity and commodity-capitalist society is not the aim-proposing subject, it is not a "teleological unity", as, for example, under the socialist mode of production. It is split up, though relatively united. It is not a mechanical sum of parts, the various commodity producers and enterprises are not *membra disjecta*: society nevertheless exists as such. But the type of inter-economic connection by means of exchange is an absolutely special type. The character of social unity is here extremely original. This is not the unity of a purposive organisation, but the spontaneous, anarchic, exceedingly contradictory and relative unity of formally independent agents of commodity production nevertheless objectively connected with one another. Society, as a whole, cannot here, by its very nature, give itself any kind of aims, for it is not a unified subject, but only the artificially functioning and anarchical combination (not sum!) of "members" connected with one another. They, the separate commodity-producers, set themselves aims, for each of them is a "purposive subject" subordinating his actions to the principle of economic rationalism sub-specie profit. But the social product of their intersecting wills and corresponding actions is far from coinciding with these aims, but partially directly contradicts them (ruin in the competitive struggle, bankruptcy in time of crisis, lowering of the average rate of profit, etc.). This is the so-called law of heterogeneity of aims, which is extremely typical for capitalist society. Therefore the causal laws of development have no directly teleological expression, which might conceal them and be their teleological hypostasis.

N. I. BUKHARIN

There is here no such state of things as would allow us to examine one and the same phenomenon both theoretically (scientifically, causally) and according to a standard (teleologically, practically). We can talk of the causes of crises, but it is impossible to talk of their expediency from the point of view of the active agents of capitalist production and the conscious rationality of action (crises are not brought about, nor made, crises make themselves, i.e. arise spontaneously). Here there is no freedom for society as a whole, as a recognised necessity, but there is necessity and nothing else, confronting the agents of this society, as external in relation to them, independent of their will, an objective law, "blind", "iron", against which there is no remedy within the framework of the given society, for it is immanent in it. The social structure itself is the embodiment of this spontaneity. Society is here "Gesellschaft" and not "Gemeinschaft", if we use the same terms as Tönnies.⁷⁵ To discover the "laws of movement" of this society in its developed form, i.e. in that of capitalist society, is the task of *Capital*. Any society, whatever its historical form, must distribute (or there must be distributed within it) its joint labour—either well or ill—among the different spheres of production.

The masses of products corresponding to the different needs require different and quantitatively determined masses of the total social labour. That this necessity of distributing social labour in definite proportions cannot be done away with by the *particular form* of social production, but can only change *the form it assumes*, is self-evident. No natural laws can be done away with. . . . And the form in which this proportional division of labour operates, in a state of society where the interconnection of social labour is manifested in the *private exchange* of the individual products of labour, is precisely the exchange value of these products.⁷⁶

⁴In other words, in anarchistic "blind" society, in which development is spontaneous, there must be a law of development which would spontaneously, while opposing a "blind law" to people, regulate in some way or other the distribution of labour in the various spheres of production. This "blind" "law of movement" which acts as spontaneous regulator, is the law of value, which acts through the market and the "barometric

MARX'S TEACHING

fluctuations of price ". Value is the quantity of socially-necessary labour expended on the production of a unit of a commodity, in distinction from its use value, determined by the natural substance of the commodity. Price is the empirical market expression of value. That price has a definite connection with the productivity of social labour, and, consequently with the quantity of value (in its Marxist sense), is evident at the first glance. But the matter is even deeper if looked at from the point of view of social reproduction as a whole, that is the regular repetitions of the productive cycle. From this point of view exchange is a definite " factor " of reproduction inferring its further progress. The empirically superficial laws of exchange therefore draw into themselves the deeper laws which derive from the sphere of production and appear in exchange. The empirically superficial facts are facts of the market to which price categories correspond. But value stands behind the back of price. This is far from being a metaphysical reduplication of price, but is a deep and general law of the movement of commodity economy on which alone it is possible to understand the movement of prices. In simple commodity-economy price fluctuates around value as its centre. If too much of a given commodity is produced the price falls, a redistribution of labour power takes place in this production. If a small amount is produced the opposite takes place. Prices rise, labour power pours in and thus another redistribution of joint labour time takes place. In capitalist society the mechanism of fluctuation is more complex. Here prices fluctuate around the " cost of production ", and not directly around value. The social interdependence of the different fractional parts of the socially divided labour, the objective connection between the subjectively independent commodity producers is fixed behind their back. Whether much or little of the commodities *a*, *b*, *c* has been produced is only fixed indirectly, from the signs given by prices. Proportions in the distribution of labour change continually in accordance with the change in the productivity of labour. So the " blind " objective law of special connections and relations between people which regulates the process of material production, assumes the form of a quality of the thing (the value of the

commodity piece). In a dismembered society in which even the spheres of production are not organically whole and in which the main principle is the extreme contradictoriness of the whole structure, the laws of the distribution and redistribution of productive forces (in the last resort the mass of labour, dead or alive) can appear in no other way than through their expression in commodity pieces, as values, which in their turn have their general money equivalent. If there is no organised production and organised distribution, if the process of exchange is formed from a number of separate and different exchange acts, in which separate commodity units appear, then it is only through the value of a commodity piece and, correlatively, its price, that the process of the redistribution of the masses of labour can take place in its social scale. "Social", in the sense of the distribution of quantities of labour over the social spheres of production, is here not given all at once, in unbroken front, it is not given as single acts of the distribution of labour which embrace whole spheres in their totality. The "social" is here formed from the "individual", which in its turn grows up on the basis of social determinants objectively given. The functioning of money as the general value equivalent is also connected with this. The rôle of the measure of value, of the price scale, etc., this is all "adapted" to serving this kind of reproduction which is inferred by the infinite quantity of exchange acts, and not by the organised distribution of quantities of labour all at once on a scale of whole spheres of social production. Therefore money is the "soul" of commodity economy. So the social law which regulates the distribution of quantities of labour among spheres of production and expresses the mutual work of human beings connected by the division of labour, assumes the form of a quality of the thing. On this foundation we get a universal aberration, characteristic for the commodity capitalist world. The relations of human beings are perceived as relations of things. This is the phenomenon which Marx called commodity fetishism and which appears in an extremely bloated form in the categories of bourgeois political economy, starting with the fetishism of the elementary commodity and passing through the fetishism of money to finish

MARX'S TEACHING

in the fetishism of capital.” The social relations of human beings, appearing in the substance money, are represented as a quality of things (gold, the power of gold, the golden calf). The social relations of people, which only appear in the substance capital, are represented as qualities of the means of production in general. These means of production are divided up of themselves by a supernatural force which engenders profit (the theory of the “productivity of capital”) just as the earth is divided up of itself by an illusory force which engenders rent. It is from such categories that the conceptions of bourgeois theoretical economy are made up.

If Adam Smith investigated the “wealth of nations”, Marx begins his *Capital* with an analysis of “the wealth of societies in which the capitalist mode of production reigns”, wealth whose elementary form is the commodity. In the dual character of labour (abstract and concrete labour), in the contradiction between the value and use value of a commodity, are already found the further contradictions whose movement conditions the movement of capitalist society as a whole.

The development of exchange also draws labour power into its orbit (Marx describes the historical and violent premises of this with intense force). Labour power also becomes a commodity, but a commodity *sui generis*, a special and specific commodity, although “subordinated” to the general laws of commodity circulation.

Labour power has both value and use value. Its value is determined in exactly the same way as that of other commodities. In the general circuit of the vital process, from the point of view of reproduction as a whole, that is from the point of view of the repetition of the productive process, the reproduction of labour power is an essential factor. The reproduction of labour power is a process of consumption (the unity of production and consumption is manifested in this; a unity which does not exclude but presupposes contradictions). This process of consumption is in its turn a process of transferring values of the means of consumption into the new sphere of production of labour power. Thus the value of labour power is fixed by the value of the

necessary means of existence (which vary in accordance with the different qualifications of this peculiar form of commodity). The use value of labour power (for which the capitalist buys it) is fixed by the fact that it possesses the quality of being able to develop a greater quantity of labour than it needs for its own reproduction. So that even if the capitalist pays for his labour power according to its full value, he still has a surplus value left. The general formula of capital is M (money)— C (commodity)— M' (money increased). So accumulation is created, not in the sphere of circulation, but in the sphere of production, and is only realised in circulation. Consequently the process of capitalist production is a process of the production of surplus value.⁷⁸

This discovery of the secret of surplus value is a discovery of the main levers of the capitalist mechanism, of the main inner springs of its self-movement. Neither Smith nor Ricardo drew any distinction between labour and labour power and so became confused in contradictions as soon as ever it was necessary on the basis of the theory of labour value, to explain the fact of surplus value.⁷⁹

Surplus value, in its turn, is divided into an accumulated section and a section consumed by the capitalists and their servants. The accumulated part, i.e. the one incorporated in functioning capital, of surplus value, is in its turn, like capital as a whole, divided into a constant part (the means of production) and a variable part (labour power). In the process of production constant capital (constantes Kapital, " c ") merely transfers its value into the value of the product. Variable capital (variables Kapital, " v ") not only reproduces its value, entering into the composition of the value of the product produced, but also creates surplus value (Mehrwert, " m "). The labour day is divided into two parts, the necessary labour time when the workers reproduce the value of their labour power, and the surplus time when surplus value is created. Correspondingly the mass of surplus value can be increased either (1) by dint of increasing the working day ("absolute surplus value"), or (2) by dint of curtailing the necessary labour time ("relative surplus value"). The first is con-

MARX'S TEACHING

nected with direct attacks on the workers. The second is directly connected with raising the productivity of labour in the production of means of consumption.

Capitalism differs from other forms of exploiters' economy (slave-owning systems, feudalism) by the fact that the greed for surplus value is unlimited. If the natural exploiters' formations had limits in the needs of the ruling classes, then here we have a limitless "drive for profit", without any previously given limits to accumulation. At the same time the inner tendencies of development powerfully force on the whole process. Here the mechanism, in conditions of free competition, was as follows: the value of the commodity is fixed by the quantity of socially necessary labour (i.e. necessary for the production of the given commodity with an average technique and other average quantities). The enterprise with a higher technique has a greater productivity of labour and consequently a much lower individual value of the commodity unit. But in the market it is a matter of socially necessary labour time. So the difference between these quantities is the basis for getting differential profit (surplus value is broken into different streams, whilst profit is part of the whole surplus value which flows to the industrial capitalist in opposition to other forms of capital and to landowning, which receives rent). The conditions of market competition force the rest to follow the general model and what was an exception becomes typical, the whole level is raised, all scales are changed and a new circle begins. Thus, if the application of machines is the technical basis of capitalism whilst the machine is itself an historical category, then the economic conditions of capitalism have a tendency towards the continual revolutionising of the methods of production and its technical basis. But, on the other hand, this growth of the productive forces of capitalist society comes into conflict with the limited conditions of capitalist appropriation. The analysis of this contradiction is one of the essential parts of Marx's economic theory.

Together with the process of accumulation the organic composition of capital $\left(\frac{c}{v}\right)$ is raised, the relation of constant to variable

N. I. BUKHARIN

capital, that is the mass of means of production is increased, the raw material and so on put into motion by a single worker, and simultaneously the productivity of social labour grows at an immense speed.

The process of the production of capital, examined as a regularly repetitive process, is a process of simple reproduction when there is no accumulation and of enlarged reproduction when there is accumulation. This process of reproduction represents in itself an immense theoretical problem, for the course of reproduction presupposes a unity of production and circulation and also technical correspondences and proportions fixed not only in value, quantitatively, economically, but also naturally and qualitatively. Schematically Marx's teaching on the reproduction of capital can be represented as follows :

Let the whole social product equal $c + v + m$

A (production of the means of production) = $c_1 + v_1 + m_1$

B (production of the objects of consumption) = $c_2 + v_2 + m_2$

In the case of simple reproduction we have the following as its necessary conditions.

1. Since the whole product A (i.e. the sum of $c_1 + v_1 + m_1$) consists entirely of means of production (conditionally, the iron, coal, machine, substantial husk), then it must all go on the compensation of the constant capital of both subdivisions, i.e. the necessary condition of reproduction is the premise expressed in the equation $c_1 + v_1 + m_1 = c_1 + c_2$.

2. Since the whole product B (i.e. $c_2 + v_2 + m_2$) entirely consists of objects of consumption (conditionally, a textile wheat natural form), then it must go entirely in the consumption of the capitalists and workers of both sub-sections in conditions of simple reproduction. This brings us to the equation: $c_2 + v_2 + m_2 = v_1 + m_1 + v_2 + m_2$.

3. Since A itself produces for itself its own constant capital c_1 and must give up the remainder for B (i.e. $v_1 + m_1$), then B itself produces for itself $v_2 + m_2$ and must give up c_2 for A, that is $c_2 = v_1 + m_1$.

On rearranging the first two equations they give a third equation. And this is the condition for simple reproduction. *The sum of*

MARX'S TEACHING

the incomes of the first subdivision must equal the constant capital of the second subdivision.

In the case of enlarged reproduction it is a much more complex matter. Here also it is possible to bring out a system of equations which will show the possibility of such a reproduction in the corresponding conditions of the whole process.

Let us suppose that :

$m_1 = a_1$ (goes to the consumption of the capitalists) + β_1 (which is capitalised) ;

$$m_2 = a_2 + \beta_2.$$

Let us suppose further that :

$\beta_1 = \beta_{1c}$ (which is subject to accumulation as a part of constant capital) + β_{1v} (which is accumulated as a part of variable capital).

$$\beta_2 = \beta_{2c} + \beta_{2v}.$$

Then the general product of both subdivisions is expressed in the formula :

$$\begin{array}{lcl} \text{A .} & . & . & . & . & . & \boxed{c_1 + \overbrace{v_1 + a_1}^{\beta_1}} & + \overbrace{\beta_{1c} + \beta_{1v}}^{\beta_1} \\ \text{B .} & . & . & . & . & . & \boxed{c_2 + v_2 + a_2} & + \underbrace{\beta_{2c} + \beta_{2v}}_{\beta_2} \end{array}$$

In the sphere A, $c_1 + \beta_{1c}$ must remain by force of its natural form, the rest $[(v_1 + a_1) + \beta_{1v}]$ must be cancelled. In the sphere B, $v_2 + a_2 + \beta_{2v}$ remains, $(c_2 + \beta_{2c})$ on the other hand, must be cancelled.

So we get the equation :

$$[(v_1 + a_1) + \beta_{1v}] = c_2 + \beta_{2c}$$

which is the condition for enlarged reproduction in its most general form. Of course, in reality the whole process, since it is contradictory, proceeds far from smoothly and the schemes themselves can only be looked upon as an expression of tendencies with a definite law, and as nothing more.

It is exceedingly important to note that the analysis of the conditions of enlarged reproduction given by Marx in his famous

arithmetically formulated schemes in the second volume of *Capital* brings in both the value (economic) and the natural (technical) aspect of reproduction. The process of exchange between the two spheres presupposes not only a "logic" of value but also one of technique, which is derived from the law of technical interconnection of the different spheres of production. So here there clearly appears the whole impermissibility of separation from the "things" in which "social relations" manifest themselves.

The process of reproduction is the process of the reproduction of commodities, it is a process of reproduction of surplus value. It is the process of reproduction of the productive relations themselves and of their class agents. The structure of capitalist society, as a specifically historical category, is a special class structure. Therefore this class character of capitalism is expressed and reflected in the specific categories of political economy. If value expresses the objectively given fact of the social co-operation of people in any commodity economy (here, consequently, it is a question of the cluster of social connections horizontally, outside the vertical class hierarchy), then the category of surplus value already expresses the relation of class exploitation, whose object is the wage labourer. If money is the more abstract reflection of co-operation in commodity economy, then capital (including money capital) is the classical class relationship of exploitation. If the form of commodity is not yet eloquent of the class structure of society (commodities also exist in simple commodity economy), the commodity of labour power is, however, already a category of class capitalist society. Division into classes is founded directly on the relations of human groups to the means of production. From the polarised relations to the means of production there arise the different functions in the productive process, the different positions in the process of distribution (various kinds of "income"), and different (for the class poles of the polarised opposites) material interests which condition the class struggle. The class division of capitalist society runs therefore like a red thread through all the main categories of Marx's political economy, in an adequate expression of the contradictory movement of capitalist reality. The transformation of the historical transition

MARX'S TEACHING

form into a "natural" and "eternal" one is characteristic of bourgeois economic theory. So also are the illusory "destruction" of all the real contradictions of capitalism and the setting up in their place of social "harmony", the general concealing and damping down of the class struggle.⁸⁰ Marx, on the other hand, gives an analysis of genius of all the contradictory factors in capitalism, while the class struggle is revealed at the heart of all the main categories. "Wages" contain an "historical and moral element", being the converted price (i.e. value) of labour power and at the same time expressing the relation between the contending class forces. Surplus value is correlative with the value of labour power. The length of the working day, the rate of exploitation (the relationship $m : v$), accumulation, the divided forms of surplus value (profit, rent, etc.), these categories all express the real class relations in capitalist society. With Marx "economic" and "social" are indivisible. The main class categories of economic theory, specific for capitalism, inevitably assume the form of value.

Thus the problem of "Machtgesetz-ökonomisches Gesetz", the problem of the relations between "economic law" and "class force", is solved by Marx in such a way that the relations of force between the classes are included in the movement of economic quantities. Not "pure economic" and "non-class", "a-social" categories which are only "distorted" by categories of another kind, categories of a "special", "class" character; not "economics on the one hand and classes on the other", but social-economic categories in which class division is included as the characteristic feature of their specifically historic nature, this is what is characteristic for Marxist economic theory. In accordance with this, the capitalist mode of production is, says Marx, "on the one hand the process by which the material requirements of life are produced, and on the other hand a process which takes place under specific historical and economic conditions of production and which produces and reproduces these conditions of production themselves, and with them the human agents of this process. . . ." ⁸¹

Bourgeois political economy has seen three "purely economic",

N. I. BUKHARIN

“ non-historical ”, “ factors of production ”: capital, land and labour, which “ naturally ” give birth to three kinds of income, interest, rent and wages. Whilst here there takes place in reality a division of the value produced by labour, with a disintegration of surplus value on the basis of the monopoly of specific means of production, these “ factors ” appear fetishistically to the agents of capital and their ideologues as the independent sources of revenue and even as the very value substance of this revenue.⁸² “ Rent grows out of the earth ”, “ gold gives birth to gold ”. All the recent and latest theories of “ imputation ”, of “ productivity ”, etc. (“ Zurechnungstheorien ”), are built upon this fetishistic illusion.

The process of the reproduction of capital as a whole, as a unity of production and accumulation, in order to be understood calls for an explanation of the divergence of price from value. In simple commodity economy value is a “ law of movement ” directly apparent in prices. In capitalist society fluctuations of prices occur around “ production prices ”, and from this point of view the law of value is converted into the law of the prices of production, which appears as the historical development of the law of value and can only be understood on the basis of the latter.

To understand this transformation it is essential to remember that the capitalists are interested in a profit on the whole of their capital expended. If we put the landowners, etc., on one side and accept that the whole surplus value equals the sum of profit, while society consists only of workers and capitalists, then the

quantity $\frac{m}{c + v}$ will interest the latter. But in fact capitals of different organic composition exist, since surplus value is created

only by living labour, i.e. variable capital, then $\frac{m}{c + v}$ would inevit-

ably vary everywhere where there is a difference in the organic composition of capital. However, it is perfectly clear that through the mingling of capitals and on the basis of competition a spontaneous irresistible tendency to an average rate of profit is formed,

MARX'S TEACHING

that is to say, such a rate of profit as corresponds to the composition of the whole total of social capital. Marx showed that, as a result of this, prices in those sections of industry with a high composition of capital diverge above, and those with a low composition, below the value, and that prices do not fluctuate directly around value but around so-called production prices (the costs of production plus the average profit). Thus the law is here much more complex than in simple commodity economy. The superficial and directly empirical fact of the market price is explained by the prices of production, the latter by the average profit and the average profit by the organic composition of capital, which, in its turn, is explained by the whole sum of surplus value and the whole sum of capital.⁸³

We cannot dwell here on the whole immense wealth of ideas given in the three volumes of his gigantic work (in particular on the great importance of the question of the converted forms of surplus value, the theory of ground rent, etc.) and we will pass to the explanation of those more fundamental tendencies in the development of capitalism which arise from his analysis and are formulated by him.

1. The drive for profit, which is the specific regulating principle in capitalism, leads to the individual capitalist striving to get a surplus profit and to get it by the introduction of new technique. New technique, by raising the productivity of labour in the given enterprise, temporarily creates for it this surplus, differential profit. But the process of competition, and, as a result, the raising of the whole technical level, leads to an immense increase in the organic composition of capital in its social scale ($c : v$) and to a rapid increase in the productivity of social labour. But since the total surplus value is created by the total v , the growth of which lags behind c , then there inevitably follows from this a tendency for the rate of profit $\left(\frac{m}{c + v}\right)$ to fall.

2. Accumulation, which has its expression in the growth of $\frac{c}{v}$ creates specifically capitalist laws of the movement of population.

Surplus "hands" are created, the so-called "reserve army of industry" which grows the more rapidly the "greater the social wealth, the amount of capital at work, the extent and energy of its growth".⁸⁴ The greater the reserve army in comparison with the active, working section of the proletariat, the greater is the mass chronic overpopulation and the stronger is officially recognised pauperism. "This is the absolute general law of capitalist accumulation."⁸⁵

3. The drive for profit, as the motive force of accumulation, i.e. of the process of the growth of capital, makes production an aim in itself, cutting it off from consumption. The possibility of conflict is already to be found in embryo in the elementary form of the commodity, in the opposition of abstract and concrete labour, of value and use value. The movement of capital by systematically revolutionising technique and creating to an ever-growing extent mass production, tends towards its unlimited enlargement. If, on the one hand, the growth of $c : v$ implies an immense growth of production, on the other hand it also implies the putting of definite limits to that growth, for it implies a tendency to a relative curtailment of the mass of effective demand, defined by the movement of quantity of the whole variable capital (v). So here we have a contradiction between the growth of the productive forces of capitalism and its economic structure ("the capitalist husk"), which determines the falling behind of v . The analysis of the conditions of reproduction shows that, speaking generally, enlarged capitalist reproduction is fully possible, even without the so-called "third persons" (i.e., for example, the peasants). But the contradictory tendencies of development, owing to its elemental march, the possibility of vast preliminary investments in the production of the means of production, investments which only afterwards almost unexpectedly appear in the mass of completed articles of consumption, periodically lead to collisions between production and the effective mass demand, collisions which take place in the form of periodical industrial crises.

4. The competitive struggle among capitalists leads to the inevitable victorious march of large-scale production. Pre-

MARX'S TEACHING

capitalist forms perish. Capital overwhelms them with its machines, and consequently with a high productivity of labour, and therefore with low prices. Large-scale production has all these advantages in the competitive struggle. Therefore simple accumulation (and the concentration of capital corresponding to it) goes hand in hand with the ruin of the conquered, with the doom of handicrafts, with the perishing of the small and medium capitalists, with the passing of their capitals into the hands of the conquerors, with the centralisation of capital. The concentration and centralisation of capital are thus the consequence of deep causes enrooted in the very structure of capitalist relations in general and of capitalist competition in particular.

5. The accumulation of wealth on the one hand is accompanied by the accumulation of poverty on the other. Class contradictions are not only not softened, but, on the contrary, are sharpened. Immense human masses are transformed into wage labourers, are utilised by the mechanism of capitalist production itself and are in opposition to capital as a subversive, revolutionary, mass force.

6. On the other hand, the concentration and centralisation of the powerful means of production and the socialisation of labour proceed apace. These material prerequisites of the new society, expressing the growth of the productive forces of capitalism, come into conflict with its productive relations. The social character of labour comes into contradiction with the individual character of appropriation, production conflicts with consumption, the productive forces revolt against the productive relations. This fundamental contradiction breaks out periodically and is periodically "solved" in crises only to be reproduced on a new and wider basis. In other words, the process of enlarged capitalist reproduction appears also as a process of the enlarged reproduction of all its contradictions, which is inevitably bound up with the final explosion of the relative unity of society, i.e. with the socialist revolution of the proletariat. So the constant technical revolution and growth of the productive forces of capitalism leads with iron necessity to a revolution which destroys capitalism. This is not an automatic process of the collapse of capitalism. But the objective development of its contradictions determines the class will

N. I. BUKHARIN

in such manner that the proletariat comes forward openly as the grave-digger of bourgeois society.

While there is thus a progressive diminution in the number of the capitalist magnates (who usurp and monopolise all the advantages of this transformative process), there occurs a corresponding increase in the mass of poverty, oppression, enslavement, degeneration and exploitation ; but all the same there is a steady intensification of the wrath of the working class—a class which grows ever more numerous, and is disciplined, unified, and organised by the very mechanism of the capitalist method of production. Capitalist monopoly becomes a fetter upon the method of production which has flourished with it and under it. The centralisation of the means of production and the socialisation of labour reach a point where they can prove incompatible with their capitalist husk. This bursts asunder. The knell of capitalist private property sounds. The expropriators are expropriated.⁸⁶

With such words of fire, which cover the deepest penetration of the secret of social dialectic, does Marx characterise “ the historical tendency of capitalist accumulation ”. That which he formulated so monumentally in the *Communist Manifesto*, the heroic song of genius of revolutionary scientific creation, as the foundation of the practice of the proletarian revolution, here in *Capital* found its full force with all the connections and deductions of a proved scientific forecast.

Marx himself estimated his scientific work as follows at a quite early period, in 1852, even before the appearance of *Capital*.

And now as to myself, no credit is due to me for discovering the existence of classes in modern society nor yet the struggle between them. Long before me bourgeois historians had described the historical development of this class struggle and bourgeois economists the economic anatomy of the classes. What I did that was new was to prove : (1) that *the existence of classes* is only bound up with *particular*, historic phases in the development of production ; (2) that the class struggle necessarily leads to the *dictatorship of the proletariat* ; (3) that this dictatorship itself only constitutes the transition to the *abolition of all classes* and to a *classless society*.⁸⁷

So he saw the chief thing to be the doctrine of proletarian dictatorship and the transition to classless communist society. The scientific analysis of the movement of capitalism is only a means of foreseeing, and foresight itself is only a means for practical

MARX'S TEACHING

activity. Lenin remarks splendidly in one place that Marx gives examples " of materialism examining society in motion, and moreover not merely from that aspect of its motion which faces backward ". He grasps the coming, in order the more energetically, fully, actively and successfully to " change the world ". His analysis of capitalist society is great and incomparable. His forecasts are justified by the whole consequent course of historical development, just as the teaching on proletarian dictatorship and the transition to classless communist society founded on that analysis is also completely justified by the whole consequent course of historical development.

IV

THE THEORY OF PROLETARIAN DICTATORSHIP AND SCIENTIFIC COMMUNISM

The analysis of capitalist society made by Marx explains the main " laws of motion " of this society, the specific laws of this specific historical-economic structure. It appears that the development of capitalism develops all its objective internal contradictions, prepares the material prerequisites of socialism within the bosom of capitalist society, sharpens the contradictions of interests among the classes which are the main contradictions of capitalism, leads to the revolution of the proletariat and guarantees its victory. However, the very course of the proletarian revolution, which shows itself as the highest type of class struggle and passes over into civil war, brings the problem of revolution far outside the bounds of the interrelations of economics and politics, of the social-economic structure and its political superstructure, as well as of those transformations of catastrophic order which inevitably arise in the course of the victorious struggle of the proletariat.

Here we must dwell above all on the general theory of the state as developed by Marx and Engels. Surely in no sphere of social science has so much idealist and even mystical fog collected as in the doctrine of the state, that citadel of the con-

N. I. BUKHARIN

centrated power of the ruling classes. The idea of the "eternity"⁸⁸ of this institution, its obligatory character for every form of human community, its universality and extra-historical nature, has been and still is prevalent as the main dogma of the majority of bourgeois theories of the state and of the law, independently of whether we are faced with the elaborations of "sociology" or specific "juridical formalism", which looks upon the state and law as an autonomous sphere developing according to its own laws and in no way fundamentally determined by other aspects of social development. With Marx and Engels the state is above all an historical category, and furthermore, historical in the dual sense of the word. That is, in the first place it only arises in accordance with definite social and historical conditions, together with the rise of private property and the division of society into classes. It "dies out" together with the disappearance of classes. So it has its historical beginning and its historical end. Its existence does not coincide with the existence of society as such. It is not an indispensable attribute. In the second place, it is also historical in the sense that it really only exists in its concrete historical form of an adequate, historical-concrete, social-economic formation. Consequently, just as, in the sphere of economic categories, means of production only become capital under definite conditions, under a definite historic form, in exactly the same way society appears in a state form only under definite conditions. Just as in the sphere of the doctrine of society as a whole, "general laws" (Engels) include a wealth of laws of historically determined, concrete "formations", "means of production", "economic structures", so in the sphere of state doctrine its general definitions include a wealth of concrete and specific forms of state power.

The state, then, is by no means a power forced on society from outside; neither is it the "realisation of the ethical idea", "the image and the realisation of reason", as Hegel maintains. It is simply a product of society at a certain stage of evolution. It is the confession that this society has become hopelessly divided against itself, has entangled itself in irreconcilable contradictions which it is powerless to banish. In order that these contradictions, these classes with conflicting economic interests, may not annihilate themselves and society in a useless struggle, a power becomes necessary that

MARX'S TEACHING

stands apparently above society and has the function of keeping down the conflicts and maintaining "order". And this power, the outgrowth of society, but assuming supremacy over it and becoming more and more divorced from it, is the state.⁸⁹

Thus the state is the product of the class division of society. Being the product of the development of society as a whole, it is also a completely class organisation. Functioning as a force which "moderates" the conflicts of classes, it is far from being a "neutral", "superclass" quantity. It "moderates" but is far from "reconciling". It "moderates" by depriving the enslaved and exploited of the means and weapons of battle, by stupefying them with a number of ideological influences, by preserving the "order" which is the condition of the process of exploitation.⁹⁰ The very existence of the state is an expression of the complete irreconcilability of classes. Consequently at the basis of the rise of the state lies the process of the formation of classes. The process of the formation of classes means, however, the conversion of the process of production and reproduction into the process of production and reproduction of the surplus product alienated by the ruling class. This is the economic foundation for the appearance and consequent functioning of the state. The economic conditions of production, which are simultaneously the process of exploitation, need "order", that is an objective, forcible guarantee. Therefore economic exploitation is supplemented by political oppression, the economic "relation of mastery-enslavement" ("Herrschafts und Knechtschaftsverhältnis," Marx) is fixed in functions, embracing the whole of society in their organs of political organisation, the state. Economics engender politics, which is itself only "concentrated economics" (Lenin), "ökonomische Potenz" (Engels). Class society is a relative and deeply contradictory unity. Therefore its categories also bear the seal of this. Hence the original character of the dialectic of society and the state. The state is at the same time the product of society and its political expression. But this expression can only be a class one. The category of oppression, corresponding to the category of exploitation, presupposes a relation between the social subject of oppression (i.e.

exploitation) and its object. In such a case the whole of society is an exploiting society. The state is an utterly class machine of oppression, for it is the dominant class "constituted as state power". So therefore here there can be no question of social "solidarity", of a really super-class force, of the representative of the "general" interest, "general" will of the so-called "whole".⁹¹ But by state two things are often meant which do not overlap. For by state is meant only the organised subject of oppression, i.e. the organisation of the ruling class embracing the whole of society, having as its object the exploited class, but looked at without including that object (just as by trust is usually meant the "apparatus" of the trust with its direction, but without the workers who are the object of the squeezing out of surplus value), for by state is meant the whole of society in its state political form, i.e. the organisation of the ruling class as subject, with the inclusion of all its "citizens", including also the politically oppressed, economically exploited classes (i.e. class). However, even in the last case we can speak only of a class state, for the inclusion of all classes in a so-called state does not contradict one scrap its class-oppressing function, which infers a "normal" course of the process of exploitation. For in the given case the exploited class is only introduced as object. It is not a participant in the "machine" of oppression. Just as all society is exploiting, as a type, although its oppressed classes are only the objects of exploitation, and the state is an organisation of enslavement, though, in the given conception, it not only includes the enslavers but also the object of enslavement. "From the political point of view the state and the structure of society are not two separate things: the state is the structure of society",⁹² but "political power is precisely the official expression of the antagonism of classes in civic society".⁹³ We may also look at the state as the organisation of the ruling class in the narrow sense of the word, as the "machine" of oppression without including the object of that oppression—just as Marx looked at it in his mature works. The "general utility functions" of state power (railroad construction, fight against infectious diseases, etc.) are far from being the expression of "solidarity" but are the essential con-

MARX'S TEACHING

dition of the "normal" course of exploitation. "Social legislation" generally represents the same sort of estimation of forces as a concession to workers during a strike, with a transference of the process of exploitation to a higher stage. Here, therefore, there is never a question of the changing of the class essence of the state, as such, and of the class significance of its functions.

It is not difficult to see this upon an analysis of the function of the state in any historical type, including the analysis of the modern capitalist state. The laws passed (the legislative function) protect and assist in equal directions the enlarged reproduction of capitalist relations (the interests of property, of the balance of trade, of accumulation; the interests of the guaranteeing of power, the suppression and corresponding education of the oppressed classes; the interests of "defence" and attack against competitors, etc.). "The protection of personal security and social order" (police, gendarmerie, army), "the protection of inherited and acquired rights" (justice), the cultural functions (education, hygiene, etc.) and the state church, the struggle against competing states, all this in essence has a clearly expressed class character, being covered by the specific ideology of "law" as the more or less ideal standards of human communion. The machinery of oppression, possessing its own material technique (the means of physical destruction, punishment and fear) and powerful organisations furnished with this technique (the army, police, courts, etc.) which form parts of the universal organisation of the ruling class embracing all society—this machinery appears under the pseudonym of the totality of legal standards, of an ideal complex functioning by force of its own inner logic and conviction. Such fetishism of state power and the specific "judicial cretinism" corresponding to it, which looks at law as a self-sufficient social substance, moving exclusively by the logic of its inner, immanent laws, congeals into the system of "pure law". All this mysticism is dissipated, however, once we expose the following fundamental facts and connections.

1. States correspond in their types to social formations. The economic structure of society determines the type of state power and its structure.

N. I. BUKHARIN

2. The dominant class economically is, à la longue, the class constituted as the state power, i.e. which is politically dominant.

3. The chief function of state power is the guaranteeing of the process of exploitation.

4. It is different from all other organisations of the dominant class in that the state is all embracing, it is the most general organisation, representing the interests of the dominant class as a whole ⁹⁴ and monopolising the material means of violence and the chief means of spiritual enslavement.

5. The rules of state organisation, i.e. the generally obligatory standards of behaviour, behind which stands the whole apparatus of compulsion, protect and facilitate the reproduction of the process of exploitation of that concretely historical type, which corresponds to the given mode of production and, consequently, to the given type of state.

The ideologues of the bourgeoisie, insofar as they are compelled to recognise scraps of Marxism in the structures of the "Machttheorie" (the theory of social force, of rule, subjection, etc.) generally extract the revolutionary sting from the Marxian theory, extinguishing the idea of class, blunting the chief function of intermediary of the process of exploitation into numerous "general utility" functions, reducing the exploiting and oppressor rôle of the state to its historical sources and treating contemporary manifestations of this type only as "excesses" and "abuses". The consistently developed Marxist theory is anathema to them, for, as one of the high priests of bourgeois political science, G. Jellinek, frankly wrote: "The practical consequences of the force theory lie not in the foundation (Begründung) but the destruction (Zerstörung) of the state;" "it paves the way to the permanent revolution." ⁹⁵

The most important tendency in modern bourgeois state science, the school of Herr Kelsen, starts out methodologically from the teleological standardised conception of law and from a purely ideological treatment of the state, adjusted to the system of its standards. Speaking generally, the whole fashionable doctrine of the "aim in law", and the "aim in the state", etc., is founded on the fact that the state in capitalist society to a certain degree

MARX'S TEACHING

embodies a rational origin in opposition to the irrational current of economic life. "Civic society" is anarchic and elemental. It is disconnected "connection", "disconnected society", as Fourier defined it. It is not, as we have seen, "a purposive subject", it is not "organised capitalism", and cannot be this.

A state-political organisation is an organised quantity (though it does not organise the chief production relations of capitalism). It is a purposive subject. Its general aims are formulated in its laws (the system of standards is the system of aims). Its operative function is its politics. But it is far from following from this that these same aims cannot be looked upon as functions, while these functions can be looked upon in their historical arising, development and doom as causally conditioned phenomena. The full bottomless error of Kelsen's system is theoretically founded on the fact that the dialectic of freedom and necessity, of causality and teleology, is completely foreign to him. With him a teleological series swallows up "causal necessity", whilst he himself has to be explained on this very ground. Foreign to him also is the conception of the specific interrelations of "civic society" with its spontaneity, and of the capitalist state, the range of whose power is very limited by this spontaneity (e.g. the capitalist state and the economic crisis), and the very type of which (and from the point of view of its limitedness, also) is defined (causally determined) by the economic structure of capitalism.⁹⁶ Kelsen's treatment of the state as a quantity having only an "ideal" existence, while the author here appeals to Marx who put the state in the superstructure, is based on the confusion of ideology and superstructure. The latter conception is the broader one. The state is a social-political superstructure, but the "material attributes" (arms, the whole material and technical basis of the apparatus of compulsion, prisons, etc.) and the human organisation (army, bureaucracy) can only be declared to be phenomena with "merely an ideal existence"⁹⁷ from an obviously stupid standpoint. Kelsen's criticism of Marxism in other directions is impossibly feeble (although in his person we have one of the most eminent representatives of modern bourgeois political science). "Of course," he declares, "the modern state can be

looked upon as a means for (Mittel zum Zweck) the economic exploitation of one class by another.”⁹⁸ But according to Kelsen this is not the root of the matter, for : (a) there have been states in which it was impossible to speak of economic exploitation as being essential to their content ; (b) economic exploitation “ is in no wise (keineswegs) the only aim of the modern state ”⁹⁹ ; (c) but in the first place a state organisation is *conceivable* (denkbar, our emphasis, N.B.) having as its object the prevention (Verhinderung) of economic exploitation ; (d) this is expressed in the fact that the modern state which was not in a position to abolish exploitation by means of social legislation, nevertheless showed in this legislation a tendency “ towards the liquidation (Aufhebung) of class opposition ”.¹⁰⁰

In this regard it is worth mentioning that (*ad a*) there were no such states à la longue ; (*ad b*) it is impossible to confuse the “ only ” “ aim ” (it would be more accurate to say function), with the main “ aim ” to which the others are subordinated. The fact is that the main function is the guaranteeing of the process of exploitation, but this function is in its turn accompanied by others which have a derivative importance ; (*ad c*) the “ conceivable ” state of Kelsen is self-contradictory and inconceivable, if we take as premise the class nature of the state, except for the proletarian dictatorship which is a state and not a state at the same time, as we shall see below. But Kelsen is here in fact not speaking of proletarian dictatorship ; (*ad d*) the reference to the modern bourgeois state is far from convincing ; this state is a long way from manifesting these tendencies of which Herr Kelsen speaks. His statements in fact can only rest either on the recognition of the “ tendency ” towards a softening of the class struggle in general, which is decisively refuted by the facts, or on a non-class treatment of the state. It is aimed at showing the latest practice of the state. However, this practice also is fundamentally contradictory to his theory which is founded on facts from the period when the bourgeoisie manœuvred and retreated (he turned this circumstance into a matter of principle, as being the “ higher justice ” of the “ neutral ” and “ super-class ” state). Consequently facts have reduced the whole theory of Kelsen to nothing. O. Spann in

MARX'S TEACHING

an essentially less interesting but more open fashion formulates the shabby basis of all idealist arguments against the Marxian theory of the state by connecting them with an "argumentation" against the materialist conception of history, which he reproaches for a "lack of true idealism". "So we see in the extremely pure working out of a preferential position for action, above all economic action, in regard to all spiritual things, which is characteristic of Marx's historical materialism, a legitimate mode of thought which is at bottom barbarous, since it is hostile to the spirit and to culture. Historical materialism is a system which devalues the innermost noble creations of culture, science, art, religion, morality, by seeing them as reflexes or 'superstructures' of purely economic processes of development."¹⁰¹ The causal explanation of a phenomenon, the discovery of its social genesis, means, according to this strange logic, its devaluation. To declare war on religious mediævalism is to declare oneself a barbarian. From this standpoint the acceptance of the Darwinian theory means to start howling like a wolf. However, "the irony of history" leads one to quite different facts and logical conclusions.

So state organisation strengthens a definite, historically derived, exploiting mode of production, being, according to its type, the expression of a specific, historical, social and economic structure. All the chief means of physical violence and spiritual enslavement are accumulated in the state organisation. The transition to a new economic formation, therefore, cannot take place without the overthrow of the ruling class, and consequently also, without the partial, and, during a proletarian revolution, the complete destruction of its state organisation. Victory over a class adversary implies the disorganisation of his main forces. Thus the social revolution is bound to have its political side. This most acute class struggle, passing over into civil war, has its fundamental objective conflict between the growth of productive forces and the form of productive relations, a conflict of which the decisive clash of classes is the subjective expression. So it is absolutely impossible to divorce the acute struggle from its catastrophic objective conditions in the economy of society, conditions which

determine this struggle. Kelsen attacks the Marxian doctrine here also. His argument is as follows. The development of the "basis" (Unterbau) is a continuous evolutionary process, "ein Kontinuum". Every change is "a chain of infinitely small 'revolutions', each change is such a 'revolution'".¹⁰² Therefore there can only be revolution in the sphere of ideology, or, in other words, 'revolution' is a conception which can only be constituted in the sphere of standard, ethical and political or juridical analysis."¹⁰³ It is not hard to expose the sophism of the small "revolutions". Of course, the contradiction between continuity and interruption is immanent in the whole process of development and every change is a change of a qualitative character. But there are "leaps" and "leaps". There is "quality" and "quality". And it is this problem of quality and quality itself which entirely escapes Herr Kelsen. Capitalist society develops by contradictions all the time. It even passes through important phases of these changes (industrial capitalism, imperialism). But these changes are not of the same qualitative kind as the transition from capitalism to socialism. In the latter case the leap is one of another type which is immeasurably more "one of principle", one passing beyond the structural forms of capitalism in general, and the new quality is a quality of absolutely different measure. From the point of view of the capitalist system in general the new quality is only socialism and the leap is only the proletarian revolution. To put changes inside the capitalist system on one level with the liquidation of that system and the transition to socialism means not to see and not to understand the chief laws of the process. It is just because of this that it is impossible to dissolve revolution in evolution and to change the new form of the whole social being for the small cash of molecular changes of the usual evolutionary type. The second chief mistake lies in the mechanical divorce from one another of the different aspects of vitally active society. The historical process is a contradictory but single process of the reproduction of social life. "Basis" and "superstructure" go through their vital circuit in a state of constant reciprocity and "submitting" to the single law of social development of the

MARX'S TEACHING

whole, which is also the determining law of the development of the basis. Therefore the very possibility that one part of social being is capable of causal examination and the other of standard and teleological examination (only !) is ruled out beforehand. It is impossible to drag revolution, as the victorious struggle of the proletariat against the bourgeoisie, as a " leap ", out of the whole social and historical context. It is an " element " in the reproduction of social life, a reproduction only possible in its new historical and economic form. The fetters of the old productive relations must be broken (this is the basis and not " ideology ", for the information of Herr Kelsen), the condition of which is the destruction of the state machine of the bourgeoisie. Here Marx emphasises just that destructive ¹⁰⁴ process, the necessity for the proletariat " to concentrate against it (the state machine, N.B.) all the forces of destruction ".¹⁰⁵ The question of the destruction of the state machine of the bourgeoisie or its utilisation by the proletariat is far from being one of terminology. Despite Kelsen, it has an immense importance both practically and theoretically. Theoretically, since it speaks of the peculiar law of the process, since it poses the question of the organisation of a new type of state (both in class content, in its organisational forms, and in the tendencies of its development). Practically, since it correspondingly directs the whole strategy and tactics of the proletariat. And along this line runs a bloody furrow between social-democracy and communism.

Thus :

1. The main tendencies in capitalist development lead to a conflict between the development of productive forces which has prepared the material prerequisites of the new society (concentration of the means of production, socialisation of labour) and its capitalist husk (Hulle, Marx), a conflict of such intensity that this husk becomes incompatible with the further development of productive forces and therefore of society as a whole.

2. This conditions an extreme sharpening of class contradictions and tensivity of class struggle. " The more or less concealed civil war within existing society " " is transformed into open revolution ".¹⁰⁶

N. I. BUKHARIN

3. Concentrating all destructive forces against the state machine of the bourgeoisie, the proletariat violently smashes that machine.

4. It creates a new type of state, the dictatorship of the proletariat. The class struggle "inevitably leads to the dictatorship of the proletariat".

5. "The proletariat will use its political supremacy, to wrest, by degrees, all capital from the bourgeoisie, to centralise all instruments of production in the hands of the state, i.e. of the proletariat organised as the ruling class; and to increase the total productive forces as rapidly as possible."¹⁰⁷

"Between capitalist and communist society," Marx wrote in *The Critique of the Gotha Programme*, "lies a period of revolutionary transformation from one to the other. There corresponds also to this a political transition period during which the state can be nothing else than *the revolutionary dictatorship of the proletariat*."¹⁰⁸ We must dwell in the first place on the dictatorship of the proletariat from the point of view of the definition of the state organisation as being the general class organisation of rule which guarantees the process of economic exploitation. It is quite clear that it does not come under that definition. But this is far from implying that the state of the proletariat is divorced from its material economic basis. If the exploiting types of state power in all their variety of historical forms had as their main function the enlarged reproduction of productive relations on which they were based and of which they were the concentrated political expression, then the dictatorship of the proletariat has as its chief function the enlarged reproduction of new, socialist productive relations. If, for example, the capitalist state facilitated the eating up of pre-capitalist economic forms, then the dictatorship of the proletariat, after the expropriation of the expropriators, is a means for the further growth of socialist forms, a powerful lever for the liquidation and refashioning of capitalist and small property owning economic relations. But for the very reason that economic development in the transition period is nothing but the final disappearance of the relics of former economic formations and types, and so therefore of the relics of exploitation and of the material starting-points from which it

MARX'S TEACHING

arises, for this very reason the dictatorship of the proletariat bears within itself the seeds of its own dying away. So that even from the point of view of its economic function the dictatorship of the proletariat is both a state and not a state. It is the last historical form of the state in which it finally merges and dissolves into society. Consequently : (1) it is the organ of the ruling class, the proletariat ; (2) this organisation has as its economic function the enlarged reproduction of socialist productive relations ; (3) it is the general, widest and universal organisation of the proletariat, directed by the advance guard, the party ; (4) it monopolises all the means of physical compulsion and the spiritual refashioning of men ; (5) its immediate function is the suppression of the resistance of the exploiters, their breaking up and liquidation ; this function of decisive and merciless class struggle carried through to the end is, of course, the most important prerequisite for all that follows. Here, consequently, we have a relation of rule. But this relation is a vanishing quantity insofar as in the course of the class struggle classes themselves at a definite stage of development disappear. By drawing everyone into its direct organisation, the state ceases to be itself, and absorbing society into itself, itself dissolves into it without leaving a trace. Class rule over people is transformed into the classless administration of things. This process of the transition to the " administration of things " is conditioned by the fact that the dictatorship of the proletariat includes an absolutely specific relation between economics and politics and a tendency towards the liquidation of classes.

In the capitalist formation elemental and anarchic " civic society " is only embraced by the " political state " and is far from merging with it and organising the main forms of its movement, which in civil society are, private property, private arrangements between capitalist and worker, competition, irrationality, and in state organisation are, the representation of the interests of the capitalist class as a whole, a certain rationality, but a narrow one which does not reach the foundations of " civic society ". Under the proletarian dictatorship the state merges more and more with economy. All the chief economic levers

N. I. BUKHARIN

are in the hands of the proletarian state. State organisation is also economic organisation. The administration of socialist economy is a direct function of the state in its struggle to overcome class oppositions. So here we have a difference in principle in the relation between "society" and the "state", between "politics" and "economics", between the "administration of people" and the "administration of things". In such conditions the development of productive forces and the victorious course of the class struggle systematically prepare the transition to the swallowing up of the political functions of the state in administrative and economic functions, i.e. the transition to classless and stateless communist society. In this way, therefore, the dictatorship of the proletariat in all its main functions and tendencies of development can in no way march parallel with other types of state power, for, historically understood, it has already gone outside the limits of the state as such. Therefore Kelsen's attempts to refute the oppressive, exploiting character of the capitalist state by the example of proletarian dictatorship which destroys exploitation, are truly pitiful.¹⁰⁹ Nor is the author's effort to construct a fatal contradiction between Marx's economic doctrine and his theory of proletarian dictatorship any more successful. Kelsen here advances the following kind of argument: (a) Marx's economic theory which has overcome the economic naïveté of Proudhon and the anarchists, leads to a view of communist economy as a centralised planned system which calls for compulsion, while at the same time a "clearly expressed anarchist ideal" is put forward in the political sphere; (b) there is not and cannot be any administration of things which is not also an administration of persons; (c) the relation of different human groupings to the problems of religion, art and "above all to erotic problems" will not only be shown in different points of view but also in vast conflicts calling for the interference of state power. Against this the following counter-arguments must be advanced: to (a) "stateless" and "anarchist" are only philosophically identical. The "anarchist ideal" in fact rejects centralisation. Stateless centralisation will be possible and historically inevitable, for the growth of productive forces leads

MARX'S TEACHING

to centralisation. The complex co-operation of men is quite conceivable without compulsion (an orchestra). The process of overcoming class oppositions, of "servile hierarchy" (Marx) and of the dying away of the state will create a self-discipline which little by little will not only push out the relics of class compulsion but also of authoritarianism in general. The centralisation of social functions is then only a state when it is given with a class characteristic ; to (b) by administration of persons is meant the process of commanding them administratively, that is, of converting them into objects, into simple fulfillers of commands, which presupposes a hierarchy of persons, compulsion, submission. Insofar as these elements disappear the administration of persons in the sense of administrative command over them disappears also. Things also remain as objects, the means of production, the instruments of labour (the doctor does not administer the sick when he gives a prescription, the direction of an orchestra is not administration in the administrative command sense of the word) ; to (c) religion in communist society disappears altogether, for, since it is the reflection of a divided world and the projection into "heaven" of the "earthly" categories of the state, of subjection, it loses any basis for existence. As for "erotic problems" (here we see a little Freudian-Viennese "local colour" in Kelsen), they will certainly not come up for solution in any administrative manner. Indeed to imagine eroticism as a basis for state power in any way at all is to confess oneself completely ignorant of real historical processes.

Marx and Engels also approached the problem of the dying away of the state from the aspect of an analysis of the state as a parasitic growth on the social body. The sharper the class contradictions, the stronger the centrifugal forces splitting the relative unity of society, the larger is the state apparatus (the army, civil service, etc.), the more immense are the non-productive expenses on it, the real faux frais of exploiting social formations. The state is transformed into a force which stands above society, divided off from it, growing disproportionately even from the point of view of its own functions.

This peculiar hypertrophy of the state apparatus and its

N. I. BUKHARIN

extreme bureaucratisation,¹¹⁰ this existence over society and those forces standing outside society, these monstrous non-productive expenses, which arise out of the features of a specific (exploiting) social formation and are multiplied by the growth of its inner contradictions, are destroyed in the first place, and in this destruction are already to be found the germs of the surmounting of the state.

It is the *cri de mode* at present to declare the ultimate aim of communism, as treated by Marx, to be an anarchistic ideal. If formerly Marx's virile theory, revolutionary from top to bottom, was put on a level with K. Rodbertus's Prussian landlord socialism and the national-“labour”, semi-Bismarckian socialism of F. Lassalle, it is to-day frequently bracketed with the systems of Bismarck, Kropotkin, etc. Marx does in fact speak of anarchy in one place, in declaring that “all socialists understand by anarchy, the ultimate aim of the proletarian movement . . .”¹¹¹ But one circumstance fundamentally distinguishes Marx's theory—it is a scientific theory. It tackles all problems from the point of view of development, of history, and not abstractly. So with Marx it is a question of the dictatorship of the proletariat as a transitional historical phase of development to communism and of different stages of the movement of society towards a stateless communist commune. This stateless (anarchic in this sense) society differs however in the highest degree from the federation of small communes of semi-handicraft character which anarchism has in mind and whose social genesis is very far from the deeply fundamental sections of the industrial proletariat. Marxism, on the other hand, has nothing in common with its pitiful social-fascist caricature which goes back ideologically to Lassalle, growing with all its shoots into the ideology of the fascist “national”, “caste” and “corporative” state, with the proletariat completely enslaved to capital and its terrorist dictatorship, offered up under the pseudonym of the “nation” and the “whole”, with an enormous number of various “simulacra” (the demagogic aspect of fascism) and “arcana dominationis”.

The dictatorship of the proletariat as the autocracy of the working-class is simultaneously an inner class proletarian demo-

MARX'S TEACHING

cracy, in opposition to bourgeois democracy, which, founded on capitalist property, exploitation and, consequently, on deep economic inequality, creates a whole system of democratic simulacra, i.e. of deceptive and disguised institutions of a formal juridical equality for all. Really this is a fiction, for economic inequality makes formal legal equality unrealisable. But the reality of these fictions is in their preventive and disguised functions which are very real. Even in the most democratic systems, which to-day largely belong to the historic past, the inner mechanism of state power fully guarantees the autocracy, i.e. the dictatorship, of the bourgeoisie, which has been analysed even by certain bourgeois authorities on the state, such as R. Michels,¹¹² Ostrogorsky¹¹³ and others. The mechanism of parties, of small "cabinets", "caucuses" (in the U.S.A.), of "higher instances" behind the scenes, with the whole system of "arcana imperii", is the real machine, which, despite its determining importance and rôle in actual life, plays a very small part in its quality of object for the bourgeois theory of state law which analyses the system of numerous simulacra in the first place from the formally juridical point of view. The dictatorship of the proletariat has no need of such a system of fictions. It openly declares its class character and its functions which find expression in the consciousness of bourgeois political scientists as a recognition of the anti-democratic (but not anti-bourgeois, not proletarian democratic) character of proletarian dictatorship.

The dictatorship of the proletariat [declares, for instance, Hans Gmelin,¹¹⁴ is a form of government (Regierungsform), according to which state power, in opposition to democracy, should not proceed from the whole people, but only from the classes which live by manual labour. Although the popular masses participating in state power are very numerous, nevertheless the dictatorship of the proletariat must be put on a level with aristocracies and oligarchies, since here also it is a question of the rôle of one class.

Marx exposed the real meaning of the theory of the "popular", "free" state, which is defended by vulgar democracy, in a merciless scientific analysis. On the other hand, the dictatorship of the proletariat, since it is the autocracy of the proletariat, really

guarantees democracy to it, educating and refashioning both the proletariat itself, and its allies, for it "expropriates the expropriators" and builds socialism, raises the material and cultural level of life of the toilers by continually developing all their inner forces and potentialities and bringing nearer the destruction of the gap between mental and physical labour.¹¹⁵ It is only here that the "people" which in Plato's aristocratic state was treated as *δηρίον ποικίλον καὶ πολυκεφαλόν* (a motley and many-headed beast) shows itself, in the course of its historical refashioning, as the real creator and organiser of the new society which marks the transition "from the pre-history of man to his real history". With Marx, therefore, (1) there is a peculiar dialectic of dictatorship and democracy; (2) democracy itself is not treated in its extra-historical abstraction, whereby it is reduced to nothing, but in its historical, concrete, class particular form, which (3) in its turn is analysed from the point of view of the historical change in the means of production and the types of state power. Thus the dictatorship of the proletariat is a new, higher type of democracy, and is, moreover, such a type as by developing, finally destroys any kind of state power, that is to say, negates itself.

Dictatorship in general, and the dictatorship of the proletariat in particular, besides the autocracy of a class, implies a special factor of disconnection even in its own laws. In accordance with the "dictates of the moment" it lays down what must be the suitable actions from the standpoint of its tasks. It *decides*, above all.¹¹⁶ This bareness of function, and heightened "freedom of action", this twofold purpose, are particularly characteristic of the dictatorship of the proletariat, which comes forward with the visor of history thrown open. Bringing the whole administration of "national economy" into its apparatus, enriching and varying to the greatest possible extent its tasks, placing itself on a foundation of socialist economy of ever-increasing planned character, the dictatorship of the proletariat rationalises to the highest degree the vital process of society as a whole. The class struggle of the proletariat organised as the state power assumes a variety of forms, impregnating every sphere of social life, from technique to philosophy. This process of the transformation of society from a

MARX'S TEACHING

fractional-elemental condition into a rationalised and organised one, this conversion of subjectless society into society the subject, fundamentally changes the very type of law of social development. The relation between the causal and teleological sequence is changed. This does not mean that objective law and the objective laws of development disappear. But it does mean that they lose their character of a blind external force standing above man and opposing his actions. Developed communism is the conditional limit of development, on the law of which Marx wrote as follows :

Just as the savage must wrestle with nature, in order to satisfy his wants, in order to maintain his life and reproduce it, so civilised man has to do it, and he must do it in all forms of society and under all possible modes of production. With his development the realm of natural necessity expands, because his wants increase ; but at the same time the forces of production increase, by which these wants are satisfied. The freedom in this field cannot consist of anything else but of the fact that socialised man, the associated producers, regulate their interchange with nature rationally, bring it under their common control, instead of being ruled by it as by some blind power ; that they accomplish their task with the least expenditure of energy and under conditions most adequate to their human nature and most worthy of it. But it always remains a realm of necessity. Beyond it begins that development of human power, which is its own end, the true realm of freedom, which, however, can flourish only upon that realm of necessity as its basis. The shortening of the working day is its fundamental premise. . . . In fact, the realm of freedom does not commence until the point is passed where labour under the compulsion of necessity and of external utility is required. In the very nature of things it lies beyond the sphere of material production in the strict meaning of the term.¹¹⁷

In other words the transition from capitalism to socialism is far from implying entry into the realm of pure chance or of pure " free will " on a social scale (indeterminism). It is far from implying the liquidation of the category of necessity, i.e. of objective law, which remains. The development of material production will always be subject to objective laws, like everything else on earth. But the destruction of anarchy in production and of irrationality in the productive process, i.e. the organisation of socialist production, its planned nature, its rational char-

N. I. BUKHARIN

acter ("general control") destroy the form of "blind" law, of law as a "blind force" ruling over men, external to them. Consequently, necessity here appears as freedom ("Freedom is the recognition of necessity"), the causal connection finds its direct teleological expression, ever more and more coinciding in its "volume". So, for example, in the economic plan, which is a system of lines of action (a system of standards, a teleological system), this causal necessity finds its direct expression. If we renounce "necessity" and "objective law" altogether, then instead of Marxism we get pure subjectivism and voluntarism. If we renounce the destruction of the "blindness" in law, the new interrelation between the causal and teleological sequence, then we get a mechanical transplantation of the categories of capitalism into socialism, that is to say, a bourgeois, liberal caricature of Marxism, utterly anti-dialectical, anti-historical. Therefore in the economic sphere, the product under socialism ceases to be a commodity, the category of value ceases to exist, the blind "law of value" is destroyed, but there remains, in another relationship, of course (both qualitative and quantitative), the necessity of the distribution of social labour according to the different spheres of social production. The plan, therefore, has its objective basis. In becoming more and more a scientific plan, it is more and more the expression of recognised necessity, which is freedom. But science itself would be objectless if there were no objective laws, since science has as its object precisely their analysis and theoretical expression, which becomes a direct instrument of practical action.

As we have seen, the state can be treated as an apparatus of state power and as society in its state form, i.e. with the inclusion and exclusion of the object of its action. The latter treatment can be applied particularly in regard to the dictatorship of the proletariat because (a) the dictatorship of the proletariat does not stand above society; (b) because economics here merge with politics; (c) politics (including economics) are rapidly objectivised on an immense scale as a current of the social and historical (and in the first place economic) process. Therefore the phases of development of the dictatorship of the proletariat are the

MARX'S TEACHING

phases of development of society as a whole towards communism through the class struggle.

The dictatorship of the proletariat, which includes elements of direct class struggle, both bloody and bloodless ; of struggle and leadership over its allies, of the refashioning of technique, economy, people and their consciousness ; their education, organisation, etc., means in the sphere of economics a constant growth of socialist, planned economy. From the point of view of relations between industry and agriculture it forces on the process of overcoming the opposition between town and country, the destruction of " the stupidity of village life ", the outliving of property relations on the land. The development of the forces of production, emancipated by the revolution, which inevitably multiplies the technical and economic power of industry, cannot be reconciled with the backward form of production relationships in agriculture, a form which chemically isolates ever newer and newer elements of capitalism. It therefore holds up the whole development, since expanded industry creates such a demand for agricultural production as can be satisfied only by decisive changes in agriculture. Marx expressed this in an unusually sharp form in his letter to Engels of the 14th August, 1852 : " The more I busy myself with this muck (he is referring to Proudhon. N.B.), the more I am convinced that a reform in agriculture, and consequently in the property abomination founded on it, is the alpha and omega of the coming revolution. Without it father Malthus will be right." ¹¹⁸

The first phase of communism, which still bears the " birth marks " of the old society, is characterised by : (a) an incomplete development of productive forces ; (b) the non-destruction as yet of the division between physical and mental labour ; (c) distribution, not according to need but according to labour (which is inevitable at the given stage of development of productive forces) ; (d) the preservation of the relics of bourgeois law (an equal share of the product for an equal quantity of labour when there is inequality of ability and strength is an expression of inequality) ; (e) relics of hierarchy, subjection, the state. The higher phase of communist society which arises historically on

N. I. BUKHARIN

the basis of the further growth of productive forces, goes outside these limits.

In the higher phase of communist society, after the tyrannical subordination of individuals, according to the division of labour, and thereby also the distinction between mental and physical labour, has disappeared, after labour has become not merely a means to live but is in itself the first necessity of living, after the forces of production have also increased and all the springs of co-operative wealth are flowing more freely together with the all-round development of the individual, then and then only can the narrow bourgeois horizon of rights be left far behind and society will inscribe on its banner : "From each according to his ability, to each according to his needs." ¹¹⁹

The higher phase of communism is thus characterised by : (a) an exceptionally large development of the forces of production ; (b) a vital and creative, absolutely free form of labour ; (c) the destruction of the division of labour, i.e. of the eternal " professions " and in particular of the opposition between mental and physical labour ; (d) the disappearance of all relics of class division, of " servile hierarchy " (Marx), of subjection ; (e) distribution according to needs as every kind of deficiency in products so far as needs are concerned passes away ; (f) the destruction (dying away) of the last relics of law and the state.

The deepest distinction between the Marxian statement of the problem and that of " all systems of the future " lies in its scientific and historical approach, in its analysis of the real tendencies of objective historical dialectics. With Marx there is no question of any " scheme " of a rationally constructed " ideal society ". He has a very stern attitude towards those splendid fantasies and sentimental ideologies which are fabricated out of illusory images. In discovering the laws of motion of capitalist society, Marx made vast historical forecasts, scientific forecasts, he foretold the inevitable doom of capitalism and the dictatorship of the proletariat on the basis of his analysis of the tendencies of capitalist development, and having given on this ground the chief features of the coming epoch, he sketched its inevitable stages of development, its fundamental forms in their historical tendency. There can therefore be nothing more commonplace than Sombart's definition

MARX'S TEACHING

that "socialism is practical social rationalism with anti-chrematistic tendencies", with its following subdivision into two further "chief groups" of socialism:

(1) Organic, morphological, tectonic, concrete, graphic, hierarchical, national, state socialism, whose representatives . . . are Plato, Campanella, Fichte, Saint-Simon, Rodbertus, and to a certain degree Fourier and Weitling also;

(2) Mechanical, amorphous, commonplace, abstract, invented, equalitarian, international, social socialism . . . to which in the first place Marx's socialism belongs.¹²⁰

The general definition of socialism given here is not only narrow but also wretchedly untrue, since it has nothing to say about the destruction of the process of exploitation, classes, etc. The demarcation into two groups does bring in certain real elements (state and socialised, nationalism and internationalism, etc.), but it mixes up absolutely different kinds of things and in important features is only a vulgar caricature of Marxism. The main point—historical dialectic—is omitted here. The distinction possessed by Marxist scientific communism as against all the "systems" of Utopian socialism, here disappears. Sombart "does not need" to understand the scientific forecast made by Marx, a forecast upon which the practice of the communist movement is based. Herr Kelsen, on the other hand, supposes socialism to be a "political theory", i.e. a system of standards put forward on a basis of "ethical and political postulates", whilst Marxism "being a political theory, assumes a mask of 'scientific and causal investigation'", and that is all.¹²¹ There is not, in all such "critical" arguments, a grain of comprehension of the dialectic of causality and teleology, of necessity and freedom, of theory and practice, etc. "Ethical" socialism is unproved, since there are various "ethical systems", various standards of behaviour, various aims and orientations each with a sharply defined class character. Here, being has completely determined consciousness, and to "prove", for example, the "desirability" of socialism from the point of view of the capitalist is stupid. However, a scientific analysis of capitalist society gives results which run in the same direction as the main orientation of the

N. I. BUKHARIN

proletariat. This in turn is explained by the objective situation of the proletariat in capitalist society. But it is just this circumstance which makes theoretical analysis a weapon of practical activity, which in the communist movement blends theory with practice, converting this practice into scientific practice. From this point of view the party of scientific communism is the only party at all able to practise scientific politics, and thanks to this circumstance the birth-pangs of a new, socialist society are curtailed. The class movement of the proletariat obtains an absolutely exceptional theoretical backing. The theory of scientific communism which is the highest product of the self-consciousness of the proletariat, raises it to a level on which it recognises its historical rôle as a whole, as a subversive revolutionary force and creator of a new society, the organiser of the proletarian dictatorship, which liquidates itself by transformation into classless communist society.

If we now take Marx's theory as a whole, the vast edifice which begins with the theory of knowledge, the general laws of materialist dialectic, and ends with the doctrine of the transition period to communism, then it is not difficult to come to the conclusion that the world has never known such a scientific philosophical synthesis. The professional savants of the bourgeoisie who have now lost their heads at the thunder of the avalanches of history, have made many assaults on Marx, thinking to damage the practical side of his universal activity by carrying this giant of genius into a learned man on the one hand and a revolutionary on the other. But in this they have simply shown the poverty and limitations of doctrinaires.

Marx showed by his whole life and activity that he was a great man of learning precisely because he was a great revolutionary. And he was a great revolutionary because he was a great man of learning. His whole monumental theory is verified by unprecedented historical practice. The practical criterion of truth and correspondence with reality in regard to this virile, compact, grand theory, is applied on the scale of a world revolution. What teaching, what conception, what doctrine, what "guide to action" ever knew such quantities, such quali-

MARX'S TEACHING

ties ? Marx has given us an all-powerful weapon. This universal genius who has built up a creative synthesis of all the conquests of thought has also given us an unprecedented synthesis of theory and practice. And if the creator of dialectical materialism, of the materialist conception of history, the creator of the *Communist Manifesto* and of *Capital* was also the organiser and leader of the First International, a leader and sage, a first-class strategist and tactician of revolutionary struggle, then his doctrine, enriched and developed by his glorious successors, is also a weapon of revolution, of the destruction of the old and the building of the new.

After the death of Marx, who saw only the first germs of monopolist capitalism, these germs grew, creating a whole new stage in the development of capital, its last, imperialist stage. It brought all the contradictions of capitalism to an extreme point. The most catastrophic epoch of all began, the epoch of imperialist wars and proletarian revolutions. This epoch caused a further development and inner enrichment of Marxism, its conversion into Marxism-Leninism. Lenin, on the basis of a great scientific work, of the experience of great historical events, on the basis of the practice of the revolutionary movement and of immense class battles, on the basis of the proletarian revolution in Russia and of mass movements in the home countries and colonies of all lands, created a new stage in the theory of Marxism. His teachings on imperialism, on the dictatorship of the proletariat and Soviet power as its form, on the allies of the proletariat (the peasantry in the first place) and the hegemony of the proletariat, on the rôle of the party, on the national question, the colonies, etc., were given such a high theoretical refashioning and brought out so much that was new, as to carry forward the whole theory of Marx. Revolutionary Marxism is to-day only Marxism-Leninism. After Lenin's death the part of theoretical and practical leader fell to Stalin. Stalin, on the basis of an experience of socialist construction unprecedented in scale, of the industrialisation of and immense revolution in agriculture, together with the "destruction of the property monstrosity" in land, on the basis of a sharp class struggle against the relics of

N. I. BUKHARIN

the capitalist classes, made a whole series of fresh theoretical generalisations which are to-day a force directing the complex practical work of the party. Marx's doctrine has grown in both its content and its rôle in history. Millions follow this teaching which will live and develop along with the forward movement of the victorious fighting armies of the proletariat. In the struggle against the fascist barbarians, who cast a dark and bloody shadow over the world of culture, in the struggle against the falsifiers of Marxism, in the struggle against degenerate and treacherous social-democracy, the Communist International and its advance guard, the Communist Party of the Soviet Union, the centre of Marxist thought and Marxist practice, leads the masses to the world dictatorship of the proletariat and the fraternal world Commune of classless humanity.

A. M. DEBORIN
KARL MARX AND THE PRESENT

I

ON THE FORECASTS OF MARX AND ENGELS

If the chief task of science be the forecasting of the future on the basis of the laws of the past and present, then Karl Marx was in fact the first man in the course of all human history to create, on the foundation of the world outlook of dialectical materialism worked out by him, an absolutely new science which is characterised by its ability to foresee the ways of future historical development. A science which has not yet reached this stage in its development is still on the level of pre-scientific knowledge. This most essential peculiarity of developed science defines its practical importance, the part it plays in men's social life. Science gives men vision, lifts the curtain of the future before them and allows them to act consciously in a definite direction.

It is not my task to explain the teachings of Marx, which would in any case be impossible in this article. My task is that of examining the main tendencies in the sphere of modern bourgeois thought and politics in the light of Marxian forecasts, of Marxist teaching. We are convinced that Marx, though he died fifty years ago, is our most vital contemporary, actively participating in our present class struggle. So vital and fresh is his doctrine, so actual, that to-day more than ever it holds the centre of the attention of humanity. For generations the "licensed lackeys of the bourgeoisie" have striven to refute Marxism, for generations the reformists, trailing after the bourgeoisie, have earnestly assisted it in the work of destroying Marxism, have

A. M. DEBORIN

proved the bankruptcy of Marx's teaching by their "discovery" of the "theory" of ultra-imperialism, "economic democracy", the "democratisation" of capital and so on. But all these refutations, all their "learned" criticism, all the onslaughts on Marx's "crude" materialism, his "mystical" dialectic, etc., have given no results, for the course of world history, working itself out on the lines foretold by Marx, has led to the victory of the proletarian revolution, the establishment of the dictatorship of the proletariat and the forcing on of the construction of socialism on the territory of former Tsarist Russia—all this on the one hand, while on the other it has led to a general crisis of the whole capitalist system in bourgeois countries.

Bourgeois and social-democratic criticism of Marxian teaching aimed its poisoned shafts not only at the philosophy of Marxism—the theory of historical materialism and the "cunning" materialist dialectic, but also at the labour theory of value and the theory of surplus value in particular, for by solving the problem of surplus value, by disclosing its source, Marx thereby laid a firm foundation for scientific socialism. "He exposed the mechanism of the modern capitalist mode of production and of the mode of appropriation which is founded upon it and thereby exposed the main element which is in the centre of the whole modern social system" (Engels).

Starting from his theory of surplus value, Marx analysed the process of the accumulation of capital and the process of the development of the general law of capitalist accumulation, showing that as a result of the accumulation of capital there takes place an accelerated process of the driving out of workers by machines which results in the absolute and relative impoverishment of the working class—the accumulation of vast wealth at one extreme and the growth of poverty, exploitation and a reserve labour army at the other.

This development of the contradictions of capitalism is a concrete expression of the main contradiction of this mode of social production—the contradiction between the social character of production and the private mode of appropriation. Marx's greatest service is in his discovery of the main law of develop-

KARL MARX AND THE PRESENT

ment of the capitalist mode of production simultaneously with the dialectical character of that law, which is not only the law of its development, but also, as bourgeois society grows, becomes more and more the law of the negation and destruction of that society. Such a necessity is implied in the very "nature" of bourgeois society, in its antagonistic structure, which from the very moment of its birth contains the forces the development of which leads it to its inevitable end.

In his famous chapter "The Historical Tendency of Capitalist Accumulation" Marx, summing up his study of the mechanism of capitalist society, emphasises with particular force that if the capitalists in order to enrich themselves expropriate the wide popular masses by violent methods and merciless vandalism, when it comes to the destruction of capitalism, the working class has only to expropriate a few usurpers.

This expropriation is brought about by the operation of the immanent laws of capitalist production, by the centralisation of capital. One capitalist lays a number of his fellow capitalists low. Hand-in-hand with such centralisation, concomitantly with the expropriation of many capitalists by a few, the co-operative form of the labour process develops to an ever-increasing degree; therewith we find a growing tendency towards the purposive application of science to the improvement of technique; the land is more methodically cultivated; the instruments of labour tend to assume forms which are only utilisable by combined effort; the means of production are economised through being turned to account only by joint, by social labour. All the peoples of the world are enmeshed in the net of the world market, and therefore the capitalist régime tends more and more to assume an international character. While there is thus a progressive diminution in the number of the capitalist magnates (who usurp and monopolise all the advantages of this transformative process), there occurs a corresponding increase in the mass of poverty, oppression, enslavement, degeneration and exploitation; but at the same time there is a steady intensification of the wrath of the working class—a class which grows ever more numerous, and is disciplined, unified, and organised by the very mechanism of the capitalist method of production. Capitalist monopoly becomes a fetter upon the method of production which has flourished with it and under it. The centralisation of the means of production and the socialisation of labour reach a point where they prove incompatible with their capitalist husk. This bursts asunder. The knell of capitalist private property sounds. The expropriators are expropriated.

A. M. DEBORIN

Such was the chief law of motion of modern society discovered by Marx's genius. All the separate elements of the Marxist system are organically merged in this conception which is the result of a profound, all-round study and analysis of the capitalist social formation. It is on the basis of this movement of modern society that the material conditions for the conversion of capitalist into socialist society are inevitably and necessarily formed.

The socialisation of labour [Lenin says], proceeding in a thousand ways even more rapidly and in the fifty years since Marx died, appearing particularly obvious in the growth of large-scale production, cartels, syndicates and capitalist trusts, as well as in the immense growth of the scale and power of finance capital, this is the chief material basis of the inevitable offensive of socialism. The intellectual and moral motive force, the physical executive of this transformation, is the proletariat educated by capitalism itself.

The proletariat, thanks to its situation in production and society, is called on by history to fulfil the greatest revolution in the world, to accomplish the proletarian revolution and establish the dictatorship of the proletariat with the aim of completely expropriating the capitalists and constructing classless socialist society. All the instruments and means of production will become public property. Petty, subdivided production in agriculture will be replaced by large-scale, collective farming on the basis of perfected instruments of labour. The prevailing anarchy of social production in modern society will be replaced by a previously thought-out plan. The struggle for individual existence disappears and this means that man emerges from the animal kingdom, from mere animal conditions of existence and enters into really human ones.

The whole sphere of the conditions of life which environ man, and which have hitherto ruled man, now comes under the dominion and control of man, who for the first time becomes the real, conscious lord of Nature, because he has now become master of his own social organisation. The laws of his own social action, hitherto standing face to face with man as laws of Nature foreign to, and dominating him, will then be used with full understanding, and so mastered by him. Man's own social organisation, hitherto confronting him as a necessity imposed by Nature and history, now becomes the result of his own free action. The extraneous objective forces that have

KARL MARX AND THE PRESENT

hitherto governed history, pass under the control of man himself. Only from that time will man himself, more and more consciously, make his own history—only from that time will the social causes set in movement by him have, in the main and in a constantly growing measure, the results intended by him. It is the ascent of man from the kingdom of necessity to the kingdom of freedom (Engels, *Socialism, Utopian and Scientific*).

The mighty ideal set by Karl Marx before toiling humanity is the result of a scientific forecast, which necessarily arises from the immanent laws of development inherent in the capitalist formation. The chief laws of society sketched in the preceding lines are characterised by the fact that men submit their conditions of life to their power and control, which in capitalist society, on the other hand, prevail *over them*, that men become conscious masters and dictators of their social relationships, submitting their own social actions to the rule of law. These main socialist laws are already realised in accordance with our development in the Soviet Socialist Union, where social production is organised according to a “previously thought-out plan”, where an immense creative work is carried out by the state of the proletarian dictatorship under the leadership of genius of the great party of Lenin headed by Stalin.

We see in capitalist countries that those main laws are fully developed which were laid down by Marx as characteristic of the epoch of developed capitalism. All Marx's scientific forecasts have been realised or are being realised with astonishing accuracy. We cannot here go into an examination of the laws of capitalism—and in particular the problem of crises which is to-day in the centre of the attention of the whole world. It is sufficient for our task to emphasise that whatever efforts have been made in this regard to refute Marx, all these supposedly learned refuters have been refuted by life itself, by the course of development of bourgeois society.

In this connection it is not without interest to recall the forecasts of Marx and Engels on the world war and its inevitable consequences. Right from the time of the Franco-Prussian war, Marx and Engels never ceased to remind us of the coming alliance of France and Russia and the world war which will be its con-

A. M. DEBORIN

sequence, together, by the way, with a social revolution in Russia. Marx wrote in his letter to Sorge of September 1st, 1870 :

What the Prussian fools do not see is that the present war is leading just as inevitably to a war between Germany and Russia as the war of 1866 led to the war between Russia and France. That is the *best result* I expect from it for Germany. Typical "Prussianism" never has had and never can have any existence except in alliance with and subjection to Russia. And a war No. 2 of this kind will act as the midwife to the inevitable social revolution in Russia.

In his well-known preface to Sigismund Borkheim's pamphlet, Engels in 1888 describes as follows the coming world war :

From eight to ten millions of soldiers will choke one another and at the same time so thoroughly devour the whole of Europe as swarms of locusts never could devour it. The ravage wrought by the 30 years' war compressed into the space of three or four years and spread over the whole continent—famine, epidemics, a general lapse into savagery, not only of the soldiery but also of the people, caused by bitter need, the hopeless confusion of our artificial mechanism in commerce, industry and credit, all this will end in general bankruptcy. The collapse of the old states and their routine political wisdom, such a collapse as will bring crowns by the dozen into the roadway and no-one will be found to pick them up, the absolute impossibility of seeing how it will all end and who will emerge victor from the struggle, with only one result absolutely beyond doubt, general exhaustion and the creation of the conditions for the final victory of the working class.

Engels takes into account the possibility that the working class will be temporarily thrown back, but at the close of the tragedy, as he expresses it, "either the victory of the proletariat will be already won, or at least will be inevitable", i.e. the conditions created which make that victory nevertheless bound to come.

In 1879 Engels writes to Bebel that the coming world war will bury the present German Social-democratic party which will perhaps not stand the trial. "Such a war", Engels says, "would be the greatest misfortune for us, it might put the movement back for twenty years. But the new party which in the end would have to be created as the result of all this in every European country would be free of all the hesitations and trivialities which are now everywhere holding back the movement."¹

KARL MARX AND THE PRESENT

Engels, like Marx, foresees almost in detail future events in Europe, the disposition of forces, the capitulation of the Social-Democratic Party before its bourgeoisie and the inevitability of the birth of a new party, that is of the present Communist Party. Not only this, they even foresaw that when the general post-war crisis should come as a result of the events described, pure democracy would be the banner around which the united reaction would temporarily gather. This forecast of Marx and Engels strikes a smashing blow at Kautsky and the whole of modern social-democracy, which hangs on to "pure democracy" and opposes it to the dictatorship of the proletariat.

Engels considered that the most favourable result of the world war would be a revolution in Russia, and not in France. However, a Russian revolution could only be counted upon after very serious defeats of the Russian army. This forecast was also accurately fulfilled. Engels in the same letter to Bebel (13-14 Sept. 1886) does not forget to emphasise once again that war will at first be a set-back to the labour movement and let loose materialism and chauvinism. "However," he says, "among many possible consequences which war holds out for us and which it is hard to foretell, one can be foreseen with certainty. After the war we should have to begin again from the beginning, though on an infinitely more favourable ground than even to-day."

An attentive consideration of the chief forecasts of Marx and Engels here quoted concerning the future fate of capitalism and the concrete ways and forms of struggle which necessarily arise from the law discovered by Marx of the development of bourgeois society, and which inevitably bring this society to collapse and to the creation on its ruins of a socialist society, cannot but strike our imagination with the genius of Marx and Engels. There is therefore nothing unexpected and astonishing if a few years ago eminent representatives of bourgeois science and business circles in Germany led by Sombart and Schmalenbach openly recognised that in fact the old man Marx had been right in everything, that his forecasts had been completely confirmed, and are now being fulfilled before our eyes.

II

THE CONTEMPORARY CRISIS OF CAPITALISM AND THE IDEOLOGY
OF FASCISM

The epoch of the general crisis of the capitalist system is the epoch of the highest development and sharpening of all the contradictions of imperialism; it is the epoch of wars and of the development of the world proletarian revolution. Capitalist monopolies, which are typical of imperialism, have brought with them a colossal increase in the growth of the great magnates of capital, an exceptional deterioration of the situation of the wide masses of the labouring population, an increase in the process of their absolute and relative impoverishment. The oppression of the capitalist monopolies, their holding back of the development of productive forces, the decay of capitalism, are typical of the imperialist period and have increased to an exceptional extent in the post-war period. Marx's prophetic statement has been fully and completely confirmed: "The capitalist mode of production falls into a fresh contradiction. Its historical mission is an unrestrained development, driven forward in geometrical progression, of the productivity of human labour. It betrays this mission insofar as it prevents the development of productivity. In this way it only shows again that it is becoming decrepit and more and more outliving itself." ² The contradictions of modern capitalism, so clearly and obviously appearing in the present world economic crisis, bear witness beyond all doubt to the rottenness and decrepitude of capitalism.

The problem of the destruction of capitalism is a question of bitter class struggle. Marx and Engels, Lenin and Stalin, have shown splendidly that no social class ever yields up its class rule and leaves the stage of history without a desperate, stern, bloody, and obstinate resistance. Faced with its maturing doom, the bourgeoisie mobilises all its forces, utilises all its reserves, hoping to maintain its position by means of unprecedented terror. And if each day the powerful voice of the world proletariat sounds louder and louder as it prepares under the banner of the Com-

KARL MARX AND THE PRESENT

munist International for the last, decisive storm of the strongholds of capitalism, if the wave of the revolutionary movement mounts hourly, spreading and growing while the fighting strength of the proletarian ranks also grows and strengthens hourly, then there also simultaneously takes place in opposition to this an increase in the offensive of capital. Capital, in the fight to preserve its dictatorship, renounces the tattered banner of bourgeois democracy. The present stage calls for other means and methods for the support of the dictatorship of capital. Finance capital advances its fascist guard on to the scene of the historical struggle. Democracy no longer guarantees the maintenance of dictatorship. So much the worse for democracy. Henceforth there is reliance on fascist dictatorship, on direct terror, on the uprooting of all "democratic" survivals.

Lies and demagogy, adventurism and disguise, have always played and still do play an important part in the support and strengthening of bourgeois rule. Fascism calls itself national-socialism. It openly and obviously carries out a counter-revolutionary policy, it is the chief weapon of reaction and applies a merciless white terror. Without trial or trace it savagely destroys thousands of revolutionary workers while falsely and demagogically dragging on a mask of anti-capitalist phraseology.

In seeking the best ways of strengthening its dictatorship, in the struggle against the revolutionary movement, finance capital enters the path of naked reaction. Its fascist and social-fascist theoreticians come out against the idea of development, for development promises little that is good to capitalism. The idea of a "feudal" capitalist system is advanced as the ideal form of social organisation. A caste-corporative mediæval system is the social ideal of modern fascism. From the disguised slavery of the "free" worker to open serfdom. From bourgeois democracy to unlimited dictatorship. From trade unions and cartels to "classless" estates, castes and corporations. This is the road whose theoretical prophets and practical heroes are the modern fascist leaders. The bourgeoisie, which once opposed feudalism, to-day insists on the "union" of capitalism and feudalism. And this struggle for unconcealed serfdom is covered up with would-

A. M. DEBORIN

be socialist slogans. Truly the dialectic of historical development works miracles. Lenin's forecast of genius, which repeatedly showed that as capitalism developed, the fight of the bourgeoisie against feudalism would yield ever more and more to the strengthening of this mutual co-operation, has been justified.

The struggle to establish a fascist dictatorship is bound up with a struggle against technical, scientific, social and other forms of progress—for a return to the hand production of the Middle Ages, for the "feudalisation" of all vital forms, including also the "feudalisation" of science. It is in just this apology for regression, in the apology for "feudalism", that the decay of modern imperialism is vividly expressed and the intense acuteness of all its contradictions. The economic laws of the development of capitalism arising from these contradictions lead capitalist society forward with irresistible force to the inevitable proletarian revolution carried out by the working class, to the dictatorship of the proletariat and the construction of socialism, to the maturing of the objective and subjective premises of proletarian revolution. The fight for economic and political progress so far as the bourgeoisie is concerned is nothing but reaction, a fight against economic and political progress, to which historical development objectively leads.

In recent years a number of books have appeared dealing with the end of capitalism, the future of capitalism, the decline and fall of capitalism, neo-capitalism, etc.³ In addition, the problem of planning occupies most attention, above all among the intelligentsia.⁴ In this last tendency the influence of the Soviet system is seen particularly, the immense impression produced by our first Five Year Plan and by our whole socialist construction in general. But in borrowing the idea of planning from us, the ideologists of the bourgeoisie aim at the impossible, at having their cake and eating it too. They wish to keep the basis of the bourgeois system—private property, and at the same time to build up an organised planned economy, without understanding or desiring to understand the simple fact that anarchy of production is not an accidental but an essential feature of the capitalist system, directly arising from its contradictions, that real planned

KARL MARX AND THE PRESENT

economy is only possible in a socialist society, i.e. in one in which all the instruments and means of production are social property.

It would, however, be strange and "unnatural", if as a result of changes in property relations, as a result of the general crisis of the capitalist system there did not arise a new variation in bourgeois ideology as the expression and reflection of the collapse of capitalist production relations (and the contradictions inherent in them). This ideology is in the main represented by fascism and is in sharp opposition to Marx's doctrine.

Old-fashioned bourgeois liberalism, which belonged to another stage of capitalist development, has collapsed. Only a few non-influential groups remain which dream of preserving, or rather of restoring, classical industrial capitalism without cartels, trusts, concerns, without finance capital and a finance oligarchy, in a word, without all those structural changes which the imperialist epoch has brought. The Liberal Party of the labour aristocracy corresponded to this bourgeois liberalism, a party which maintained the foundations of democracy and dreamed of a planned evolutionary development of capitalism and its gradual growth into socialism. All the reactionary elements, whose glances were aimed into the distant past, were grouped on the right flank of the bourgeois parties. As a result of the development of industrial capitalism and its transformation into imperialism, as a result of the process of the concentration and centralisation of capital, of the formation of capitalist monopolies, important changes have also taken place in the realm of ideology, beginning with philosophy and ending with politics. Bourgeois liberalism and democracy, which had at its base the ideas of liberty, equality and fraternity proclaimed by the French revolution, and also the outlook formulated by the advanced thinkers of the bourgeoisie who were progressive for their age, an outlook which sometimes contained materialist elements, and in any case the ideas of evolution and development insofar as these ideas reflected the onward course of capitalist development—all these ideas have to-day collapsed. Bourgeois liberalism and bourgeois democracy have become bankrupt to-day, when it is evident to all that

A. M. DEBORIN

democracy in our time is only an external form covering the dictatorship of the bourgeoisie, as Lenin insisted for over twenty years.

Germany is to-day in this respect the "classical" and most "advanced" country. All the forecasts of Marx and Engels concerning the paths of development of capitalism after the world war and concerning the part which the Social-Democratic Party would play in this complex of events by renouncing at the decisive moments in history the principles of Marxism and betraying the cause of the proletariat by finally going over to the side of the bourgeoisie, have been fully justified. At one time, as Marx and Engels foretold, the Socialist Party did in fact gather all the reactionary elements in the country around the banner of "pure democracy", smashing the revolutionary workers in the name of "pure democracy" and thereby saving the bourgeoisie and the capitalist system from the ruin which threatened them. Not only the communists but, quite naturally, even certain bourgeois leaders speak with contempt of present-day social-democracy. This is what the fascist Ferdinand Fried writes of the Social-Democratic Party :

At the time when capitalism, against which social-democracy had been fighting for almost a hundred years, had really begun to shake and crack, as foretold by the social-democratic prophets (i.e. Marx and Engels, A.D.), we find social-democracy more or less closely bound up with capitalism as its last support. It imagines it is supporting and preserving the state while in fact it is only supporting capital.⁵

In another place this same Fried writes :

Democracy (the direct, equal and secret ballot), which social-democracy at first regarded as a means to an end, has become for it an end in itself. Since democracy is the only sphere in which social-democracy has won any success, it quite rightly identifies itself with this democracy, but does not see yet that it has stuck halfway, at a point where it must waste away together with capitalism and democracy, whilst life passes it by.⁶

Hindenburg's biographer Schultze-Pfaelzer, in an interview with Otto Strasser, one of the leaders of the so-called "revolutionary" wing of national-socialism, remarks in regard to social-democracy

KARL MARX AND THE PRESENT

that the Second International is in fact no longer following "the watchwords of the old red battalions".

I could quote many other contemptuous estimates of modern social-democracy from bourgeois politicians.

In its struggle against the growing rise of the revolutionary movement and the approaching proletarian revolution, the old methods of strengthening the dictatorship of the bourgeoisie no longer suffice. Finance capital passes to new methods of support for its dictatorship, casting aside the flag of democracy, advancing its fascist guard to battle against the approaching revolution.

But what is fascism? What is its ideology? In what are its main strivings expressed? The "cunning of reason" or the dialectic of the historical process bring us some quite unexpected and peculiar surprises. The specific character of the present stage of world history lies in the fact that large-scale capital in industry and agriculture is not averse from using anti-capitalist phraseology in order to strengthen capitalism.

Yet most characteristic and curious of all is the attempt to prove "scientifically", despite Marx's teaching, for all these "new" theories are repelled by Marx and oppose Marxism as their antithesis, to prove that development is far from being a law of reality, that capitalism can happily prolong its existence as a static and not a dynamic system. Lest we should seem to be making unsupported statements, we will give two or three quotations from a multitude of such arguments. Walter-Eucken, for example, proves that even if capitalism entered a stage of complete paralysis, of bureaucratisation of the industrial enterprises and the curtailment of inventions and improvements, this would be far from meaning the end of capitalism. "A more static form would take the place of the dynamic form."

Since Marx's day, he continues, the conviction has grown that

the vital law of capitalism is an ever-widening dynamic, and that the end of development means also the end of capitalism itself. Marx in the middle of the last century lived through an unexpected rise of capitalism in England. It is in this way that the birth of the legend of the necessarily dynamic essence of capitalism is to be explained. It would not be difficult for those who have lived since this period to

A. M. DEBORIN

understand the incorrectness of this Marxian thesis. . . . Modern political economy has shown that Marx's theoretical proofs of capitalism's essentially dynamic nature are false.⁷

In the light of Marx's outlook and teaching, the end of the development of capitalism implies death, and it follows that, applied to the capitalist system, the end of the development of capitalism means the end of the system. But modern bourgeois scientists, seeing already the end of capitalism, seeing its rottenness, nevertheless dream of preserving this dying social formation which feels itself in good health even without any development at all.

In connection with this kind of mental attitude arises the idea of the conservative law of the life of peoples, a mystically irrational law of movement. Such a doctrine and conception of life is inextricably bound up with the denial of materialism, rationalism and the idea of development. The organic growth of a nation on the basis of its own tradition and its own soil—this is the basis of the new conception of life as formulated by another author.⁸ Every nation represents an independent biological organism which is capable of living in its own completely determined environment. Everything which penetrates from the outer, alien world is harmful to the national organism. Autarchy, Strasser says, necessarily calls for the agrarianisation of Germany.⁹

Nickish,¹⁰ Hillscher¹¹ and others prove that "to become more rural means to become poorer and more primitive, maybe more savage and barbarian, but nevertheless more German. Barbarism carries its own law within itself. . . ."

We could give many more quotations to characterise the mood of bourgeois minds in the present epoch of decline of capitalism. But we have said enough for our purpose.

The attempt is to cut oneself off by a Chinese Wall from the outer world, insofar as one can take at all seriously the effort at autarchy and re-agrarianisation, for this "autarchy" is also a means of deceiving the masses, since in fact behind "autarchy" is hidden economic preparation for a new war, while on the other hand it expresses the interests of definite groups of the bourgeoisie and has, by the way, as its aim, ideological and political autarchy, i.e. estrangement from Western and Eastern ideas, by Western

KARL MARX AND THE PRESENT

ideas meaning parliamentarism and democracy, by Eastern, bolshevism, rationalism, materialism, atheism, etc. It follows that the danger threatening from the "East" is at present the most real. True, this danger has already become an organic disease in Germany, and this disease is undermining the life of "the national organism", i.e. of capitalism, in such merciless fashion, that the final doom is inevitable. Yet the bourgeoisie still dreams that it will be possible for it by destroying the enemy, by destroying Marxism, i.e. the revolutionary workers, to restore the health of the "national organism".

We have already shown above that one of the most dangerous ideas for modern capitalism is the Marxist idea of development, the specific law of capitalist dynamics which is opposed by capitalist statics, since this development inevitably leads to the end of the capitalist system.

As an antidote to the Marxian laws of the development of capitalism new theories of capitalism have recently been created on the basis of an analysis of the laws of the spirit. These learned gentlemen examine the historical process from the point of view of the free activity of men, emancipating them from the nightmare of the Marxist teaching constructed on so-called natural-scientific conceptions,¹² which are "guilty" of frightful deductions regarding the inevitable end of capitalism.

The process of the fascisation and "feudalisation" of thought in recent years is embracing ever-wider circles of the bourgeoisie and the bourgeois intelligentsia. This process goes parallel with the sharpening of the class struggle and the process of the decay of capitalism. Yesterday's realists are to-day becoming mystics, former "radicals" are passing over to the fascist camp. True, this is but one aspect of the process of class polarisation, for in speaking of the growth of fascism and the spreading of fascist ideology, we must not forget the colossal growth and development of the communist movement. But at the moment we are chiefly interested in fascist ideology.

Materialism and idealism, these two main world outlooks, are becoming the banners and symbols of faith of two worlds, two cultures, two systems of thought and two conceptions of life.

A. M. DEBORIN

All the ideologues of the bourgeoisie stand on the ground of idealism. The Communist Party as the only really proletarian party is carrying out the principles of consistent materialism in all spheres of science and practical activity.

In the course of a single essay it is impossible to develop all the concrete, burning problems of the day in the light of these two systems of thought. But one thing can definitely be said, idealism in the present circumstances is more than ever the black flag of general reaction, of obscurantism, of the decline and degradation of thought. And insofar as this modern idealism decisively penetrates every scientific discipline, from mathematics (has not Jeans advanced the idea of a mathematical god ?) to the theory of society and the state, it would be a mortal danger for science were we not convinced of the victory of communism and consequently of the triumph of materialism in every sphere of human culture.

It is however insufficient to talk of idealism in general. We must, even though briefly, characterise the concrete form of modern idealism which is becoming the prevailing form. Old classical German idealism, which was the ideology of the bourgeoisie in the period of its rise, defended and in every way justified, though certainly in idealistic form, the principle of development. Modern idealism of the period of the decline and decay of capitalism differs from the old idealism in the fact that the idea of progress and development is hateful to it, and that it has inherited only the reactionary aspect of the old idealism. To-day we encounter the denial of the idea of development, even in its form of bourgeois evolutionism, in numerous philosophical works, as well as in works on natural science, the social sciences, and in the sphere of the works of reactionary politicians, especially the fascists. This circumstance calls for general attention. All these gentlemen show a special hatred for Marx's materialism, and it is just this materialism which is the chief enemy since the idea of development is inextricably bound up with it. But Darwinism also figures as a doctrine calling for anathema as being atheistical and materialist, and so indeed does all modern natural science, as well as Marxian materialism.

KARL MARX AND THE PRESENT

To prove this thesis we will make some quotations from the works of politicians and "pure" savants. The "materialist outlook", says one of fascism's "left" leaders,

has, as is well known, the idea of progress as one of its motive forces. There is no worse sort of fatalism than this spiritual hallucination that humanity for millions of years now has been marching along this road which leads ever upward, which is decorated on right and left with the milestones of development. How has this fixed idea become possible? Surely everyone knows from his own experience that life is a circle, and not a line.¹³

Neither progress nor development exist at all. Everything turns in an eternal circle. The principle of causation is beneath criticism. The idea of fate and destiny is higher than the principle of causation. Fate stands behind every natural phenomenon. The whole of natural science from Darwin via Virchow and Haeckel to Planck and Einstein has killed God with its matter.

As for Marxism, its chief aim is materialism. The idea of development is inextricably bound up with Marxian materialism. Look, exclaims Otto Strasser, at the Soviet Union, where communism glorifies technique and "deifies progress". It is enough to watch Russian films to know that the machine has there become a new idol while tractors are looked upon as elements of civilisation. In a word, all science, insofar as it rests on a materialist basis and recognises the idea of development and progress, is atheist science and liable to rejection.

In this sense also the famous Viennese professor Othmar Spann expresses himself.

The mechanical conception of development prevailing to-day which proceeds in a straight line (geradeaus) and never ends cannot hold out against scientific criticism.

Darwin and Marx have done terrible harm to our civilisation with their mechanical conception of development. For this conception of development deprives every activity of value since to-day each one is overcome by to-morrow. And this has given birth to utilitarianism, materialism and nihilism, which are characteristic of our time.¹⁴

Leaving aside the question of how far these authors incorrectly interpret Marx's point of view, we meanwhile think it necessary to state that they reject the materialist outlook and the idea of

A. M. DEBORIN

progress inextricably bound up with it. A special mystical logic develops on the basis of the idea of movement in a circle, which can be briefly summed up as the logic of the vicious circle, as distinct from the "logic of development in a straight line", and particularly as distinct from the dialectical logic and theory of development of Marx, Engels and Lenin.

Going further in our characterisation of modern idealism and the pseudo-dialectic bound up with it, which is again opposed to Marx's materialist dialectic, we should first emphasise that this idealism proceeds from the conception of completeness which in social science corresponds to the community, *Gemeinschaft*. Bourgeois scientists blame Marx because his outlook and whole teaching bear the stamp of atomism, liberalism, individualism, mechanism, etc. That all these accusations are based on conscious falsehood seems to me obvious to anyone who has any acquaintance at all with Marxism.

However, what is the meaning of all this? It can only be fully explained later. At the moment it is only necessary to emphasise the following, that whereas liberalism (and democracy) really starts from the individual and looks at society as a simple sum of atom-individuals and therefore puts forward an individualist and mechanist point of view which is the expression of capitalist society in which there goes on the struggle of each against each, in which free competition, etc., reigns, Marxian communism and the whole Marxian teaching on society, as well as its general philosophical conception, are directly opposed to such atomistic liberalism.

Contemporary idealism of the fascist interpretation, in opposing to communism the mediæval corporative system in which the state is looked upon as an end in itself, in which the personality of the worker is made a victim to the capitalist moloch, naturally feels hostile towards Marx's teaching, according to which "in place of the old bourgeois society, with its classes and class antagonisms, we shall have an association in which the free development of each is the condition for the free development of all". Marxian dialectic solves with genius the contradiction between form and content, the whole and the parts, quantity and quality, etc.

KARL MARX AND THE PRESENT

Fascist "dialectic" puts the category of completeness in the key position. Its first tenet reads: the whole exists before the parts, whereas the bourgeois-liberal outlook gives the key position to separate individuals from whose agglomeration a complete society is produced.

Not being able here to criticise the whole complex of theoretical "ideas" behind contemporary fascism, we consider it necessary merely to emphasise that the principle of "completeness" in the mind of fascist "ideologues", the logic of the vicious circle and the idea of the eternal circuit which excludes the principle of development, reflect the present condition of "feudalisation of capitalism", in accordance with which bourgeois professors and capitalists dream of confining capitalism within a feudal and mediæval corset, thus converting it into an immobile, stagnant form. In this way they hope to avoid any forward motion, any development, which would inevitably lead to the substitution of a socialist system for capitalism. In place of the present society they wish to build a "true" state, a "true" society, a "true" completeness. Naturally the learned gentlemen who develop these "ideas" see at once in Marx's teaching on society, economy and the state, as well as in his whole theory of historical materialism, their chief and most dangerous foe. All their "learned researches" aim at refuting Marx's teachings in these fields.

One of the philosophers and ideologues of fascism is the not unknown Oswald Spengler, who in his book the *Decline of the West* which made such a noise ten years ago, came out sharply against the "pink-red optimism of progress". Spengler throughout his voluminous work wages an untiring struggle against Marx and his teaching, in particular against his teaching on development. The precursor of modern fascism criticises the Marxian conception of history as a process of development. A hostile attitude towards the idea of development, towards the principle of "progress", even in its usual bourgeois interpretation, distinguishes Spengler and all the modern fascists. They fight against social development out of fear of Marxism, of Bolshevism, and hope to destroy them by the help of exceptional laws. The idea of "progress" has become a frightful bogey for these

sections and classes of the population. A world in which everything is submitted to an exact accounting, in which "everything is standardised and typified" and in which the whole of life is permeated by the principle of planning, they say, would be godless and disgusting. So their chief slogan is not "forward" but "back".¹⁵ Everything connected with the ideas of development and progress is treated as "Kulturbolschewismus".

The second chief feature of modern fascist ideology is a negative and contemptuous attitude towards reason, towards rationalism (and therefore towards all contemporary science) and the declaration of the primacy of the spirit, i.e. of the combination of desires and primitive instincts.¹⁶ Hence the opposing of irrationalism and intuition to rationalism. In this respect Nietzsche, Spengler, Bergson, Ludwig Klages, the German romantics and modern irrationalists are in general the true leaders and fathers of fascist ideology. The fascists openly state that in philosophy their leaders are Nietzsche, Lagard and Spengler.¹⁷ It is the fault of philosophy and science that the spirit and reason have risen above the soul, that is above the primitive instincts of man. We cannot enter here into an examination of the teaching of the so-called "philosophers" and must limit ourselves only to showing the connection and succession between modern fascism and these authors' teachings. The intuitivism and irrationalism of Bergson are also aimed at reason and consciousness which are man's weapons in the struggle against nature and the existing social relationships which rest on the exploitation of man by man. Conscious and reasoned thought must give way to the liberated feelings, to the chaos of desires with their primitive striving towards violence against the weak.¹⁸ We can know only the "appearance" of things through reason, Spengler says. The essence of things we can only penetrate with the help of "divine contemplation". The rashness of reason lies in its striving to discover the inner connections of phenomena, to take its fate in its own hands and overthrow the secret forces which stand over life, Spengler complains.

Scientific knowledge submits "fate" to human will. But this is a revolt of the mind, of the reason against the will of providence.

KARL MARX AND THE PRESENT

Reason slays the idea of fate, whereas the man of "organic culture", Spengler declares, must recognise the idea of fate and submit before it. 'The people must submit to blind destiny and the forces personifying it. The whole of this "philosophy" has as its aim the justification of the existing wage slavery, the justification of the rule of the King, the nobility, the bourgeoisie and priesthood, who, according to Spengler, are the representatives and creators of culture. When the masses, he means, of course, the workers, enter the stage of history the end of culture is at hand and civilisation is enthroned. The age of civilisation is marked by the reign of rationalism and materialism. The "rationalist criticism of all the foundations of life and an all-lelling naturalism call for the destruction of the historical differences between the privileged and the enslaved, for the replacing of the existing state system by a just social system". The plebeian morality of socialism sets itself the task of the practical refashioning of all the forms of life. Instead of submission to fate, socialism makes strategic plans with the aim of "getting round" fate. It is permeated by humanitarianism, preaches general fraternity and peace among nations. . . . Such is the openly brutal cynicism of this ideologue of imperialism and fascism.

Another modern philosopher and count, Ludwig Klages, in his book *Der Geist als Widersacher der Seele*, comes forward like Spengler in defence of the soul against the destructive principle of reason.

So the fascist conception of man as a "beast of prey" becomes comprehensible. "Der Mensch ist ein Raubtier"—man is a beast of prey, says Spengler. Only the soul can know the feeling of rapture a man experiences in plunging his knife into the warm and living body of an enemy. This savage sadism is lifted by Spengler and the modern fascists to the level of a "philosophical doctrine", realised in practice in the tortures, murders and pogroms which they inflict on the revolutionary workers and communists who are "rash" enough to fight for "general fraternity" and "peace among nations".

The future belongs, in the opinion of the fascists, not to internationalism, which is a Jewish ideal, nor to the "collectivis-

A. M. DEBORIN

ing tendencies of Bolshevism ", but to the principle of nationalism, the idea of race and aristocracy. In this respect the fascists are the successors of Spengler (and partly of Nietzsche), of Gobineau, Chamberlain and other writers who see in the Aryan the salt of the earth and the centre of the universe.

Adolf Hitler in his book *Mein Kampf*, with all the brutality characteristic of this Teuton, particularly attacks the " Jew " Marx, who preached the international solidarity of the workers and recognised the equal value of all races. Fascism, says Hitler, stands in principle on the ground of the recognition of the aristocratic idea in nature, as well as in social life. He not only recognises a different value in races, but also a different value in separate individuals. Culture and civilisation on our planet are inextricably bound up with the existence of the Aryans.¹⁹

Joseph Gobineau in his work *Essai sur l'inégalité des races humaines* sees the main factor of historical development in the struggle of races, placing the Aryan race in the first place. Hitler, like all fascists, is only repeating Gobineau when he declares that the noblest race is the " blue-eyed, white-skinned German race ", whose doom would mean the end of all culture. The Aryans are called by nature itself to power and dominion over other, lower, less valuable races. By their very essence they are a ruling race. In particular Hitler and his fellow-thinkers declare anti-Semitism to be one of the most essential symbols of the faith of fascism. " In waging war against the Jews ", writes Hitler, " I am fighting for the cause of God." ²⁰

The fascists consider Hitler's greatest service to be his popularisation of the race problem and his proof that a Jewish question really exists. The Jews boast of their geniuses, Spinoza, Heine, Einstein. But the majority of Germans know nothing of them.²¹ When national-socialism comes to power, the Hitlerites wrote a few years ago, they will put the Jews, like every other alien nation and race, in the position of foreigners and submit them to special jurisdiction (*Fremdenrecht*).

Naturally enough, in close connection with the race theory is the zoological nationalism of the fascists. The idea of a united nation is opposed to Marx's teaching on the class struggle. The

KARL MARX AND THE PRESENT

idea of a nation as a whole, single, biological organism is put forward by the fascists as an ideological weapon able to guarantee social peace to the bourgeoisie and remove the class struggle. National solidarity means a solidarity of interests between capital and labour. In the first paragraph of the Italian fascist, *Carta del Lavoro*, the following is proclaimed: "The Italian nation is an organism which follows vital aims and disposes of means of activity which stand higher than the aims and means of the isolated and incorporated individuals of whom the nation consists. In the fascist state the complete moral, political and economic solidarity of all is realised."

Even many bourgeois investigators who are generally sympathetic towards fascism, acknowledge that the fascist state, like the whole fascist movement and its ideology, is deeply hostile to the proletariat. Hammer, for example, calls Italian fascism "the protector of capital and the enemy of the proletarian movement".²² He shows how Mussolini robs the workers and to some extent the petty bourgeoisie, also, in favour of the plutocracy. Even Beckerath²³ declares the plutocratic nature of the fascist régime in Italy. German fascism, like Italian, is a weapon in the hands of finance capital and the big trustified bourgeoisie with the aim of suppressing and uprooting the revolutionary movement of the proletariat.

Nationalism is one of the best tried and most essential elements among the ideological means of subjecting the proletariat to the capitalists and obscuring the class consciousness of the workers. The social-democratic parties of all countries as long ago as during the war rendered powerful aid to the ruling classes in the work of preparing for fascism—without mentioning all their later policy of co-operation with the bourgeoisie—by their passing over to the side of "their" national bourgeoisie. They renounced the Marxian principle of class struggle with its teaching on the state and with all their might began to defend the national idea and the bourgeois state.

Fascism looks on the nation as the primal metaphysical whole, having "ideal" aims and interests conditioned by the unity of race, blood, religion, etc. The nation is a biological organism

A. M. DEBORIN

subject to all the laws of development and life of such an organism. Marxist materialism kills the national idea, the class struggle destroys national unity.

The fascist idea of the nation is closely bound up with their idea of the state. The nation or race, which in fact are identical conceptions for the fascists, is the "mystical dominant" (*corpus mysticum*) in all human affairs.²⁴ The main aim of the nation as a mystical and metaphysical whole permeated with the consciousness of its special mission on earth—is the creation of a powerful state as the perfect foundation and complete embodiment of the national consciousness. The state exists for ever, the individual has only a transitory existence. Therefore the aims and the tasks of the state are different from the aims and tasks of the citizens who live for the sake of state. If the nation is the consciousness, the "spirit", then the state as the embodiment of the national consciousness is the objective spirit in the Hegelian sense and represents an aim in itself. And since the spirit, according to Hegel and his modern fascist followers (in Italy Gentile is the chief theoretician), is activity, action, *azione*, then the main essence of the fascist state lies in its continual activity, in a trial of strength, in the manifestation of its might. Hence the centre of gravity of the state is removed by the fascists from its legislative institutions to the executive power which carries out the real functions of the state.

The fascist state by its very essence follows militarist aims. Its ideologues speak quite frankly of this. For example, the French fascist Georges Valois declares war to be the creator of every culture and civilisation. The leader of Italian nationalism, Corradini, says that war is "an act of the highest solidarity of which mankind has so far shown itself to be capable". It follows that the German fascists are in this respect no wit behind their French and Italian colleagues.

So fascism is the ideology of militarist imperialism, insofar as it is a matter of its foreign policy, of the "right" of one nation to plunder other nations, to "lift" the super-profit from the bourgeoisie of other nations. The thoroughly false and fraudulent "idea" of the solidarity of interests of workers and capitalists

KARL MARX AND THE PRESENT

must serve as the main lever in the work of the practical realisation of the tasks which the fascists have set themselves.

As long ago as 1915 Lenin wrote in his article "Imperialism and Socialism in Italy":

The question has been put squarely and one cannot fail to recognise that the European War has been of enormous use for humanity in that it actually has placed the question squarely before hundreds of millions of people of various nationalities: either defend, with rifle or pen, directly or indirectly, in whatever form it may be, the great-nation and national privileges in general, as well as the prerogative or the pretensions of "our" bourgeoisie, that is to say, either be its adherent and lackey, or utilise every struggle, particularly the clash of arms for great-national privileges, to unmask and overthrow every government, in the first place *our own*, by means of the revolutionary action of an internationally united proletariat. There is no middle road; in other words, the attempt to take a middle position means, in reality, covertly to join the imperialist bourgeoisie.²⁵

Since the above lines were written a great deal which is of vital importance has changed in the world, but it has changed in those directions which were pointed out by Lenin. In Russia the working class under the leadership of the Communist Party has revolted against its "own" bourgeoisie and set up the revolutionary dictatorship of the proletariat. In other countries, in Italy and Germany, thanks to the active help of social-democracy, the reactionary dictatorship of the big bourgeoisie has temporarily triumphed, supported by a large part of the petty bourgeoisie. It is, however, necessary to point out that a great difference exists between Italy and Germany in the sense of the historical experience of the proletariat as well as in regard to the degree of development of capitalism. Without being able to go deeply into this aspect of the question here, we will allow ourselves to express the certainty that the rule of fascism in Germany cannot be a long one and that the revolutionary proletariat, recovering from the oppression and persecution which has fallen upon its head, will gather fresh strength and under the leadership of the Communist Party overthrow the present régime and set up its revolutionary dictatorship.

Lastly, we must in this connection say a word or so concerning the "socialism" of the fascists. The German fascists openly

A. M. DEBORIN

call themselves national-socialists. This fraudulent trick also calls for attention, insofar as the fascists with the aim of deceiving the wide masses of toilers, seek to identify socialism with nationalism and stateism, i.e. with the interests of the big bourgeoisie. They are "socialists" in the sense already explained by Spengler. Socialism, he says, is just as national as philosophy, science or art. What is the essence of Prussian socialism? The absolute submission of the individual personality to the state and the sentiment of devotion to the interests of the nation. Spengler has further explained that by socialism must be understood the careful observance of the right of property and inheritance with a formal subjection of all productive forces to the legislature. We shall see below that the German national-socialists accept Spengler's point of view, i.e. the point of view of zoological nationalism and imperialism which is identified with pure Prussian socialism. In this way the savage fury, the animal hatred and the bloody struggle against Marxian or Bolshevik real socialism and internationalism become comprehensible.

The fascists, the French and Italian ²⁶ ones in particular, often refer to Saint Simon and Bazard in regard to the corporative, caste, hierarchical economic system. Georges Valois ²⁷ in France is in this respect almost looked on as the restorer of Saint Simonism. The Italian fascists also base themselves on the teaching of Saint Simon. Corradini and Rocco had begun to propagate the idea of the "producers' state", according to Beckerath, under the influence of Valois, even before Mussolini. The idea of an organic anti-individualist producers' state, Reupke writes, owes its origin to Marx in its Bolshevik form.²⁸ The fascist formulation of the same idea, he continues, comes from Saint Simon and Bazard. Spühler finishes his work on Bazard with the following profound prophecy: "The spirit of Saint Simonism will create the social institutions of the future. They will bring complete harmony into social life."²⁹ Neo-Saint Simonism, around which an important literature has already grown up and which is opposed to Marxism as being a "higher" and more "ideal" doctrine,³⁰ expressing the real needs of the modern epoch, must be subjected to a crushing Marxian criticism, as also must the

KARL MARX AND THE PRESENT

other elements of fascist " theory ". But we must limit ourselves in this connection to just a few general remarks. It may be asked, what so delights the fascists in the conception of Saint Simon and Bazard ? The fascists themselves and their ideology answer this question for us. Saint Simon, they say, believed in private property. He demanded a leading rôle in production and social life for the entrepreneur.³¹ He insisted on the solidarity of the interests of capital and labour, thus defending social peace and rejecting the class struggle. Saint Simon, finally, aimed at realising " the producers' state " and indicated the hierarchical principle in its construction. All these elements are really to be found in Saint Simon and his disciples. For Saint Simon's system arose in conditions in which capitalism, and consequently the proletariat, also had only just freed itself from feudal lines of development, in which the " third estate " had not yet been sufficiently differentiated internally, and in which the proletariat did not yet play an independent political part and had not come out openly against its oppressors, in a word, in conditions in which the proletariat had still not become " a class for itself ".

The *Communist Manifesto* says the following of the Utopian systems of Saint Simon, Fourier, Owen, etc. :

The undeveloped state of the class struggle, as well as their own surroundings, causes socialists of this kind to consider themselves far superior to all class antagonisms. They want to improve the condition of every member of society, even that of the most favoured. Hence, they habitually appeal to society at large, without distinction of class ; nay, by preference to the ruling class. For how can people, when once they understand their system, fail to see in it the best possible plan of the best possible state of society ?

As the class struggle develops and assumes a more definite character, their systems are deprived of any theoretical and practical sense. Saint Simonism has therefore arisen in definite historical circumstances which are the expression of a definite stage in the development of modern society. In Saint Simon's mind, Engels says, the antagonism between the third estate and the privileged classes took the form of an antagonism between " workers " and " idlers ". And the " workers " were not only

A. M. DEBORIN

the wage-workers, but also the manufacturers, the merchants, the bankers. Modern fascism has accepted this point of view and for them Krupp or Morgan is a worker. According to Saint Simon, Engels says, in his "ideal" industrial state these should lead and command

science and industry, both united by a new religious bond destined to restore that unity of religious ideas which had been lost since the time of the Reformation—a necessarily mystic and rigidly hierarchic "new Christianity". But science, that was the scholars; and industry, that was, in the first place, the working bourgeois, manufacturers, merchants, bankers. These bourgeoisie were, certainly, intended by Saint Simon to transform themselves into a kind of public officials, of social trustees; but they were still to hold, vis-à-vis of the workers, a commanding and economically privileged position. The bankers especially were to be called upon to direct the whole of social production by the regulation of credit. This conception was in exact keeping with a time in which Modern Industry in France and, with it, the chasm between bourgeoisie and proletariat was only just coming into existence. But what Saint Simon especially lays stress upon is this: what interests him first, and above all other things, is the lot of the class that is the most numerous and the most poor ("la classe la plus nombreuse et la plus pauvre").³²

If Saint Simon was interested in the first place in the fate of the labouring masses, the fascists are only interested in the fate of finance capital, of the trustified bourgeoisie and big landlord-agrarians. They carry out a coup d'état in their interests and seek to organise the "producers' state", i.e. to subject the workers completely to the power of the bourgeois sharks. It is with this aim that they propagate the fiction of the unity of the nation, deny the existence of classes and proclaim the all-powerful, authoritarian state, at whose head is an elected minority, consisting of the representatives of capital. Winreich writes that in national leaders who intuitively grasp the national consciousness, the "integration of the national will" finds its expression.³³

Together with pseudo-socialism, intended to deceive the workers, bourgeois philosophers and scientists have in recent years been earnestly working out a pseudo-dialectic to oppose to the materialist dialectic of Marx and Lenin. Modern bourgeois "dialecticians", to whom I join the social-fascist "philosophers",

KARL MARX AND THE PRESENT

strive to prove that opposites, although they exist everywhere, are never overcome. On this basis they completely reject the category of contradiction. Arthur Liebert, the philosopher of "tragic dialectic", sees the chief fault of Hegelian dialectic to lie in its recognition of the possibility and necessity of solving contradictions. "The idea of harmony and of humanism", Liebert writes, "arose in Hegel from his belief in the possibility of realising an ultimate aim within the limits of history."³⁴ Liebert insists on the impossibility of solving contradictions, and in this lies the tragic and pessimistic character of the "new" dialectic, which, in spite of its "longing for pure harmony", remains in the ground of the philosophy of antinomy and antagonism.

Bartel, in his book *Die Welt als Spannung und Rhythmus*, frankly declares that "where polarity is destroyed chaos arises, as, for example, in the case of social polarity between rulers and subjects".³⁵ Communism by destroying the polarised opposition of classes, brings with it, according to our author, social chaos. Ludovici expresses himself decisively against the category of contradiction since it destroys oppositions. Contradiction, he says, is "a bad neighbour and a disturber of the peace". Oppositions cannot be removed by any force or any "research workers' tricks". The social-democratic philosophers like Siegfried Mark, Markus, Kranold, De Man, Max Adler, etc., either simply renounce Marxian dialectic or distort and falsify it to make it acceptable to the bourgeoisie. "Pure" fascists are sometimes ready to give its "due" to Marx's materialist dialectic, insofar as it deals with the past, when, if you please, classes really existed, but in our time, of course, when, according to them, a united nation has replaced classes, it is apparently unacceptable. Other fascist ideologues and publicists are ready to see in the conciliation of classes, in the principle of the solidarity of interests between the workers and the bourgeoisie, the realisation of the moment when opposites are "cancelled" and class contradictions solved. Neo-feudalism is the historical "synthesis" of feudalism (thesis) and capitalism (antithesis).

Lastly, we should mention the comical "law of triune bipo-

A. M. DEBORIN

larity", "discovered" by the fascists with the aim of completely refuting Marxist dialectic. According to this "law" every 140-150 years a change in social forms takes place. The historical pendulum moves between two eternally established poles, the individualist and the "collectivist". After the organic stage of mediæval feudalism, an individualist capitalist stage has appeared since the French Revolution. One hundred and forty years have passed and now there must come the kingdom of fascism, of neo-feudalism.

Thus all the efforts of the bourgeois philosophers, savants and simple dilettanti are directed towards the destruction and refutation of Marx's dialectic. But the attacks of the bourgeois pigmies are powerless to overcome the proletarian giant.

Starting from the idea of the "whole" as preceding the parts, they put the idea of the nation and the state at the foundation of their systems. Economy and society in their existence and their life are subjected to the idea of the whole, i.e. the idea of the nation and the state. But since every whole has a definite structure, i.e. a hierarchy of members, and cannot exist on homogeneous elements, the state also has a definite structure formed from definite organs. From this point of view the state is an eternal organism consisting of organs, for each organ, each part in its turn represents the whole—the organism. The organs in a state are its castes. A caste, as distinct from a social class, is always orientated towards the interests of the whole and serves it, whilst a class follows "egoistic" aims.

The organism, says Spann, has noble and ignoble organs. There exist in society active and passive elements, leaders and directors, on the one hand, and the mass of those led, on the other. Only the former, i.e. the leaders, fully express the *complete* character of society, and they are therefore the noble and the best, chosen to rule over the mass. Thus nature itself demands a hierarchical social and state structure.

In opposition to Marx who sees in the state an organisation of violence, of oppression by the ruling class of the oppressed classes, Spann, Andreae and others declare that the state is the "moral completeness of life", a living organism. The main

KARL MARX AND THE PRESENT

opposition between bourgeoisie and proletariat is overcome, Spann writes, by their mergence in a common trade guild. The workers' trade unions and the employers' cartels in this case become organs of the whole, representing not the interests of a class but the whole of society. The caste of employers is a caste of leaders in the economic sphere ; they are, so to say, by nature creatively endowed beings, whilst the caste of workers formed beneath them are people who see the meaning of life in " sensual feelings " and " the satisfaction of immediate needs ". So they slander the working class by whose sweat and labour all society is fed, these bourgeois, fascist ideologues and savants.

In Spann's footsteps marches another fascist ideologue, Professor Andreae ³⁶ of Graz, who, like Spann, throughout his work wages a toothless controversy against Marx, Lenin and Stalin (whilst defending Trotsky), " proving " the unsoundness of their teaching on society, the state and communism. Waging war on behalf of the new feudal-caste system, these gentlemen naturally declare through the mouth of Spann that Marx never aimed at the truth, that he was only a politician, that " his works always subordinated science consciously or unconsciously, to political ends ".³⁷ The Spann gentlemen who have, as we have already seen, falsified science in the cause of fascism, dare to speak of the non-scientific character of the Marxist system.

Ferdinand Hermans, in his book *Demokratie und Kapitalismus*, also hopes to destroy the class struggle and all the unpleasant aspects of capitalism, for which Marx's " false " teaching is responsible, by the creation of a caste system.

Economic life [he says] will then be organised to a greater degree than it is to-day, after the fashion of the present cartels, but without their constant underground struggle for new quotas. The new organisations will partly have a similar task to that of the mediæval guilds of struggle against economic progress, for the creation of new combinations will again revolutionise the whole of economy.

The working class will no longer suffer from the consequence of economic liability (shifting equilibrium). The individual worker will stay in the enterprise in which he works ; it is even possible that his place in the enterprise will become hereditary.³⁸

These measures will cause the cessation of the class struggle.

A. M. DEBORIN

In this way we see that the fascist "savants" not only dream of the cessation of all progress, but even of the creation of hereditary professions, of the complete enslavement of the workers by the organisations of capital.

But the full colossal deception, fraud and demagogy of these gentlemen becomes clear for us when we approach the main question of the class struggle, the question of private property. In the opinion of the fascists, the idea of the state, as the highest divine whole, as a moral organism, has the primacy over all other aspects of reality. Therefore the state is, or can be, formally the owner of all wealth which is in private hands, while in fact the right of use must remain in the hands of the property owners. If, moreover, we take into account that the divine idea of the state is concretely embodied in its living agents, creators, leaders and directors, who, in their quality of the "best" "noble" organs of the state are simultaneously the leaders of economy, i.e. the employers, then the whole fraud is exposed. The fascists are ready formally to declare the whole of private property "abolished", whilst in fact leaving the use of the property in the hands of the property owners. Unlike Marxism which seeks to destroy private property, we, say the fascists, wish to make everyone into property owners.

What power must Marxism-Leninism, Marxist socialism, the proletarian revolutionary movement have obtained, when big bourgeois, magnates of capital, are compelled to flourish the banner of "anti-capitalism" in their social demagogy, in order to deceive the labouring masses. It seems to me that after what has been said it is clear that the distorted and falsified slogans of socialism are used by fascism with the aim of strengthening capitalism, with the aim of enslaving the working class to a capitalist oligarchy which would in fact be the owner of the whole of national economy, for the state, according to the fascist projects, is completely handed over to the aristocracy of capital as the chosen "best" and "noble" caste of the nation. The workers are reduced to the level of mediæval serfs, hereditarily bound to definite trades and a definite enterprise.

Fascism is the naked, open form of bourgeois dictatorship,

KARL MARX AND THE PRESENT

which sharpens all the methods of suppressing and enslaving the toilers which are inherent in capitalism and inseparable from any system of the dictatorship of the bourgeoisie.

III

FASCISM AND SOCIAL-FASCISM

The world economic crisis has clearly exposed the rôle of international social-democracy as the chief social support of the dictatorship of the bourgeoisie. But it is almost as important for us to expose the theoretical foundations, both of principle and of politics, on the background of which the process of rapprochement and merging of social-fascism and fascism is taking place.

In their general outlook the leaders of modern social-democracy hold a common position with the bourgeois and fascist ideologues, and have of course nothing in common with Marxism, with the outlook of the revolutionary proletariat. They are all in the sharpest opposition to dialectical materialism. De Man sums up Marx's outlook as "materialist cynicism" and opposes to it a religious-ethical world conception. Since rational thought is the result of materialism, De Man declares, then the sphere of the irrational, the sphere of feeling and experience represents something primary that does not submit to rational interpretation. The fate of the working class is ever more closely bound up with the fate of the nation. A firm national solidarity exists between the working class and the bourgeoisie. Marxism, finally, adopts the ground of a false teaching on the class struggle. It may well be asked wherein the views of the social-democrat De Man differ from the views of the fascists outlined above.

Max Adler, the "left" Austro-Marxist, has throughout his literary and public life been in fact at war with Marxism, with materialism and with revolutionary dialectic. The life of man is senseless if there is no God, he declares. Darwinism and Marxism must be fundamentally re-examined from the point of view of the immanent expediency inherent in the world. Historical pro-

gress, which, by the way, to him only means the development of reason, is senseless without God, without an ultimate aim. The same thing applies to evolution in the sphere of natural phenomena. From the point of view of Adler, as of the fascist ideologues, each natural phenomenon can only be explained, not from the angle of causality, but from the angle of aim. "The present object of faith is the infinite development of reason, the empirical expression of which is the development of humanity, and only for its sake do God and the immortality of the soul in the quality of the theoretically possible and practically necessary conditions of this infinity, become indissoluble elements of this faith," Adler writes. For Adler the idea of God is the idea of order. Arthur Bonus in the *Sozialistische Monatshefte* sets the teaching of Christ against the views of Marx. "Our lord Jesus", he says, "never appealed to revolt and violence, he saw no necessity for a revolution in the state, but acted by the power of the word and the spirit. So also the future of the labour movement lies in faith in the power of the spirit and in preparing for the triumph of the spirit which will conquer without the use of violence."

The philosopher Kranold states that ethics forms the real essence of socialism and therefore socialism is a system of idealism. The socialist movement is still in our time to a certain degree the class movement of the proletariat, but with every day this movement more and more loses its class character. Marxism is a transitory phenomenon and socialism as a moral ideal has an eternal and permanent value.

Concerning the modern theory of development Max Adler writes: "Only by the prevailing prejudice according to which a naturalistic conception of development has become a logical necessity, can we explain the extreme resistance encountered by the cognitive-critical squaring of the conception of progress with religious faith." 39

Social-democracy treats the problem of the state in the main in the spirit of the bourgeois and modern fascist doctrines. Through Lassalle they have adhered to the Hegelian, reactionary conception of the state as a super-class organisation, as the organ of the "whole", "the community". For Lassalle the

KARL MARX AND THE PRESENT

state is an institution in which "solidarity of interests, community and mutuality of development" are realised. It is the incarnation of the moral idea and socialism merely expresses a higher form of this moral idea in comparison with liberalism.

The Lassallean cult of the state has passed as an inheritance to modern social-democracy. Its whole practical political activity since the world war, when it took its irrevocable stand in defence of the interests of its national state, that is, of its bourgeoisie, placing these interests above those of socialism and the international proletariat, proves the correctness of our statement. We shall see below how far social-democracy has gone to-day in carrying out this policy.

Karl Kautsky, in his voluminous *Materialist Conception of History*, tries all ways to show that modern democracy in the shape of the "industrial state" does not rest on violence, that modern capitalism and its corresponding state organisation arose in peaceful fashion, and that therefore it is "wrong" to have recourse to violence, i.e. to revolution with the aim of overthrowing it.

The modern state is for him in fact a "perfect" political organisation, which is called on to live for ever. It is not an organisation of violence and exploitation, as Marx taught, but fulfils cultural tasks, i.e. to use the words of Lassalle and Hegel, it is the incarnation of the "moral idea". In the democratic state, Kautsky says, armed struggle as a means for solving conflicts no longer has a place. They are solved peacefully by propaganda and the vote.⁴⁰

Kautsky is in raptures because slavery and serfdom are impossible in modern democracy, because the worker is a "free personality", because external violence no longer exists for him. Industrial capitalism does not have recourse to violence to maintain its existence, it does not rest on violence and military power. General disarmament and world peace would have triumphed long ago but for . . . the existence of the Soviet power.

Capitalism and democracy include the possibilities and conditions for an infinite development, Kautsky declares. This means, in fact, that capitalism and democracy are eternal and

A. M. DEBORIN

unchanging institutions. If the ideologues of fascism deny the Marxist law of the development of capitalism and recognise the existence of a conservative law of life, by which capitalism is eternalised, and moreover in feudal forms, if they adopt the viewpoint of a curve around which life revolves in an unchanging circle, thus excluding any development or forward movement, then Kautsky's point of view which sees in democracy and capitalism the unchanging forms of human existence, is also equivalent to a denial of any development and in particular to a denial of the Marxist theory of development.

Kautsky does not spare his aging powers in order to convince the workers that capitalism is anything but perishing, anything but experiencing a crisis, anything but developing towards self-negation, as Marx teaches and as is confirmed by the whole course of things in the post-war period.

Capitalism [he solemnly declares] has not been wrecked (as a result of the world war, A.D.). It seems that its elasticity, its capacity for adaptation to changing circumstances are stronger than its sensibility. It has borne the trial of war and to-day, from the purely economic point of view, stands firmer than before. . . . It has shown its vitality and capacity for adaptation to varying and very serious conditions in the most convincing way. And therefore no arguments in economic theory can question the vital power of capitalism.⁴¹

So, despite the growing horror of the facts of modern life, unemployment, poverty, the hunger of millions of workers, despite all the facts which cry out the immense crisis of the capitalist system, despite the fact that the atmosphere throughout the world is charged with high tension, that civil war between bourgeoisie and proletariat is going on openly, the leader and theoretician of social fascism sings the praises of capitalism, affirming that capitalism is in the best of health, that its vital forces are inexhaustible and there is no end to its kingdom.

Not for nothing have the sycophants of the bourgeoisie in the camp of social-democracy earned the approval of Pope Pius XI, who, in one of his recent epistles, sings the praises of social-democracy, which, unlike communism, is coming ever nearer to Christianity. "The social-democratic programme", says the

KARL MARX AND THE PRESENT

Pope, "is the starting-point of class co-operation," for there is nothing specifically socialist in the demands of this party. In formulating his programmes the Pope puts forward as an ideal the fascist idea of a corporative state or corporative solidarity, under which there are no classes, but castes exist and united corporations of workers and employers.

The Pope, and after him all the other present-day princes of the Church, turns the sharp edge of his criticism against communism, quite justly seeing in it the only revolutionary party of the proletariat, which in fact struggles for the destruction of the capitalist system and for the construction of a socialist society. The Pope calls for an organised world struggle against world communism, and above all against the Soviet Union, against the country of socialism in construction.

In this struggle against socialism and the Soviet Union, the Pope, as is well known, also finds a firm and true ally in the person of social-fascism.

"A spectre is haunting Europe—the spectre of communism." All the powers of the old world have entered into a holy alliance to exorcise this spectre : Pope and Mussolini, Hitler and Kautsky, fascists and social-fascists, the princes of the Church and the leaders of the yellow unions, the Christian socialists and the social-democratic Christians. The anti-capitalist demagoguery of the Church and fascism, inspired by the present world crisis and aimed at the salvation and strengthening of capitalism, is supplemented by the ideology of social-fascism, which sees its task as being, in the name of the same aim of saving capitalism from the inevitable approach of proletarian revolution, to sing hymns to its glory, wishing it long life and proving by every means in its power the eternal vitality of capitalism and democracy.

Social-democracy in its attitude to socialism also has recourse to social demagoguery, as the fascists do, in order to deceive the masses of workers and keep them under their influence. In fact, as the Pope correctly declares in the given case, social-democracy long ago renounced socialism, but being forced to retain socialist phraseology, it declares monopoly capitalism, fascist corporative solidarity, or in other words the co-operation of classes in general,

A. M. DEBORIN

to be socialism. Social-democracy sings in various tunes the so-called "economic" and "social state". It is first of all necessary to emphasise the very important fact that it has advanced a new theory of the "flexibility" of capitalism. (This is the same old theory of the growing of capitalism into socialism.) This means that capitalism bends but does not break. The Marxian theory of development and the theory of the proletarian revolution which arises from it, as a result of which we get a new quality, a new socialist formation, is declared unscientific and old-fashioned. The "scientific" theory of development is that socialism is being born every day—a little bit each day—as a result of the development of capitalism.

The "philosopher" Kranold gives a theoretical foundation as follows to this point of view—every slightest quantitative change is transformed into a qualitative change, or, in other words, is necessarily accompanied by such a change of quality. Development is perfected every moment in a revolutionary way, but it is also at every moment a gradual evolution.⁴² Evolution and revolution, continual changes and interrupted changes are one and the same. In other words, revolutions are in general impossible. Marx's teaching starts from the conception that at a given state of development, quantitative changes in the limits of a given quality lead to the appearance of a new quality by means of a leap—in social life by means of a revolution. It is this theory of the conversion of one quality into another which is twisted by Kranold into a theory of the infinite change of one and the same quality. To use the words of Spann, who also fights against the Marxian theory of development, which, by the way, he has utterly failed to understand, "the given whole, in all the changes and expansions, always remains itself and confirms itself".⁴³

In accordance with these "theoretical" and "general-philosophical" views, we have naturally the complete negation of the whole economic teaching of Marx—his theory of crises, his theory of impoverishment and theory of revolution. "Social revolution", write the social-democratic politicians and economists, "is a process completed within the framework of capitalism.

KARL MARX AND THE PRESENT

It is completed every day and every hour, so that to-day within the framework of capitalism socialism is growing every day and will continue to grow." "Socialist economy is not born", the Nöltings write in their party text-book on the theory of economy, "as the result of a single dramatic act, nor as a result of a legislative act of the state. It matures in a process which is already being completed before our eyes in stages evident to all." ⁴⁴

Capitalism is a kind of form which is in a process of constant change. Socialisation is a lengthy social process with wide ramifications, and not a single revolutionary act. General expropriation is a general nonsense (*Generalexpropriation ist Generalunsinn*) our author explains along with Renner, the leader of the Austrian social-democrats. Every success along the path of economic democracy is a new milestone on the path to its ultimate aim.

What is "economic democracy"? This is a new term which has replaced the verbal combination "organised capitalism", for in fact there is no difference between one and the other.

"Economic democracy", say the authors of the above-quoted text-book, "is a combination of means having as their aim the further growth of capitalism, with the intention of transferring it on to the rails of an economy which serves the general national interests." So the authors frankly recognise that the aims of social-democracy are directed in the first place towards the further development of capitalism. How is "economic democracy" realised? In the first place by the submission of the right of ownership to the interests of the nation, of the state, and even this reform, which, by the way, is really no different from the demand for the formal recognition of the state as the owner of the whole of economy, must be completed gradually. But the most important "revolutionary" factor in this economic democracy is the admission of the labour unions together with the employers' unions into the job of running economy—under the higher control of the democratic state. We see that in their idea of "economic democracy" the social-fascists also approach the fascist ideal of "corporative" economy based on the idea of the

solidarity of interests of workers and capitalists in the name of the general welfare of the state, i.e. in fact of the capitalists.

Hilferding declared as follows at the Kiel congress of the German Social-Democratic Party in 1929 : " The problem to-day is how, with the help of a conscious public administration, to transform an economy organised and run by capitalists into an economy run by the democratic state."

At the conference of the " Society for social politics " in 1926 the same Hilferding solemnly stated : " We need a capitalism at its full strength and not impoverished and decadent, for it is very nice for the heir to receive an inheritance which is as large as possible."

At the Kiel Congress just mentioned Hilferding stated the Social-Democratic Party to be a " part " of the existing capitalist state.

A. Braunthal speaks of the beginning of the process of the proletarianisation of the state. These words to-day, in the midst of the horrible fascist terror, have a bitter irony and sound like a crude mockery of the workers. Braunthal, like all bourgeois and social-democratic writers, gives a great deal of attention to the process of the interpenetration of the state and economy, the process of the stateising of economy and the economising of the state. But they are unwilling to admit that both state and economy are in the hands of the capitalists. Braunthal is glad that the trade unions are becoming organs of economic democracy. " The democratisation of economy, that is, the ever-growing influence over economy of a state and its organs that are becoming proletarianised, is more and more becoming the work of the trade unions." ⁴⁵ But Braunthal here " forgets " that the trade unions, in becoming organs of the state, more and more submit to the power of capital. Braunthal looks on this process of the merging of the trade unions and the state as being the road to socialism. He writes : " The economic laws of our time are laws of a society in process of revolution, i.e. of a society which is being transformed from a capitalist into a socialist society."

In full accordance with fascist theory the social-democrat Severing in 1929 in his speech on the anniversary of the Weimar

KARL MARX AND THE PRESENT

Constitution, openly proclaimed the principle of "the fraternal consolidation and solidarity of all estates".

So Lapinsky is quite right when he reaches the following conclusion as a result of his analysis of the crisis of capitalism and social-fascism :

The supreme task of the whole political-economic and social system becomes for the social-democrats, as for the fascists, "the highest productivity of labour", and the state, as the mythical agent and guide of the interests of the "community", enlarges its functions to an unheard-of extent, as well as its powers and its sphere of "interference". As with the "pure" fascists, so also in the social-fascist camp, "production" or "economy" and the "state" are exalted into a kind of super-class holy beings, on whose altar all victims have to be laid.

Nor in the end is there any lack of "corporativeness" connected with this system of development. In fact, there is probably more of this corporativeness, i.e. of the doctrine proclaimed by the fascists of a caste-corporative development, in the pseudo-democratic state than in the purely fascist states, where the "corporations" (particularly the workers' corporations) are turned into simple stage properties. The highly organised character of modern societies in our monopolist epoch combined with the simultaneous suppression of the class independence of the proletariat, of course contains not a few elements of caste-corporative development. This development naturally remains quite one-sided. All there is in common between the proletariat and the decisive sections of the bourgeoisie is simply the high degree of their "corporative"-union organisation which far surpasses the pre-war level. But the bourgeoisie preserves a deeply expressed class and militant character for its own organisations while on the other hand the class castration of the mass organisations of the workers, the complete degeneration of the functions of the trade unions and their conversion into a part of the state, undoubtedly gives them much more of a caste character in the spirit of the corporations of the fascist theoreticians.⁴⁶

In this way social-democratic practice and ideology are rapidly fascised, developing in the direction of the Stato Corporativo, in the direction of papist and fascist corporative "solidarity".

The social-fascist literary men and publicists openly recognise that the workers look with extreme mistrust on all their projects of organised capitalism and economic democracy, seeing in them only a falsified substitute for the great cause of socialism.⁴⁷

The workers understand very well that in the period of im-

A. M. DEBORIN

perialism all talk of democracy is nothing but a fraud. As long ago as 1916 Lenin wrote that "imperialism is the 'negation' of democracy in general, of democracy as a whole", that

the political superstructure on the new economy, on monopolist capitalism (imperialism is monopoly capitalism) is a turn from democracy to political reaction. Every monopoly [Lenin says] inevitably gives birth to a tendency towards stagnation and decay. Just so far as monopoly prices are fixed, even temporarily, do the impulses to technical, and therefore all other kinds of forward movement, to a definite extent disappear.

This remarkable forecast of Lenin's is to-day being realised on a very wide scale. For this reason, the answer of the proletariat to the economic policy of finance capital, to imperialism, cannot be freedom of trade, but only socialism.

Parallel with the new political superstructure of monopoly capitalism there has developed and is developing a reactionary ideology which to-day threatens the very foundations of science and culture. Bourgeois liberalism and democracy, which are the expression of a definite and more or less progressive bourgeois outlook, have given way to a reactionary political ideology which is indissolubly connected with the most reactionary tendencies in the spheres of philosophy, science, literature and art. These facts once more confirm the truth and depth of Marx's teaching on the dependence of the superstructure on its basis. We are to-day the living witnesses of the process of the birth of a new ideology in connection with the changing of the social-economic basis. This process is in our day so clear that it lays bare all the relations and connections of the different "sections" of the social organism, so that they can be felt with the bare fingers, as the saying goes. Ideology is a system of scientific, philosophical, moral, political, religious and similar ideas, which are usually passed off as absolute truths which are binding for all and which serve the ruling class as a means for strengthening its power and rule. Turning to the present stage of history it is first of all necessary to emphasise that the old liberal and democratic ideologies have in the new conditions appeared insufficient, outworn and a hindrance to the further strengthening of the rule

KARL MARX AND THE PRESENT

of the bourgeoisie. The old ideology has also come into conflict with the new economic, and therefore political, conditions of the rule of the imperialist bourgeoisie.

This explains the very sharp attacks on modern science, technique and economy, insofar as they grew up in the previous stage of development of bourgeois society, and no longer correspond to the "needs" and demands of the bourgeoisie. Of course, bourgeois scientific and philosophical thought even in the preceding stage of development stood on a very low level in comparison with Marxism-Leninism. But it never fell into such degeneration and decline as it is passing through to-day when such "high priests" of bourgeois science as Sombart come out with the cry of "back to God", when Frazer declares that superstitions are useful to inspire respect for the Government,⁴⁸ when Spann and his like denounce all knowledge not based on faith in God, when Hans Freyer⁴⁹ calls on us to bow down before a holy "something", and when the philosopher Jaspers comes out against "soulless materialism" and "rationalism", replacing them by "groundless metaphysics", "the kingdom of the spirit" and a spiritual aristocracy.

Sir James Jeans, in his book *The Mysterious Universe*, also advances a "scientific" defence of a mathematical god. He writes: "We discover that the universe shows evidence of a designing or controlling power that has something in common with our own individual minds." And this designing or controlling power betrays a capacity for thinking mathematically.

Professor Shaunsland⁵⁰ in his capacity as a philosophical biologist says that "Ignorabimus" is the last word of scientific "knowledge". The philosopher Richard Kroner, a neo-Hegelian, openly appears in his last work⁵¹ as a supporter of the caste state, proving that only a class and caste state corresponds to a natural order founded on the principle of hierarchy and rank. Religious "socialists" who are accepted into the Second International while at the same time forming their own "International of Religious Socialists", declare through the Swiss professor Ragatz that "God is objective reality" and that they have joined the socialist movement in order to win the confidence of the

A. M. DEBORIN

workers and fight not so much for socialism as for the salvation of Christianity.

All these bourgeois savants and ideologues, publicists and theoreticians, wage a fierce war on Marxian materialism, on its dialectic, its teaching on development and the whole of its all-embracing scientific theory, recognising that it is precisely this theory which alone is scientific, embracing every sphere of knowledge and human practice. It is therefore quite natural that in denying the teaching of Marx they are forced to go on to deny the foundations of all scientific knowledge and to appeal to God and every kind of supernatural principle. If we go down a little lower than these recognised "men of learning" then we find ourselves completely in that realm of darkness where occultism and astrology reign, both of which have recently become extraordinarily widespread. It is enough to state that the realist Messer, the vitalist Driesch, the idealist Verweien and others have openly declared themselves followers of occultism (spiritualism).

As for astrology, in Berlin alone seven or eight periodicals appear with various curious titles such as the *Cosmic Gazette of the Future*. Another astrological organ declares itself a "non-party paper, which recognises no class differences". All these "non-party" organs, appearing in tens of thousands of copies, carry on a party agitation for Hitler, printing articles on "what the Stars decree for Hitler in 1933" and so on. In "enlightened" Germany of to-day there have also appeared a crowd of miracle workers and prophets to whom Rudolf Olden has even devoted a whole book (*Propheten in deutscher Krise—das Wunderbare oder die Verzauberten*, Berlin, 1932). Can we wonder after this that the fascists, generalising, so to speak, all these moods and tendencies, have flung out the slogan of "Back to Barbarism". And, indeed, mankind to-day is living through an epoch of the darkest reaction, the most ignorant bigotry, when every conquest of science and culture is being questioned, when the bourgeoisie are ready to sacrifice these if only they can save their property, if only they can maintain the capitalist system.

In this kingdom of chaos, bigotry, persecution of science, of decay of thought, only the teaching of Marx and Lenin remains

KARL MARX AND THE PRESENT

like an impregnable rock, able to resist every onslaught of the enemy. Marxism-Leninism and the revolutionary practice of the communist proletarian movement indissolubly bound up with it, are called on to remove the rotten edifice of the modern system, to renew the world and to save all that is worth saving of the old cultural heritage.

Only the teaching of Marx and Lenin can guarantee the further development and progress of humanity, for both the teaching of Marxism-Leninism and the revolutionary proletariat which is the living agent of this teaching, the tireless fighter for its living incarnation, contain inexhaustible creative forces, whilst the bourgeoisie has become degraded in every respect and is no longer capable of any serious creative effort. The reactionary classes are by their very nature no longer capable of the creation of fresh cultural values and all their "new" and "latest" doctrines, ideas and systems are usually only modifications of old and outworn systems and doctrines. Just as the bourgeoisie is no longer able to develop productive forces and play the part of an advanced social class in economics and politics, it is also incapable of developing and moving forward scientific and philosophical thought. A revolutionary class is alone capable of the creation of new cultural values in all spheres, for its glances are not turned backward but forward, to the new world.

All the modern bourgeois conceptions, philosophical, historical, economic and so on, have the same relation to the theories of Marx, which are as though carven from a lump of granite and represent an organic synthesis of genius of all aspects of social life and all spheres of human knowledge on the firm foundation of dialectical materialism and materialist dialectic, as the alchemy of the Middle Ages has to modern chemistry. When the modern professor or philosopher declares the state to be a personality, a living organism, surely that is alchemy? If the bourgeois economists refute the Marxian theory of value by opposing to it a "spiritual theory", then is not that alchemy? At least the alchemists always had a definite quest, with a definite meaning, but these modern scientists are quite senseless, for Jupiter, as we know, first deprives of reason those whom he wishes to destroy.

Y. M. URANOVSKY

MARXISM AND NATURAL SCIENCE

THE aim of Marxism, right from its very birth, has never been the attainment of simply a philosophical perception and explanation of the existing world. It has rather been, on the basis of scientific explanation, in practice to change and upset existing relations, for the motive force of history is not the abstract criticism of ideas but revolutionary practice.

V. I. Lenin has given a profound, many-sided, concretely historical definition of Marxism, as containing "a new outlook, consistent materialism which also covers the sphere of social life, dialectic as the most many-sided and profoundest teaching on development, the theory of the class struggle and the world-historical revolutionary rôle of the proletariat, the creator of the new, communist society".¹ The historical and logical essence of this new world outlook and its method (i.e. Leninism-Marxism of the epoch of imperialism and the proletarian revolution) lies in the unity of theory and practice, "for only thus can a really proletarian party armed with a revolutionary theory be created".²

What is the connection between this practical, thoroughly revolutionary teaching, aimed at changing the world, and natural science, the science of those laws of nature which lie behind the practical activity of man when he puts the forces of nature to his own service?

The epoch in which Marx's system of views and teaching was formed was remarkable for its colossal achievements in the natural sciences and the growing social (class) function of natural science at that time.

The basis of this development of the sciences of nature was the

NATURAL SCIENCE

path of conquest entered on by capitalism after the Vienna Congress of 1815. Industrial development and economic revolution gripped the whole continent. In the middle of the nineteenth century even Germany from "a mouldy philistine country" was transformed into a country with a developed industry and came into the arena of world trade.

The growth of productive forces gave a powerful impulse to the progress of natural science in all its departments.

Let us recall how, in the small space of time between 1830 and 1848, the law of the conservation and transformation of energy was formed and given its basis in the works of Joule, Mayer, Colding, and Helmholtz. At the same time Faraday discovered electro-magnetic induction. Organic chemistry developed, thanks to the work of Liebig and Wohler. In morphology Schwann's cellular theory was confirmed. In physiology we had the work of Johannes Muller and his school. In geology Lyell established the idea of evolution. Natural science passed through a period of the greatest ferment. Capitalism gave it birth and science in its turn thrust itself into the practical activity of the bourgeoisie and gave it new possibilities of industrial development. The classics of plant physiology and agro-chemistry, Senebrer, Sossior, Davy, Bassengo, Liebig, laid the theoretical foundation for rational agriculture. Thanks to the development of organic chemistry, from about the middle of the 'fifties there began a revolution in the chemistry of dyes which led to big changes in the textile industry. Pasteur, stimulated by the demands of production, made discoveries which in turn influenced both agriculture and medicine.

So long ago as the 'forties a consciousness of the importance of the social function of the natural sciences made its way into the minds of scientific workers and public persons. A discussion took place among men of science on the connection between theory and practice, science and industry. We can point to J. Liebig as to the poet of the idea of the unity of theory and practice and the adversary of the theory of "pure science".

Alexander Humboldt in the 'forties gave a verbal foundation

Y. M. URANOVSKY

to the development of scientific knowledge, starting from "the different degrees of pleasure induced by contemplation of nature". But this indeed is merely an "ideological aberration" which he himself exposes by recognising the importance of the mathematical and physical sciences for the welfare of states. By his whole practical activity he rejects the theory of "contemplative bourgeois science".

The fact of the development of the teaching of Marx and Engels in this period of the Sturm und Drang of the natural sciences, when the achievements of science had been vastly enlarged and its social significance had grown, calls for an answer to a question of great importance for understanding the essence of Marxism: What is the relationship between Marx's ideas and natural science considered in its historical development?

Were the theoretical roots of Marxism formed also in the soil of the natural sciences, or, on the contrary, is Marxism only a conception of history, a "science of the spirit", with which the science of nature has no inner connection?

It is well known that it is just this latter view which is typical of the pseudo-Marxists (K. Kautsky, Max Adler, etc.). Karl Kautsky, the patriarch of the renegades, even in the years of his former "greatness" answered the question of what is meant by Marxism as follows: "I do not understand by Marxism a philosophy, but an experimental science, a special conception of society." Philosophy, the theory of knowledge, is a fine thing, "but one which has no more relation to the tasks of our Party than, for example, the vexed question of Lamarckism and Darwinism, or the question as to whether or not the atomic theory is sound".³

Kautsky here advances a number of arguments. Marxism is nothing but a special "conception" of society, Marxism has no relation to philosophy, philosophy has no relation to party policy, and, finally, natural science has no relation either to Marxism, or to the policy and philosophy of the party.

Marxism is distorted in many ways in these arguments. If we turn to the last statement, then even a cursory attempt at explaining the rôle of natural science in the formation of Marx's

NATURAL SCIENCE

ideas and the general relationship between Marxism and the natural sciences, will once more show convincingly how the pseudo-Marxists castrate the rich content of Marx's ideas, distort and contract their foundations, and so ideologically disarm the proletariat in its fight for communism.

From Engels' works alone it would be possible to show the inner relationship of the different consistent parts of Marxism to the science of nature. The *Dialectic of Nature* is the most all-embracing attempt at applying the method and outlook of Marx to the data of natural science. It is an attempt which is as far ahead of all that was done in this sphere by German natural philosophy and by Hegel, as the condition of productive forces and natural science in the nineteenth century surpasses the century of the French Revolution.

We shall now endeavour to analyse the problems posed here by using Marx's work and starting from his activity in the sphere which interests us.

Of course, a "vast part of the main and leading ideas in the realms of history and economics in particular" belong to Marx. But it does not follow from these words of Engels that Marx took no interest in natural science, was not equal to the development of natural science in this age, did not bring the data of this realm of knowledge within the orbit of his system of views. To-day this aspect of Marx's biography has been to some degree cleared up from the point of view of fact. He was interested in natural science while still a schoolboy, in the gymnasium at Trier, where he studied under the then famous geologist Steiningcr. It was the same in Berlin University where he followed the lectures in anthropology given by Heinrich Steffens, the follower of Schelling and a natural philosopher who was also an important geologist and mineralogist. Marx retained his interest in natural science to his last days. This interest manifested itself in him at various stages, in dependence on the time at his disposal for this kind of work, and in varying degree, either in acquaintance with, or study of, or active research into some scientific problem.

Marx's independent researches in higher mathematics are well known. In astronomy Marx studied Kirkwood, who discovered

“ a kind of law of difference in the revolutions of the planets ”. Marx studied the relation of this law to Laplace’s hypothesis and connects this discovery with the Hegelian criticism of Kepler and Newton.

In this sphere of physics Marx read Grove’s *The Correlation of Physical Forces*, the work of “ the most philosophical naturalist ” among the English and German scientific investigators. Marx followed Tyndal’s work, paying special attention to Tyndal’s splitting of the sun’s rays into heat rays and rays without heat.

In chemistry, particularly in agronomical chemistry, Marx had fundamental knowledge. For many years he read the literature of this subject and studied Liebig, Schönbein and others.

In biology Marx read Schleiden and Schwann, studied Darwin critically, besides Kelliker, Trémaux, Huxley, Fraase, Helmholtz, Traube and others.

We will not here stop to examine Marx’s special study of historical and experimental technology, nor dwell on the keen interest Marx showed in the conquests of applied chemistry, like the economically profitable method of obtaining oxygen invented by Rebour, or on his interest in the achievements of applied physics, such as Deprez’ experiment at the Munich electrical exhibition. As for the history of science, he had a very wide knowledge, as all his works irrefutably bear witness. Is there any basis after this for speaking of the indifference or carelessness of Marx in regard to natural science? The great thinkers who stood at history’s turning-points, Bacon, Descartes, Spinoza, Kant, Hegel, generalised from the level of knowledge reached in their period and had the more permanent value, the wider the practical and theoretical basis for their conclusions, the more vividly their point of view rose above their own time. This applies even more to Marx than to any of his predecessors. Only a pygmy born to grovel in the gutters of the empyrean can look with contempt upon a giant solely because he “ feels ” solid ground under his feet whilst his titan’s head is hidden in the clouds.

What are the inner sources which nourished Marx’s interest in both modern and historical natural science? What are the motives which determined this interest not as something external

NATURAL SCIENCE

and accidental, not as simply a curiosity for knowledge, but as an inner necessity, so that this interest arose out of the actual general tasks of Marx's theoretical and practical activity?

The history of Marx's concern with scientific questions may be generally divided into two periods, up to 1850 and after 1850. The essential content of the first period of Marx's theoretical activity was the finding of a basis for the materialist outlook and especially for the materialist conception of history. In the course of his work during this period he was drawn to a consideration of the problems of natural science.

It is not difficult to follow the historical course of his thought in the works collected in the *Holy Family* and in the *German Ideology*. Here Marx already advances and solves quite differently from the philosophers who had preceded him the two chief questions, what is nature—the object of natural science, and what is natural science—the science of nature.

Marx criticises Hegel's formal, abstract, mystical conception of nature. If real nature is a natural-philosophical form of logical foundation, the reflection of the idea, then it is something lower than the idea, nature is "an imperfect being". The natural sciences from this point of view are directly bound up with theology and teleology, and can have no real importance, since they study the expression of the real creator of reality—the idea. Marx showed that the basis of this mysticism was the divorcing of nature from the practical activity of man. According to Hegel philosophical thinking must combine the practical attitude to nature with the theoretical. But with Hegel the determining basis remains the course of thought, the idea, and not practical activity. So with Hegel the picture of nature is distorted and fixed in its separation from man.

As distinct from Hegel, Marx looked at nature in its development, in its unity with man. Man is himself a part of nature. Man is historical nature and nature is natural history. It might appear at first glance as though Marx in not yet using the category of man as a totality of social relations, completely shares the outlook of Feuerbach. In reality Marx here also, in the works collected in the *Holy Family*, had already grasped the

specific link, industry, which made the foundation for new views both on nature and on its relationship to man, as well as on the specific environment which man makes for himself in the general limits of nature.

As is well known, Feuerbach also speaks of everything in nature being in a state of reciprocity, everything being relative and everything being necessary, and he sees the unity of man and nature. But with Feuerbach nature swallows man. Feuerbach does not see the historical character of the specific relationship between nature and man, the dialectic of freedom and necessity, of the absolute and relative within these relations. Feuerbach understands nature abstractly. "It follows that nature is everything, save supernatural. Feuerbach is striking, but not deep," Lenin remarks. When Marx forcibly emphasises that "industry is the real historical relationship" between nature and man, he is laying the foundation for those views which he afterwards developed with exceptional power and depth in the *German Ideology*.

We are interested in that part of these views which is related to the analysis of the reciprocity of nature and man, to the analysis of the very conception of "nature". Marx's basic thought is that nature, with the development of man and his practical activity, does not oppose man as something equal to itself and eternally unchanging. Nature develops, but after man's appearance its development is not completed abstractly outside the sphere of man and his activity, since man, whilst submitting to it, also vanquishes it. Nature is not an abstract reality with eternal "natural vocations", it is given man in historically concrete fashion through his practical activity.

This thought (or rather, these thoughts) of Marx relates to nature taken in connection with man's practical activity, industry. For example, in the Roman Campagna there are pastures and marshland where in the days of Augustus, "one could see continuous vineyards and the villas of the Roman capitalists". This conception of nature also relates to natural science.

Neither is man connected with an absolutely unchangeable nature in his theoretical relation to nature, in natural science,

NATURAL SCIENCE

which "gets its aim as well as its material, only thanks to commerce and industry, thanks to the sensual activity of man".⁴

Natural science has to do with a relatively changeable nature ; on the one hand, as a result of the industrial activity of many generations, on the other hand (as the further development of science has shown) as a result of man's action upon it through the medium of investigation of observed processes.

The essence of the processes of nature cannot be understood without taking man's practical activity into account, which depends on the condition of productive forces and social construction. Only by starting from the practice of social life (industry, classes, social conditions) can human nature be understood as a part of nature as a whole, not only in the sense that man's psychology and ideas show their class essence, but in the sense of taking account of those natural (biological) changes to which he is subjected, when, in the process of changing reality, he also changes himself.

The method established by Marx spells the doom of naturalism in all its variations which looks on human society and man as an ordinary "child" of nature : the socio-power school (Podolinsky, Ostwald) ; the geo-political (Rutzel, G. E. Graf, etc.) ; every kind of bio-sociological school, starting with social-Darwinism, from Karl Kautsky's attempts to supplement Marx with a doctrine of the instincts as the starting-point for the analysis of social relationships, or the efforts of the Austro-Marxists to correct Marx by the teaching of Freud, explaining religion and culture by biological factors, right down to the philosophy of modern fascism (O. Spann) which tries to base itself on a biological theory of completeness and a doctrine of races in the organic world.

Marx breaks down all kinds of teaching on freedom of will by showing that social being determines social consciousness and in this way extends the objective method to the study of the most complex social phenomena.

In place of inconsistent, abstract, materialist monism (Spinoza, French eighteenth-century materialism, Feuerbach), Marx lays the firm foundations for a materialist monism which is not abstract, but concrete, dialectical, consistent, taking account of

the specific nature of human society, of all the inner connections between nature and man in their historical development. Marx gives a method and an outlook in which the dialectic of nature and the dialectic of history are indissolubly connected together.

In Marx's views the historical primacy of nature is not in any way broken. Even before the triumph of evolutionist ideas Marx establishes the following premises: the theory of creation is destroyed, as is shown by the natural sciences (geognosis); nature develops, it is in process of becoming even before the appearance of man; the development of nature goes spontaneously, is immanent, self-generated; the organic world (and man) arose through generatio æquivoca; life has not always existed as Thomson, Helmholtz and other representatives of the "absurd doctrine" of panspermy uphold. It follows that Marx understands this generatio æquivoca not as being the conception and birth of higher organisms without the intermediary of seed and parents (the mediæval form of this doctrine of generatio æquivoca, spontanea aut primaria), but in the sense of self-movement, self-development, i.e. in the sense which is in accordance with the chemical theory of the origin of life and the evolutionary theory of the origin of man, established within a decade and a half by Darwin's theory.

In a deep internal connection with these new views of the object of the natural sciences, of nature, Marx develops an absolutely new outlook on the science of nature, on natural science.

Even in the works belonging to the *Holy Family* Marx analyses, with greater power and depth than any of his predecessors (Bacon, Spinoza, the French materialists and philosophers of the age of enlightenment), the cultural-historical and social significance of natural science. Marx reproaches the philosophers for not taking into account the rôle and importance of the natural sciences. Natural science is not an external factor of usefulness for man or a chance factor of enlightenment. It is internally bound up with the most essential form of human activity, with practice, with industry, with the development of labour.

Industry is a practical relationship of man to nature, natural science, a "theoretical relationship". Industry is the basic form

NATURAL SCIENCE

of practice, natural science, the foundation of human science. Industry discloses the real powers of man, and natural science is such a "real power", "a potential of production". Marx establishes the empirical origin and practical function of natural science and apportions a very important social rôle to natural science.

It follows that the power of Marx's analysis, surpassing all that had hitherto been written on the importance of the natural sciences, is determined by the fact that Marx knew how to generalise with genius the objective data of the epoch. Marx did not invent theories but summed up the experience of history and modern life. He often refers to the "gifts of science" which Davy, Liebig and others made to humanity.

In the *German Ideology* Marx gives a materialist analysis of the motive forces of the progress of the natural sciences. "Pure" natural science is not a self-sufficient factor having its own history quite independent of society. Social practice has the primacy in relation to natural science, i.e. industry, social conditions. Natural science gets from practice both its aims and the means for attaining them.

If Marx in his early works spoke of natural science as a "real power of man", then in the *German Ideology* natural science appears as a real power of the ruling class. By force of the division of labour prevailing in class society, natural science is cut away from the material process of production into an independent function, a "spiritual potential" of production. Being a factor of progress at a definite stage, this ever deepening divorce of science from industry at the same time represented the basis on which idealism penetrated the natural sciences. But the relation between science and material production is itself historical in character, being different in the age of simple co-operation, of manufacture and of large-scale industry.

Science was one of the conditions for the development of capitalism (for example, theoretical mechanics, perfected by Newton, were the condition for the development of the third period of private property since the Middle Ages, large-scale machine industry), but it is also one of the conditions for the

transition to a higher social formation, to socialism and communism. Science, at a definite level of the development of material productive forces and of social development, is transformed from a condition of the enslavement of the working class into a condition for the emancipation of the proletariat and humanity as a whole.

The development of the natural sciences is not determined synonymously with the development of productive forces. If in the last resort technique and industry determine science, it nevertheless demands for its development corresponding social conditions which, in the shape of definite classes and political relations, can either assist or hold back the progress of science.

Finally, an extremely important condition of scientific progress is the theoretical premises which are provided by the work, both of all preceding generations and by that of contemporaries. Marxism consequently does not coincide with vulgar materialism in the sphere of the history of science.

On the other hand, the attempt to deduce science and its history from the social needs of this or that epoch which, in absolute opposition to Marx's views, are understood in a purely psychic sense and used as the primal starting-point in analysing the history of the natural sciences (Gustav Eckstein, Otto Bauer, Otto Genosen, etc.), is an utter distortion of and complete renunciation of Marxism. This completely relativist theory is based on the ideas of Mach and Avenarius and is only connected with the great ideas of Marx with the aim of mocking and deceiving the working class.⁵

What is the relation between the natural and social sciences with Marx?

Marx's views on this question were formed on the one hand in the struggle against abstract materialism and naturalism which dissolves society into nature, and on the other hand in the struggle against the complete divorce of history from nature (Bauer, the forefather of the Freiburg school). The divorce of the science of nature from the science of man is only possible on the basis of opposing man as subject to the objects of nature, in principle. But for Marx the monist, man, as we have seen,

NATURAL SCIENCE

though a specific part, is nevertheless a part of nature. Just as nature is the basis of man, so correspondingly natural science is the basis of providing ancillary laws for the study of social phenomena. With all their qualitative difference, the science of nature and the science of man are one, for they study a single material world. They are one according to the materialist method, through applying which to the study of human society Marx discovered his conception of history.

Applying this discovery to the history of science, Marx discovered the dialectic of the history of the natural sciences. Through his analysis of the meaning of science, its social function, the motive forces of its development, its class content and the prospects of its development, Marx laid the foundation of the dialectical materialist history of the science of nature and was the first to lift the history of science on to the level of a real science.

The second period of Marx's preoccupation with scientific questions after 1850 is characterised by the fact that Marx fixes his attention on more concrete problems than those which interested him in the first period.

The wealth and variety of the scientific interests in this period of Marx's work are to be explained by the fact that Marx, on the one hand, in his work on political economy and the method of dialectical materialism, was forced to turn to natural science as a secondary science, and on the other hand by the fact that the development of science at this time was going impetuously ahead.

The attraction of science into the circle of Marx's interests proceeds by different currents.

His study of agronomic chemistry was started by his work on the study of rent. Marx in this connection, as we saw above, studied Liebig, Schönbein and everything achieved in this sphere by French authors. He followed for a number of years the dispute between the supporters of mineral and nitrate fertilisers, the struggle between the physical and chemical schools in agriculture. He was interested in everything written against Liebig's theory of the exhaustion of the soil and was acquainted with all the latest facts on this question.

Y. M. URANOVSKY

Marx developed an interest in chemistry in general through his work on the method of scientific research, the theory of knowledge and the logic of dialectical materialism. This interest is inspired through the working out of the method " which lies at the basis of the Marxist criticism of political economy ".

From this point of view Marx follows the revolution in chemistry and gives particular attention to the molecular theory which is connected with the names of Gerard, Kekulé and Laurent.

Since the fundamental laws of dialectic have force in both science and history, Marx uses chemical data to confirm his methodological premises. The law of the transformation of quantity into quality which Marx examines in the transformation of the craftsman into the capitalist, he simultaneously confirms by the fact that this law is valid in natural science and in chemistry in particular, where in homological series a simple quantitative addition of elements leads to the formation of qualitatively different bodies.

It is therefore a great distortion of Marx's teaching to affirm that in the natural sciences he was a mechanistic materialist. But it is just to this that Plekhanov's attribution of Feuerbachism to Marx inevitably leads. Franz Mehring completely agreed with Plekhanov when he wrote : " Marx and Engels always remained on the philosophical viewpoint of Feuerbach, however much they may have enlarged and deepened it by extending Marxism into the sphere of history. To speak briefly and clearly, in the realm of science they were mechanistic materialists, while in the realm of history they were historical materialists." ⁶

Both historically and logically this is a very revealing distortion of Marx from the best representatives of the theoreticians of the Second International.

This distortion shows, as V. I. Lenin pointed out, a neglect of the very essence of Marxism by the theoreticians of the Second International, a neglect of materialist dialectic ; it shows a lack of understanding of the fact that historical materialism is the result of applying to the study of history the very same method used by Marx in his study of nature. It shows a superficial under-

NATURAL SCIENCE

standing of the deep connection between the dialectic of history and the dialectic of nature in Marx and Engels.

For Marx science served as the basis for the working out of all aspects of his method and outlook. In connection with the logic and theory of knowledge of dialectical materialism, Marx followed attentively the philosophical evolution of such a great scientific investigator as Huxley. He attended Huxley's lectures, made himself acquainted with his written and spoken work, was interested in his attitude to Comteism and analysed Huxley's contradictory position, which approached materialism while still leaving agnostic gaps and attempting to compromise religion and science.

On the plane of philosophy and world outlook Marx was interested in the new works which showed that "the whole French school of physiologues and microscopists", led by Robin, had spoken against Pasteur, Huxley, etc., in favour of "generatio æquivoca". Marx in connection with the materialist conception of history follows science which represents the basis for his philosophical and historical views. From this aspect Marx welcomed the appearance of Darwin, whose teaching, with all its deficiencies, gave a "natural-historical basis" to his own views. Darwin gives him a new and sharp weapon with which to criticise the teachings of Malthus which are closely connected with a number of economic and political questions.

The discussion of Darwin's work is deepened during Marx's lively discussion with Engels on the work of Trémaux. In this author Marx approves of, first, the effort to determine the Darwinian chance individual changes, since with Trémaux progress arises from necessity "on the basis of the periods of development of the globe", and secondly Trémaux's effort to give a natural historical basis to such social categories as nationality by advancing the idea of the influence of the soil.

As a politician and economist Marx followed attentively to see what new productive forces were evoked by the application of science to industry (Deprez in electricity, Rebourts in chemistry, Bakewell in Zootechnics, etc.). For "science was for Marx an historically motive, revolutionary force". Marx saw the inner

Y. M. URANOVSKY

connection of science with the concrete tasks of the political struggle and showed how the data of science, which seem at first glance to stand apart, confirmed his outlook and proved the movement of humanity towards communism.

It is, of course, hard to follow in each separate instance the motives which urged Marx to occupy himself with this or that problem of natural science. In the realm of science it is only relatively possible to isolate separate aspects or plans of Marx's interests. In reality all these aspects are mutually connected and united. One and the same sphere of science might interest Marx in different relationships. The circle of the problems which he drew into the orbit of his theoretical activities was considerably wider than the one we have sketched. Marx worked in the mathematical sphere, he was on the level of development of modern astronomy, and so on.

It is impossible to minimise the circumstance that Marx stood on the shoulders of German natural philosophy. Like Engels, he did not reject it, but critically accepted everything of value it could give him. So that in this direction also he included in his outlook the whole past development of the natural sciences.

Finally, his close scientific friendship with Karl Schorlemmer had a great importance, and particularly the collaboration with Engels who specially interested himself in working out the dialectical method in the natural sciences.

But a deep necessity penetrated the apparently accidental character of Marx's scientific studies. This was his effort to create the most all-embracing system of views, to create a consistent teaching based on the widest generalisations of theoretical and practical knowledge, as a foundation for the political struggle of the proletariat.

It is here that there grow the roots of the necessity and inner purposefulness of Marx's scientific interests, which at first glance are apparently accidental and sporadically scattered.

Once upon a time professional men of learning in criticising Marx used to ask where in the works of Marx, "the historian and economist", his philosophy is explained, and especially his "philosophy of history"? The proper answer to this question

NATURAL SCIENCE

has been given in its right place. Is there any foundation for asking this question in regard to the natural sciences? It may be said that we can find in Marx authentic statements on problems of the history of philosophy, that he has explained separate principles of the conception of nature, given an estimation of certain important scientific events of his day, but that he has no separate "philosophy of nature", that he lacks a complete *Systema naturæ* which answers all questions.

In such a form Marx certainly has no system of nature. Moreover, Marxism does not admit such a philosophy of nature since it puts the question of the philosophy of nature on a new basis of principle in comparison with the philosophy preceding Marxism.

Before Marx and Engels the nineteenth century had known two types of constructing a picture of the world, two types of approach to the establishment of a relationship between philosophy and science and in the very conception of the method of the natural sciences. The first type found its most complete expression in Hegel's philosophy of nature. German natural philosophy and Hegel's philosophy had the aim of uniting "the collection of evidence on final objects", which was contemporary science, of uniting this evidence on a common basis, of showing its inner connections and representing nature not as a collection of scattered forces and matters, but as a complete and organised unity.

In view of Hegel's incorrect starting-point, in view of his idealism, the task he set himself could not be solved correctly. Hegel's philosophy of nature necessarily dissolved into "rational science", for which the empirical sciences were only the condition, but not the main picture of the world. In Hegel nature is subordinated to logic, science only regulates the course of developing conceptions. In posing the problem of the connection between philosophy and science, in making a criticism of the narrowly inductive, analytical, descriptive science of the close of the eighteenth and the beginning of the nineteenth centuries, the natural philosophers (Treviranus, Ocken, Steffens, etc.) and Hegel played at that stage a positive part and had a fruitful influence on a number of important scientific investigators (Oersted, Schönbein, J. R. Mayer).

As experimental science developed further and the natural sciences were enriched by new data and were able to demonstrate factually the inner connections of nature, the method of the natural philosophers and of Hegel, which led to the abuse of deduction and the thrusting of artificial connections into nature, disclosed ever more clearly its own bankruptcy. After the period of the "illusory" connection of philosophy and the sciences of nature, science emancipated itself and drew apart from philosophical thinking.

The second type of constructing a picture of the world is characterised by the fact that it is applied on the basis of the empirical sciences alone, outside of all conscious connection with philosophy. Such is the vulgar materialism of Vogt and company, such is the "ordinary positivism" of Comte and of Alexander Humboldt's doctrine of the "Cosmos" which is in many ways akin to it. In dwelling for a moment on the "Cosmos" let us recall that in it the author set himself the aim of giving "a contemplation of the universe based on empiricism, on analysed thought, i.e. on the totality of phenomena collected by science and subjected to the laws of thought, comparing and putting together these data".⁷

This attempt of Alexander Humboldt had one positive side insofar as it expressed the necessity of comprehending the connection and unity of the data of the natural sciences, not at the dictation of an abstract idea but on the basis of actual empirical knowledge.

Owing to Humboldt's utter philosophical helplessness his "Cosmos" gave not a picture, but a mosaic of nature, not the inner connection of the data of science, but their external arrangement, not a system of knowledge, but an aggregate of observations. If Hegel's philosophy of nature was subjected to logic, then the "Cosmos" was divorced both from logic and philosophy (herein is its methodology) and hence arises its poverty in comparison with the Hegelian philosophy of nature.

If Hegel gave a method to the scientific investigator which nevertheless contained a grain of reason, Humboldt, on the other hand, disarmed the investigator into nature. The "Cosmos" was retrogressive in the philosophical sense compared with

NATURAL SCIENCE

German classical philosophy, and disappeared without leaving any important traces in the history of science.

The dialectic of nature of Marx and Engels represents the overcoming of both the types of conception of the relations between philosophy and science outlined above, types of the construction of a philosophy of nature.

According to Marx's teaching it is impossible to compose a single conception of nature and get a method for investigating nature, by starting from the activity of pure reason, for which science appears only as the condition of its movement.

On the other hand the dialectic of nature is impossible on a bare foundation of science outside of philosophical thinking. The conception and investigation of nature cannot be achieved simply by a summary of the facts of the natural sciences.

Materialist dialectic is the "total, the sum, the result of the history of the knowledge of the world". This method of investigation and understanding of objective reality in the full totality of its relations, in its development, transitions and inner contradictions, is the method which may be shortly described as "the doctrine of the unity of opposites" (Lenin).

The dialectic of nature is a method of the investigation and understanding of nature. This conception of nature is founded on the application of materialist dialectic to the data of science as they are obtained at each given historical moment. The dialectic of nature brings no artificial connections into nature and does not solve problems by substituting itself for the natural sciences. It helps in critically understanding and connecting facts already obtained, it points out the paths of further investigation and fearlessly poses uninvestigated problems.

The dialectic of nature is an organic part of the complete Marxist world outlook, the concretising of the teaching on dialectic as the science of the general laws of nature, of history and human thought. It is inseparable from the empirical sciences, on which it is based. It therefore changes its appearance with every big discovery in science. Since it is the most general conclusion from the historical development of science, the dialectic of nature gives empirical science a power of orientation and also directs it.

The dialectic of nature is inseparable from the dialectic of history with which it is connected by a unity of method, as two sides of a single teaching on a single, objective reality, as inseparable parts of the complete world outlook of Marx. This means that a real knowledge of nature and a conception of it as a developing whole is only possible with the knowledge of the laws and history of the development of human society which forms a specific part of nature. This means, further, that for the dialectical materialist science puts a stop to its pseudo-independent existence divorced from every aspect of social practice. The Marxian scientific investigator is consciously included in a single and inseparable complex of the theoretical and practical activity of a class which is the agent and motive force of historical progress. Science then finds its true ground and obtains a powerful impulse for its infinite development. It becomes a real weapon of struggle for changing the world and for the emancipation of the proletariat, and is transformed into a progressive and historically revolutionary force for the rapid construction of communist society.

The general foundations of the "philosophy of nature" in such a conception were laid by Marx and were systematically worked out by Engels on concrete material. Engels in this respect played a special part as one of the creators of the world outlook of the proletariat.

Marx's interest in science was not a manifestation of intellectual or scientific snobbery. The historical path of his theoretical activity has a deep logical foundation.

Materialist dialectic, that most precious theoretical weapon of Marxism, could not be the general teaching on the laws of movement in nature, history and thought, unless it had been checked by the facts of science.

Dialectic as a theory of knowledge could not have been created without the generalisation of the rich experience of the history of natural science and the rôle of science in the knowledge of man. V. I. Lenin, that dialectician of genius, gave a special place to the history of the natural sciences (particularly to the history of the mental development of animals, the physiology of the sensual organs, etc.) in the series of other sciences "from

NATURAL SCIENCE

which the theory of knowledge and dialectic must be formed ". The materialist conception of history could not have been created but for the study of the laws of development of science which is a particularly important manifestation of the social superstructure. A study of the rôle of science is essential for the theory of scientific communism both as a condition for the emancipation of the proletariat and as a condition for the construction of communist society. Finally, the creation of political economy also calls for the study of natural science as a condition of technical and economic development, as an essential condition for the functioning of the forces of production.

The great historical and revolutionary power of the teaching of Marx, Engels, Lenin and Stalin lies in the fact that it represents the sum of a colossal generalisation of all aspects of man's theoretical and practical activity, of the whole struggle of the working class. It is a united, complete, vital world outlook in which all the component parts are connected and bound together by indissolubly and incontestably united principles.

This is precisely why it has managed to stand the test of the fire of revolution and the many-sided practice of socialist construction, both as a precious guide to action and as the theoretical foundation of the policy, strategy and tactics of the party.

The fifty years which have passed since Marx died fill an exceptional place in the history of science because of the rapid rate of progress in natural science.

Frederick Engels in his classical works discovered the inner meaning of the natural sciences in the nineteenth century, the materialist and spontaneously dialectic character of their content. So far as concerns the development of science in the last decade of the nineteenth and beginning of the twentieth century and the relations of science to Marx's ideas in the epoch of imperialism, V. I. Lenin answered this question. A whole number of bourgeois philosophers, scientists and theorising politicians have given a reactionary solution to the question of the relation of science in modern times to philosophy and world outlook. They declare that twentieth-century science has refuted the ideas of materialism which once prevailed and which go back to French materialism

Y. M. URANOVSKY

of the eighteenth century, and that it has brought with it a "regeneration of the human spirit" and the triumph of idealism. For two centuries the materialist outlook has been widespread, the important German biologist Oscar Hertwig wrote,

but unless all the signs of the times deceive us, we are now again at a decisive turning-point in the spiritual development of man. The two hundred years' reign of various materialist trends, against which from time to time in the past different distinguished writers have raised warning and prophetic voices, like Goethe, Fichte, Carlyle, Karl Ernst von Bär, like the physicists Fechner and Mach, is to-day again about to yield its place under the pressure of time to an idealist outlook.⁸

This turning-point was announced almost simultaneously in the organic and non-organic sciences, but it was made particularly clear in modern physics.

V. I. Lenin has shown what were the conditions and causes which brought about this change and what was its true philosophical and class meaning. Twenty-five years have passed since Lenin gave his deep and all-round analysis of the crisis in science. In that time many new conquests have been made in physics, but the crisis has grown deeper yet, embracing fresh realms of science. The estimate made by Marx's great successor has not only remained unshaken but has received fresh confirmation.

In the same year as Engels died, the Würtemberg professor V. K. Röntgen discovered rays which were created by the impact of electrical charges on objects in exhausted tubes. This discovery marks the beginning of dazzling successes. From 1895 to 1900 the teaching on radio-activity was created, Zeeman's effect was discovered, Planck put forward the quantum theory and thereby laid the foundations of modern physics. Rutherford established the nuclear theory of the atom and then the work of Niels Bohr began to develop the theory of atomic structure, and one after the other came a succession of pictures of the atom. In 1905 Einstein created a partial theory of relativity. In 1913 Moseley's work allowed us to penetrate further into the meaning of the connection between the elements and their arrangement in horizontal periods and vertical groups in Mendeleev's table. These works help us to understand the astonishing phenomenon

NATURAL SCIENCE

of Aston's isotopes. Finally, in 1926 begins the development of wave mechanics. The impetuous movement along the path of new discoveries is not stopped, but physical thought penetrates the complex structure of the atomic nucleus. New methods of physical research lead to the reforming of the sciences near to physics, of astrophysics, chemistry, crystallography and geology.

These fresh facts and theories insistently demanded a fundamental change in all the firmly established conceptions of the old classical mechanics. Newton's mechanics were based on the conceptions of mass, energy, space and time as metaphysical substances existing separately and independently of one another. It turned out that they are interconnected and united. Mass depends to a great degree on speed. Space and time do not exist separately, they are not forms separated from their content, matter. Impenetrability, inertia, mass, have ceased to be the unchanging properties of matter. The continuity prevailing in nineteenth-century physics has proved an inadequate and one-sided category, since the quantum theory has shown the importance of interruption in nature. The conception of the atom as the final and indivisible brick in the world edifice has collapsed, just as has the established confidence in the immutability of the elements, etc.

Failing to get beyond the old method of research and to bring forward a more perfect form of thinking corresponding to the level of scientific development in place of the old outworn form, repelled by bourgeois social relations from dialectical materialism which alone is able to replace the mechanistic materialism formerly prevailing in science, and expressing the growth of reaction "all along the line" which is characteristic of the epoch of imperialism, the bourgeois physicists have turned to idealism and all the varieties of reactionary philosophy.

In analysing the theoretical premises of the crisis in bourgeois science, V. I. Lenin pointed to the progress of mathematics and physics as the first cause giving birth to "physical" idealism: the second cause is "the principle of *relativity*, the relativity of science, a principle which, in a period of utter breakdown of old theories, imposes itself with especial force upon physicists and

which, due to *ignorance of dialectics*, inevitably leads to idealism ".⁹ This argument is confirmed with especial force by modern physics.

From the relativity of the measurements of time and space fixed by modern science, physicists draw a one-sided conclusion concerning the exceptional relativity of these categories. Meta-physical reason is accustomed to a conception of the atom as an unchanging unity of mechanical structures. It calls for a stable starting-point and a final cause. But, since the atom is capable of disintegration, since the research-worker has not yet, at our present level of knowledge, been able to establish the causes of the processes which take place in the atomic nucleus, the physicists therefore draw the conclusion that it is necessary to renounce the law of the conservation of matter and energy.

From the difficulties connected with the circumstance that actual research into inter-atomic phenomena brings about changes in the object observed, a doctrine has been formed that the measurement of physical quantities in microphysics is in principle inexact and that therefore their unknowability is confirmed. As though during biological experiments, no place is found for this change in the object, which has nevertheless not prevented the penetration of the secret of, say, cariokinesis, or of the working of the muscles in biochemistry. From this well-known fact of the change in an object under investigation the idealistic conclusion has been drawn that the object has no existence at all apart from the subject (N. Bohr, P. Jordan). From historically-conditioned difficulties of the methodology of physical research they draw the conclusion of " a theoretical limit " and fix absolute bounds of knowledge, as though the history of science has not completely refuted such a declaration of " Ignorabimus ". The physicists, W. Heisenberg, P. Jordan, N. Bohr and others, demand a renunciation of the category of causality, though this renunciation, as Planck warns us, " is a serious thought owing to the consequences arising from it ". " The new theory of knowledge ", P. Jordan writes, " calls for the renunciation of all that mysticism of conceptions which was expressed as a faith in the ' compulsion ', the ' necessity ', in the ' comprehensibility ' or the ' explainability ' of natural laws and causal relationships." ¹⁰

NATURAL SCIENCE

The physicists, save for a few insignificant representatives of the old generation, are turning back to Kant or even more to Hume. The Machists, Franck, Reichenbach, Schlick, are utilising these difficulties of modern physics, systematising them and giving a basis to the reactionary conclusions of the physicists and raising them to the heights of theory.

It does not come within the task of science, in the opinion of the majority of modern bourgeois physicists, to explain processes, but only to describe them, for from this point of view the research worker in general does not know objective reality and is compelled simply to describe statistical laws of behaviour.

These reactionary conclusions are strengthened by class interest and are utilised as an ideological weapon of struggle against the proletariat. For example, the theorising fascist, R. N. Coudenhove-Kalergi, strives in his struggle against Marxism to work from the reactionary tendencies in modern physics and biology. The disintegration of the atom by Hertzian rays and wave mechanics, he declares, have brought victory to idealism. Materialism is refuted. Science, from which it worked, has turned against it. It has destroyed the idol which materialism wished to set up in the place of god, the idol of matter. "With the banner of a 'scientifically' justified idealism in his hands, with God and Nietzsche on his lips, he agitates for a crusade against the Bolsheviks, those solitary allies of materialism, for a crusade organised, of course, under the leadership of an 'all-saving personality'." ¹¹

In fact, any conclusions in favour of idealism and fideism are not in accordance with the content of modern physics. When a physicist deflects α -rays by an electrical or magnetic field, when he establishes that one gramme of radium discharges $3.5 \cdot 10^{10}$ particles in a second, he has no doubts about the real and objective existence of rays and particles. The materialness of the world is not refuted either by the theory of relativity or by the fact that, close upon the molecule and the atom, the nucleus itself has turned out to be only a "relationship" of matter, nor by the other achievements of the modern physical sciences.

Modern physics actually confirms dialectical materialism. The

Y. M. URANOVSKY

theory of relativity is evidence of this in bringing us to a conception of the unity of mass and energy, of space and time. So also is the collapse of the conception of immutable qualities and elements. So also is wave mechanics which affirms the unity of interruption and continuity, etc.

Amazing as is the transformation of imponderable ether into ponderable matter, from the viewpoint of "common sense", and conversely, amazing as the absence of any other kind of mass in the electron save electro-magnetic may appear to it, together with the strange discovery that mechanical laws of motion are limited to only one region of natural phenomena, while the others conform to subtler laws of electro-magnetics and so forth—yet all this for dialectical materialism is only another confirmation of its truth.¹²

In the light of Marx's teaching the fact becomes comprehensible that, in the main, similar processes are observed in the development of both inorganic and organic sciences in the last decades.

In this period in biology not only have the sciences formerly worked out been deepened, but new realms of knowledge have been discovered. To characterise the achievements of this period it is enough to recall the mechanics of development and experimental morphology, the theory of fermentations, the discovery of hormones in plants and animals, vitamins, the theory of tissue cultures and isolated organs, genetics, ecology, I. P. Pavlov's theory of conditioned reflexes, etc.

The new facts discovered in the spheres of morphology and physiology—the facts of regulation and restitution, established by the mechanics of development, the wholeness of the organism, regulated by the nervous system and inner secretions, the complexity of the processes of nourishment and motion in plants which are far from being reducible to simple laws of mechanics (the works of Max Nordhausen and Alfred Noll), etc., have called for the replacing of the insufficient, one-sided mechanical method. It was necessary to advance new principles for the connection of the growing heap of material. It was necessary to create a new "philosophy of the organic" on the basis of the factual data discovered.

In the period when capitalism had passed into the latest stage of its development, imperialism, in conditions of the growth of

NATURAL SCIENCE

reaction among the bourgeoisie in its struggle against the working class and the colonial peoples, with the flourishing of reactionary trends in philosophy, science and art, the new data discovered by biology and eloquent of its factual progress, have brought about a crisis of theoretical thinking in the sciences of the organic world.

A "new course" in biology has commenced along a path sown with metaphysical and psychological conceptions, entelechy, the dominant, impulse, the super-individual soul, morphasthesia, autotropism, mnema, etc.

A wave of reaction is rising in biology and beginning to struggle against the main biological achievement of the nineteenth century, Darwinism.

"A salutary reaction against Darwin's speculations has begun," declares O. Hertwig. "It is necessary to exclude Darwin from the series of scientific theories. . . . Darwinism has perished ingloriously," declares the Kantian Jakob von Uexküll. Eminent biologists declare that, despite the development of science, "the gap between living and non-living nature, instead of gradually closing up, has rather become deeper and wider".¹³

In fighting onesidedly against mechanistic methods in biology they reach the conclusion that biology does not have a method of its own, since it is heterogeneous in its logical composition and in theory yields to physics and chemistry, just as in the laboratory the biologist is gradually giving way to the engineer. It is therefore necessary to create a biology as a science *sui generis*, for "real biology is almost destroyed".¹⁴

The ground is being prepared for the proclamation of the coming of an epoch with a new world outlook born on the biological wave (Jakob von Uexküll), for the aggression of vitalism and the appearance of a number of organically founded reactionary philosophical systems (O. Spann—the philosopher of fascism, Henri Bergson, etc.).

Vitalism (neo-vitalism) is the inevitable shadow of mechanism and its necessary complement.

On the one hand the mechanists affirm that the living is a machine, though certainly an historically-developing, complex

Y. M. URANOVSKY

machine ; the living is an object completely dependent on external environment, its passive shadow. On the other hand, there is the opposite declaration of the vitalists that life is an autonomous subject, the laws of life are " absolutely independent and self-acting vital factors, which have the primacy over all inorganic laws ; these latter must submit to the former in opposition to what has been hitherto accepted ".¹⁵

On the one hand, we have a violent reduction of life to physics and chemistry and the establishment from below not only of the unity, but also of the identity of nature. On the other hand is an impassable gap between the organic and inorganic worlds, or a universal teleology which establishes the idealistic identity of nature from below.

On the one hand, the mechanists state that the organism is only a sum of parts, on the other hand, the category of totality (*Individuum*, *Totalität*) is put forward, in relation to which the part is merely a subordinated means. On the one hand, causality understood one-sidedly (*causa efficiens*) as a renunciation of chance and expediency the reduction of consciousness to the rôle of epiphenomenon, a statically morphological approach to the study of organic phenomena. On the other hand, we have expediency on the basis of indeterminism (*causa finalis*), the introduction of psychological factors as the leading ones in the explanation of biological processes, and a one-sided physiologism, divorced from structure. The vitalists exaggerate, one-sidedly expanding certain features in the fundamentals of biology, the facets and aspects of organic phenomena, just those features which the mechanist biologists are absolutely powerless to explain.

The numerous schools created out of the break-up of biology and which are attempting to solve the dilemma, " mechanism or vitalism ", the representatives of " organic biology ", the Machists (Hans Winterstein), the " positive " vitalists (L. von Bertalanffy), the mnemonics of E. Bleuler, etc., are rather the smitten than the smiters, since vitalism is invulnerable from the positions of idealism or eclecticism.

Whither, for example, does the mighty condemnation of

NATURAL SCIENCE

vitalism pronounced by Ph. Franck lead us? Vitalism, he says, is only a negative concept. It is an expression of despair in the physico-chemical method. "Nowhere is there a really vitalist biology. You can construct nothing out of cries of despair." ¹⁶

Actually his threats to vitalism are anything but terrible. In fact, as we know, science for a Machist is only the simplest description of phenomena—according to the principle of economy of thought. Science has to do with experiences and the symbols adapted to them. For Ph. Franck considers that the nucleus, protoplasm or reductional division, for example, are only relations between symbols. Why then not construct a biology as a science utilising the conception of "induction" borrowed from Uexküll or Driesch's superpersonal entelechy? Franck can say nothing at all convincing against such a possibility. Moreover, he has to recognise as theoretically possible the construction of biology out of teleological representations. The Machist cannot dispute that entelechy is a more economic symbol than the categories of scientific biology, but god or goblin is a simpler representation than Uexküll's "psychoidal law of induction" or Driesch's unrepresentable entelechy, to which we might apply Mephistopheles' words:

With thought profound take care to span
What won't fit into the brain of man.

Trying to work from the most recent achievements in biology, vitalism tries thereby to prove that it is corroborated by the conquests of science. But the reliance on Spemann, Jennings, Yerkes, etc., is purely verbal. The whole "philosophy of the organic" of the vitalists is reduced to the fact that the laws of the material world discovered and established by biology are connected in a purely verbal way with "psychoidal induction" and entelechy. For example, Academician I. P. Pavlov's well-known teaching which permits us by using a strictly scientific method to establish certain essential laws of the functioning of the higher nervous activity, and which is not only materialist but a teaching objectively confirming the laws of dialectic, is

also, it appears, called on to confirm vitalism. "Pavlov's well-known experiments", Uexküll writes, "are particularly fitted for the study of induction."¹⁷ But the fact is, however, that this induction is anything but fitted for a weapon of biological research from the point of view of the teaching of Pavlov himself, since this induction is a metaphysically reversed and mystified conception of the reflex. Uexküll tells us concerning this mysterious induction that it is a "psychoidal law" and thus reveals that either he will not or cannot understand what are the reactionary tendencies in physiology against which Pavlov's teaching on conditioned reflexes is aimed.

Neo-vitalism seeks confirmation in the data of comparative physiology, particularly the physiology of the organs of the senses. With this comprehensible aim Johannes Müller's law of the specific energy of the sense organs is adapted in an absolutely one-sided fashion in the spirit of "physiological" idealism and raised to the rank of "the fundamentals of all biology". By bringing under it all the facts of modern physiology, including Pavlov's teaching, it is not hard to reach the conclusion of the autonomy of life and the primacy of vital factors.

These attempts by the vitalists to work—after Driesch's experiment in the sphere of the mechanics of development—from the facts of the physiology of the sense organs, show how true was Lenin's brilliant analysis which established the problem of relativism as the methodological core around which the crisis in bourgeois science revolves. In fact, for those who hold a metaphysical standpoint it is particularly difficult to grapple with the element of subjectivism and relativism which exists in the data of the sense organs. On the other hand, the data of the physiology of the sense organs which are eloquent of this relativism are the more attractive for those who strive to justify a "physiological" or any other form of idealism.

Lenin's analysis of the crisis of the physical sciences is fully applicable also to the explanation of the condition of modern biology. As in physics, the theoretical premises for reactionary inclinations were created by the very progress of biology. As in physics, in place of the mechanical method a deeper form

NATURAL SCIENCE

of thinking was called for. A fundamental refashioning of the main categories of biology was demanded, of life, the individual, causality, expediency, development, form, function, etc.

The majority of research workers in biology have also, under the pressure of the social conditions of the imperialist epoch, having no knowledge of dialectics, turned towards reactionary philosophy. This turn to reaction in theoretical biology has a different expression. The ranks of the supporters of mechanical materialism have grown thinner, whilst the theoretical biologists, resurrecting the anything but advanced aspects of the teaching of the great investigators of living nature, Lamarck, K. E. von Bär, Johannes Müller, appealing to the shades of Kant, Schelling, Ocken, Mach, etc., have created many schools of different idealist shades from Machism to Driesch's metaphysical vitalism. The condition of the bourgeois philosophy of biology is largely characterised by the style of ideas which Hans Driesch is rather actively propagating. His Schillerian "Hans metaphysicus, a famous thinker, a great little man" is preaching from the roof of the vitalist tower his philosophy of the organic constructed on the data of biology plus an inconceivable entelechy which after death is transformed into a superentelechy, as is demanded by "the doctrine of immortality in its Indian form, consequently, by the doctrine of the transmutation of souls".¹⁸

The crisis of modern biology is deepened still further by the fact that the crisis in the border sciences, in physics on the one hand and medicine on the other, influences biology, strengthens the chaos of conceptions and chokes it with incorrectly drawn conclusions even in the sphere from which they are transferred.

The representatives of physics have dealt a heavy blow at modern biology by attacking determinism and preaching freedom of will, which they deduce from the apparent indeterminism of intra-atomic processes (A. Sommerfeld, N. Bohr, P. Jordan, etc.).

Jordan, for example, openly considers it unreasonable, in view of the fact that we do not know the basis of the disintegration of the atom, "to ask the question of on what basis this mutation has taken place just at this time, and not thousands of years before".¹⁹

Y. M. URANOVSKY

The reactionary views of the physicists have given direct support to the vitalists and upset the mechanists. In illustration of this argument it is sufficient to recall the name of Ludwig Rhumbler. This famous mechanistic biologist, who for many years has laboured to explain the most complicated biological phenomena as the playthings of physico-chemical forces under the control of natural selection, is now beginning to overestimate values and surrender to Hans Driesch. Taking the word of A. Sommerfeld for the fact that indeterminism is observable in the atomic system and a purposive foresight is shown by its particles, Rhumbler draws conclusions which he applies to biology. He admits that an entelechy capable of a mechanistic interpretation may be accepted. He is inclined to suppose that an entelechy is already given potentially within the atom in the shape of the energetic factor.

This slipping into the position of extreme vitalism, pan-vitalism, is particularly significant in a mechanist.

Just as in physics, so also in biology the latest achievements of science disclose the insufficiency and limitations of mechanical materialism, but they completely confirm dialectical materialism.

All the recent achievements of biology, the mechanics of development, the theories of ferments and vitamins, the facts of endocrinology, genetics, the theory of conditioned reflexes, etc., are a complete refutation of vitalism.

As a concrete illustration we will recall the events connected with the works of Spemann and his school.

These experiments established that the dorsal lip of the blastopore of an embryo of an amphibian when transplanted into the undifferentiated regions of other amphibia becomes possessed of the capacity of inducing a development of the nervous system, chords and mesoderms.

The nature of the action of the spheres of an embryo (Spemann's "organisational centres") was unknown until recently. The vitalists, always ready to speculate on phenomena still unstudied, hastened to declare that "Spemann and his pupils have shown in recent years the amazing multiplicity of cases of harmonic equipotentiality".²⁰

NATURAL SCIENCE

So Spemann's organisers were to prove in this way the all-powerfulness of entelechy.

But the recent works of Holtfreter, who got induction by transferring "organisers" killed by heat, frozen and dried, and the analogical works of Bautzmann, O. Mangold and Wemeyer compel us to see a chemical basis for the phenomena of independent development.

Materialism has triumphed again. A crushing blow has once more been dealt at vitalism, which is not only "a lazy", to use Claude Bernard's expression, but also a deeply reactionary conception of modern biology.

The achievements of modern biology have brought triumph to materialism, because they explain the objective laws, the material bases, the conditions and causes of the morphological and physiological processes of a single, developing, organic world, because these achievements enlarge the theoretical basis of plant science, animal science and medicine, that is of the practical activity of man directed towards the mastery of the forces of nature.

It is precisely dialectical materialism which is confirmed by the achievements of modern biology. It is only materialist dialectic which gives a method of research, and it is the conception of unity of opposites which is the law of the processes of the organic world (assimilation and dissimilation, autonomy and correlation of organs, etc.). Materialist dialectic allows us to understand the element of relativity, the subtlety, the fluidity of the categories of biology (genus, species, individual, etc.).

Materialist dialectic is confirmed by the whole movement of biology as a science taken in its whole and compelling us to see the unity of the organic world in its inner connections and reciprocity. During the nineteenth century the two chief departments of biology, morphology and physiology, developed in deep separation from one another, to the mutual harm of both. The principal significance of the opening up of a new sphere in biology, experimental morphology, lay in the throwing of a bridge (as was seen by such a thoughtful biologist as K. A. Timiryazev) between these two completely separated spheres.

Y. M. URANOVSKY

The further development of biology has still further narrowed the artificially created gap between the morphological and physiological sciences.

Endocrinology and its connected morphogenetics show the unity and reciprocity of form and function and compel an understanding of the unity and connection of the morphological and physiological sciences.

Lenin has shown that the content of dialectic must be checked by the history of science and not by separate examples.

The history of the development of biology during the last decades furnishes convincing proof of the depth of thought of this dialectician of genius.

Thus modern natural science confirms from all sides Marx's immortal ideas. Just as the inner meaning of the achievements of science confirms the materialist dialectic of nature, so the present condition of science and its social rôle confirms the correctness of the Marxian conception of history.

In the countries of capitalism, where once Kepler and Galileo, Descartes and Newton, laid the foundations of modern science, this science is to-day in a state of serious crisis, accompanied in certain parts by complete stagnation and sharp decline.

The external history of this crisis and its manifestations have been fairly well described by bourgeois savants who continually return to this painful theme.

The old ideas and conceptions are utterly destroyed in the physical and biological sciences. The numerous tendencies created by the break-up of the old science attempt to advance new conceptions to unite the mass of facts discovered in the progress of science. But nothing but "chaos" (L. von Bertalanffy) and "confusion" (M. Planck) result from the search for a method.

The outlook of these scientists is distinguished by its reactionary character, its pessimism and direct connection with teleology.

The physicists, like Sir James Jeans, declare the universe is finite, and proceed to the conclusion of the existence of a mathematical creator of the universe.

NATURAL SCIENCE

The biologists support a general teleology (holism, emergent evolution). They speak of the inevitable degeneration of civilised man (D. Kotzowsky), of the mystery of the organic world (Charles Ricket), of the immortality of the soul (H. Driesch), etc.²¹

In place of rationalism we have intuition, in place of determinism, indeterminism, the mechanistic picture of the world has yielded to the organistic. Romanticism, mysticism, pessimism and fatalism, are growing. On the one hand, philosophical thought is going into a decline, since it is incapable of generalising accumulated material; on the other hand, scientists are afraid of philosophy, "for philosophy is the opium of science". Positivism and Machism are growing, different schools are reviving the teaching of Berkeley, Hume, Schopenhauer and Schelling, and Nietzsche's "blond beast" is opposed to the mighty figure of Marx.

Max Planck, the physicist, denying the crisis in words, gives interesting indirect testimony of its existence. Planck indeed confirms the presence of a crisis when he is compelled, in retreating and yielding his positions, to defend the causality and objectivity of the physical world. He confirms the crisis in bourgeois science when he speaks of the confusion prevailing in science and complains that science is being overwhelmed by the activity of all sorts of fantasists. He exposes the anarchy and class character of bourgeois science when he regretfully states that these fantasists are assured of support "whilst on the other hand valuable scientific research workers with rich prospects are compelled to limit themselves or to cease work owing to lack of means".²²

On the other hand, the testimony of the biologist Hans Driesch is interesting. Even before the flames of the Reichstag fired by the Storm-troopers lit up the progeny of fascist mediævalism, he complained bitterly that

in Germany at least we are living in a time when interest in scientific knowledge is importunately and rudely pushed aside in favour of very vaguely expressed "cultural-philosophical" considerations. The desires and hopes of faith are mingled with real knowledge.

Y. M. URANOVSKY

This period of scientific and philosophical decadence will finish sometime. And then it will once more be recognised that the natural sciences with their strict method are the refuge of real knowledge.²³

We will put aside the unintentional humour of the apostle of vitalism who deplores the mingling of faith and knowledge, philosophical and scientific decadence.

The important thing is to note the helplessness of the bourgeois savants which appears at the slightest attempt to analyse the causes and conditions of the crisis of bourgeois science.

On the other hand, the international character of this outstanding phenomenon of bourgeois culture, its bases and causes, is quite understandable in the light of Marxism-Leninism. This phenomenon fully confirms the philosophical and historical views of Marx and Lenin.

The general economic crisis which brings near the fatal hour of the expropriation of the expropriators, sets no great creative tasks before bourgeois science.

The upsetting and destruction of productive forces when demanded in the interests of private property, the fear of all innovation which is at the bottom of the theory of "the technical exhaustion of man", hold back the development of science or else give that development a one-sided character. Scientific workers have to *justify* their science by showing they are not guilty of the world crisis of capitalism (Emile Borel, etc.).

The class rule of the bourgeoisie has turned into a fetter on science. The bourgeoisie has worked science enough. It can be said without exaggeration that it develops it only so far as the interests of militarism and imperialism call for it.

The social conditions of the bourgeois world are unfavourable for the development of science. The reactionary character of the bourgeoisie which has suppressed with blood and iron the revolutionary movement of the proletariat and the colonial peoples, the reactionary nature of sections of the petit-bourgeoisie evoked by the ruin of the post-war epoch, the spirit of disillusionment, fatalism, mysticism (astrology, alchemy, magic, occultism, spiritualism, anthroposophy, etc.), spreading its

NATURAL SCIENCE

poisonous colour over their background, all has a fatal influence on science and colours definitely the outlook which the scientific investigator constructs on the basis of modern science.

Chauvinism, the tendency to economic isolation (autarchy), the Balkanising of Europe, are all fetters on the development of science. They are obstacles to real scientific generalisation and the working out of a number of scientific problems which by their nature call for co-ordination, for a frankness which excludes secrecy, and for the co-operation of nations.

The division of labour, which has developed one-sidedly in bourgeois science, creates such minute specialities that they deepen the division between the different branches of even one and the same science, and the objective basis of crisis and reaction is also strengthened. The anarchy of bourgeois social relationships does not allow the planned organisation of the process of research, but private property in the instruments of research, the selection of cadres from the propertied classes, monopolises research activity, puts wide sections of workers outside its limits and is unable to guarantee the drawing into scientific work of capable and gifted human material.

If the research worker does not by his class nature express the reactionary moods of the ruling bourgeois, the external "bidding of capital" forces him along that path.

Fascist Germany with its superstition and utilisation of scientific theories in the struggle against the working class (genetics, the race theory, etc.), with its persecution of everything progressive in science, with its driving out of scientific workers who do not meet the conditions of the "third empire", is not an exception in the bourgeois world.

Fascist Germany as the rottenest link in world capitalism simply shows up more vividly and nakedly the situation of science and the scientific worker in bourgeois society.

In the historical sense the path of bourgeois science is completed. It has gone from Bacon of Verulam who boldly declared that "*Scientia et potentia humana in idem coincident*", past Oswald Spengler, the sentinel at the gate of the doomed Pompeii of bourgeois civilisation preaching a fight against technique and

knowledge, down to similar familiars of fascism who see salvation in "collecting all books for the bonfire".

Modern bourgeois science confirms Lenin's teaching that a crisis of method is inevitably evoked by the progress of scientific knowledge in capitalist society.

This crisis in method becomes more profoundly acute and grows into a general crisis in outlook which is accompanied by a general stagnation and decline in scientific research, as the decay of the social and economic foundations of bourgeois society spreads in the period of general crisis of capitalism.

In the fifty years which have passed since Marx's death the ideas of this giant in thought have reached out in a way unprecedented in the history of the intellectual life of nations.

What do the views of the modern theoreticians of social-fascism have in common with Marx's teaching? What do their views on the chief problems of science have in common with Marx?

The theoreticians of the Second International themselves cynically admit their treachery in this sphere. They themselves proclaim that they have turned from "mechanical materialism to Machism and from Darwinism to neo-Lamarckianism".

Machism is the theoretical-cognitive basis of the scientific views of most of the social-fascist theorists. Their chief arguments are that a natural law is only a convenient way of describing phenomena and that any scientific picture of the world is absolutely conditioned by social relations.

These Machian vulgarisms, which have been pitilessly exposed by Lenin, deprive science of its objectively scientific meaning.

In the physical sciences the Machian arguments inevitably bring the social-fascist theoreticians to completely sharing the lot of the reactionary-minded bourgeois physicists who preach indeterminism and idealism.

Matter, mass, is only a complex of sensations. "Neither the eternal existence of mass, nor its metaphysical uncreatability and indestructibility are established; only the constancy of the relations of acceleration observed by man is revealed."²⁴

In biology the social-fascist theoreticians stand on the extreme right wing even as a fraction inside bourgeois science. It is

NATURAL SCIENCE

well known that Kautsky accepts the view of the eternity of life. In the theory of evolution Kautsky takes adaption to environment as his starting-point. So his departure from Darwin towards a neo-Lamarckianism of a psychological sort is defined. This also explains why the lesser social-fascist theorists like Gustav Eckstein and Hans Haustein refer to and support the vitalists like A. Pauly, E. Rignano, E. Hering, Semon, etc.

We know how Kautsky criticises the fascist racial theories ; this criticism rather justifies and deepens them than exposes their scientific baselessness and reactionary character.

By refashioning Marx with neo-Lamarckianism, by biologising historical materialism, Kautsky has disarmed himself before the fascists Günther and Lenz. He is as close to them theoretically as he is politically.

There is no dirty and reactionary source in bourgeois science from which social-democratic theorists do not draw their wisdom. The famous " freedom " of social-fascist research shows itself by each one of them in his own way, with a greater or less degree of frankness, refuting and correcting Marx. Frederick Adler refutes Marx and Engels as mechanists. Max Adler directly and Kautsky indirectly, prove Marx always to have been an idealist (for Marx, according to these distorters, always started from needs, from man's purposive activity). These theorists have their shades of opinion and partial disagreements. Finally, they very often " partake of freedom " by an eclecticism which permits them to connect the inconnectible. But the general main line of their views in science is sufficiently clear and definite. It is in the main an idealist system of views. The social-fascists stand on the right wing of modern bourgeois scientific research workers and whole-heartedly share with them the burden of ideological dispersion and decline. They are " not antipodes but twins " (Stalin).

The dictatorship of the proletariat and the Soviet system bring forward new principles in the organisation of the process of scientific research. Unlike bourgeois scientific research which is partially dependent on the state but chiefly in the hands of private persons and various societies (including clerical ones),

thereby excluding any possibility of planning and unity in work, socialism puts forward as its principles, instead of anarchy, a planned foundation, instead of spontaneity, social foresight, instead of one-sidedness, complexity, instead of the individualism of the competitive struggle, socialist competition and shock-work.

The philosophy of Marxism, dialectical materialism, the importance of which the mass of Soviet scientific workers recognise more and more, gives a precious weapon with which to generalise the latest facts of science, to justify theoretically the science of nature.

Science in these conditions provided by socialist society, assumes a particular power which distinguishes it in quality from bourgeois science. This is its greater activity, its greater tendency towards active interference in and changing of, those processes of nature which in the conditions of bourgeois society remain elemental and unrestrained.

The fiftieth anniversary of Marx's death almost coincides with the fifteenth year of Soviet power. The development of Soviet science in the fifteen years of its existence has fully justified Marx's views. Science in the U.S.S.R. has in this period won immense victories which have allowed it to a great extent to overtake, and in some sections even to surpass, bourgeois science.²⁵ These victories have been won not only in the field of the applied sciences, but also in the field of the theoretical sciences connected with them whose generalisations rise high above the practical interests of the present day. It is enough to recall the development of Soviet physics and chemistry, the study of radio-active substances, geology and geo-chemistry, the work in genetics, the experiments with mitogenetic rays, the theory of philembryogenesis, the theory of conditioned reflexes, etc. Soviet science, from a mere appendage of European science, as it was before the November revolution, has become a strong force both within the country and in international science. These victories are the more remarkable for having been achieved in circumstances of civil war and intervention, of unceasing and desperate resistance from the remnants of the bourgeoisie defeated by the November revolution.

S. I. VAVILOV

THE OLD AND THE NEW PHYSICS

History is the true natural history of man.—K. MARX.

I

ON CERTAIN TASKS OF THE HISTORY OF SCIENCE

It is to be hoped that one day the history of science will itself become a science. The guarantee of this is the growth, plain even in its smallest details, of science and technique and the hundreds of thousands of human beings who are creating the history of science on the earth before our eyes. We cannot neglect this unceasing movement, this powerful manifestation of nature, capable of changing the earth no less radically than earthquakes and floods. To understand this process, means, as always, to master it in many ways and to learn to direct it where necessary. The history of science is a necessary and, perhaps, even a sufficient prerequisite for the planning of science. So sooner or later the history of science must become a science.

Up to the present, however, it has stayed in the cradle of personal characteristics and biographies, of chronological data, and, in many cases, of imperfect documentation. The "scientific" nature of this history is reduced to naïve schemes in which science is removed from its living, changing environment and treated as an autonomous organism, almost as an organism developing with a logical structure. Up to the very present, disputes have not ceased as to whether the history of science is not perhaps unneeded, while circumstances have combined to make it almost impossible for anyone to devote himself fully to

the subject. The very subject itself is incomprehensible and strange to the qualified historian, while the learned scientific worker has not time even to "look at" it, and indeed it has become a mark of good form not to look at it, save in cases of disputed priority. In many instances also the scientist does not possess the necessary general historical and philosophical knowledge. It is in this lack of hands to tackle the subject that we find not the least important cause of the unhappy position of the history of science.

We should not be surprised, therefore, if up to now no answer has been made to the chief and absolutely inevitable questions of the connection of science with pre-scientific or extra-scientific knowledge, of the possibility of a scientific form without a concrete content (theology, scholasticism), i.e. of science without concrete knowledge as opposed to knowledge without science. Where is the transition from instinct, conditioned reflex, habit, the knowledge of the savage, to what we call science? How are we to explain such an amazing fact as the lack of any science (even pseudo-science) in old pre-Peter-the-Great Russia? The "history of science", which has officially existed for thousands of years, is still not able to answer such questions.

Science as a factor in history, as one of the means of influencing the pace and direction of the development of human society, is essentially a new phenomenon, which has practically hardly been in existence more than four centuries. We might say of ancient and mediæval science not unjustly that :

Ihr durchstudiert die gross' und kleine Welt
Um es am Ende gehn zu lassen
Wie's Gott gefällt.

But this characterisation has an absolutely libellous ring when applied to modern science, which has built railroads, created electro-technics, conquered bacteria. These stages have meant an enlargement of the accessible regions of the earth, an unusual acceleration of the mobility of man himself and of material values, the practical realisation of the instantaneous and economic transference of power over enormous distances, and, finally, the strengthening of the power of resistance of the human organism

THE OLD AND NEW PHYSICS

itself. The history of science by analysing social and economic relationships must find the causes of this mighty process of the transformation of science into a motive force of history.

The far from uniform significance of scientific results for practice and for science itself calls for serious attention. The discovery of printing or of the first forms of steam engine were for the general scientific system merely elementary adaptations. In comparison with such results as the creation of classical mechanics and the theory of gravity, these discoveries, for all their immense practical consequences, appear as mere primitive schoolboy exercises. Of course, it is beyond doubt that the study of any question means the knowledge of something new which may be applied for human needs. The floods of patents, the direct participation of science in industry, the delicate practical tools of modern technique bear witness to extremely intense work in this direction. But there is no doubt that even such perfected results of modern science as aviation and the radio have been far less effective in their practical results than printing and railroads. This astonishing lack of correspondence between the structure of science itself, its own estimation of scientific results and their importance for society has not so far been touched on by the history of science. Whereas here we have one of the main organisational and possibly structural problems of science itself.

How have the thematics of scientific research at different times and different places been determined and how are they determined? It is only to-day that we have begun to study this most important problem of the history of science and it is only the Marxists who are doing it. Up to now the problem has remained unsolved. In the history of science we have been concerned with what such and such persons were working on, or, on the other hand, interested ourselves in what persons at various times were working on a given theme. The motive and stimulus were consciously or unconsciously considered to lie in the inner logic of science itself.

Whereas a mere fleeting glance at even one of the chronological dates at once destroys this primitive scheme. I will limit myself

to one remarkable example from the history of optics. In the seventeenth century, at the very dawn of exact science, practically all the fundamental facts of classical optics had been established. Grimaldi had discovered and described in detail the phenomenon of diffraction. Hooke and Newton had studied the series of interferential phenomena and Newton for the first time had exactly defined the length of the light rays of visible light. E. Bertolin discovered double refraction while Newton drew the conclusion of the possibility of the polarisation of light rays. O. Römer for the first time defined the speed of light, Newton studied the laws of dispersion and introduced the conception of the monochromatic ray, while finally Fermat and Huygens formulated the main principles of geometrical and wave optics. Almost 150 years pass, a period of the fully conscious cultivation of science, an epoch in which the Paris, Berlin and Petersburg Academies, the Royal Society, have been at work, the age of Bernirulli, Euler, D'Alembert, Cavendish, Lomonosov, but physical optics was forgotten. The splendid experimental and theoretical foundation received as a heritage from the seventeenth century, remained without a superstructure till the nineteenth century.

Neither the logic of optics itself nor any reference to chance (for two centuries and throughout Europe !) can explain such a state of affairs. The causes are naturally to be sought for in the technical demands of the epoch, in the social and economic conditions of the nations and the times, in the practical requisites for certain elements of physical optics in the seventeenth century (the needs of navigation ?) and the lack of such a stimulus in the eighteenth century.

It would however be a mistake to aim at seeking a constant, detailed parallelism in the history of science and the history of society. The development of science is undoubtedly one-sided and progressive, science may pass through a period of stagnation, not grow, but by its very meaning and essence it is not able to go backwards. Its concrete (in the exact Hegelian sense of the word) results are transmitted, developing from epoch to epoch, from nation to nation, from one class to another. Having accepted his scientific heritage, the new possessor changes its methodo-

THE OLD AND NEW PHYSICS

logical forms, casts off the alien ideology which has affected science like everything else, directs science into his own channel, speeding up this aspect and slowing down that, but the construction of science nevertheless is in accordance with the inherited foundations. The development of science in the quite unusual new conditions of socialist society in our country serves as an immense illustration of this. The social and economic factors are the main catalysers in the development of science, able to accelerate it to an unusual degree, or to hold up its growth, but these processes begin at the level already reached by science. International scientific connections which had assumed impressive forms by at least the sixteenth century maintain this level at a definite height to a certain degree independently of local conditions. Science in Russia during the first half of the eighteenth century and modern Japanese science are sufficient examples of this.

The influence of individuals in the development of science is exceptionally great. Quite properly whole epochs in the history of science are connected with the names of Newton, Faraday, Darwin or Pasteur. The significance of this factor is again catalytic, accelerative, and in its turn dependent on social and economic conditions. The results of genius obtained from the activity of a Leonardo da Vinci or a Lomonosov have really had little influence on scientific development, whereas Newton's teaching has speeded it up to an unusual degree. The causes, of course, are not merely to be found in the personal peculiarities of these people, but in conditions of environment.

Such are a few of the factors in the kinetics of scientific development. This kinetics and its dependence on various conditions here pointed out as well as on others not here mentioned, must form the chief, if not the only, task of the history of science. Having fulfilled this task, the history of science can and should become the true and only "theory of knowledge" in place of the many gnoseological constructions which work upon an abstract "man" outside of his epoch, his class, his biological peculiarities.

II

CLASSICAL PHYSICS AND THE NEW PHYSICS

We are accustomed to mark certain "special points" in the continuous line of scientific development, as though they are epochs of a turning-point, of a sharp qualitative change in the condition of science. The age of Galileo, the sixteenth century, particularly attracts attention in this respect, as the beginning of a new science based on quantitative, verified experiment. In opposition to the careless theorising, inventions, and guesses of ancient and mediæval science, the new physics is based on experiment, measurement and logic. Newton's physics, his mechanics and optics, were the greatest example of the new science, in which an all-embracing system was built up on the basis of experimental "principles", according to a scheme by which physics was able to develop for more than two centuries.

Without denying the depth and importance of this aspect of the revolution in the sixteenth and seventeenth centuries we should not forget that its roots stretch a long way back. Experiment, measurement and logic were the methods of ancient astronomy, the Pythagorean researches into the vibrations of chords were the undoubted prototypes of the new science. Ptolemy's empirical data on the refraction of light can be quite well placed alongside even Newton's unsuccessful measurements of dual ray-refraction in Icelandic spar. Archimedes' statics are a fully worthy predecessor of Newton's dynamics. From this point of view the classical physics of Galileo and Newton is the necessary result of preceding development and is remarkable for its maturity and fruitfulness, though in essence containing nothing qualitatively new.

On the other hand, ancient science, in its positive results, and classical physics, from Newton to our day, approach closely to pre-scientific and non-scientific knowledge, to that circle of ideas, images and interpretations which are the gradual acquisition of every man from the day of his birth. This circle of knowledge is the result of daily experiment, the sum of the reciprocity

THE OLD AND NEW PHYSICS

between the human organism and its environment. Every man pictures the world as being a spaciousness (absolute space) in which completely distinct bodies are moving, reacting upon one another, manifesting force and still remaining unchanged (the constancy of mass). The Newtonian lists of the main conceptions, space, time, distinct masses and forces, are found, perhaps not clearly formulated, in pre-scientific consciousness, in Indian physics, in Aristotle, in Archimedes, just as they are found in the modern elementary schoolboy. Thousands of years of the work of conscious thought were called for in order to give these images precision and to separate the general principles and laws of motion. For this it was necessary to learn experimentally (Galileo) and to think abstractly (Newton).

But the conceptions are formulated, these laws are assimilated without effort, in full accordance with the pre-scientific picture of the world held by everyone. It is astonishing how easily and naturally the principles of classical physics are accepted in school ! Ancient Science and its new classical heir were in complete biological accord with the natural inclinations of human consciousness which was the sum of adaption to environment, to its conditions and scales. It is just of this classical science that it can be said with full justice that

So bound and kin from eternity,
By the bond of blood kinship
Is the thinking genius of man
With the living force of nature.

This accordance of the ordinary conceptions of the fundamental scientific scheme had and still has a great importance for the successful development of classical physics. Thanks to this, science has constantly worked on demonstrable examples and models and has remained in principle " understandable " even in its most complex and abstract conclusions. Science has been distinguished from " non-science " only by the definition and quantitative character of its objects and the correct application of logic.

The completely demonstrable nature of the main ideas of classical science has enabled a wide application of the method of

S. I. VAVILOV

"hypothesis", i.e. of propositions on the nature of phenomena which are based on models wholly taken from the surrounding "ordinary" world of customary human scales. Greek atomism and the atomism of the new age are the most remarkable examples of hypotheses of this kind. The theory of sound and light as a wave movement was also inevitably based on a model idea of waves borrowed from the ordinary image of a disturbed watery surface.

The heuristic importance of the method of model-hypotheses is truly enormous. When we examine the real genesis of the chief results of classical physics for the whole period of its existence from Falais to Kelvin we inevitably encounter the use of models.

The customary appearance of the primary images and conceptions, their "simplicity", also determined the mechanism and formal-logical mode of thought connected with it which was characteristic of the scientist and particularly of the physicist. This is just as true for antiquity and the Middle Ages as for modern times. It is difficult to draw a dividing line between the old and new physics according to this principle, just as it is difficult to do so in regard to the use of experiment.

What is really new and foreign to classical physics, to its use of models, its conceptions and mechanism, began, however, a very long time ago.

Having learned how to experiment the physicist was able to approach phenomena completely foreign to non-scientific knowledge and which lay outside the scope of ordinary human scales. This happened when Galileo first turned his telescope on to the firmament, when Gilbert began to study the properties of magnets and Newton with the help of interferential fields was able to measure the hundredth parts of microns. Absolutely new worlds were made accessible to man, worlds concerning which Pythagoras and Archimedes could only theorise and make guesses, absolutely inevitably supposing them to be constructed according to the image and likeness of the normal, human, pre-scientific world.

From this time (the sixteenth century) science had really entered a non-classical period, and there opened before it a realm full of the unexpected, the unusual, unlike our world. Together with the

THE OLD AND NEW PHYSICS

consistent and harmonious development of classical physics there gradually unfolds the investigation of an unknown circle of phenomena completely foreign to immediate human experience. Man, having acquired the telescope, the microscope, the torsion balance, becomes in the sense of his direct possibilities of knowledge, an absolutely new being biologically, remaining, however, biologically unchanged in all other respects. This separation of the man of "learning" from the ordinary man explains the difficulties of the first understanding of the results of the new science and even the hostility towards them during the period of their assimilation.

The contradiction between the old and new physics is seen from the very beginning and begins to appear quite clearly even in the seventeenth century. The discoveries of the new physics, universal gravity, the properties of magnets and electrical charges are brought into the scope of the classical scheme either badly or not at all. Mechanical hypotheses constructed according to tradition in order to explain gravity, the properties of electrical and magnetic fields (Newton made the first hypotheses in this sphere) do not fit the facts. There arise the dilemmas of action at a distance and contiguous action, of the dualism of electricity and magnetism, which are quite insoluble on the basis of formal, mechanical, graphic thought. The newly discovered qualities of light (interferential, diffraction, polarisation) remain incomprehensible for a century and a half. What for us is the elementary idea of the interaction of coherent waves escaped the attention of Newton, Huygens, and Euler owing to the absence of a visible image, of a model accessible to everyone. Together with phenomena which in principle did not fit into the classical scheme (gravity, electro-magnetism), difficulties were presented in this way by facts which were classical in essence but called for rather unusual models.

The new phenomena, just because of their novelty, their removal from the direct interests of human society, did not occupy the centre of attention, for a long time received no social stimulus to development, were put aside for very long periods and sometimes even forgotten (it is sufficient to recall the forgetting of diffraction).

S. I. VAVILOV

(1) The necessity for new experimental methods of research ;
(2) the extreme difficulty of creating a theory in the new realm where there were no ordinary images and models and which called for an absolutely different methodology from classical physics ;
(3) the absence of any call from society or the ruling classes for a scientific production new in principle, the distance from direct needs and demands, these are the causes of the slight development of the new science in the eighteenth century and its relatively slow growth in the nineteenth century.

But before our eyes, at the very beginning of the new century, the barrier was burst and non-classical physics with irresistible power, breaking down all practical obstacles, began its victorious march, discovering both experimental methods and theoretical paths and acquiring practical importance.

The relations of the classical and modern physics are quite clear. The graphic, ineradicably customary foundation of classical physics which is based on ordinary ideas and ordinary experience, its astonishing fruitfulness and vast technical importance have quite naturally nurtured the conviction of its uniqueness and immutability. But this conviction must no less inevitably disappear with the transition to an absolutely different experimental basis unusual to the human mind. To expect the former close bond between the " thinking genius of man " and " the living force of nature " in this region would be groundless. Man must change biologically in order to reach the former harmony and " comprehension ".

III

EXPERIMENT AND THE THEORETICAL METHODS OF THE NEW PHYSICS

It is hardly possible to draw a sharp line between the experience, the experimental method, of the new and the classical physics. Both the one and the other have been cultivated for centuries in one and the same laboratories by the same persons. We can only state that the experiments of the new physics are impossible for an " unarmed " man in natural conditions, without apparatus

THE OLD AND NEW PHYSICS

increasing the sensitivity of his perception to an unusual degree or else simply discovering new phenomena which are hidden from direct sensation. The experiments of classical physics, on the other hand, are in many cases carried out by simple "domestic" means.

If, however, we glance into the modern physical laboratory and look at the apparatus by means of which the most unexpected discoveries of the new physics have been made, we in fact there encounter very simple things. Wilson's cloud chamber, the most fruitful apparatus of modern physics, with the help of which Compton's effect was studied, is so simple and primitive in its main parts that it might certainly have been quite successfully constructed in the seventeenth century by, let us say, Otto von Guericke who built much more complex pumps. The amazing sensitivity of the chamber which registers the trajectory of a separate particle is based on the extreme compliancy of unstable equilibrium (in this case of condensed steam with adiabatic expansion) to the slightest reaction. The same principle is at the basis of Millikan's condenser which allows one to alter the charge of an electron. Here the charged microscopic particle hangs in an unstable position like Mahomet's coffin, balanced by electrical tension and the force of gravity. We also encounter the utilisation of the instability of electrical condition in Geiger's counter, an apparatus which calculates separate quanta and electrons and is also astonishingly simple in the construction of its main parts.

But even without these simple apparatuses, man is able by extreme tension of his unarmed sense organs, i.e. by creating unusual or unnatural conditions for them, to pass beyond the classical limits and look directly into the realm of phenomena of a different scale, quite unlike the ordinary scheme. The human eye, after a long period in darkness, assumes a sensitivity greater even than that of the above-mentioned apparatuses. Such an eye is able to discern directly the differential, quantum structure of light and to discover the contradictoriness (from the classical viewpoint) of the nature of radiation.

It is neither the complexity nor the technical perfection of

S. I. VAVILOV

modern apparatus which has thus determined the growth of modern physics in our time. On the contrary, practical demand has again proved the stimulus to the working out of new methods which in fact were quite possible even in the seventeenth century.

The specific nature of the difficulties facing the new physics must be sought not so much in the technical complexity of experimental methods as in the perfect originality of the theoretical methods by which modern physics has to connect and explain facts. Attempts to approach them with the classical scheme, which have been made and always inevitably repeated, give only either an approximately true, or else a completely untrue result. Along this road there only remains confidence in conformity, in the fact that the principles of classical physics are the limit of the more exact and general laws.

What should a physicist do on encountering phenomena which are in principle new and "incomprehensible" to him as a man, for which he has no tangible model and for which there are no guiding, generalising principles? Newton first met this really tragic difficulty when studying gravity. He was content with a mathematical description of an empirical law. The electrostatic, magnetostatic, and electrodynamic phenomena discovered by Coulomb, Versted, Ampère and Faraday in just the same way only led to a mathematical formulation of the results of the experiment. The conception of science as an economic, mathematical description of the phenomena of nature, the view that "science curtails for us the experiments of a swiftly flowing life", and that this is the limit of its chief functions, was widespread in regard to new phenomena long before Kirchhof and Mach. This profession de foi is clearly expressed by Ampère in his *Mémoire sur la théorie mathématique des phénomènes électrodynamiques uniquement déduite de l'expérience*.

First the observation of facts, changing as far as possible the conditions and carrying out exact measurements, and from them deducing general laws, solely based on experiment . . . this was Newton's method. In general this method was adapted by the French scientists to whom physics owes its recent great successes; this same method guided me in all my researches upon electrodynamic phenomena, [Ampère writes in this mémoire].

THE OLD AND NEW PHYSICS

As against such a desolate description which demands that every step in modern science should only be realised by means of experiment, at the beginning of the nineteenth century there could only be confused guesses, like the intuitive suppositions of Faraday on the connection of all the forces of nature.

The new theoretical method which allows one to "overtake" experiment, to foresee the course of phenomena even in the new sphere which is without models, was nevertheless discovered, and theoretical physics emerged from the blind alley of "pure description". This method was employed for the first time with astonishing success by Maxwell, in the sphere of electro-dynamics.

The new method may be called mathematical hypothesis, or the method of mathematical extra-polation. The essence of it lies in the generalisation of partial, empirical, mathematical correlations, in the finding of such mathematical forms as shall, by including all separate cases directly discovered by experiment, simultaneously give a considerably wider content. It follows that the only justification of the correctness of the chosen mathematical formula can be its consequent verification by experiment.

Since Maxwell, mathematics has assumed an incomparably deeper importance for physics than it had for classical physics. From being an auxiliary tool of quantitative calculation and formulations mathematics has become a heuristic method which permits the theoretician to anticipate experiment and to demonstrate experimental facts new in principle.

The development of the theory of relativity and quantum mechanics is a remarkable example of the power of the method of mathematical extra-polation. Physics, in the world of new scales deprived of concrete images and models, has found in mathematics an illimitably capacious method for the creation of a new theory.

In the boundless sea of possible mathematical forms the physicist, of course, frequently errs, choosing the wrong road, but experiment corrects him, the necessary limit of conformity with the results of classical physics above mentioned, and mathematical intuition still not understood and calling for careful study, shows him the right road.

S. I. VAVILOV

Besides its rôle of concrete heuristic assistant to the physicist, mathematics has been the only adequate language able to express the vital dialectic of natural processes which completely fail to fit on to the mechanical straight rails of classical physics. The dialectic of new phenomena in all their contradictoriness has become obvious to the physicist in the last decade. History has apparently purposely protected the investigator against "premature" discoveries which might have been made long ago, but which would have destroyed the whole harmonious classical system. Newton did not discover ultra-violet rays and florescence which in his circumstances should apparently have happened inevitably. Lenard, passing cathode rays through a thin sheet of tinfoil, did not discover the diffraction of electrons. Fresnel, in making interferential experiments with mirrors and getting "irrefutable" proof from them of the wave nature of light, perhaps to the benefit of classical physics, did not see what was happening with interferential pencils at extremely weak intensity. He would have seen that from the point of view of the wave theory light rays cannot interfere, since only very rarely does light from both rays simultaneously reach the place of interference.

Looking back on the history of the theory of light and matter, on the unceasing struggle with its alternating success between the theory of waves and corpuscles, we see a typical picture of the dialectical process of thought, still incomplete to-day.

But once reason arrives at the point of putting itself forward as a thesis, this thesis, this thought, opposed to itself, doubles into two contradictory thoughts, positive and negative, yes and no. The struggle of these two antagonistic elements, enclosed in the antithesis, constitutes dialectical movement. Yes becoming no, no becoming yes, yes becoming at once yes and no, no becoming at once no and yes, the contraries balance, neutralise and paralyse one another. The fusion of these two contradictory thoughts constitutes a new thought which is their synthesis. This new thought again divides into two contradictory thoughts which in their turn merge in a new synthesis [Marx, the explanation of the Hegelian conception in *The Poverty of Philosophy*].

The physicist gradually approaches nearer and nearer to the comprehending of the mathematical forms of quantum electro-

THE OLD AND NEW PHYSICS

dynamics, which, finally, unite the contradictory yes and no in a single dialectical law.

Maxwell's theoretical method is limitless, as mathematics is limitless ; it is terrified by no scales, however remote from human custom. On the basis of this method physics can develop boundlessly, working alternatively from experiment and mathematical thought.

V. L. KOMAROV

MARX AND ENGELS ON BIOLOGY

THE development of Capitalist industry in the eighteenth and nineteenth centuries created a demand for technical development, for the concentration of masses of food products and for various sorts of raw materials which needed working up. In its turn the satisfaction of this demand exacted an increased development of natural science and the nineteenth century has often been called the age of science. The concentration of the population into large towns, grouped around factories and mills, also required a deeper development of medical science, the success of which is bound up with the progress of science in general, and so accelerated the rapid advance of the latter.

The attraction of ever greater numbers of scientific workers to the problems of science, the foundation of laboratories and scientific institutes, helped the accumulation of factual material and from this aspect scientific progress was undoubted. Nevertheless, the prevalence of the empirical method, faith in the infallibility of induction, fear of hypothesis and wide generalisations, in no small degree hindered its advance. For, though there can be no science without a good knowledge of facts, factual knowledge alone is not science.

Of course, among the scientists were many workers who sought for connecting ideas and built up more or less wide generalisations. However, these searches were often inadequate, often vitalism and other "isms" prevented a correct interpretation of natural phenomena and reduced many years' search after the slippery truth to nothing.

Simultaneously, in the nineteenth century a revolution in ideas

MARX AND ENGELS ON BIOLOGY

in the sphere of social science was born and grew to maturity. A bridge was thrown from the Utopianism of the sociologists of the eighteenth and first half of the nineteenth century to historical materialism, to the theory of surplus value, to the ideas of class struggle and the historical change of social formations. Karl Marx and Frederick Engels gave us the opportunity to discover the true meaning of social relationships and social tectonics, utilising for this purpose the whole arsenal of knowledge prepared by the labours of their predecessors in philosophy, political economy and sociology.

Scientific experimenters, weighed down under the burden of their factual material, overlooked the re-estimation of all values which Marx and Engels carried out. Although there were among them men of revolutionary outlook, they nevertheless started from the false conception that science develops self-contained, independently of the social structure, whilst biology, though it works on the conclusions and facts of the physical and chemical sciences, might completely ignore the science of society. It is almost impossible before the revolution of 1917 to find any reference to the scientific achievements or method of Marx and Engels in the works of biologists.

Marx's outlook was very complete, embracing all problems of the cosmos. Moreover, in the preparations of his *Capital* and other works, Marx drew upon such a wide literature, that he was quite unable to pass over biological problems without paying attention to them. Engels in *Anti-Dühring* and *The Dialectic of Nature* even more profoundly touched on these biological problems and showed us the right path to their general solution.

The unprepared reader may be shocked at the sharply negative attitude of Marx and Engels towards the materialist teaching of L. Büchner, Moleschott and K. Vogt. The works of these three scientific popularisers were at one time very widely read by the free-thinking intelligentsia. In the Russian intellectual revolutionary movements translations of the books of Büchner, Moleschott and Vogt played a part in the emancipation of men's minds from the ideas of the Middle Ages. Büchner was famous as a rank atheist, Moleschott and Vogt as materialists on the

V. L. KOMAROV

basis of human physiology. I myself well remember how at the age of seventeen Moleschott's calculations on the speed at which the molecules of our body are extracted from the organism in a process of exchange, and replaced by fresh ones taken from our foodstuffs, had a great influence on me.

It would appear that since these authors are materialists, they must also be close to Marx and Engels who were firm materialists. But Marx and Engels had an absolutely negative attitude towards them. Engels calls their materialism vulgar and says that in them we find materialism taking the place of scientific knowledge. They were ignorant of philosophy, whilst vainly abusing it, and, moreover, tried to extend their theory of nature to society and thereby reform socialism.

Scientists will here be particularly interested in Engels' struggle against the simplification and schematisation of science. He considers both the one and the other absolutely dangerous. 'The value of science is to express the world as it is. Simplification and mechanisation of phenomena which are essentially complex and realise themselves in the complicated chain of other phenomena always affects the truth of scientific conclusions. In short, dialectical materialism triumphs over vulgar materialism and is alone acceptable.

It would be of the greatest importance to use the methodological and generalising remarks of Marx and Engels on biology in such a way that further work in the sphere of this latter discipline might be on a firm materialist footing and that all varieties of idealist distortion which hold up the general advance of natural science should cease. This task, however, calls for such profound knowledge both on philosophy and biology that to undertake it in its full significance would be too bold a task, so we shall concentrate chiefly on the attitude of Marx and Engels to the doctrine of evolution and to Darwinism as its most vivid expression.

I

REMARKS ON DARWIN IN THE MARX-ENGELS CORRESPONDENCE

Darwin's book, *The Origin of Species by means of Natural Selection or the preservation of favoured races in the struggle for*

MARX AND ENGELS ON BIOLOGY

life, first appeared on November 14th, 1859, and the second edition on January 7th, 1860. One would think that acquaintance with the first edition, in the brief period of its existence, was far from obligatory on such a political-economist and politician as Marx is generally represented to be, but on December 12th, 1859, Engels is writing to Marx about the Darwinian struggle for existence as a principle already completely assimilated. In this letter he makes this remark about Darwin: "Darwin, whom I am just now reading, is splendid." Further on he speaks of the blow Darwin's work has dealt at teleology and says that there has never yet been such a majestic effort made to discover historical development in nature.

Marx, on his side, writes to Engels on December 19th, 1860: "During my time of trial, these last four weeks, I have read all sorts of things. Among others, Darwin's book of Natural Selection. Although it is developed in the crude English style, this is the book which contains the basis in natural history for our view." On June 18th, 1862, Marx is already approaching Darwin critically. He quite correctly recalls that Malthus attributed a geometrical progression in multiplication to the human race as opposed to the plants and animals on which man feeds and which multiply more slowly than can satisfy humanity's needs. Darwin transfers Malthus' teaching to plants and animals.

This quotation is as follows:

I am amused by the statement of Darwin, whom I am reading now, that he applies the "Malthusian" theory to plants and animals also, whereas the whole point of Mr. Malthus lies in the fact that he does *not* apply his theory to plants and animals, but *only* to men—with geometrical progression—as opposed to plants and animals. It is splendid that Darwin again discovers among plants and animals his English society with its division of labour, competition, opening up of new markets, "inventions" and Malthusian "struggle for existence". This is Hobbes's *bellum omnium contra omnes*, and reminds one of Hegel in the *Phenomenology* in which civic society is expressed as the "spiritual animal kingdom" whereas with Darwin the animal kingdom represents civic society.

Certainly, the Darwinian "struggle for existence" is hardly acceptable in its sociological aspect. We shall see later that

Engels found amendments to the "struggle for existence" which make its main principle more acceptable. Darwin's misfortune consists in having taken the Malthusian doctrine as something proved and accepted it without sufficient criticism.

Darwin's exact reference to Malthus is as follows: "It is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdoms; for in this case there can be no artificial increase of food, and no prudential restraint from marriage." When we get this reference after the definition of what is "the struggle for existence" we cannot but feel that it would of course have been much better for Darwin if he had not referred at all to Malthus. It is not possible to apply terms borrowed from the world of the class struggle to the study of animals and plants and go unscathed.

The correspondence of Marx and Engels again refers to Darwin over P. Trémaux's book *Origine et Transformation de l'Homme et des autres Etres*, Paris, 1865. "Despite all its deficiencies", says Marx, "this book is a big step forward in comparison with Darwin."

The chief arguments of Trémaux are as follows: first, that crossing does not create differences, but on the contrary evokes a unity of special types. Changes in the earth's crust bring about differentiation (not isolatedly, but as the main basis). Progress, which with Darwin is purely accidental, is here a necessity, on the basis of the periods of development of the earth itself. Degeneration, which Darwin was unable to explain, is here simply explained. Transitional forms die out extremely quickly in comparison with the growth of special types, so that the gaps in palæontology, which so worry Darwin, are a necessity for Trémaux. The difficulties which hybridisation makes for Darwin are here, on the contrary, the bulwark of the system, since it is shown that the species is established when its crossing with other species becomes sterile or is made impossible.

The theory of Trémaux is much more important and fruitful in its application to history and political life than that of Darwin. In certain questions, such as the national question, it is only here that we can find a natural foundation. Trémaux affirms, by

MARX AND ENGELS ON BIOLOGY

the way, that the real boundary between the Slav and Lithuanian races on the one hand, and the Muscovites on the other, coincides with an important geological boundary which lies to the north of the basins of the Niemen and the Dnieper. South of this line the capacities and types of men proper to the country differ and always will differ from the types and capacities of the Russian population.

In short, in his judgment of evolutionary doctrines Marx is apparently more inclined to welcome the doctrine of the dependence of the organism on external environment than the doctrine of the influence of selection.

Trémaux's book produced quite a different effect on Engels. The influence of geological formations on the peculiarities of beings living on the surface of the Devonian or Carbonarian amuses him. Does Trémaux think then that men of different nationalities also speak in different languages because they live on different geological formations? Marx did not keep silent, but on October 3rd, 1866, wrote to Engels that he is almost word for word repeating the objections raised by Cuvier to the supporters of the theory of the variation of species in his book *Discours sur les Revolutions du Globe*. Trémaux's main idea, the influence of the soil, is in Marx's opinion such a happy one that it only has to be expressed to win for itself scientific approval.

Engels' reply of October 5th gives us a further development of the dispute on the influence of environment on the organism arising from this book by Trémaux.

His primary merit, says Engels, is that he has more vividly brought forward the influence of "soil" on the formation of races and therefore also on the formation of species, than has hitherto been the case. His second service is that his views on crossing, though one-sided, are closer to the truth than those of his predecessors. Trémaux silently accepts that Darwin was correct in his views on the unchanging influence of crossing. On the other hand, neither did Darwin deny the influence of soil, though neither he nor Trémaux says that it acts quite independently of the fact that fertile soil is favourable and unfertile soil unfavourable to the development of the organism.

V. L. KOMAROV

In regard to the introduction of geology into the doctrine of evolution, Engels is of the opinion that anyone who tries to base a doctrine of the variation of organisms exclusively on geology is badly acquainted with geology and that this is quite a different matter from Cuvier's objections who, though he was not correct, at least did not make mistakes in geology. In actual fact the ethnological examples given by Trémaux are incorrect.

It is wrong to confuse the geological structure of the ground with the "soil" on which things grow. The influence of the latter on the races of animals and plants has long been known, though there is an immense gap between the recognition of this fact and the theory of Trémaux. It is later clear that Engels not only estimates the chemical reaction of the soil on the organisms which it feeds, but also the influence of the greater or lesser age of the given section of the earth.

Another book little known to modern scientists which attracted Marx's attention over Darwin was the work of the German professor, Fraase (1847), *Climate and the vegetable world in Time, —i.e. their History*, in which is shown that climate and flora are changed in the course of the historical era. He is a Darwinist before Darwin and admits the rise of species even in the historical era.

In 1868 Engels informs Marx that he has read the first volume of Darwin's book, *Variations in Animals and Plants under the Influence of Domesticity*. "Only the details are new here and even in this respect it does not contain a great deal of importance."

Further reference to Darwin shows that the attitude of Marx and Engels towards him was always sympathetic and very negative towards his critics, but gives no material for forming a fundamental judgment on Darwinism.

Marx was specially interested, among the separate problems of evolution, in the problem of the appearance of life on the earth. In his letter to Engels of October 18th, 1868, he writes :

Büchner's concoction interests me in so far as it quotes the majority of German researches in the sphere of Darwinism—Professor Jäger (Vienna) and Professor Haeckel. These researches

MARX AND ENGELS ON BIOLOGY

bury the cell as the primal form and consider the starting point to be a formless albuminous ball capable of contraction. This hypothesis was later confirmed by discoveries in Canada and later on in Belgium and some other places. It is necessary, of course, to follow up the first form to the condition in which it can be created chemically and it looks as though the way to that is already being groped after.

You can see how conscientiously Büchner has studied the literature in English, by the way, from the fact that he makes Owen one of Darwin's supporters.

The discovery of traces of organisms in the limestone of the Laurentian system, to which was given the name of the Canadian azoic, was afterwards disproved. Yet much later the Dutch microbiologist, Beijerinck, claimed the discovery of the "contagium vivum fluidum", that is the virus passed through a Chamberland filter which will not pass bacteria. The liquid living substance, without any morphological structure, absolutely corresponds to the hopes of Marx who was clearly inclined towards a chemical theory of the origin of life.

The remark about Robert Owen who debated with Huxley against Darwinism shows that Marx has a good memory for even minor details in the destiny of the theory of natural selection.

The most important of the extracts quoted is that in which Marx says that Darwin's theory gives a favourable basis to his own. He does not say exactly what he has in mind, but we must believe that it is Darwin's struggle against idealism and teleology in the old natural science, the historical view of nature, the new way of posing the problem "environment and organism". It is more difficult to define Marx's attitude towards the struggle for existence and natural selection. Perhaps, had Darwin not changed his habitual method of starting out from facts and not dragged Malthus in by the hair, it would have been a quite different one, and Marx would not have been compelled to say that Darwin was transferring to plants and animals the peculiarities of the English capitalist system.

V. L. KOMAROV

II

ENGELS ON DARWIN IN "THE DIALECTIC OF NATURE"

Of course the most important work in the fundamental literature of Marxism in which we find a criticism of the doctrine of evolution is F. Engels' *Dialectic of Nature*.

In its first section, "Dialectic and Science", Engels, referring to the biological ignorance of the famous chemist Liebig, says, "He only read Darwin in 1861 and only much later the important works on biology and palæontology which appeared after Darwin. Lamarck he never read at all."

In the same way he remained quite ignorant of the important palæontological special researches which appeared before 1859, the works of L. von Buch, D'Aubigny, Munster, Klipstein, Gauer, Kwenstadt, on the fossils of cephalopodal, which cast much light on the genetic connection of different growths. All these experimenters, almost against their will, were compelled by the force of facts, even before the appearance of Darwin's book, "to approach the Lamarckian hypothesis of the origin of living beings. . . ." Thus, the theory of development was gradually confirmed in the views of those experimenters who were working more fundamentally on the comparative study of fossil organisms. . . . L. von Buch in 1832 in his book *Über die Ammoniten und ihre Sonderung in Familien* and in 1848 in a lecture delivered to the Berlin Academy introduced with great decision into the science of fossils the Lamarckian idea of the typical affinity of organic forms as a sign of common origin. While in his research on ammonites he proved (in 1848) the thesis that "the disappearance of the old and the appearance of the new forms is not in general the consequence of the complete destruction of organic creations, but that the creation of new species out of older forms is, in all probability, only the consequence of changing conditions of life".

In this extract rich in thought we find an indication of the importance of an acquaintance with the doctrine of evolution for scientists in other branches and an indication also of the excellent acquaintance which Engels himself had with the history of the rise of Darwinism. At that time few were interested in Lamarck and little was known about him, yet Engels declares with satisfaction that palæontologists, and L. von Buch in particular, have been brought to Lamarckism by the force of the facts which they are studying. The change in the conditions of

MARX AND ENGELS ON BIOLOGY

life as the main cause of variation in organisms is an idea which he regards with approval.

On page 42 of this same article we read :

hard and fast lines are incompatible with the theory of development. Even the border line between vertebrates and invertebrates is no longer unchanging. Every day the lines of demarcation between fish and amphibia, between birds and reptiles, tend more and more to vanish. Between the *Compsognatus* (a small dinosaur) and the *Archæopteryx* (a toothed bird of the same origin) only a few intermediary members are wanting, while toothed birds' beaks have been found in both hemispheres.

The above facts cause Engels to point out that Nature in this sphere of hers is filled with dialectic, using instead of the metaphysical " either, or " the dialectical " both, and ". Indeed, one and the same animal which occupies an intermediate place between two classes or orders, can, by one of its features, belong to the one class and through another feature to another class. The *Archæopteryx* has the feathers of a bird and the teeth of a dinosaur.

The Struggle for Life. Before Darwin biologists willingly saw harmonious co-operation in nature ; after him they were inclined to see only struggle. In actual fact the reciprocity between living beings includes conscious and unconscious co-operation as well as conscious and unconscious struggle. It is impossible, even in the plant and animal world, to see only a one-sided struggle. But it is quite childish to reduce all the variety of historical developments and the complexity of life to the single poverty-stricken formula of " the struggle for life ". The very conception is borrowed from Hobbes's teaching on the war of all against all and the Malthusian theory of population, by transference from the human sphere to the sphere of organic nature. Man is not content with gathering the means of existence, but produces them, that is to say obtains means of existence which would not exist in nature at all without him. So the reverse transference of the doctrine of the struggle for existence from natural history into the history of human society is quite impermissible. Thus, while he accepts the Darwinian theory as one of the greatest triumphs of science, Engels is far from accept-

ing it uncritically, his wide philosophical and historical education and his general erudition allowing him to note the deficiencies and errors of Darwin and dwell on them opportunely.

In his work, *The Rôle of Labour in the Process of the Humanising of Apes*, Engels develops and defends the main thesis that "Labour created man himself". He says at the beginning that Darwin has given us an approximate description of our ape-like ancestors, who lived in herds in trees. "The first consequence of the usual mode of movement conditioned by their manner of life (climbing) in which the arms undertook quite different functions from those of the legs, was that these apes gradually ceased to use their arms when they moved over the ground and began to learn upright walking. Thus a decisive step was taken towards the transition from ape to man."

In these lines, so full of meaning, we find an answer to the question which has so embarrassed biologists, as to whether form determines work or work (function) determines the form. Indeed, the form of any one of our organs, taken as the culmination of development, as the final stage of the embryonic process, permits it to complete only definite functions. But if we take the organ in the process of evolution, then it is undoubtedly the product of the function. In a word, instead of the metaphysical "either, or", modern science decisively favours "both, and". "So that the upright walk might become for our hairy ancestors first a rule and then a necessity, the arms had to be previously specialised in other functions." At first the operations to which our ancestors learned to adapt their hands were very simple and every complication demanded a very considerable period of time.

In order that the first flint might become a knife by means of human hands, such a long period of time had to elapse that the historical period we know is in comparison quite insignificant. But the decisive step was made, the hand became free, and was able to perfect itself in cunning and skill, while the great flexibility thus acquired was transmitted by heredity and multiplied from generation to generation.

Unfortunately for many of us, Engels does not here say whether the flexibility of the hands acquired through exercise was

MARX AND ENGELS ON BIOLOGY

transmitted as a heritage by means of a change in the feeding of the tissues, as a consequence of the increase of the lumen in the blood-vessels and the changes thereby evoked in the developments of the muscles and nerves of the hand, or whether it was by means of natural selection. In his account he apparently inclines in favour of the first method.

So the hand is not only the organ of labour, it is also its product. Only thanks to labour, thanks to adaption to ever-fresh operations, thanks to the hereditary transmission of the special development of the muscles and sinews thus acquired and, over a much longer period of time, of the bones as well, as well as thanks to the ever-fresh adaption of these hereditarily transmitted improvements to new and ever more complex operations, only thanks to all this has the human hand attained that high degree of perfection which has enabled it, as though by magic, to bring to life the pictures of Raphael, the statues of Thorwaldsen, the music of Paganini.

So here the chief emphasis in the development of the human organism falls on the hereditary transmission of the "thus acquired" (i.e. by labour processes) special development of the muscles, etc. Here Engels departs from Darwin, though later he comes back to him when he says

But the hand was not something self-sufficient, it was only one of the members of a complete, unusually complex organism. And what assisted the hand also assisted the whole body which the hand served, and assisted it in a double respect.

In the first place it assisted it through the law which Darwin called the law of the correlation of growth. According to this law, certain forms of separate parts of the organic being are always connected with the definite forms of other parts which apparently have no connection with the former.

All Darwinians remember the law of correlation of growth, or law of correlation. Engels cites a number of examples of correlation as proved phenomena. "However", he adds, "dependence of this sort is still too little investigated and here we must limit ourselves to the mere statement of the fact."

Much more important is "the direct calculable influence of the development of the hand on the rest of the organism". And further,

The development of labour necessarily assisted the closer drawing together of the members of the society since because of it instances

V. L. KOMAROV

of mutual support of common action became more frequent and the advantage of this mutual activity became clear to each separate member. To put it shortly, men when formed reached the point when they felt the need of saying something to one another. The need created the organ. The undeveloped tongue of the ape was slowly but steadily changed by means of gradually increased modulations and the organs of the mouth gradually learned to pronounce one distinct sound after another.

In these words a theory of species formation is concisely outlined which, while not identical with the Darwinian theory, in my opinion surpasses it. The Academician, N. Y. Marr, has expressed the idea that in primitive men sound language was preceded by linear speech, the language of gestures. In this case Engels' view on the rôle of labour in the process of the appearance of speech is even more sharply emphasised. The language of gestures demands a hand with finely developed muscles and nerves. The hand is the result of a lengthy and relatively refined labour process. Engels also indicates the form of primitive labour which might have produced such a result. This was the working up of stones, calling for complete co-ordination of the hand and eye and the thought of the worker.

First labour, then, together with it, distinct speech were the chief stimuli under the influence of which the brain of the ape was able to be gradually transformed into the human brain, which in every respect in its basic structure surpasses the former in size and perfection. With the development of the brain there has proceeded in parallel fashion the development of its closest weapons, the sense organs.

Further, Engels says that the chief distinction between human society and the ape herd is labour.

All animals are to a high degree profligate with regard to food products and often destroyed their natural growth in the seed. The wolf, unlike the hunter, does not spare the she-goat which in the following year must provide him with kids. In Greece, goats, which eat all the scrub, giving it no chance to grow, have denuded the hills. This "plundering economy" of animals plays an important part in the process of gradual change of species, since it compels them to adapt themselves to new, unusual forms of food, thanks to which the blood acquires a different chemical composition and the whole physical constitution gradually changes, while species, established once and for all, die out.

MARX AND ENGELS ON BIOLOGY

Indeed, the study of vegetable and animal forms shows how important it is for them to possess the quality which we may call plasticity of form, the ability to change the environment, manner of life and kind of food, upon which morphological changes inevitably follow, leading to the formation of new variations and species. Species which lose their plasticity are usually condemned to extinction unless saved by geographical isolation, as happens with the flora and fauna of islands and mountain valleys. Engels, moreover, here expresses the firm confidence that a change in the kind of food brings with it a change in the chemical composition of the blood, and that the latter acts by effecting changes also on the construction and form of the body. What a lesson this is for those neo-Darwinians and geneticians for whom heredity is self-sufficient and quite independent of the influence of environment or of peculiarities acquired by the individual during his life. It is a pity, for example, that Weismann was all his life a man of the study and gave Engels no occasion to make even a short estimate of his teaching, which acknowledges natural selection as the only motive force of nature.

“The labour process begins only with the preparation of the tool.” The most primitive tools are those for fishing and hunting, indicating a transition from a vegetable diet to the use of meat also.

A new step on the path to humanity. Meat diet has all the important elements which are needed by man for metabolism in an almost complete form. Meat diet both curtailed the process of digestion and the length of other vegetative processes in the organism corresponding to the phenomena of the vegetable kingdom, thereby saving more time, elements and energy for the active appearance of the animal, in the real living sense of the word. The further man in the course of his formation got from the vegetable world, the higher he rose above the animal.

Meat diet, however, had its greatest influence on the brain, which thanks to it received a greater quantity than formerly of the substances it needed for nourishment and development, allowing it to perfect itself from generation to generation more quickly and completely.

V. L. KOMAROV

These lines compel us to think over the question as to whether or not the exclusively meat diet of the Eskimos, or the exclusively vegetable diet of the Hindus, have exercised a certain influence on both their bodily peculiarities and their peculiarities of character and thought? Engels would have answered affirmatively. All the more so, since here it is a matter of a very lengthy influence on the organism of the kind of food.

Engels next gives his attention to the use of fire and the training of animals as two new progressive factors in the life of humanity during its formation period. And further, "Just as man learned how to consume everything edible, so he learned also how to live in any climate. He spread over the whole world and is the only animal who was in a position to do so." At the same time there appeared new needs (shelter and clothing) and new forms of labour for their satisfaction.

Engels, in these lines on man's habitation of the whole world, revealed his attitude to a question which has greatly interested scientists, that of the monogenetic or polygenetic origin of man and other living beings. Evidently Engels, like Darwin, imagined the origin of species as monogenetic. "Thanks to the mutual work of the hand, the organs of speech and the brain, not only separate individuals but men in society acquired the ability to fulfil ever more complex operations, to set themselves ever higher aims and achieve them. From generation to generation the process of labour became more varied, more perfect, more many-sided." In the last resort there developed our modern human society, while simultaneously there also developed the fact that

Men became accustomed in explaining their actions to start from their thinking and not from their needs (which are of course reflected in the head, perceived) and so in course of time there arose the idealist perception of the world, which since the period of the collapse of the ancient world has gripped men's minds. To this day it so masters them that even materialist-thinking scientists of the Darwinian school cannot form for themselves an idea of the origin of man, since, by force of the influence of this idealist world-perception, they fail to see the part which has been played by labour.

In fact, the idealistic outlook often obscures the consciousness of our research workers and prevents them from seeing the

MARX AND ENGELS ON BIOLOGY

truth. Unfortunately, it is not limited to the question of human origin but spreads its baneful influence over the whole realm of biology (see, for example, O. Hertwig's arguments in his great work on Darwinism, etc.). The only salvation lies in the fact that when they study the dialectically flowing process of material nature (none other exists) the empirical scientists conscientiously photograph these processes.

In his article "Old Introduction to the Dialectic of Nature", Engels gives a short review of the advance of science from the so-called "Renaissance" to our own day. In pointing out the general recognition in the middle of the eighteenth century of the theory of the immutability of species, Engels speaks of the appearance of the doctrine of evolution.

It was not the scientists but the philosophers who made the first breach in this fossilised outlook. In 1755 appeared Kant's *General Natural History and Theory of the Heavens*. The problem of the first impulse was here set aside. The earth and the whole solar system appeared as something *become* in the course of time. If, before the appearance of this thought, the overwhelming majority of scientists had not felt the fear expressed by Newton in his warning "Physics, Beware of Metaphysics!"—then they would have drawn from this single discovery of genius by Kant such consequences as would have saved them infinite errors along circuitous paths and an immense quantity of time and labour expended in a false direction. In Kant's discovery lay the germ of all further progress. If the earth was something which had become, then all its present geological, climatic and geographical condition had become also, its flora and fauna as well, and it must have a history not merely in space, but in time also.

The last remark can be energetically recommended to the attention of all evolutionists. Certainly, we often carefully study relations in space, that is the geographical distribution of those organisms and species we are working upon, and we do often take them into account in time. In special works, particularly in monographs on separate groups of animals and plants, we do in fact find such an attempt, particularly in works of the twentieth century. How well, for example, the palæontological history of the horse or cave bear has been studied. Since geologists began to study in detail the glacial and interglacial periods, it has been

V. L. KOMAROV

possible to construct the history of the rise and differentiation of modern organisms in a more accurately historical aspect. For example, in his monograph on the dandelion (*Taraxacum*), the Viennese botanist, Handel-Mazzetti, gives a very clear picture of the development of its species. According to his research the dandelion arose at the beginning of the pliocene age as a single species. At the end of the pliocene age twelve forms already existed, continuing their development continuously throughout the glacial period, at the close of which there were fifteen main species. At present the differentiation within this species has increased and we now have eighteen main forms and whole groups of species which are breaking off from these main ones almost before our eyes. Charles Darwin first began to be conscious of the need for thinking of the species in animals, by examining it in time, when in South America he began to study the question of the dying out of old fauna, the remains of which astonished him by their abundance and scale. He expresses his attitude to this in a generalisation, saying that the thinning of a species precedes its dying out.

After Kant, Laplace and Herschel with their astronomical discoveries gave a firm foundation to the doctrine of the origin and main stages of the early history of the globe. The doctrine of the changing of the earth with the course of time became generally recognised.

But we may well doubt [says Engels] whether it would have occurred to the scientists to notice the contradiction between the doctrines of the changing earth and of the unchanged organisms which exist upon it, had not the growing conception that nature is not something which is, but something which becomes and dies been a help from the other side. Geology arose . . . it had to be recognised that not only the earth taken as a whole has a history in time, but also its present surface and the plants and animals which live thereon. This recognition was at first not made without some difficulty . . . only Lyell brought common sense into geology when he replaced the unexpected revolutions brought about by the caprice of a creator by the gradual action of the slow transformation of the earth.

It was even more difficult to reconcile Lyell's theory with the hypothesis of the permanence of organic forms than any of the theories which had preceded him. The idea of the gradual trans-

MARX AND ENGELS ON BIOLOGY

formation of the earth's surface and of all the conditions of life on it led directly to the doctrine of the gradual transformation of organisms and their adaption to a changing environment, led to the doctrine of the variability of species. However, tradition is a force not only in the Catholic church, but in science as well. Lyell himself did not notice this contradiction for many years, while his disciples were still less aware of it. This is only to be explained by the division of labour established at the time in science, thanks to which every one confined himself to his own special sphere of knowledge and only a few were capable of seeing things as a whole.

Narrow specialisation does indeed hinder the general advance of science, even when a general deepening of the method or factual contents of the given branch of science is thereby achieved. A living connection between the different branches of science and their reciprocity are absolutely essential.

The further progress of palæontology, of physiology, of comparative anatomy, microscopy, etc., greatly advanced the study of the organic world and prepared the triumph of the dialectical view of nature insofar as it is expressed in evolutionary teaching.

The gaps in the chronicles of palæontology [says Engels] have been gradually filled, compelling even the most obstinate scientists to recognise the astonishing parallelism existing between the history of the development of the organic world as a whole, thus providing the thread of Ariadne to lead us out of that labyrinth in which the botanist and geologist had become hopelessly confused. It is characteristic that simultaneously with Kant's attack on the doctrine of the eternity of the solar system K. Wolf in 1759 made the first onslaught on the theory of permanency of species, proclaiming the doctrine of their development. But what was merely a forecast of genius in him assumed more concrete forms in Ocken, Lamarck and Bär and was triumphantly completed just a century later in 1859 by Darwin.

Engels has little to say of the actual teaching of Darwin and most unfortunately makes no critical estimate of him. As in the correspondence with Marx, he is chiefly interested in the reflection of Darwin's theory on social questions.

"Darwin did not understand", he says, "what a bitter satire on man he was writing and on his countrymen in particular, when he showed that free competition, the struggle for existence praised by the economists as the greatest achievement in history, is the normal condition of the animal world."

V. L. KOMAROV

Among animals, however, there are those which unite in a group or herd, while the individuals comprising one and the same herd wage no struggle against one another. Human society has the definite aim, by overcoming the internal struggle, of strengthening the struggle for mastering nature, of emancipating itself from the power of physical environment. In class society the union of men belonging to one class follows the same aim, the organisation and prosecution of the class struggle with the aim of overcoming and mastering a hostile social environment. However, it is a risky thing to look for an analogy between the animal world and human society. Engels, of course, does not sin in this way, and when he says that Darwin wrote a satire on capitalist society, this does not mean he approves of the borrowings from Hobbes and Malthus of which Darwin was unwittingly guilty, thereby paying tribute to his social environment.

It is impossible to pass over in silence the circumstance that when botanists talk of the struggle for existence among plants they are forced to make various reservations in the conception. Of course, there is a kind of struggle between the shoots and plants which cover the soil with grasses and single plants, between the quick-growing shoots of cereals and the slow-rising shoots of trees, etc., but all these phenomena are still a long way from having much in common with the meaning we give to the "struggle" in human relationships, or the conflicts of the higher animals.

Engels gives a categorical answer to the question of the fate of the species which have arisen and even to that of man. "Everything which arises is bound to perish." So he confirms once more that the development of life proceeds not in space alone, but in time also.

In his article "Notes" in *The Dialectic of Nature*, Engels defends deduction against induction, though Haeckel opposed the latter to the former, considering like the English scientists that it was almost the only logical method permissible in exact science. Newly discovered facts often refute a classification already established and founded on the inductive method.

MARX AND ENGELS ON BIOLOGY

What a splendid confirmation of Hegel's words that an inductive conclusion is essentially problematical! Nor is that all. Thanks to the successes of the theory of development even the whole classification of organisms is removed from induction and reduced to "deduction", to the study of origin—a certain species is literally "deduced", deduced from another by way of descent, and it is impossible to prove the theory of development by means of simple induction, since it is completely anti-inductive. Thanks to induction conceptions are sorted: species, kind, class. Thanks also to the theory of development they have become fluid, and so relative also. But relative conceptions are incapable of induction.

There is no lack of deduction in the case which interests us, i.e. when applied to the evolutionary teaching of both Lamarck and Darwin. Having, with the aid of induction, made their main arguments, they then both by the use of deduction extended them into the series of those facts which are inaccessible to direct research. Lamarck was reproached by all his critics for the poverty of his factual material and the predominance of deduced conclusions, but Darwin cannot be reproached with this since he starts from facts and all his conclusions are built up on concrete examples, whilst he also makes wide use of the deductive method, cleverly combining it with the inductive.

Another important element in the "Notes" is the paragraph "accident and necessity". How often has Darwin been reproached for building his world on accident. One of his critics (L. S. Berg), basing himself on the fact that Darwin is alleged to have built his theory on accidents and that accidents mutually cancel one another out, proved (1922) that the struggle for existence and natural selection are not progressive factors. On the contrary, since they are conservative factors, they rather preserve the already existing peculiarities of the organism. Evolution is to a great extent pre-determined and is the development of already existing seeds. "There are symptoms which develop on the basis of inner, automatic causes, inherent in the very nature of the organism, independently of any influence of external causes." These symptoms apparently arise exclusively from the stereo-chemical qualities of the albumin of the protoplasm of the given organism.

Hegel had already advanced the statement that accident has

its basis and is necessary, that necessity is also accident, but that accident is rather absolute necessity.

Science preferred to ignore these arguments as a paradoxical play on words. . . . While science was continuing to think in this way what was it doing in the person of Darwin?

In his epoch-making work Darwin starts from a wide basis of fact which rests on accident. It is the unnoticed accidental differences in individuals within the different species, differences which can be increased to the point of changing the actual character of the species, the actual causes of which can only be shown in very rare cases; it is these which compel him to doubt the former foundation of all law in biology, to doubt the conception of the species in its old metaphysical unchangeability and permanency. But without the conception of species all science lost its meaning. All its branches needed the conception of species. Without the conception of species what would be human anatomy, anthropology, geology, palæontology, botany, etc.? All the results of these sciences not only became disputed but were simply destroyed. Accident destroys necessity as it had hitherto been understood. The old idea of necessity refuses to work.

Darwin himself understood accident as a peculiar kind of necessity. At the beginning of his chapter "Laws of Variation" he says that in the preceding chapters he had expressed himself in such a way as though the initial variation on which his theory was based was the work of accident. "This expression of course was completely incorrect." We only speak of accidental variations when we are ignorant of the causes of these variations in each particular case. "Variation is usually connected with the conditions of life to which a species has been subject for many generations." . . . "In each case two factors are at work, the nature of the organism, the more important of the two, and the nature of the conditions at work."

So with Darwin "accident" is legitimate and even dialectical insofar as it emphasises the reciprocity of the two facts.

Engels, pointing out the revolution produced by Darwin in the conception of accident and necessity, noticed the fact that the mode of thought of even those scientists who had been pure empiricists had changed. They had lost part of the metaphysical mode of thought natural to them (either accident or necessity).

MARX AND ENGELS ON BIOLOGY

Engels has a further note on this question : " We must show that the Darwinian theory is the practical proof of the Hegelian conception of the inner connection between necessity and accident."

The struggle for existence is one of the chief elements in the Darwinian theory. Darwin himself at the beginning of the third chapter of his great work devoted to the explanation of the struggle for existence, in the section entitled " The term, struggle for existence, used in a large sense", warns us that he understands this expression in a large and metaphorical sense which includes any dependence of one being upon another and the dependence of any living being upon its physical environment (for example the desert plant's struggle against drought).

Darwin's critics have attacked the theory of the struggle for existence. Whilst not denying the fact of the struggle for life, they have chiefly insisted that struggle must exhaust and destroy organisms and cannot therefore be a source of organic progress.

The struggle for existence, say the specialists, causes innumerable young individuals to perish, thereby lessening the number of individual variations and the probability of the appearance of such variations as might assist more mature organism to survive. Plate has christened the struggle for existence " Natural Destruction ", whilst arguing that it represents the condition in which every organism to a greater or less degree finds itself, a condition like that in which in civilised (i.e. capitalist) countries the workers find themselves, having to wage a ceaseless and terrible struggle for the improvement of their economic position. We find in nature several kinds of struggle for existence.

In the first place, there is reciprocity between the physical and chemical forces of nature, temperature, rainfall, drought, air and water currents, the properties of the soil, etc. Then come surplus population and the constant competition among organisms evoked by this. Then, Plate says, in nature there takes place a kind of mass destruction of living beings, as well as an individual destruction caused by climate, bacteria and other peculiarities of the species or of other species. Of course it is

impossible to expect progressive changes to arise out of destruction, or a general progress of the organic world as a whole. However, the latter is a generally recognised fact, and so the explanation of it must be found elsewhere than in the Darwinian theory.

Now let us see what Engels has to say about the struggle for existence.

We must first of all strictly limit it to the struggle which takes place due to over-population in the plant and animal world—a struggle actually taking place at a definite stage in the development of the vegetable kingdom and at a low stage in the development of the animal kingdom. But we must strictly distinguish from this those cases in which species vary, the old ones dying out and their place being taken by new and more developed ones, and where there is no such over-population. For example, when there is migration of plants and animals to new places in which new climatic, soil, etc., conditions cause variation. If the individuals which have here adapted themselves survive and form a new species, thanks to constantly changing adaption, whilst other and firmer species perish and finally die out, with them dying out incomplete, intermediate elements, then this may take place—and in fact does take place—without any kind of Malthusianism, whilst if this latter does have some influence here, then it does not actually change anything in the process but at most merely accelerates it. The same can be said of the gradual change in the geographical and climatic conditions of any given part of the world (the desiccation of Central Asia, for example). Here it is of no importance whether the animal or plant population suppress one another, the process of development of organisms caused by the change in geographical and other conditions proceeds of its own accord. The same thing applies to sexual selection, in which Malthusianism plays absolutely no part.

Therefore Haeckel's *Adaption and Heredity* may without any kind of selection or Malthusianism cause the whole process of development.

Darwin's mistake is that in his *Natural Selection or Survival of the Fittest* he confuses two quite different things.

One. Selection thanks to the pressure of over-population in which there survive, probably, the strongest, but in which the survivors may also be the weakest individuals in certain respects.

Two. Selection due to a great capacity for adaption to changing circumstances, in which the survivors are best fitted to these circumstances, but in which this adaption may be as a whole either progress or regress (for example, adaption to a parasitic life is always a regress).

MARX AND ENGELS ON BIOLOGY

The fact of the matter is that every progress in organic development is also a regress, for it fixes a one-sided development and excludes the possibility of development in many other directions. But this is the fundamental law.

So Engels not only recognises the struggle for existence as an important factor in organic progress, whilst limiting it to the struggle produced by over-population, but he also introduces a whole number of amendments. In Darwin's favour is the remark that Malthusianism is here out of place. He has taken into account the great importance of variations which are the result of the migration of plants and animals to new places. The variation in the living conditions of any country (the desiccation of Central Asia, etc.) also has its influence according to Engels and according to the facts in our possession upon the process of the development of new organisms.

The further definition of selection by dividing it into two categories is a very important amendment to the Darwinian theory and here "changing circumstances", the influence of environment, form an independent factor in the formation of species.

Finally, the statement that every progress in organic development is simultaneously a regress is extremely important. The fact is that progress is connected with the differentiation of organisms, with the transition of more general properties to narrower ones, with the decrease in the amplitude of the plasticity of the form. If the species loses its capacity for change by adaptation to changes in the environment, then these latter begin to have a destructive action, whilst the construction of the organism congeals at a definite stage, thereby setting a limit to further progress.

In a fragment from his *Ludwig Feuerbach*, 1886, Engels again returns to the Darwinian theory. He points out the importance of the discovery of the organic cell by Schwann and Schleiden.

With this discovery, the investigation of the organic, living products of nature—comparative anatomy and physiology as well as embryology—was for the first time put upon a firm foundation. The mystery was removed from the origin, growth and structure of organisms. The hitherto incomprehensible miracle resolved

V. L. KOMAROV

itself into a process taking place according to a law essentially identical for all multi-cellular organisms.

But an essential gap still remains. If all multi-cellular organisms—plants as well as animals, including man—grow from a single cell according to the law of cell-division, whence, then, comes the infinite variety of these organisms? This question was answered by the third great discovery, the theory of evolution, which was first presented in connected form and substantiated by Darwin. However numerous the modifications in details this theory will yet undergo, it nevertheless on the whole already solves the problem in a more than satisfactory manner.

The evolutionary series of organisms from few and simple to increasingly manifold and complex forms, as we see them today before our eyes, right up to and including man himself, has been proved in all its main basic features. Thereby not only has an explanation been made possible for the existing stock of the organic products of nature, but the basis has been given for the pre-history of the human mind, for following all its various stages of evolution from the protoplasm, simple and structureless yet responsive to stimuli, of the lower organisms right to the thinking human brain. Without this pre-history, however, the existence of the thinking human brain remains a miracle.

Engels, however, absolutely disagrees with Darwin over the question of the origin of life on earth. In this question, Darwin, as is well known, retreated from the empirical method which he generally used and attributed the origin of life to its "having been originally breathed by the Creator into a few forms or into one". Engels consistently and obstinately presses the idea that the first living beings arose out of a complication in albuminous bodies. "As soon as the composition of albuminous bodies shall have become known, it will be possible to proceed with the production of live albumen. But that chemistry should achieve over night what Nature herself even under very favourable circumstances could only succeed in doing on a few planets after millions of years—would be to demand a miracle."

This chemical pre-requisite is complicated by the demand for an historical explanation of the origin of life on earth.

In the article "Notes" there is another confirmation of this in the section entitled "Physiography". "After the transition from chemistry to life had been accomplished for the first time the conditions were present within which life arose and there-

MARX AND ENGELS ON BIOLOGY

fore for the first time there appeared geology, meteorology and the rest. And then also the most varying forms of life, which are incomprehensible without this."

Life is inconceivable outside of time and space, for the appearance of life it was necessary to have some kind of combination of external conditions which is still unknown to us and for its evolution, the evolutionising of these conditions in connection with their differentiation. Life lasts as long as the conditions necessary for existence last. Finally, the complexity of conditions determines the complexity of the organisation of living beings. This is all too simple to meet with the reader's approval, but this is how things are.

The last and most complete reference by Engels to Darwin's theory is found in his letter to P. Lavrov.

I recognise in Darwin's teaching the theory of development, but I only accept his means of proof (the struggle for life, natural selection) as the first, temporary, incomplete expression of a recently discovered fact. Before Darwin it was just those gentlemen who today see everywhere only the struggle for existence (Vogt, Büchner, Moleschott, etc.) who saw just the reciprocity of organic nature, as, for example, when the vegetable world brings the animal world oxygen and food, while the animal world gives the vegetable world nitrogen and manure, as Liebig in particular proves. Both these views are correct within certain limits, but they are both equally one-sided and limited. . . .

The whole of Darwin's teaching on the struggle for existence is simply the transference from the social sphere into the sphere of nature of the teaching of Hobbes on *bellum omnium contra omnes* (the war of all against all) and the bourgeois economic teaching on competition together with the Malthusian theory of population. Having made this piece of jugglery (the unconditional truth of which I dispute, as is already shown in the first point, particularly in regard to the Malthusian theory), they again transfer the same theories from organic nature to history and then declare that they are proved to be true as the eternal laws of human society.

In protesting against this transference of Darwinism as such into history and the class struggle, Engels here emphatically says (Nov. 12th, 1874) that the Darwinian theory is important for him as a theory of development in its first approximation but not specifically as Darwinism, based on the struggle for existence and natural selection. We have already quoted many places in

V. L. KOMAROV

which Engels also attributed great importance to the influence of environment, change in the mode of life, migrations, the character of food and, finally, climatic changes. The latter sometimes embrace whole countries and act upon the whole of their population, causing some to die out and transforming the others, forming new species at the expense of the old. We get a consistent materialist doctrine which has rid itself of all relics of idealism and converted mechanistic standpoints into dialectical ones.

III

ENGELS ON DARWIN IN *ANTI-DÜHRING*

The struggle of ideas which Engels waged against the then popular philosophy of E. Dühring also concerned the latter's teaching on the organic world. Dühring recognised as a characteristic feature of the organic world the presence of purpose, and said also that the instincts were essentially created for the satisfaction connected with their functioning. In a word, he gave Engels sufficient material to reproach him with preaching that Nature apparently acts and thinks consciously, in other words with a striving towards Deism. Dühring energetically fought against Darwinism, accusing Darwin of having "steeped himself in the wisdom of the breeder", and that his teaching "gives us a scientific semi-poetry, while the whole of Darwinism, save for what he has borrowed from Lamarckism, is a dose of toleration for human brutality".

In his answer to these accusations Engels gives a short account of Darwin's theory, concluding it with the words, "So, by means of natural selection, by means of the survival of the fittest, species are changed."

In defence of this theory he further says that

Darwin would not dream of saying that the origin of the idea of the struggle of existence is to be found in Malthus. He only says that his theory of the struggle for existence is the theory of Malthus applied to the animal and plant world as a whole.

However great the blunder made by Darwin in accepting so naively and without reflection the Malthusian theory, nevertheless

MARX AND ENGELS ON BIOLOGY

anyone can see at the first glance that no Malthusian spectacles are required in order to perceive the struggle for existence in Nature—the contradiction between the countless host of germs which Nature so lavishly produces and the small number of those which ever reach maturity : a contradiction which in fact for the most part finds its solution in a struggle for existence which is often of extreme brutality. And just as the law of wages has maintained its validity even after the Malthusian argument on which Ricardo based it has long been exposed, so the struggle for existence can still take place in Nature, even without any Malthusian interpretation. For that matter, the organisms of Nature also have their laws of population, which have been left almost entirely uninvestigated, although their formulation would be of decisive importance for the theory of the evolution of species. But who was it that gave the most definite impulse to work in this direction ? No other than Darwin.

Engels' remark that the organisms of Nature also have their laws of population is of great importance for the further development of the theory of the formation of species. If scientists have so far paid no attention to it, then it is not Engels, the simplicity and clarity of whose account are irreproachable, who is to blame, but the fact that they are not acquainted with *Anti-Dühring*. The doctrine of species into which the worlds of plants and animals are divided is in fact merely the doctrine of the plant and animal population of the globe. Its peculiarities, relation to its environment, its distribution in space, its migrations and variability or stability can be methodically understood only through the doctrine of species. But the study of species by approaching them from the point of view of the doctrine of population has not yet been begun, thanks to the unfortunate circumstance that the majority of systematisers seek the absolute in the doctrine of species and not an historically developing phenomenon of nature.

Dühring wrote that there can be no struggle among unconscious plants and kindly plant-eating animals, thereby showing his limited conception of the struggle for existence as feeding by means of devouring rapacity. Engels answered this as follows :

The *name* : the struggle for existence, can for that matter be willingly handed over to Herr Dühring's exceedingly moral indignation. That the *fact* exists also among plants can be demon-

M.M.T. P

V. L. KOMAROV

strated to him by every meadow, every cornfield, every wood ; and the question at issue is not what it is to be called, whether "Struggle for Existence" or "Lack of conditions of life and mechanical Effects", but how this fact influences the fixity or variation of species. On this point Herr Dühring maintains an obstinate and "identical" silence. Therefore for the time being in regard to natural selection it will certainly continue to be applied.

Dühring's further objections to Darwin are not of much interest to us, but in defending Darwin from Dühring's stupid attack, Engels is not only expressing a justification of Darwinism, but also his own thoughts of the formation of species, which are of extreme importance and interest.

It is true that Darwin, when considering natural selection, leaves out of account the *causes* which have produced variations in separate individuals, and deals in the first place with the way in which such individual variations gradually become the characteristics of a race, variety or species. To Darwin it was of less immediate importance to discover these causes which up to the present are in part absolutely unknown, and in part can only be stated in quite general terms—than to establish a rational form according to which their efforts are preserved and acquire permanent significance. It is true that in doing this Darwin attributed to his discovery too wide a field of action, made it the sole agent in the alteration of species and neglected the causes of the repeated individual variations, concentrating rather on the form in which these variations become general ; but this is a mistake which he shares in common with most other people who make any real advance. Moreover, if Darwin produces his individual variations out of nothing, and in so doing applies exclusively "the wisdom of the breeder", the breeder also must produce *out of nothing* his changes in animal and plant form which are not really imaginary but occur in reality.

Thus Engels saw, no worse than the other critics of Darwin, that the causes of variation were not investigated and explained by the latter but that he gave too wide a field of action to natural selection. However, he looks on this fault in Darwin from the point of view of the history of science and justifies him by the fact that the man of science who makes any great discovery (in this case natural selection) naturally pushes it into the first place and pays no attention to anything else.

But once again, the man who gave the impetus to science to investigate how exactly these variations and differences arise is no other than Darwin.

MARX AND ENGELS ON BIOLOGY

Recently—by Haeckel to be precise—the idea of natural selection has been extended, and the variation of species conceived as the result of the mutual interaction of adaptation and heredity in which conception adaptation is taken as the factor which produces variation and heredity as the conserving factor in the process.

Dühring did not agree that physico-chemical factors could bring about an expedient variation in organism. In his opinion it was necessary in order that this might happen that Nature itself should have the aim and the will to attain it. Engels answers as follows :

If therefore tree-frogs and leaf-eating insects are green, desert animals are sandy yellow, and animals of the polar regions are mainly snow-white in colour, they have certainly not adopted these colours on purpose or in conformity with any ideas : on the contrary, the colours can only be explained on the basis of physical forces and chemical action and yet it cannot be denied that these animals, because of those colours, are fittingly *adapted* to the environment in which they live in such a way that they are far less visible to their enemies.

In just the same way the organs with which certain plants seize and devour insects alighting on them are adapted to this action and even purposively adapted.

So Engels, while standing firmly on the ground of dialectical materialism, reconciles physico-chemical factors with expediency in the organic world, whilst Dühring undoubtedly demanded idealistic constructions in order to explain expediency. To Dühring's objection to Darwin's monogenetic origin of organisms because it does not recognise the existence of parallel independent series of similar (it would be better to say related) creations of Nature except insofar as these have a chain of descent from a common ancestor, Engels answers as follows :

The statement that Darwin traced all existing organisms back to one original creature is, to put it politely, a product of Herr Dühring's "own free creation and imagination". Darwin expressly says on the last page but one of his *Origin of Species*, sixth edition, that he regards all beings "not as special creations, but as the lineal descendants of some few things". And Haeckel even goes considerably further, assuming "a quite independent stock for the vegetable kingdom, and a second for the animal kingdom", and between the two "a number of independent stocks of Protista, each of which has developed out of one special archeon of the Moneron" (*The History of Creation*, p. 397).

V. L. KOMAROV

According to Dühring, Darwin at once comes to an end at the point where his thread of descent is broken, and this takes place because Darwin recognises the monogenetic origin of organisms. Engels is ironical here.

It is certainly a bitter reproach against Darwin, and one for which he has no defence, that he comes to an end at the point where the thread of descent breaks off. Unfortunately it is a reproach which can be levelled at the whole of our natural science. Where the thread of descent breaks off for it, it "ends". It has not yet succeeded in producing organic beings without descent from others: indeed, it has not yet succeeded either in producing simple protoplasm or other albuminous bodies out of their chemical elements. With regard to the origin of life therefore, up to the present, science is only able to say with certainty that it must have arisen as a result of chemical action. However, perhaps the philosophy of reality is in a position to give some help on this point, as it has at its disposal independently co-ordinated products of Nature which are without common descent. How can these have come into existence? By spontaneous generation?

It is clear that Engels prefers the monogenetic origin of the modern organic world to the polygenetic. Indeed, it is even the only admissible one. According to the facts of palæontology the most ancient remains of living being are the relics of iron bacteria (the upper Alleghanian strata in North America) and after these come the numerous and varied rhizopods (Foraminifera) in the pre-Cambrian strata of France. The former belong to the class of particles whose cells are of the simplest construction of any known forms and whose feeding approximates to the type of simple chemical reactions (chemitropes), the latter to amœba, i.e. also to extremely simple organisms, though more complex than the former. So monogenesis is apparently not merely theoretically but practically confirmed. With Darwin it was beyond all doubt, with Haeckel it was advanced with considerable amendments, though later a number of scientists who held the polygenetic view of evolution, have strongly objected. The difficulty of explaining the whole genealogy of the plant and animal world from one or a few ancestors is obvious and the temptation is great to admit from the very beginning that a great many of these ancestors arose even though by spontaneous

MARX AND ENGELS ON BIOLOGY

generation and that a special group of animals or plants is descended from each of them. So far, however, we have no confirmation in fact of such a point of view and it has developed speculatively. In this respect the specialists have not got beyond Dühring's *Philosophy of Reality*. Since Dühring, in annihilating Darwin, refers his readers to Lamarck, Engels gives us his opinion on the importance of the latter also, which finally leads him to sum up the place which Darwinism holds in the historical course of the development of science.

Neither Darwin nor his disciples among scientists ever think of in any way belittling the great services rendered by Lamarck; in fact, they are the very people who first put him again upon his pedestal. But we must not overlook the fact that in Lamarck's time science was as yet far from being in possession of sufficient material to enable it to answer the question as to the origin of species except in an anticipatory way, as it were prophetically. In addition to the enormous mass of material, both of specimens collected and of the results on anatomical investigation, which botany and zoology have accumulated in the intervening period, two completely new sciences have arisen since Lamarck's time, and these are of decisive importance for this question: research into the development of plant and animal germs (embryology) and research into the various organic remains preserved in the various strata of the earth's upper crust (palæontology). There is in fact a peculiar similarity between the gradual development of organic germs into mature organisms, and the succession of plants and animals following each other in the history of the earth. And it is precisely this similarity which has given the theory of evolution its most secure basis. The theory of evolution itself is however still in a very early stage, and it therefore cannot be doubted that further research will modify in very important respects our present conceptions, including strictly Darwinian ones, of the course of the evolution of species.

So the importance of Lamarck's theory is established as the first stage in the doctrine of evolution, and the importance of the Darwinian theory as the result of the summing up and generalisation of the modern condition of factual science, which has accumulated a terrific quantity of material, and lastly the importance of further investigations which shall sooner or later sum up this material of the most recent period and give a new theory of evolution more perfect than Darwin's, is emphasised.

In further analysing Dühring's philosophy Engels is led into making the following remark, "Incidentally, Herr Dühring's biological knowledge is sufficiently characterised by the question which he has the impudence to put to Darwin: 'Is it to be supposed that animals have developed out of plants?' Such a question can only be put by a person who has not the slightest knowledge of either animals or plants." Darwin definitely considered that plants and animals do not descend from one another but that they are both descended from a common ancestor living long before the Cambrian epoch.

In the extracts entitled *From the Preparatory Works for Anti-Dühring* we have a few more very important remarks concerning Darwinism and Darwin. Engels here says that

Haeckel looks upon adaptation in relation to the development of species as a negative factor which brings about changes, and on heredity as a positive factor conserving species. Dühring, on the contrary, declares that heredity produces negative results and brings about changes.

We must take the facts into account and investigate them and here, of course, Haeckel appears absolutely correct in considering heredity the conservative positive side (principle) of the process while adaptation is the negative side which causes revolutions. The domestication and cultivation of animals and plants and involuntary adaptation are in the given case more essential arguments than Dühring's subtle commentaries.

The importance of heredity has turned out to be more complicated than might have been thought in 1878, instead of "either, or", here as in many other cases we get, "both, and". Heredity is conservative in relation to the species insofar as mass interbreedings of individuals of one and the same species create an equalisation of divergencies, while heredity is progressive insofar as hybridisations between the forms and variations of the given species give birth to the appearance of new symptoms which did not before exist. In any case, Engels' call for an essential consideration of the facts and against the decision of disputed questions by speculation rings extremely imperatively.

Here Engels once more returns to natural selection. "If Darwin studies the form, natural selection, in which slow change takes place, then Dühring demands that Darwin should point

MARX AND ENGELS ON BIOLOGY

out the cause of the change." We see that Engels recognises "slow changes" as the normal motive force of the process of evolution and does not express any desire to find other more rapid ones. Evidently the theory of evolution has a sufficient foundation even without a theory of mutations.

Let us finish this chapter with Engels' estimates of Darwin's personality which Engels gives at the conclusion of his *Anti-Dühring*. "How great in comparison with the boastful Dühring is the extremely modest Darwin who not only confronts, groups and works out a multitude of facts from the whole of biology but recalls with pleasure each one of his predecessors, however insignificant, even when he thereby diminishes his own glory."

IV

DOES THE DARWINIAN THEORY HAVE ANY MEANING FROM THE
POINT OF VIEW OF THE SOCIAL SCIENCES?

Attention has more than once been drawn to the fact that Darwin's *Origin of Species* and Marx's *Critique of Political Economy* both appeared in 1859. It must be imagined that we owe this coincidence not merely to the genius of the authors but also to the fact that scientific and social circumstances had sufficiently matured at this time to give a basis to a theory built up on the firm material of reality and not on metaphysical abstractions. The common feature of both these works is that the phenomena of living nature as a whole and the phenomena which are the essence of man's social life were both explained not in "laws" handed down from above but in the study of the actual material foundation of life. Marx expressed this when he said of men's social life that it is to be explained in "their material conditions stated with the accuracy of science". "In the same way as Darwin discovered the law of organic society, Marx discovered the law of the development of human history," Engels said on March 17th, 1883, in his speech at the graveside of Marx.

However, this inner connection of Darwinism with the social sciences was not so obvious to all. In 1887 at the congress of

V. L. KOMAROV

Naturalists in Munich the famous German scientist Virchow, who was then almost at the head of scientific medicine, made a speech in which he showed that Darwinism was not merely scientifically unfounded but also politically dangerous. He condemned the theory of natural selection and said that it leads directly to collectivism. He mentioned the Paris Commune and that its repetition in Germany was possible under the influence of Darwinism. Evidently his reproaches were partly directed personally against Haeckel who a few days before had delivered a brilliant speech in the defence of Darwinism, of which he had for some time been a supporter. The occasion of this conflict was not a favourable one for Haeckel since it was at the time when Bismarck was waging a cruel struggle against both the socialists and the free-thinkers' party, seeking the continuation of the exceptional law against the socialists. The accusation against Haeckel of an alliance with the French revolutionaries had considerable effect and he began to defend himself and to prove that Darwinism in its social aspects can be more easily used by the ruling classes than the oppressed.

There is no other scientific theory, Haeckel wrote, which has more openly proclaimed that the equality of individuals at which collectivism aims is impossible, and that this equality is chimerical and is in absolute contradiction to that natural inequality among individuals which exists everywhere in real life.

Collectivism demands equal rights for all citizens and an equal participation in the enjoyments of all the good things of life. The theory of natural selection proves, however, that this is simply impossible, since in human societies, just as among the animals, neither rights nor duties nor wealth will ever be equal for all members of the association. The theory of selection teaches us that in the life of humanity, just as among plants and animals, only a tiny minority survives and develops, whilst the immense majority, on the other hand, suffers and dies more or less prematurely. So that the principle of selection is not democratic, but, on the contrary, profoundly aristocratic and is of assistance not to the collectivists and the working class but to the upper, ruling classes. Since this is so then there is no

MARX AND ENGELS ON BIOLOGY

reason for the Government to persecute the Darwinian theory, and they should, on the other hand, welcome it.

Is this so? We must remember that Marx when he became acquainted with the Darwinian theory drew attention not only to its important philosophical and social meaning but also to the fact that the transference of the Malthusian doctrine into the sphere of the relations between animals or plants confuses it. Neither did Marx approve of the transference of generalisations deduced from observation from the life of animals and plants to human society. Nevertheless, his sympathetic attitude to the theory of natural selection appeared even in such an essentially specialist work as *Capital*. In the twelfth chapter of Volume I, "The Division of Labour and Manufacture," Marx says :

In actual fact manufacture produces the skill of the detail worker by reproducing within the workshop, and by systematically driving to an extreme, the differentiation of trades which it finds ready to its hand as a natural growth of society. On the other hand, the transformation of detail work into the life occupation of an individual corresponds to the tendencies of earlier societies, to make occupation hereditary, to petrify them in castes or to ossify them in guilds—the latter process replacing the former when particular historical conditions give rise to a degree of individual variability incompatible with the caste system. Castes and Guilds are the expression of the same natural law as that which regulates the sub-division of plants and animals in the species and sub-species, the only difference being that at a certain stage of development the hereditariness of castes and the exclusiveness of guilds is decreed as a social law.

After the sentence "the manufacturing period simplifies, improves, and multiplies the instruments of labour by adapting them to the exclusive and peculiar functions of the detail worker," there follows this note :

In his epoch-making work the *Origin of Species*, Darwin writes with reference to the natural organs of plants and animals : "So long as one and the same organ has different kinds of work to perform, a ground for its changeability may possibly be found in this, that natural selection preserves or suppresses each small variation of form less carefully than if that organ were destined for one special purpose alone. Thus, knives that are adapted to cut all sorts of things, may, on the whole, be of one shape : but

V. L. KOMAROV

an implement destined to be used exclusively in one way must have a different shape for every different use."

A little further on we see again that Marx in his analysis of the division of labour utilises the Darwinian theory :

The manufacturing division of labour implies the unrestricted authority of the capitalist over persons who have become mere parts of an integral mechanism that belongs to him. The social division of labour confronts, one with another, independent producers of commodities who recognise no other authority than that of competition, the coercion exercised upon them by the pressure of their reciprocal interests—just as in the animal kingdom the war of all against all maintains, more or less, the conditions of existence of all species.

In short, since the division of labour puts a definite mark on men fulfilling this or that kind of work it is necessary to utilise the facts of biology in this question. It is all a question of where is the boundary between biology and sociology. Although Marx draws an analogy between competition in the animal world and economic competition in human society, he does not mechanically transfer Darwinian principles into sociology, since the sphere of their direct application is quite different.

The abundance of facts, the carefully worked out conclusions, the absence of dogmatism, the historical perspective of the rise and development of capitalism, lastly, the echoes of the fundamental law of science, the law of the transformation of energy, all combine to give Marx a relationship with " evolutionary " doctrine. However, scientists are mainly empiricists, whereas Marx started from dialectical materialism and there is consequently a profound difference. A comparison is possible here because the dynamic processes in Nature are carried out in accordance with the laws of dialectical materialism and therefore, if the scientist takes the right path and studies Nature conscientiously and not tendentiously from an idealist aspect or through simplification and schematisation, then for such a scientist a work which has been completed by a materialist dialectician must be a work akin to his.

The Darwinians should take care to remember that biological laws and, in particular, the biological division of labour and

MARX AND ENGELS ON BIOLOGY

division of labour in human society are absolutely different in principle. Haeckel, the German apostle of Darwinism, with extreme light mindedness mingled together sociological and biological facts, in treating the life of bees and ants and herds of mammiferous animals. Moreover, like other bourgeois Darwinians he looked with contempt on political economy, considering it a collection of arguments and not a true science. This is perhaps just in regard to certain bourgeois economists, but Marx made political economy into a science with a firm factual and philosophical foundation, so that it is one of the most trustworthy of the sciences which undertake the investigation of the phenomena of life. Ernst Unterman, who has written an attractive article on this question, concludes it as follows :

No biological synthesis will ever be in a position to explain the origin of economic classes and the revolutions in economic systems. The Marxian theory on the other hand has clearly shown how the methods of production are changed through technical progress, how new economic classes are thus created and new economic categories arise, how the appearance of different political institutions is caused, how the forms of the family change and laws appear, how, in a word, the whole physiological and psychological development of man moves in a definite direction. And insofar as his work has been supplemented by other thinkers it has not lost its value but has become, on the contrary, even more powerful.

V

THE INFLUENCE OF THE IDEAS OF MARX AND ENGELS ON THE FURTHER DEVELOPMENT OF EVOLUTIONARY DOCTRINE

We have seen that Marx and Engels gave quite definite directions as to how they understood the phenomena of life in general and evolutionary doctrine in particular. Their attitude towards the birth of life on the earth through consecutive complications in the construction of carbonaceous combinations which eventually produce albuminous bodies and finally living albumen—protoplasm, is quite clear. Life is a form of the existence of albuminous bodies, Engels said in *Anti-Dühring*. Their attitude is clear also towards the factors of evolution, their constant attention to all the works which deal with the influence of environment on the

organism, with the latter's adaptation to the external world. All this compels us to think that had Marx and Engels lived longer they would certainly have expressed themselves on those neo-Darwinian tendencies which attribute a creative significance exclusively to selection.

The works of Weismann began to appear in 1881, but in the correspondence of Marx and Engels after December, 1882, his name is not once mentioned. This happened because Weismann's works only assumed general significance considerably later, particularly after 1902 when his *Vorträge über Descendenztheorie* appeared and his teaching became more completely defined. Engels would have certainly have seen in his work, had he been acquainted with it, a step backwards.

There is, however, one thesis of Marx which we have so far not used. This thesis reads: "The philosophers have only *interpreted* the world in various ways; the point, however, is to *change* it."

Were there any actual elements in the Darwinian theory capable of changing the world? We will not here speak of the revolution in men's minds which Darwin's theory produced. Nor of the fact that it opened out to scientists new methods of research, new paths in the study of the organic world. Nor of the fact that the progressive bourgeoisie at first made use of Darwin's theory in its fight against feudalism and then later began to renounce it as being a teaching more helpful to the proletariat than to itself. We are not now interested in this but in the application of biological theory to industry as being that manifestation of human power which rapidly and irrevocably changes the face of the earth. Darwin joined in the industrial activity of man through his development of the theory of selection, or artificial selection.

But the teaching of Darwin himself on artificial selection did not have much actual importance. He borrowed it from the old practice of those who had occupied themselves in the breeding of different domestic animals, particularly pigeons, and did not introduce any real improvements into it.

This task was carried out, or rather its fulfilment was helped

MARX AND ENGELS ON BIOLOGY

on, by another scientist who lived much later and whose work therefore evoked no critical remarks from Engels, that is De Vries. De Vries's theory of mutations on its ideological side, despite its outwardly revolutionary character (and there are revolutions in Nature), would hardly have been approved by Marx or Engels. The lack of cause in mutations, or more accurately the failure to explain the causes of the appearance of mutations connected with their lack of direction, as well as the lack of cause in the change of mutational and pre-mutational periods, induced the idea of autonomously developing cycles of the internally self-contained properties of an organism and could hardly be approved by consistent supporters of dialectical materialism. Yet in agriculture De Vries stimulated the working out of more suitable methods than those which were connected with the Darwinian theory. According to Darwin selection consisted in the choice of males throughout several generations, whilst the desired peculiarities of the organism were obtained only gradually, increasing with each generation. De Vries's method of selection consists in choosing individuals already in possession of the desired symptoms ("mutants") and the whole work of the selector is reduced to their multiplication in as large a quantity as possible. True, practical workers to-day chiefly make use not of De Vries but of Mendel, whose rules allow the calculation beforehand for several generations of peculiarities obtained as a result of crossing breeds which are near to one another, though mutations are frequently the starting-point of a completely successful selection.

Our well-known Darwinian Timiryazev greeted the appearance of the Mendelian theory negatively. Another of our Darwinians, the Academician Menzbir, in his article *The First Sixty-five Years of the History of the Theory of Selection* (1926), says that the Darwinians have utilised both the Mendelian theory and the theory of De Vries more completely and scientifically than the direct disciples of these two scientists. These theories have given us very valuable material for the knowledge of variations, have introduced a great deal that is new into practical selection, but have not replaced the theory of natural selection, in their

V. L. KOMAROV

estimate of which Marx and Engels have appeared, from the prevalent point of view among scientific workers, completely right. Darwin's theory as such has been proved and its further deepening, broadening and application in the light of new factual data is in full accord with Engels' statement (in *Anti-Dühring*) that Darwin's theory calls for still further development and perfection. In any case in the fulfilment of Marx's testament, "to change the world", Darwinism has turned out to be a powerful weapon and has already carried out a great work, renewing agriculture in its two main branches, cattle and plant breeding, and increasing its productivity.

Engels in his development of Marx's idea of the necessity for changing Nature emphasises the necessity for changing it, whilst taking into account the consequences which arise from our economic activity. This is what he says upon this in his *Dialectic of Nature* :

An animal destroys the vegetation of a place without introducing anything creative there. Man destroys it in order that on the ground which he has cleared he may sow cereals, or plant trees or lay out a vineyard, which he knows will reward his labour a hundred-fold. He transfers cultivated plants and domestic animals from one country to another and thus changes the flora and fauna of whole parts of the earth. Moreover, with the aid of various artificial methods of cultivation plants and animals themselves so change beneath the hand of man as to become unrecognisable. Those wild plants from which our wheat cultures are descended have not yet been found. It is to this day a question in dispute as to from what wild animal our many different breeds of dogs and numerous breeds of horses are descended.

Three years ago when studying the problem of the origin of cultivated plants the author of this essay reached the conclusion that the immense majority of the older cultivated plants are not encountered in their wild state and never have been encountered. They are the creation of man by means of a complicated process of hybridisation and selection, and, moreover, are mostly created unconsciously. In this respect a sharp change in Nature is beyond all doubt.

We will not, however, be too carried away by our victories over Nature [Engels writes]. Nature revenges herself for every such

MARX AND ENGELS ON BIOLOGY

victory. Certainly each of these victories at first has the consequences we expected, but in its second and third degrees it has quite different and unforeseen consequences which only too often destroy the importance of the first. The inhabitants of Mesopotamia, Greece, Asia Minor, and other places when they got rid of the forests in order to get land for cultivation never dreamed that they were thereby making possible the present desolation of these countries by depriving them, when they cut down the forests, of centres for the collection and preservation of moisture. When the Alpine Italians cut down the coniferous trees on the southern slopes of the mountains and carefully preserved them on the northern, they did not foresee that they were thereby cutting away the roots for cattle breeding in that district. Still less did they see that they were thereby depriving their mountain streams of water for the greater part of the year with the further effect that they would become even wilder torrents pouring into the valleys in the rainy periods. The people who introduced the cultivation of potatoes into Europe did not know that at the same time as they introduced this starchy tuber they were also introducing scrofula.

So we willy nilly notice at every step that in no case do we dominate Nature as the conqueror dominates an alien people, as though we were something standing outside Nature, but that, on the contrary, since we with our flesh, blood and brain belong to Nature and are within Nature, we can only dominate it insofar as we, unlike other beings, are able to discover and correctly apply her laws.

When a factory owner or merchant sells the commodity he has made or purchased at his usual profit then he is quite satisfied and uninterested in what happens to this commodity later or to the person who has bought it. The same applies to the physical results of these actions. The Spanish planter in Cuba did not care when he burned the forests on the mountain slopes and obtained from the ashes enough fertiliser for a whole generation for his very profitable coffee trees; he did not care whether or not the tropical downpours would then wash away the defenceless upper layer of soil and leave behind it only naked rocks. In our present method of production (the capitalist) only the first tangible successes are ever considered in regard either to Nature or society. So there is nothing astonishing in the fact that the consequences of actions so directed are later quite different and even for the most part of a directly opposite character.

The private owner or employer, however necessary it may be to make the changing of the world comply with the laws of Nature, cannot do so since he aims at profit and only at profit. By creating crisis upon crisis in industry he lays waste natural wealth in agriculture, leaving behind a barren soil and in moun-

V. L. KOMAROV

tain districts bare rocks and stony slopes. Only the planned economy of the working class can take into account all the consequences of economic measures, utilising the conquests of science and combining economic achievements with care for the future, since it does not seek the mere extraction of profit but the organisation of its territory, the raising of the productivity of labour, and the well-being of the ever-growing population.

Such real importance do the remarks of Engels possess concerning the destruction of forests in mountain districts that our legislation has taken this into account and excepted the Central Asian forests from our general plan of forest economy. Quite apart from this, we have to take it into account in the planning of economic measures in a great number of other cases.

The remarks of Marx and Engels which we have given upon biology in general and the theory of evolution in particular present us with firm directions on the necessity for a consistent reconstruction of the problems which altogether form the so-called philosophy of natural science. Not only is it necessary to make firm use of the principles of dialectical materialism in the fight against idealism, agnosticism and all kinds of metaphysics, but we must also refuse to be satisfied with pure empiricism which should be connected with theory.

Lenin, in his book *Materialism and Empirio-Criticism*, says :

Natural science positively asserts that the earth once existed in a state in which no man or any other living creature existed or could have existed. Inasmuch as organic matter is a later appearance, a result of a long evolution, it follows that there could have been no perceiving matter, no "complexes of sensation", no self which is "inseparably" connected with the environment, as Avenarius would like to have it. Hence matter is primary, and mind, consciousness, sensation are products of a very high development. Such is the materialist theory of knowledge, which natural science instinctively holds.

Certainly the scientist feels instinctively the profound reality of the thing he knows. This, however, lays on him a great responsibility for care in the work he carries out, and this frequently impels him to neo-Kantianism in order that he may conceal bad work behind the screen of the impossibility of

MARX AND ENGELS ON BIOLOGY

knowing the thing-in-itself. On the other hand, it obliges him to think continually of organisms not as autonomous, but as living in a definite environment, in space and time, and even in their historical aspects, as a definite moment or phase in the process of development and not as a finally completed image. The phase may be a lengthy one, so that it appears as though the phenomenon or organism which we are studying is constant and motionless. But, in fact, sooner or later changes will take place and they will not take place of themselves but by force of objective causality, thanks to the constant opposition of organism and environment. Lenin quotes Feuerbach in connection with this as having recognised objective law in Nature : " The recognition of the fact of natural order and the approximate reflection of that order in the mind of man is materialism ", and further : " There is no doubt that there exists a natural objective relation between the phenomena of the world. Engels always speaks of the ' Laws of Nature ', of the ' Necessity of Nature ', without finding it necessary to explain the generally known position of materialism." Both Engels and Lenin are agreed that the old philosophy of Nature replaced " the real connections still unknown to it " by " ideal, fantastic ones ". " The recognition of the objective character of the laws of Nature, of causality and of necessity is very clear in Engels, as in the emphasis on the relative character of our own, that is human, approximate reflection of the facts of law expressed in these and other conceptions." Hence not only is the reality of facts and of causal connections clear but also the impermissibility of fantastic explanations of whatever, owing to the condition of science at the moment, cannot be causally explained with a sufficient nearness to truth.

It is now expedient to point out that the idea of development in Marxism is a much wider one than that of Darwinism or that of other scientists. Lenin has given us a short but very expressive idea of Marxian teaching on development :

In our times, the idea of development, of evolution, has almost fully penetrated social consciousness, but it has done so in other ways, not through Hegel's philosophy. Still, the same idea, as formulated by Marx and Engels on the basis of Hegel's philosophy,

V. L. KOMAROV

is much more comprehensive, much more abundant in contents than the current theory of evolution. A development that repeats, as it were, the stages already passed, but repeats them in a different way, on a higher plane ("Negation of Negation"): a development so to speak in spirals, not in a straight line; a development in leaps and bounds, catastrophes, revolutions; "Intervals of gradualness"; transformation of quantity into quality; inner impulses for development, imparted by the contradiction, the conflict of different forces and tendencies reacting on a given body or inside the given phenomenon, or within a given society, interdependence, and the closest, indissoluble connection between *all* sides of every phenomenon (history disclosing ever new sides), a connection that provides the one world-process of motion proceeding according to law—such are some of the features of dialectics as a doctrine of evolution more full of meaning than the current one (*Karl Marx*, by Lenin).

In short, thanks to Hegel, Marx, and Lenin the theory of development is applied to the history of man also, studied in the light of the main thesis of dialectical materialism.

The crown of the Darwinian theory, the theory of the origin of man, is supplemented by Engels' teaching on the importance of labour processes, of their influence on both physical development and the spiritual world of man, and completed by the teaching of Marx and Engels on the Class Struggle, which guarantees the further progress of humanity in a planned and organised classless society. Stalin in the third chapter of his *Foundations of Leninism* speaks of the importance of theory, quoting the words of Lenin that "only a party guided by an advanced theory can act as vanguard in the fight". He says further :

the immense importance attached by Lenin to theory is perhaps best shown by this, that he himself understood the great task of generalising on behalf of materialistic philosophy, the main achievements of science since the days of Engels, and of comprehensively criticising the anti-materialistic trends of certain Marxists. Engels said that "materialism should take on a new aspect with each new discovery". For his own epoch, Lenin performed this task in his remarkable work *Materialism and Empirio-Criticism*.

The advanced theory in scientific problems is materialist dialectic which, according to Marx, is the science of the general laws of movement of both the external world and of human thought.

A. I. TIUMENIEV

MARXISM AND BOURGEOIS HISTORICAL SCIENCE

I

MARXISM-LENINISM AND BOURGEOIS HISTORICAL SCIENCE

THE best proof that the crisis now raging in every capitalist country is not the usual periodical crisis, that is to say a temporary and transitory one, but is a crisis of the whole capitalist system and the beginning of the end of capitalism, is not merely its depth, but also the width of its embrace. This time the crisis is not confined to the sphere of economics and material production. With the decay of the economic basis the whole social and political system of capitalism begins to break up. No less clear signs and symptoms of decay are also to be found in the sphere of bourgeois ideology. Pessimism, the growth of a reactionary temper, the prevalence of idealism, the rebirth of mysticism, the renunciation of science and scientific methods and the call for a return to the methods of mediæval scholasticism, all these facts are evidence of the unusual depths of the process of ideological collapse and degeneration among the bourgeoisie. If the economic crisis has thrown back production for generations in the capitalist countries, then the crisis experienced by bourgeois ideology and particularly by bourgeois science, has thrown the latter back for hundreds of years.

Theory becomes a force, Marx wrote, when it grips the masses. And Marx's scientific theory has really become the possession of the widest masses in the U.S.S.R. At the same time research work is being carried out along the line of the concretisation and deepening of the general positions in Marxist

A. I. TIUMENIEV

theory. The study of social-historical formations, which occupies the centre of research work in the historical sciences in the U.S.S.R., is nothing else than the application of these general premises to concrete historical reality and their concretisation in the form of special laws which are manifested in the life of various historical societies.

If thus the scientific importance, vitality and reality of Marxist-Leninist theory are becoming more evident and are being proved, we may say, by the daily practice of the building of socialism, there is simultaneously, with the catastrophic decline and collapse of the capitalist system, quite a different picture to be seen of bourgeois historical science, a picture of complete chaos, decline, the domination of a pessimistic temper and utter methodological helplessness. It is instructive and significant to dwell just upon this wretched condition of bourgeois historical science. The facts which are evidence of the catastrophic condition of the technical and physical sciences in the European west and America, the renunciation of technique, the call for a holiday in science, the discussion of measures against inventions, unemployment raging among the representatives of science, are generally recognised. But in fact the situation on the front of historical science is no better. No longer ago than 1932 there appeared in the French history journals (*Révue historique*, *Revue de synthèse historique*, etc.) an extremely instructive manifesto with the characteristic title "Fondation pour l'histoire". The historical sciences flourished in France before the war, write the authors of the manifesto, but

for some years our historical production is directly and seriously threatened (depuis quelques années notre production historique est gravement et directement menacée). Scientific workers are becoming fewer in numbers and frequently quit the field of original research even while still having sufficient leisure for it, owing to the impossibility of publishing the results of their work. The essential monetary support for them to be au courant with the development of foreign scientific production and to encourage the growth of science in France is lacking. Scientific productivity has been considerably curtailed in quantity. On the other hand the inclination of the public towards history is far from disappearing. Quite the contrary. But it is turned towards enterprises which have nothing to do with

BOURGEOIS HISTORICAL SCIENCE

historical science. A considerable number of authors, attracted by the easy money and material advantages here to be found, have multiplied the works of so-called "fictionalised history". In most cases composed without attention to truth or even to probability, these publications are as harmful to the reputation of French science and to French thought in general (*l'esprit français en général*), as is the actual slowing down and curtailment of historical research.

In order to fight this evil and as a defence against the threatening peril it is proposed as a "point d'appui" (the straw of the drowning man!) to create at the University of Paris a special centre, a "Fondation pour l'histoire" with the aim of helping the production and publication of historical works. But to fulfil this task money is needed, and so the manifesto concludes with an appeal to social charity, "to all those who are interested in a serious and conscientious study of the past and who would like to help in the salvation of history in France". So we see here that it is a question neither more nor less than of the salvation of the science of history in France, while the desperate appeal for help comes from a society formed under the auspices of the University of Paris and headed by such important historians as Gabriel Hanotaux and Alfred Cauville. Bourgeois historical science is certainly in a bad way when even such an historian as Hanotaux, a true servant and herald of imperialism, is forced to hold out his hand for alms. And this in France, where the economic and other crises are not so bad as in other capitalist countries.

It is enough to look at the relatively widespread literature on the history of France in the nineteenth and twentieth centuries (i.e. the nearest period in time and consequently deserving the closest attention) published in 1928-30 to see just what sort of historical literature the modern bourgeois reader is demanding.¹ It is the history of the big and notorious civil and criminal trials,² the history of the numerous intrigues and conspiracies of the Restoration period,³ whilst the story of a certain four sergeants of La Rochelle (a kind of modern three musketeers) has had two whole books devoted to it, and, finally, the anecdotised chronical-history of court life under the July monarchy and the Second Empire.⁴ The occasional more

serious works are completely lost in this stream of fictionalised history in the style of Alexandre Dumas, while the former are either the completion of works begun much earlier, like the collective history of the French people edited by Hanotaux (the fifth volume has appeared covering 1801-1926), or else new editions of old works, like the new edition of Weyle's *History of the Republican Party*.

Of course it is not merely a question of material difficulties or the embarrassed and critical position of bourgeois historians. The internal crisis through which bourgeois historical science is passing has much more to do with it. It is in this profound internal crisis of bourgeois science itself, in its utter helplessness, its fruitlessness and bankruptcy, that we must seek the causes of its externally wretched condition. If the bourgeois social and historical sciences were not so helpless and if they armed the bourgeoisie in its struggle against the crisis and communism as well as Marxist-Leninist theory arms the proletariat of the U.S.S.R. in its struggle against the bourgeoisie and for the cause of socialist construction, it would not appear superfluous and be cast aside as useless by its capitalist masters.

We can only get an idea of the completeness and depth of the crisis which the bourgeois social sciences are passing through if we examine them in their historical aspect and give a glance at the road which has brought bourgeois science to a deadlock. The decline of bourgeois science did not begin yesterday. For more than a century now bourgeois social and historical thought has not been moving forward but backward. The period of the highest development of bourgeois social and historical thought, when it came closest to understanding the paths and laws of social development, was the period of the French Revolution. Then the bourgeois theoreticians themselves expressed and argued for many of the premises upon which their descendants are making a particular onslaught to-day. Marx, as we know, drew a great deal from his bourgeois predecessors. It is only as a result of not thinking the matter out that bourgeois historians, like Below or Sée, can censure Marx for not having invented his own theory from beginning to end. No

BOURGEOIS HISTORICAL SCIENCE

theory, and least of all one which has produced such an immense revolution in scientific outlook as Marx's theory, can be constructed on a blank place, nor is any theory ever so constructed. In constructing his all-embracing system Marx made use of everything that was healthy, vital and revolutionary in the systems of bourgeois theoreticians, and, by transmuting these elements borrowed from bourgeois theoreticians into the ideology of the proletariat, he turned them and sharpened them against the bourgeoisie itself. Both the recognition of the close connection between theory and practice (Bacon) and the materialist basis of a world outlook (Bacon, Hobbes and Toland in England, the French eighteenth-century materialists), and the theory of classes (the physiocrats, Saint Simon), and of the class struggle (Barnave, the French historians of the Restoration), and dialectic (Kant-Hegel), and the theory of value (the English classical school in political economy), all these fundamental truths which are now an inalienable possession of Marxism, were first proclaimed, not by Marx, but by bourgeois theoreticians and recognised as truth by the bourgeoisie itself. We have here a kind of unity of opposites and development by means of a growth of contradictions. The deeper the main principles of Marxism have become and the more sharply they have been directed against the bourgeoisie, the more categorically and insistently bourgeois theoreticians have protested against and attacked them, in this way renouncing the heritage of their predecessors and simultaneously condemning themselves to utter theoretical sterility.

II

THE NATURAL-SCIENTIFIC TENDENCY AND METHODS OF SCIENCE IN THE SEVENTEENTH AND EIGHTEENTH CENTURIES

Bourgeois ideologues attained the greatest clarity in their ideas regarding society and social development only in years of revolution and in direct connection with and dependence upon those tasks with which this revolution confronted them. On the other hand, the whole outlook of the preceding epoch (seven-

A. I. TIUMENIEV

teenth and eighteenth centuries) was coloured in the first place, as is well known, in a natural scientific light. It was not the social but actually the natural sciences which were the real child of the bourgeoisie. The development of natural science in the new age was dictated by the demands of economic development, by the calls for the utilisation of natural forces without which capitalist production is inconceivable. It is just this practical utilisation tendency which distinguishes the outlook of the bourgeoisie of the new age from the abstract philosophical direction of ancient thought as well as from mediæval scholastic "science". Bacon attacks both with equal fury. It is very characteristic in this regard that the part played by philosophers in Plato's ideal state is given by Bacon in his Utopian Bensalem Island to learned investigators gathered into a special institution, while the aims of their investigations, unlike Plato's aims, are purely material and practical. "The aim of our society", the representative of the House of Solomon tells in a talk with the visitors to the island, "is the comprehending the motive causes and inner forces of nature and the extension of man's power over nature to the extreme limit." And Bacon in his *Utopia* only expressed the general mood of his time. The attraction to natural science was general. "Just as in the period of the Renaissance there was admiration of the ancients," says the historian of science, "so now there was no less an attraction towards the exact sciences and the physics akin to them." ⁵ It is characteristic that this attraction towards natural science assumed extremely wide proportions just after the bourgeois revolution in England.

Ideas on society and man at this period were formed completely under the influence of this one-sided naturalistic trend of thought. Sociology as an independent science simply did not exist. At the basis of the science of law lay the idea of natural law, of a law springing from human nature and common for all men and nations independently of conditions of time and place.

If eighteenth-century materialism, as Engels says, was incapable of "looking on the world as a process, as a substance which is in continual development" ⁶ (in order to influence nature, which

BOURGEOIS HISTORICAL SCIENCE

was the chief task of the age, it was sufficient to investigate its present condition and was not at all necessary to know its past), then this view was applied with equal force to the history of human society.⁷ In the absence of any idea of historical development interest in the historical past was also lacking. Descartes complained of the time lost in reading old books with their histories and fables. The denial of historical development was common throughout the age of enlightenment. "You wish to know the sentiments, inclinations, manner of life of the Greeks and Romans?" Hume wrote. "Study well the morality and actions of the English and French. You will commit no great errors in transferring to the former the observations you make on the latter. Humanity is so much the same in all ages and all lands that in this respect history gives us nothing new and unusual." Dupont de Nemours went even further and thought he had reached a knowledge of the laws of human society by studying the society of beavers, bees and ants.⁸ Montesquieu only recognised the influence of climate on man and considered, for example, that Peter's reforms in Russia were aimless since they did not correspond to the character of the Russian people formed under the influence of the severe climate there.⁹ In order to influence men and change their morals and customs it was necessary therefore to turn, not to the study of human social life and history, but to the study of human nature, which, as has already been stated, was at this time considered as unchanging for all times and all peoples. "The actions of the human machine", wrote Holbach, "are constantly regulated by the same laws as are inherent in all beings engendered by nature."¹⁰ The conception of the "laws of nature" was extended to society. At this time men dreamed of creating a "physics of morals" and creating an ideal legislation on its foundation. From this point of view, however strange that may seem to us, it appeared quite consistent to look at the facts of social life as hindering the knowledge of the real nature of man. It was recognised that it was possible to influence social life, not by starting from social or from historical man, but from individual, abstract men, "isolated from each other", as Volney, for example, expresses it.¹¹ The French materialists looked on

A. I. TIUMENIEV

the study of human nature in just the same way. From the point of view of Holbach and Helvétius, our lack of knowledge, our ignorance, and above all the interest of definite social groups prevent clarity in our notions of the true needs of human nature. The latter must be reduced to the most general needs and therefore isolated, cleansed of any awkward social factors.¹² Holbach's works which were devoted to social questions had just this aim of establishing the principles of a "natural" morality and politics and opening the way to removing all deviations from these principles. Of course, under all these arguments about human nature in general is concealed the definite class outlook of the bourgeois who dreams in the first place of the free and unhindered construction of his own personal good. Human nature in general is bourgeois nature. By the interested groups who prevent the free manifestation of human nature are meant the nobility and church, against whom the materialist philosophers directed their controversial shafts in the first place. But it is nevertheless very typical that the class ideology of the bourgeoisie passed at this time into forms so definitely unhistorical and even anti-historical and naturalistic, in accordance with the general tendency of the day.

Another aspect of the naturalistic, natural-science tendency of bourgeois thought was its rationalism. For in order to direct the forces of nature it is necessary to know its laws and its laws can only be known with the help of reason cleansed of prejudices, the very task which Bacon set himself. Just the same view was applied to society. It is only possible to influence society and social life by knowing the laws of human nature. The similarity of methods in this case is, however, only superficial and ended there. Insofar as they regarded society and man not as a phenomenon *sui generis*, but as a phenomenon among other phenomena subject to the same natural laws, to that extent they substituted for the study of society the study of human nature, insofar as the actual fact of social development and the history of society was denied, so the only possible road to real knowledge of society and its laws was closed. Whilst science by following along the paths laid down by Bacon attained the construction of an exact

BOURGEOIS HISTORICAL SCIENCE

and experimental knowledge, all questions concerning society (and particularly the question of the origin of society) were solved in a purely rationalist way without any kind of appeal to the real, actual facts of social life and even more, to history. The whole evil of social life proceeded exclusively from ignorance, and only reason (the reason of the bourgeois intelligentsia) can expose this evil and, by removing it, build a social life according to human nature and natural laws. That is why the idea of progress, insofar as it arises in the second half of the eighteenth century (Turgot, Condorcet in France, Lessing and Herder in Germany ; the works of the last three which touch on the question of progress already belong to the 'eighties and 'nineties), has in view exclusively the successes of human reason and enlightenment as a means for the " education " of humanity.

Only one sphere of social life could not be brought under the prevailing naturalistic and rationalist ideas of society. This was the sphere of political economy, the development of which was just as insistently dictated by the needs of developing bourgeois society as was the development of the natural sciences. It was thanks precisely to its immediate practical importance and significance that political economy was the only social science which quite early broke the magic circle of naturalistic and rationalistic views on society. Even in the middle of the seventeenth century, in the years immediately after the bourgeois revolution in England, the English economist William Petty approached economic facts not with abstract arguments but with figures, weights and measures, as he himself wrote. And this same Petty had already managed to free himself from the mercantilist outlook which prevailed in his time. He was the first to declare, what afterwards became the basis of the classical school of political economy and was also repeated by the physiocrats, that not money but labour is the foundation of social wealth. We find in him both the idea of the distinction between value and price and the conception of surplus value, in a word those theorems which were afterwards developed by Adam Smith, and Ricardo in particular, and were widely utilised by Marx.

III

BOURGEOIS HISTORICAL SCIENCE AND THE GREAT FRENCH
REVOLUTION

If in the second half of the eighteenth century in England, then passing through the industrial revolution, the analysis of economic phenomena occupied first place, in France, then on the eve of a revolutionary outbreak, the social aspect of economic phenomena began to attract attention. The economic school of the physiocrats in France starts from the process of distribution. And if, in accordance with the economic backwardness of France where agriculture still held the most prominent position in the economy of the country, the economic system of the physiocrats is a long way behind Adam Smith¹³ (Marx calls the physiocrats' theory "a bourgeois reproduction of the feudal system of the dominance of landed property"¹⁴), they nevertheless possess, though in an embryonic and very unclear and confused form, a theory of classes. If Quesnay, the founder of the school, in fixing class division, begins with the fact of distribution, distinguishing a productive class of agriculturists, a class of landed proprietors and a "barren" class, then in Turgot, who keeps on the whole to the same division into classes,¹⁵ we find at the same time both within the productive class of agriculturists, and within the class of industrialists (whom like Quesnay he considers barren),¹⁶ an opposing of the owners of capital to wage labourers who possess nothing but their hands.¹⁷ In Turgot we have some curious remarks on slavery as the first form of exploitation, on the negative features of slavery (its unprofitable character) and on its transformation into the new form of exploitation of dependent serf labour, and lastly on the development of free farmers' rent.¹⁸ Turgot wrote in 1766. In the essays of Necker which appeared much later, partly on the very eve of the revolution in his *Essai sur la législation et le commerce des grains* (1775) and *De L'administration des finances de la France* (1784), the idea is quite definitely advanced of the opposition of the interests of the class of capitalists—owners of the means of production—and of the class of wage labourers "who live by the labour of their hands" and are therefore

BOURGEOIS HISTORICAL SCIENCE

“ forced to submit to the law of the property owners ”, and of the class struggle between them “ in which the strong under the protection of the law destroys the weak, the property owner by force of his prerogatives drives out the man living by the labour of his hands ”.¹⁹

If we can already discern in Turgot and Necker (who by the way were practical men filling important posts in the Ministry of Finance) the idea of classes and the class struggle, then in the years of revolution which revealed all the class contradictions existing in pre-revolutionary France, clearer views are formed both on the course of social development as a consequence of economic development and on the class struggle. In his *Introduction to the French Revolution* and other works of Antoine Barnave, an outstanding thinker and practical politician, who was in the very thick of the class and party struggle of the first years of the revolution and perished under the knife of the guillotine, the view of history as being in the first place the history of the class struggle is already becoming a harmonious system, close to the historical-materialist conception of history.²⁰ It was in the person of Barnave that the historical thought of the bourgeoisie reached its highest development, and it is just because Barnave comes closer to the outlook of historical materialism, and in this respect is the most direct predecessor of Marx (though his works, only published in 1843, fifty years after his death, could not have been known to Marx in the years of the formation of his historical conception), that his works deserve our particular attention.

By origin and political sympathies Barnave belonged to the provincial industrial bourgeoisie (he was a native of Grenoble in the Dauphiné, one of the advanced industrial provinces of that time), and this circumstance made his social outlook compare favourably with that of the bourgeoisie (primarily financial) of the capital. A sober practical politician, Barnave made his calculations not on abstract theories to which he reacted negatively, but on the analysis of real facts and the real relation of forces. Whilst Siéyès based the sovereignty of the nation and the right of the third estate on references to natural law, Barnave opposed to all this “ metaphysics ” the necessity of giving an historical

A. I. TIUMENIEV

basis to the pretensions of the bourgeoisie, and specially emphasised that his point of view was nothing but a simple conclusion from the historically formed relationships of social forces. Barnave sharply attacks the contemporary philosophy of the Encyclopædists, accusing it of precisely this purely speculative, non-historical tendency. Instead of examining facts the philosophers are exclusively occupied with their own speculations.²¹ Despite the idea which had prevailed hitherto he considers the aim of education to be the preparation of an historically thinking man, and in a special work, *Plan d'étude de l'histoire*,²² he gives the necessary methodological directions. Barnave even discerns the dialectic of historical development. Social life appears to him to be in a condition of constant change and development. In distinction from the views of the preceding epoch, he denies the possibility of standards and laws which would regulate social life in any conditions and under any circumstances, and in each separate case calls for a concrete analysis of the situation which has formed. Laws do not depend on people's will but on the degree of development of the given society.²³ A law which is good at one time and in certain circumstances, can have an absolutely opposite effect at another time and in other circumstances. In all social facts and phenomena Barnave first of all looks for their class basis. But at the basis of the class division of society, he puts, like a true representative of the third estate, not the relations of production, but property relations. For him property is that centre around which the whole of social life revolves, the cement which binds the nation into a single whole. In the decay of state power in the Middle Ages he sees the consequence of the lack of a guaranteed right of property. The relation of class forces and the class struggle are reduced in the first place to the struggle of different forms of property. The whole history of humanity is examined from this point of view. Primitive equality is based on lack of property. With the use of property there arises also inequality of possession (an idea which, as we know, Rousseau also advanced). The agriculturist, enslaved by his toil, falls into the power of the big landowner. Large-scale landowning is the basis of the aristocratic class.

BOURGEOIS HISTORICAL SCIENCE

Movable property and above all money capital which is formed with the growth of trade and crafts, is the distinguishing mark of the bourgeoisie. The non-owning classes, the proletariat, stand outside society in Barnave.²⁴ In great states landed property is the foundation of the aristocracy and of federalism, just as movable property is the principle of democracy and the unity of the nation.²⁵ Barnave explains absolute monarchy as the consequence of the equilibrium of both kinds of property, while the period preceding the revolution he recognises as a period of the growth of the importance of movable property and the bourgeoisie as a class. From this point of view Barnave also estimates the significance of the revolution which in his eyes represents in the first place a change in the forms of property. "From the moment new forms of wealth are created", he says, "a revolution in political laws is prepared. A new distribution of wealth produces a new distribution of power."²⁶ Barnave's theory of revolution is also typical. Population, its wealth, morals, are the body of society, whilst laws and the form of government are the husk. Between the one and the other there exists a definite and gradually changing relation of force and tension. If the husk is elastic and expands with the growth of the substance, the progress of social organisation is completed without violent shocks. But as soon as the husk ceases to be elastic and opposes the social forces, the point is reached when every normal relationship is broken and the content must either be destroyed or break the husk.²⁷

Barnave's works were published, as has already been said, only fifty years after his death, and so remained absolutely unknown either to his contemporaries or to the generation immediately following. It is the more curious that it was under the impression of the revolution that another thinker among his contemporaries, Saint Simon (Saint Simon was a year older than Barnave), reached an almost analogous idea of the rôle of classes and class struggle in history. Saint Simon experienced the revolution. He was not only a witness of the class struggle between the nobility and the bourgeoisie, but also of the industrial revolution experienced by England in the last decades of the eighteenth century and

A. I. TIUMENIEV

which gripped France also in the years of the Napoleonic empire. This allowed him to make a further important step forward in the understanding of the structure of class society and the significance of the class struggle. It is true, Saint Simon in his views on historical development was not such a consistent monist as Barnave ; it is true that by overestimating the importance of science exactly in the spirit of the preceding epoch (Saint Simon was D'Alembert's pupil), he saw it as being, together with social-class development, another independent factor in history and declares, for example, that scientific and political revolutions have alternated, being in turn either the cause or the consequence of one another.²⁸ Certainly he fails in the end to break with religion, arraying his last writings in a religious mystical form with his preaching of a " new Christianity ". But nevertheless when we cast off all this mystical covering we see that Saint Simon in his understanding of the class structure of society considerably deepens Barnave's point of view. He does not put an indefinite property in general at the basis of class division, but precisely property in the means of production. The dominant position of a class is defined in the first place by those means of production which it possesses. The revolution and victory of the bourgeoisie are thus conditioned by the pushing out of agriculture from its place of primary importance by industry. The place given to industry and the industrial class by Saint Simon in his system is already well known. And in this respect he makes a big step forward in comparison with Barnave. His class analysis is much deeper. The bourgeoisie is not a united class for him. He already distinguishes between the actual industrial bourgeoisie and the financial and bureaucratic bourgeoisie which is as much a " parasitic " class as the nobility and therefore close to it. Insofar as this alliance of the nobility and financial bourgeoisie was in power Saint Simon recognised the next task in his time to be the transfer of power from these social classes to the industrialists, thus forecasting the revolutions of 1830 and 1848 (though Saint Simon did not admit revolutionary methods for the future). It is characteristic that Saint Simon like Barnave confirmed his analysis of the present position of capitalism by a short historical sketch,

BOURGEOIS HISTORICAL SCIENCE

though a superficial and not always accurate one, but nevertheless proceeding from a class point of view.

Barnave and Saint Simon were not alone in their views on society. They were only the most vivid expression of that general shift in the social and political outlook of the bourgeoisie which the revolution caused. The younger generation of historians (the so-called historians of the Restoration period) devote their historical works, as is well known, in the first place to the history of the struggle of the bourgeoisie for its class and property interests. The influence of the revolution was not limited to France. In Germany in 1800 Lueder's book appeared which also examined social development from the viewpoint of the class struggle.²⁹ "In England", as Engels wrote, "it was no secret that the centre of gravity of the whole political struggle in the country was the striving for power of two classes, the landed aristocracy on the one hand and the bourgeoisie on the other."³⁰ Even the representatives of reaction in defending the feudal privileges of the nobility acquired the same language, though they did not use it very well, and declared, for example, like Lavergne-Peguilhen the representative of the historical romantic school in Germany, that "the form of economy creates the basis for the organisation of society and the state".³¹

The change which had taken place in the social outlook also affected science, though here it went no further than the idea of an evolutionary change of forms. The idea of the evolution of human society is transferred to nature. Charles Darwin had, as we know, many forerunners. It is enough to mention Erasmus Darwin in England at the close of the eighteenth century, Geoffroi de Saint Hilaire and Lamarck in France, Kant's *General Natural History of the Heavens* and Goethe's scientific works in Germany.

If the industrial revolution in England and France conditioned the growth of science and scientific thought, while the revolutionary period called for the immediate solution of the social and political tasks facing the revolution, then in Germany, economically backward, politically divided, provincial, where the revolution was still to come and the bourgeoisie was later to be remarkable for its political feebleness, there still prevailed a speculative,

A. I. TIUMENIEV

abstract, idealist trend of thought. In this abstract philosophical form the new ideas on evolution and revolution were perceived and worked out. The dialectic of development, which Barnave reached quite empirically, by working from the analysis of facts, was discovered a little later in Germany also, but in the avowed form of idealist philosophy. However, insofar as the theory of dialectic was worked out by the philosophers in Germany, it received there an infinitely more complete and profound treatment than in Barnave's cursory remarks. Not only Hegel, with whom the idealist theory of dialectic reached its perfection, but Kant and Fichte also were dialecticians.

IV

THE TURN OF BOURGEOIS HISTORICAL SCIENCE TOWARDS REACTION. POSITIVISM

During the revolutionary years and the decade immediately after, the social and historical thought of the bourgeoisie reached its apex. This was the period when the main arguments of the historical-materialist theory, later to be developed and deepened with genius in Marx's synthesis, were, so to speak, in the air.

For this very reason it was necessary for us to dwell on the history of the development of those arguments in order to show that bourgeois historical thought was not always so barren and helpless as it is to-day. But there was a time when it almost completely reached an understanding of the fundamental law of social development, when the recognition of the material basis of the development of society, when the facts of the class struggle, when finally the dialectical law of development, in short all those Marxist premises against which to-day the bourgeois theoreticians fight so persistently and which they try so carefully to "supercede", when these were not foreign to the bourgeoisie itself and were placed at the basis of historical analysis by bourgeois historians and theoreticians. In his well-known letter to Weydemeyer (1852), Marx, as we know, himself recognised this.

And now as to myself, no credit is due to me for discovering the existence of classes in modern society nor yet the struggle between

BOURGEOIS HISTORICAL SCIENCE

them. Long before me bourgeois historians had described the historical development of this class struggle and bourgeois economists the economic anatomy of the classes. What I did that was new was to prove : (1) that the *existence of classes* is only bound up with *particular historic phases in the development of production* ; (2) that the class struggle necessarily leads to *the dictatorship of the proletariat* ; (3) that this dictatorship itself only constitutes the transition to the *abolition of all classes and to a classless society*.

So Marx only attributes to himself the theory of the dictatorship of the proletariat and the abolition of classes. But it was precisely the theory of proletarian dictatorship, precisely what is new in Marx's contribution, just those consistent conclusions from the theory of the class struggle which he made in connection with the changing social situation and the appearance of the proletariat, a theory established before him by bourgeois scientific historical thought, it was just these developments which naturally appeared absolutely unacceptable to the bourgeois theoreticians and forced them to retreat to the old positions in which the first place was given, not to classes, but to human nature in general and the progress of reason. At the very time when Marx had set himself to the creation of his grand system the bourgeois theoreticians were already retreating from even those unclear and unformulated ideas of the material and class basis of social development which their predecessors had formed. It was a retreat all along the line. Hardly had it reached a correct understanding of the course of historical development than bourgeois science already began to turn away from it. That this was not a matter of actual scientific causes is perfectly clear. The very fact that the further development of bourgeois historical science is not forward but backward, finally leading to a deadlock, is eloquent of this. To a certain degree the individualist nature and psychology of the bourgeois, approaching all social phenomena not from their social but from their individual aspect, has prevented his obtaining a clear idea of social laws. But if the lack of clarity in the social views of the bourgeoisie has been conditioned by this peculiarity of bourgeois psychology, it does not, however, in any way explain the sharp change in the main standpoints of bourgeois historical science. The real cause of this change was actually the changing position

A. I. TIUMENIEV

of the bourgeois class itself. Having triumphed over its ancient class enemy, the nobility, and won its way to power, the bourgeoisie no longer needed a revolution or a theory of revolution. The appearance of a new adversary, the working class, on the scene of the class struggle, which now attacked the bourgeoisie itself, completely changed its views and attitude towards the class struggle. Revolution and class struggle were all right so long as they served the interests of the bourgeoisie, but they were harmful and must be stopped as soon as they were turned against the bourgeoisie. And that is all. We can find no other motives to justify the bourgeois historians. To prove this let us turn to their own works. However superficially radical was Barnave's theory of revolution, he was in fact a typical moderate bourgeois in his political views. He was the representative of the caste bourgeoisie and a warm defender of property. So he is at the same time for freedom and order but with a strong power. He is against the nobility but he is for monarchy. He wants the stabilisation of the rule of the propertied bourgeoisie and is therefore in favour of a high property qualification. Even on the 14th of July 1789 he calls for "the arming of the property owners against the robbers".³² With the conclusion of the activity of the Constituent Assembly he recognises the revolution is finished and demands its termination.³³ It was not, however, in the power of the third estate to hold up the revolution, and Barnave begins to follow with alarm the work of the Legislative Assembly, though his customary penetration at once deserts him and he now explains the further development of the revolution not by class struggle but solely by the work of "agitators".³⁴ The confidence which enabled him to analyse the historical conditions leading to revolution deserts him and in the future he foresees anarchy and the return of despotism.³⁵ So Barnave, as we see, was now ready to renounce his theory of history once the revolution went further than his own political programme and was turned against the third estate.

Another no less striking example is shown by the historians of the Restoration period (Guizot, Mignet, Thierry). They are usually shown as supporters of the class theory and Marx's direct

BOURGEOIS HISTORICAL SCIENCE

predecessors. But the fact is usually completely overlooked that even the works of these historians already mark a step backward and a retreat from the more consistent method and clear formulations which we find in Saint Simon and Barnave. Although they also speak of classes and the class struggle their actual conception of classes is not marked by clarity and is continually confused with the conception of castes (estates) or even of nations, while the class struggle is replaced by the struggle of different estates and nations, by the struggle of the Gallo-Romans against the victorious Franks. The economic element, the property element, yields completely to the political element.³⁶ All these concessions are very apparent in Thierry, Saint Simon's direct and immediate pupil. It is in his work particularly that the struggle of the bourgeoisie and nobility is consistently represented as a struggle between estates, as a struggle of the whole people, the whole Gallo-Roman nation against the Frankish conquerors. The facts of economic history do not exist for him. The mediæval artisans' town was for him not a new economic formation but the resurrection of the Gallo-Roman municipality and the urban institutions only repeat the ancient Roman municipal institutions. The struggle of the town bourgeoisie against the seigneurs was the struggle for "Roman freedom equal for all" against "the privileges which have arisen from the conquest and from German customs".³⁷

But what conditioned and pre-determined such a retreat from a purely class point of view and a return to the old idea of the struggle of the third estate, the struggle of the conquered race against the conquerors? We can find a definite and unambiguous answer to this in both Guizot and Thierry. In his pamphlet on democracy published in 1849, consequently under the direct impression of the February Revolution and the June days of 1848, Guizot makes clear the fact of "the appearance of a new fighter in the arena". "Against the middle classes appear the working classes, against the bourgeoisie, the proletariat." "This is the scourge and shame of our time," he exclaims further. "Internal peace, peace between the different classes of citizens, social peace, this is France's most insistent demand. This is the sheet

anchor." So the class struggle insofar as it is turned against the bourgeoisie is a " scourge " and a " shame " and must be ended. This is clear and simple. Thierry, who, as we have seen, carries out the caste-national view-point very consistently, even applies this denial of the class struggle to the history of the past.

The distance separating our age from the old order [he writes in the preface to his *Essay*], the prejudices spread by systems which strive to divide the mass of the nation, to-day united and uniform, into mutually hostile classes, have all confused for many the historical conception of what in its time comprised the third estate in the Estates general of the kingdom. People are generally inclined to the idea that the third estate then corresponded to what we now call the bourgeoisie, that it was the highest class among those classes which were outside of and various stages lower than the nobility and clergy. This opinion is both dangerous and false because it seeks in history for the root of that antagonism which only arose yesterday and is destroying the public peace, and is moreover contradicted by the evidence of antiquity, by the real actions of the monarchy and the general spirit of the great transformation movement of 1789. . . . The estate which was the weapon of the revolution of 1789 and whose history I am trying to outline by going back to its beginning is nothing but what every nation is if the nobility and clergy are counted out.³⁸

So the class struggle is a " prejudice ", and a " dangerous " one (dangerous for the interests of the bourgeoisie), and must therefore be cut away not only from the present but also from the past. The revolution itself is no longer a revolution but a " great transformation movement ". It would be hard to express oneself more clearly and frankly. Guizot goes further and even expresses regret at the class struggle between bourgeoisie and nobility in prerevolutionary France. " They were unable to act together in order to make mutual use of liberty and might. They betrayed themselves and betrayed France also as a sacrifice to the revolution. " ³⁹

At the same time as they hasten to renounce the " dangerous prejudice " of the class struggle the bourgeois historians also renounce another " prejudice ", materialist monism. If Barnave in history achieved the monistic viewpoint and was able to explain the social psyche by social and material conditions, then Guizot

BOURGEOIS HISTORICAL SCIENCE

renounces historical monism and, repeating the mistakes and inconsistency of the eighteenth-century encyclopædists, adopts a definitely dualist viewpoint. He distinguishes from social progress individual progress as quite independent of it and only in connection with it (in reciprocity, in the language of the theory of factors) and which includes the development of man himself, his feelings and capacities. Moreover, both these aspects of progress must be studied separately and independently of one another.⁴⁰ Worse than this, he comes back to the idea of foresight against which the French encyclopædists fought and sees in history the realisation of divine planning. "It (European civilisation) marches by divine paths. In this is contained the reasonable basis of its superiority."

The wide distribution of the theory of evolution in just this first half of the nineteenth century which won such popularity in bourgeois science was also no accident and is directly connected with the revolutionary class theory. This is why the actual principle of evolution, which apparently stood for progress as against the idea of an unchanging nature (human "nature" in particular) prevailing in the eighteenth century, was really already from the very beginning playing a reactionary rôle, insofar as it was not merely a step back in relation to the revolutionary class theory which was formed in the period of the revolution and was now regarded as a "dangerous prejudice", but was also specially directed against this latter view. Insofar as the revolutionary path no longer complied with the interests of the bourgeoisie and had been declared a "dangerous prejudice", so the development of the whole world must be carried on by evolution and not by dialectical leaps.

The path traversed by the further development of bourgeois science because of the change which took place in the prevailing modes of thought among the bourgeoisie and their renunciation of the revolutionary class theory could only be a path of reaction and return to the old views and ideas. The social teaching of Saint Simon in France and Hegel's philosophical teaching in Germany, each, in the conditions of its own country, appearing as the extreme expression of the new tendencies and ideas

A. I. TIUMENIEV

engendered by the revolutionary age, were both in the same way distinguished by their dualist character, and, whilst they showed the elements of a new outlook, were far from free of the old prejudices and ideological forms. Saint Simon's theory of the class structure of society was combined with the purely idealist conception of the preceding century on the progress of human reason and the self-development of science. In Hegel's philosophical teaching the same heritage of the past appears in the idealist mystical form of the self-development of the spirit with which he covered his teaching on the dialectic of development.

This dual character of both doctrines left an equal possibility for their development in either direction. And in fact we see that in this respect the fate of both doctrines was similar. In both the one and the other case those who did not hesitate before the logical conclusions from the two doctrines reached a socialist doctrine. On the other hand, the bourgeois theoreticians who, as we have seen, hastened to renounce both the teaching on classes and dialectics, took from them precisely their idealistic covering and the prejudices inherited from the past. It is not the historians of the epoch of the Restoration period who had entered the path of open bourgeois reaction who are the direct predecessors of Marx, as is usually thought, but the French Saint Simonists, who in developing further Saint Simon's teaching on the class structure of society approached nearest in their historical views to the historical-materialist conceptions. In the *Explanation of the Teaching of Saint Simon* (1828-29) compiled by Bazard in co-operation with other Saint Simonists, the idea already clearly appears of the antagonistic character of all preceding social periods, of the consecutive change of the different forms of exploitation in the direction of their gradual softening, of the struggle of the exploited classes for their emancipation, while the very development of this struggle, its course and its issue are almost dialectically understood.⁴¹ The Saint Simonists recognised both the exploiting nature of modern bourgeois society and the replacing of this exploiting society in the future by "associations" in which there should be no place for exploitation. However, in their ideas on the ways of establishing this coming association they remain pure

BOURGEOIS HISTORICAL SCIENCE

utopians. While recognising in the past and correctly estimating the importance and the rôle of the class struggle, in the present (when public opinion, as it appeared to them, was already sufficiently prepared for the acceptance of their teaching) they renounced the class struggle and made their appeals not to the proletariat but to the good will of "humanity" (while in fact limiting themselves to a small group of student youth). This deprived their teaching of actuality and real significance.

If the Saint Simonists formed the left socialist wing among the followers of Saint Simon, then on the right bourgeois wing the first place was occupied by Augustin Thierry and Auguste Comte who were also direct disciples of Saint Simon. The former, as we have seen, openly took the way of bourgeois reaction, while the latter was the founder of Positivism, a tendency typical of bourgeois thought not only in France but also in England and America. If Thierry openly attacked the consistent class viewpoint and was guilty of a frank distortion in his historical works by replacing the clear conception of a class by confused ideas of castes and even nations, then Comte in the same way in the sociological part of his system of Positivism completely does away with any mention of classes, class struggle or revolution. In his teaching the material basis of social development also plays no part at all. He once again stands the whole of social development on its head. It is just Positivism which by making pretensions to the part of a scientific theory finally transferred the social thought of the bourgeoisie from materialist on to idealistic lines, thereby depriving it of any scientific importance. If Saint Simon put the development of science alongside that of industry, then Comte recognises the self-development of human reason and human thought as the chief factor in social evolution, reducing the latter to his well-known law of the three stages. At the same time he breaks with yet another "dangerous prejudice", with the argument once advanced by Bacon that theoretical and scientific thought only developed in connection with and dependent on practice. With his law of the three stages he stands completely on the same ground as the eighteenth-century encyclopædists. The whole of the real content of social life is completely cut out

A. I. TIUMENIEV

of his teaching on society or else placed in absolute dependence on the progress of human reason. The forms of society are conditioned by the corresponding stages of the development of thought. To polytheism correspond militarism and the prevalence of acquisitive tendencies, to the metaphysical stage, various transitional forms of feudalism, to the positive stage, industrialism. Antiquity is looked upon as producing a polytheist outlook, the Middle Ages, a monotheist one, whilst the Middle Ages are taken as a higher stage of development solely on the grounds that from Comte's point of view monotheism represents the next stage in the development of theological outlook as compared with polytheism.⁴² Comte connects the French revolution with the coming of the positivist stage. "The stationary (?) condition" (from 1830 to 1848) is explained by the lack of a properly worked out positivist doctrine. "These last eighteen years must be looked on as a period of a motionless state when the lack of a dominant doctrine has prevented the organic completion of the revolution".⁴³ Very curious is his explanation of the different forms of exploitation as phases in the development of religious ideas.

Polytheism is capable of developing acquisitive tendencies. So we must suppose that this theological system corresponds to the conditions necessary for the military life. Slavery corresponds to polytheism, the massacre of prisoners to fetishism, the emancipation of the serfs to monotheism. Fetishism has too individual and local a character for it to establish a spiritual connection between conqueror and conquered capable of restraining cruelty after a battle. Monotheism, on the other hand, is so universal that it forbids any such great inequality between the followers of one and the same God, whilst not permitting such a connection with the followers of another belief.⁴⁴

By taking such a purely rationalistic and even idealist point of view and removing all really social facts from the field of his vision Comte, like the eighteenth-century philosophers, reached the denial of the specific character of social life, reducing the science of society to physiology, that is, if we speak the language of the eighteenth century, to "human nature" and regarding it exclusively as "social physics". Physiological and social phenomena are "undoubtedly similar", and can only be distinguished

BOURGEOIS HISTORICAL SCIENCE

in the same way as individual phenomena are distinguished from those of the species. "In all social phenomena there can be noticed in the first place the influence of the laws of physiology upon the individual", and therefore "in any investigation of social phenomena which is correctly undertaken we must start from the profound study of the laws of individual life". So the laws of physiology are the foundation of social development (and one of their partial manifestations is the self-development of the human reason). Mutual relations between men only slightly "alter the influence of these laws".⁴⁵ Quite in the spirit of encyclopædist philosophy is the immense part which Comte attributes to education, and particularly to the re-education of the human race under the influence of his positivist system. This re-education of humanity appeared to Comte (particularly at the close of his life), just as it did to his teacher, as the propagation of a religious and mystical cult. He made humanity the object of his cult, declaring himself its first priest. In introducing this mystical religion, Comte, as we see, takes a step backward even in comparison with the eighteenth-century encyclopædists.

The success of Positivism and the influence which it enjoyed not only in France but also beyond its borders and above all in England, America, and partially in Italy, shows how much this step backward and the return to eighteenth-century traditions which are characteristic of Comte's teaching, corresponded to the new temper and that reactionary tendency which the development of bourgeois ideology had already assumed since the first half of the last century. If not directly Comte's own teaching, then at least those main tendencies, and primary arguments on which his system was based, are characteristic of the general tendency of sociological and historical science in these countries during the second half of the last century and the first decades of the present century. All the sociological and historical systems which have come from bourgeois theoreticians are only different variations and combinations of one and the same main arguments. The same arguments have been at the foundation of the investigations of bourgeois historians insofar as the latter have sought to give their works a generalising character. The most general

A. I. TIUMENIEV

feature is the removal of any reference to classes and the class structure of society (in this respect the latest views of bourgeois theoreticians are even a step backwards in comparison with the most advanced thinkers in the eighteenth century). At the same time, as with Comte, the whole specific nature of social phenomena is ignored and practically the whole real content of social life is removed from the sphere of investigation. Insofar as the law of social development is recognised, they seek this law not in the facts of social life but in some inner law inherent in these facts themselves. They reduce social law to the laws of biology (Humplowich, the Race theory, the theory of social instincts which is particularly widespread in America), to the laws of physiology (organic theories in sociology), and finally, most frequently of all to psychology and to the action and manifestation of various psychological qualities. The development of man's capacities and above all of human reason (Draper, Buckle), individual psychology (Tarde, Lacombe, Palant, Simmel, Ward, Baldwin), collective psychology and collective consciousness (Durkheim, Tönnies, Lamprecht), national psychology (Lebon, Foulner, Lazarus, Steinthal, Wundt), mass psychology, crowd psychology, generally pictured in its most negative features (Tarde, Lebon, Segal, Lenôtre, N. K. Mikhailovsky), finally the psychology of the subconscious (Freudism), the influence of external geographical environment on the physical and psychological nature of man (Buckle, Ratzel's anthropogeographical school)—these are the problems which above all interest bourgeois sociologists and which they place at the foundation of their sociological systems.

The same psychological or social-psychological, as it is sometimes called, tendency is particularly characteristic of the work of bourgeois historians and bourgeois methodological guides to the theory of history. Berr, for example, considers that it is "an indisputable" fact that "history is a problem of psychology".⁴⁶ The task of the theoretician of history merely consists of starting from this "indisputable" fact in order to establish different species of individuality, personal individuality, collective, "geographical", "temporal".⁴⁷ In the widely-read handbook of

BOURGEOIS HISTORICAL SCIENCE

historical science of Langlois and Seignobos the whole of historical evolution is looked on (quite in the spirit of Tard or of the Russian school of " Subjective Sociologists ") solely as the result of the imitation and implanting or enfeeblement of habits. This quintessence of bourgeois historical wisdom deserves to be quoted here word for word.

The formula of evolution must show the consecutive changes in habit . . . every habit (custom or institution) is at first the arbitrary action of a few individuals. When other people begin to imitate this action it becomes a custom . . . this is the first phase : Personal initiative, imitation, and the voluntary acceptance by the mass. A voluntarily accepted custom having become traditional is transformed into an obligatory rule. The voluntary personnel which carry on public affairs having become a permanent body is transformed into a personnel endowed with the power to use moral or material compulsion. This is the phase of tradition and of power. It is very often the last one and lasts until the destruction of society. But then, custom grows weak, the laws are broken, the ruling personnel is refused obedience. This is the phase of indignation and decay. Finally in certain civilised societies there comes a time when law is subject to criticism and the ruling personnel to censure, while a part of the population, calls for a rational reformation and control over the ruling personnel. This is the phase of reform and control.

What a profound analysis of the origin of social institutions we have here, and particularly what an analysis of the origin of state compulsory power in the force of habit ! Here we have an explanation of revolution as the enfeeblement of customs which have evidently begun to be burdensome (no other explanation is made). To the psychological and physical qualities of human nature the author of the most widely-read handbook of historical method in Germany, and also partially in other countries (particularly in Tsarist Russia), E. Bernheim, reduces all historical facts and all historical development.⁴⁸ " The human actions," we read in the latter, " which form the object of our science are chiefly based on psychological causes." Together with psychological qualities " it is necessary to understand historical relations, to study profoundly the physical qualities of the individuals and social groups, of nations and races and the influence of external nature on man's activity ".⁴⁹ The same primary importance of the investigation of psychological and psychic

A. I. TIUMENIEV

factors for the understanding of the historical process is also recognised by other German authorities in the theory and method of historical science, who are of great importance (Dilthey, Schpranger, Lamprecht, Breisig, Lindner, Becher, the semi-Marxists, Weber, Trölsch, Sombart, who think it necessary to correct Marx in this direction), as well as in short text-books (W. Bauer, Meister). Finally it is well known what a warm champion of personality and the personal (i.e. psychological) factor in history was Kareyev in his historical and theoretical works.

We have already shown above that this substitution of the investigation of psychical and psychological motives for the investigation of social facts was far from having been dictated to bourgeois historians by the interests of "pure" science. Even the exceptional solidarity observable in this respect among all bourgeois historians and sociologists is not an accident. For not one of them could get the simple idea into his head that it is not social psychology which conditions social facts but that social psychology is itself the product of social environment and the facts of social life. Concerning the origin of species, for example, exactly the opposite position is, as a matter of fact, axiomatic, namely, that the instincts of animals are not the cause but the consequence of the development of the species under the influence of external environment. We have seen that in the epoch of bourgeois revolution the bourgeois theoreticians came very close to the correct idea of the real process of historical development and the real relationship of its different aspects. We have also seen what were the motives and impulses which influenced them when they hastened to retreat from this correct point of view. Lastly we have seen what were the objective social causes conditioning this change in bourgeois psychology. The same causes and motives (whether consciously or unconsciously) are at the bottom of that exceptionally psychological trend which is characteristic of bourgeois-sociological and historical thought in the last century. It is no accident that the renunciation of the class point of view and the turn to psychology were chronologically coincident, and

BOURGEOIS HISTORICAL SCIENCE

moreover, at the very beginning were combined in a single personality. Comte, Saint Simon's disciple, by renouncing all the positive aspects of his teaching and assimilating all its negative aspects, becomes therefore, as we have seen, the forerunner of all the subsequent tendencies in bourgeois science.

The refusal to investigate real social facts and the reduction of sociology and history to psychology were in close and direct connection with the effort to make a radical break with the "prejudice" of the class structure of society and the class struggle and to get rid of any mention of these unpleasant facts from history. The investigation of real social facts and the real laws of social development which could not promise anything good for the bourgeoisie is replaced (consciously or unconsciously) by general arguments which say nothing and explain nothing, about the individuals forming society, about human nature in general and the psychology of these individuals, arguments in which the idea of social classes, thrust out again by the re-establishment in all its rights of "human nature", must completely fade and disappear. The mistake and inconsistency of the eighteenth-century materialists is now made into a principle and is repeated in a thousand different ways for many decades without any hope of shifting historical science. And this again is not accidental, since the forward movement of historical science and the knowledge of the real laws of historical development, as has just been said, do not and cannot interest the bourgeoisie. We have seen how the text-book of Langlois and Seignobos through the pen of its clever authors causes the dialectic of development and of the class struggle to disappear completely and the whole of social evolution, particularly such facts as the establishment and stabilisation of compulsory state power and revolution and the overthrow of power, is reduced to a simple strengthening or enfeeblement of habit. General conceptions of the nation (as we have seen from the example of Thierry) and of humanity take the place of classes which are driven from the pages of bourgeois historical works. In place of the change in the forms of exploitation and the social superstructures corresponding thereto we have a cultural evolu-

A. I. TIUMENIEV

tion (the progress of reason, to use the language of the eighteenth century), in which the leading part is taken by a chosen minority (*élite*), that is the most highly "educated" class. In world historical development this leading part of *Kulturträger* is attributed, as we know, to the European states, thereby justifying their imperialist policy.

With the consistent propagation of this point of view, with the one-sided preparation and emphasis of the importance of the psychological element in history, it was natural to arrive at the denial of the law of historical development and the introduction into history of the teleological element, to the substitution of the conception of historical causality by ideas on the manifestation of man's free will, of action according to aims (the question of what conditions the aims themselves and men's expedient activities is already outside the limits of the tasks which the psychological historians set themselves). Such a deviation towards indeterminism can in fact be seen to a greater or less degree in the works of all bourgeois historians who build on the basis of psychologism. If this deviation can be seen most clearly expressed in the naïve individualist point of view which reduces the whole historical process to the initiative of various "creative" personalities who arrange the fate of "humanity" according to their desire, then those theories which talk of collective consciousness, the collective mind, the collective will, are in fact in no way different from these naïve ideas. In this respect their very term, collective individuality, is characteristic.

V

THE HISTORICAL SCHOOL IN GERMANY : RANKE, SCHMOLLER, RICKERTIANISM

The introduction of teleology into the sphere of history was bound later to lead to the opposing of historical science to natural science, to the resurrection of the idea of historical development in the direction of the fulfilment of a definite aim (this teleological trend is inherent in all theories of progress), to the bringing of the subjective-value factor into the explana-

BOURGEOIS HISTORICAL SCIENCE

tion of historical facts, and, finally, to pure idealism. If these extreme conclusions were not reached in those countries where the pseudo-scientific traditions of Positivism were still strong, or were only encountered in occasional systems (Bergson) in a mild form (Cournot, Naville, on the division of science), in Germany in which it was precisely the mystical and idealist trends of thought which prevailed, all these extreme conclusions were just what comprised the content of the dominant schemes and systems.

Insofar as the class point of view penetrated into Germany (naturally in its bourgeois interpretation which recognised different forms of property as the basis of the different classes), it was here received as we have seen by the reactionary romantic school in the first place. Here the feudal reaction felt itself sufficiently stable to allow the luxury of particular classes and to utilise the class (more accurately, the caste-class) point of view in order to describe the delights of feudal property and the feudal system and the "loyalty" and other glories of the feudal Junkers (Marwitz, Müller, Keller, Lavergne-Peguillen, later Raumer and others). All this playing with "economic materialism" and the class point of view did not go outside the limits of the romantic school and the further development of historical science in Germany completely avoided them.

The dialectical doctrine which forms the highest achievement of German theoretical thought was already cast in its idealistic form. The further development of bourgeois science, by retreating from dialectic, completely preserved this idealistic covering in which the dialectical grain was hidden.⁵⁰ Historical science in nineteenth-century Germany developed under the exclusive influence of L. Ranke and it is characteristic that the representatives of the school considered its founder to be a disciple and follower of Hegel. Of course this is nonsense. The pygmy Ranke is a long way off even the idealist Hegel. But the important thing is that the actual followers of the dominant trend in historical science trace their descent from Hegel (of course from Hegel the idealist and not from Hegel the dialectician). Ranke was more reactionary in all respects and fell back still further than the historians and sociologists of

the positivist tendency. If these latter in renouncing materialist monism and reducing historical development to psychology and to the action of various "factors", nevertheless covered up such a factual individualisation of history with phrases about the regularity and laws of historical development, Ranke however in this respect went beyond them. He sees in history only facts, only a single continuous stream of unrepeated facts; he is exclusively occupied with "the collection of anecdotes and the reduction of all great events to trivialities and nonsense", as Marx sharply but justly expressed himself about him. He has no desire to concern himself with any generalisations, which he calls "phantasies" or "philosophising".⁵¹ Each fact, even the most trifling, can be of great importance in its relation to the process of world history, while the importance of each separate fact can only be recognised in the general connection of events.⁵² The establishment of fact therefore forms the chief and, indeed, the only task of the historian. The study of sources is all that remains for the historian to do.⁵³ It is just this one-sided demand for the criticism of sources and the establishment of "historical truth" which is characteristic of Ranke. "The exact description of events, whatever they may be" is for Ranke "the highest law".⁵⁴ To show how events "took place in reality" is all that is called for from the historian. Facts put themselves into definite groups and series and it only remains to catch "the music of history". Renouncing any search for historical law, for any "clevernesses" and "phantasies" and reducing the task of the historian to the simple composition and exposition of facts is, in Ranke's opinion, the guarantee of the "objectivity" of the historian and of "historical truth". This is the external obvious aspect of the method of Ranke and his school. The reverse aspect, however, shows Ranke as an idealist and declared reactionary. The actual "music of history" which sounds particularly clearly at the moment of social crises and the sharpening of social contradictions, which sounds all the louder the more the class structure and economic basis of social life are disclosed, he does not hear and does not wish to hear. His ear is completely deaf

BOURGEOIS HISTORICAL SCIENCE

to this. Not only the economy and class structure of society but social life in general has no meaning for Ranke. In his conception of the historical process (the phrases about objectivity of historical truth are just phrases) he is a pure idealist and even confessionalist. In this formless, disorderly, chaotic stream of facts, in this, if we may use the term, leap-frog, in this eternal circle, in which thanks to the play of chance now one and now another accidental fact plays the decisive part, this or that personality appears on the surface, this or that separate aspect of culture is advanced—"the spiritual tendencies", as Ranke calls them—for example, literature, art, etc. Ranke nevertheless fishes up a certain "spirit" of history which passes from one nation to another, from one circle of nations to another (whilst he opposes non-historical nations, who evidently lack this "spirit" to historical nations). In place of the shame-faced psychologism of the positivists Ranke quite frankly brings forward as the main motive force "the historical force of the human spirit". The action of this "spirit" also conditions progress, forcing its way through the chaotic mass of facts. Ranke understands progress itself as "the education of the human race" by the Lord God.⁵⁵ In conformity with this idea of progress he gives the leading part not to the intelligentsia, not to the representatives of "intellectual progress", but in the old-fashioned way recognises rulers and statesmen as the masters of the destinies of peoples. He is only interested in political, and at that only foreign political history, and not the internal politics, but only the relations between states. Even Ranke cannot get on without the interpretation of historical facts, but in his interpretation he goes a long way back to those methods which Barnave and the Saint Simonists both termed "childish". And indeed it is impossible to characterise in any other way the picture of European progress which Ranke gives in his lectures on the "epochs of modern history" which he delivered in 1854 to the Bavarian King Maximilian II. The destinies of the Greco-Roman world are here made to depend on the issue of the struggle between Cæsar and Antony. He places the struggle of Empire and Papacy in the centre of all

A. I. TIUMENIEV

medieval history. The commercial prominence of the Netherlands is explained by the will of fate. The English revolution becomes discontent with the policy of a rapprochement with Spain, the French revolution was prepared by the materialist philosophers who "did not believe in God and wanted to hear nothing more about the King".⁵⁶

Of course this parody on history and historical science would not deserve any attention if the author were not the head and fount of a school which to this day enjoys exceptional influence in the bourgeois historical science of Germany. The German bourgeois historian was worthy of his bourgeoisie and the bourgeoisie was worthy of its historian. This archaic idea of the exceptional rôle and importance of the state and the political factors in history, this mixture of the bourgeois conception of progress with a purely feudal and clerical content put into the conception which we find in Ranke, completely corresponds both to the general internal situation in Germany and in particular to the character and the political rôle and the situation of the German bourgeoisie itself. The German bourgeoisie,⁵⁷ pitiful, cringing, incapable of any revolutionary activity or revolutionary thought, out of fear of the labour movement preferred a compromise with feudalism to its overthrow. The revolution of 1848 ended in the capitulation of the bourgeoisie. The feudal Junker class remained in power and there took place in Germany, as a consequence, a compromise and the adaptation of the feudal system to the changing conditions, an adaptation which was carried out with the forces and statesmen of the feudal state itself. The unification of Germany for which the bourgeoisie strove in the first place (though far from complete and in places leaving undisturbed all the petty feudal princes) was completed by the typical Junker Bismarck, against whom the bourgeois parties at first waged guerrilla warfare but who afterwards became the hero of the bourgeoisie. The natural consequence of this cringing of the German bourgeoisie before the feudal Junkers was the mongrel thought of the German bourgeois historians.

For Ranke and his immediate disciples economy and eco-

BOURGEOIS HISTORICAL SCIENCE

conomic history did not even exist. Insofar, however, as it was absolutely impossible to ignore completely economic history there arose in Germany a special school (in opposition to Marxism) of historical economists and Ranke's "method" was completely transferred to this new science also. The most prominent representative of this school, Gustav Schmoller, is Ranke's absolute double in the sphere of economic history. By his political views and sympathies Schmoller, as is expected of a real theoretician of the German bourgeoisie, was a convinced supporter of the Prussian monarchy and bureaucracy and simultaneously an active enemy of Marxism.⁵⁸ Like Ranke, he also attacked all wide generalisations, calling them "intellectual jugglery". In fighting against Marxism he also throws overboard the whole heritage of the classical school of political economy as expressed by its best representatives, Smith and Ricardo. Like Ranke he wants to be a realist and stay on the ground of real facts. And he reduces the task of the research worker first of all to the accumulation of facts and to partial researches and generalisations. Economic science has not yet emerged from the stage of descriptive science. The time has not yet come for abstract theories nor will it come quickly (read never, since abstract theories are not in the interests of the bourgeoisie). Just as with Ranke, so also with Schmoller, behind this outward objectivism and exemplary intention not to quit the real ground of fact there is hidden a completely different reverse side. The renunciation of economic theories and the knowledge of the abstract laws of economic development conceals the effort to smuggle into the sphere of economic history the same "laws of the human spirit", the same "spirit of history", as play such a large part in Ranke's world history. And in this case pretended realism conceals also a definitely idealist tendency. The historical economists of Schmoller's school, following the general tendency of bourgeois historians, bring forward in the actual economic facts and phenomena not so much the material as the psychological aspect.

I have tried [he himself says in one of his speeches] to be an economist and an historian. I have always been interested in the

A. I. TIUMENIEV

task of fulfilling and completing what Hildebrand, Knis, and Roscher tried to do in Germany for economic science—separate it completely from the dogmatism of Anglo-French utilitarian philosophy and put it on another foundation more deeply and firmly founded in the psychological respects.⁵⁹

This is little enough. Schmoller felt the need for psychologism in order to introduce ethics into economic science, in order to take it off the path shown by the classical school on to the path of Saint Thomas Aquinas, by constructing an economic system on a system of moral views. "The sciences of the state, of law, of national economy . . ." he says, "even in their separation from ethics would have remained a part of a moral system, being founded on a definite world contemplation."⁶⁰ And what this introduction of ethics into economic science must lead to is shown by the statement that "the agents of progress are the creators and perfectors of religious systems, the builders of a truer order of human relations".⁶¹ So Schmoller's "spirit" like Ranke's "spirit" brings him directly into the embraces of the church. A franker representative of the economic historical school, Schönberg, also reveals the secret of the gravitation of the bourgeois historians in this direction. Schönberg is concerned in the first place with the raising of the morality of the working class. The best means for this uplift he sees not in any social institutions, but in ethical influences and the sermons of the clergy. The material basis for such spiritual influence must be draconic measures against trade unions which exceed "the bounds of legality", particularly in respect of the breaking of contracts by the workers and "illegal stoppages of work which put the social wealth in danger".⁶²

Insofar as the historians by renouncing all generalisations confined themselves exclusively to factual research, the philosophers in Germany undertook the working out of theory and the forming of a theoretical basis for historical "science" (Windelband, Rickert, Rotenfeldt, Mehliis, Becher). The consequence of this division of labour between the historians and the philosophers was the complete subjection of history to philosophy, and the transformation of historical science into the serving-maid of idealist philosophy and at the same time the resurrection of the

BOURGEOIS HISTORICAL SCIENCE

philosophy of history in the old metaphysical and theological sense of the word. With the aim of making better use of history in this direction it is separated from the other sciences as being a specially "individualising" science, a science of non-repetitive facts, a science in which actions according to an aim and teleology take the place of causality, a science, therefore, in which all law is denied.

With historical science are bound up tasks which are not only foreign to us but even profoundly anti-historical and which comprise the very negation of history itself. "The object of the philosophy of history, as a science of principles", we read in Rickert, "is the idea, in the Kantian sense . . . all these epochs must work at the realisation of the idea of a system of values."⁶³ Values, of which the philosophy of history must create a system, possess an "importance outside time", are super-historical and even "transcendental".⁶⁴ This task of seeking to square the circle, of transforming history into super-history and temporary transitory facts and social formations into timeless values is of course beyond the strength of the rank and file historian. The rôle of the latter is confined to a "simple summary" of the material, while the "reduction to values", i.e. the choice from the inexhaustible material of history of anything which has any kind of cultural or ethical value, the final judgment, as well as the solution of general historical and philosophical problems, is the task of philosophy.⁶⁵ If we follow the Rickertian theory of value in its genesis and development we shall see that its roots go back to German idealism of the beginning of the century and that its further development has a tendency towards introducing into historical science and restoring the purely clerical doctrines of the fall and redemption of the human race. In Fichte the elder we find an attitude towards historical science⁶⁶ identical with the Rickertian point of view, in Fichte the younger it is an almost developed doctrine on the value significance of historical fact.⁶⁷ On the other hand, in Fichte's closest disciple Mehlis, the philosophical theological element is the dominant one.

There is yet another peculiarity arising directly out of the

idealist efforts of the bourgeoisie and above all from German historical science which distinguishes this science. This is the final separation of theory and practice. The modern German historians have broken decisively with the practice of life, and rising above this world of sorrow they have adopted the position of "pure science" (for their task is not to know the real laws of historical development and to apply this knowledge in practice—neither the one nor the other is in the interests of the bourgeoisie). The study of historical facts is declared to be an aim in itself. Ranke sees in the study of history above all "pleasure" received through "sensing" the inner spiritual connection of things.⁶⁸ The latest representatives of Ranke's school look on history in the same way. For Meinecke the "high aim" of history is "the pure contemplation of historical facts" forming an "inner sanctuary" and "calm refuge" in which the soul finds liberation from the dark and gloomy sides of life.⁶⁹ The reverse side of this divorce from life and practice and the conversion of history into a sphere of "pure contemplation" is an extreme subjectivism. "Historians", Rickert declares (and this is his chief argument in favour of the individualising character of history)—"speak of the general together with Goethe. We utilise it but we do not love it, we only care for the individual."⁷⁰ And in fact this very Meinecke who saw in history "pure contemplation", in complete agreement with Rickert poses the question not of the tasks and aims of historical science but of what we, the historians, "want" or "do not want".⁷¹

That despite Rickert and the Rickertians this tendency towards idealism, this divorce from life and gap between theory and practice is not any specific feature of historical research, but corresponds to the general growth of a reactionary temper and tendencies among the bourgeoisie, which is ever more decisively breaking with its progressive past, is shown best of all by the similar revolution which is taking place in the sphere of natural science and particularly by the savage campaign which the reactionary bourgeoisie of all countries has begun against Francis Bacon, the founder of bourgeois science, attacking him above

BOURGEOIS HISTORICAL SCIENCE

all for his materialism and his inductive method and arming themselves against those very main premises which once formed the strong pride of bourgeois ideology and were the cause of the triumph of bourgeois science over mediæval scholasticism.⁷² In breaking with science and returning to scholasticism the bourgeoisie had naturally to renounce the forerunner of scientific thought and theory and the enemy of scholasticism.

VI

THE CRISIS OF BOURGEOIS IDEOLOGY AND SCIENCE IN THE EPOCH OF IMPERIALISM

By breaking with the past and decisively disassociating itself from it, by declaring "prejudices" all the positive results and achievements of historical thought in the revolutionary epoch, by transferring research on to the ground of idealism (at best a psychological idealism going no further than a superficial psychologism), by introducing into history subjective conditions of value and judgment in place of objective causality and the investigation of historical laws, and, finally, by divorcing theory from practice, bourgeois science even when it did not deviate on to the path of pure and frank scholasticism and deny any law in history (the positivist trend), condemned itself to the most complete sterility and helplessness and to marking time on one spot. The accumulation of facts only cited in their external superficial connection, the criticism of sources which often became hyper-criticism and hindered investigation instead of facilitating it, these are the achievements which can be put on to the active side of the balance of bourgeois science in the last hundred years. In regard to the understanding of the historical process, that is the really scientific understanding of historical facts, the thoughts of bourgeois historians throughout this period have gone backward and not forward. The more reactionary the bourgeoisie has become, the more has bourgeois historical science fallen back; the more helpless the theoretical thought of the bourgeoisie has become, the clearer and more definitely the importance of Marx's theory has stood out as the

A. I. TIUMENIEV

only scientific theory. Even his class adversaries have been compelled to recognise this. Bourgeois theoreticians who tried at first to be silent about Marxist theory were afterwards compelled not only to take it more and more into account but also to learn from it. "The dialectic of history is such", Lenin wrote, "that the theoretical history of Marxism compels its enemies to re-clothe themselves as Marxists."⁷³ If the more reactionary and die-hard historians who have openly gone the way of idealism and scholasticism like the historians of Ranke's school continue to treat Marxism with contempt or to attack it, a number of eminent historians who have not quite lost their scientific instinct, like W. Sombart, M. Weber, E. Tröeltsch, try to assimilate Marxism and put it into scientific circulation, making it acceptable to the bourgeoisie by blunting the revolutionary aspect of Marxian, by teaching and introducing typically bourgeois correctives in the shape of psychologism, Kantian "criticism", or open idealism. And if, despite all these distortions, the works of these historians are not, like the majority of other historical works, a simple hand-book of fact, but have some theoretical value, they owe it exclusively to those arguments and methodological approaches which they have drawn from Marx.

With the commencement of the epoch of imperialism and the beginning of the decline of capitalism changes take place in the psychology and ideology of the bourgeoisie. Under the influence of the sharpening of class contradictions and the growth of socialist parties in every European country, and in Germany above all under the influence of the failure of Bismarck's anti-socialist law, under the influence of a series of symptoms and manifestations of the decay of capitalism (the extreme acuteness of all the external and internal contradictions of the capitalist system in the imperialist epoch, frequent crises, the high cost of living, the growing evidence of the parasitic character of finance capital, the increasing dependence of the technical intelligentsia, the utter emptiness of ideology), the growth of a pessimistic temper both in the ranks of the upper bourgeoisie and in those of the petty-bourgeoisie has been evoked.

BOURGEOIS HISTORICAL SCIENCE

This new temper finds its expression first of all in the renunciation of the optimistic theory of infinite progress. Spengler, the most popular exponent of modern bourgeois ideology, decisively renounces this theory. "I do not see any progress," he says, "any aim, any way for humanity, except those which sit in the minds of the West European philistines of progress."⁷⁴ Spengler's pessimism has brought him to complete historical "post-relativism" and to the forming of a "conception of world history" in the shape of the change of the different new-born and dying cultural formations (cultural "souls"), which he compares to waves which now rise suddenly, now fall on the calm surface of the sea,⁷⁵ this pessimism, this historical relativism goes back to the last decade of the last century when the most important historian of antiquity, Edward Meyer, developed an absolutely analogous theory of the cyclical character of history which afterwards became the basis of the whole tendency towards the modernising of antiquity.⁷⁶ The example of the Russian historian R. Wipper is also extremely significant. At one time a warm supporter of the theory of progress, under the influence of the growing "burdens" of life, under the influence of the conversion of capitalist production into a "Moloch swallowing everything", under the influence of the "emptiness of spiritual life", in 1913 he began to deny progress, to become a mouthpiece of reaction and to idealise antiquity, while after the world war he completely swallowed the pessimistic theory of "the circuit of history".⁷⁷ Pessimism and confusion before the approaching catastrophe evokes even in men like Simmel an attraction towards fate and religion.

Life tries to express itself religiously [he wrote], not in a language with a given vocabulary and ready-made syntax, but directly. One may say in a kind of pseudo-paradox: the soul wants to preserve its faith by losing its faith in all previously determined religious standards. . . . The impossibility of preserving further the traditional church religions with the existence of religious instincts in spite of all "enlightenment" (since the latter steals from religion only its clothes but not its life) is among the most difficult problems of modern humanity.⁷⁸

In the very first years of the century in Germany a general turn

A. I. TIUMENIEV

can be observed towards the resurrection of Hegelian idealism simultaneously with a revival of interest in religion.

Our generation [wrote Windelband in 1910], as a result of positivist poverty and materialist emptiness, is beginning again to yearn after the spiritual foundations of life and to seek them out. . . . Is it astonishing that owing to the absence of any kind of new influential philosophy it is beginning to take that teaching which has depicted the universe with broad strokes in the shape of the development of the spirit. Moreover, this new Hegelianism frequently appears coloured in a religious light.⁷⁹

The growth of the influence of idealism and religion is directly connected with the development of capitalism. The voluntarist systems of Croce and Gentile prevailing in Italy which have replaced the rule of law in ancient society by "creative" will and action, express the will to power of the imperialist and fascist bourgeoisie.⁸⁰ Voluntarism is the self-hypnotism of the bourgeoisie which conceals its actual powerlessness to bend history to its will.⁸¹ When after the world war the establishment of the dictatorship of the proletariat in one-sixth part of the world and the wave of the communist movement which swept every European country assisted the final formation of the reactionary and pessimistic temper of the bourgeoisie in the shape of fascism, it was idealism in particular which came forward as the closest ally and inspirer of fascism both in Italy and in other countries. The creative will of the philosophical system has its correspondence in the call to action and renunciation of any kind of theorising by active fascism. As has already been said idealism advances step by step with religion. The resurrection of idealism proceeds simultaneously with the renaissance of religion. "The creative will" is confirmed by the authority of the church, and the pessimism which has gripped wide circles of the bourgeoisie and pushed them towards mysticism and the denial of progress has led directly to anti-historicism, to the need for self-hypnotism and the necessity for hypnotising and deceiving the masses—all these roads have led the bourgeoisie to Rome and from thence to Canossa. The bourgeoisie, beginning with the revolt against religion and the church, returns penitent into the lap of the church which is its only salvation. In Italy Gentile, proceeding

BOURGEOIS HISTORICAL SCIENCE

from liberalism to fascism, as fascist minister for national education has again introduced the teaching of religion in elementary and secondary schools.

Blood is the mediary between God and man [the German fascists declare], the voice of blood is good and moral. Blood is higher than intellect. Faith is a true weapon, but intellect is not decisive in every struggle. Empirical action is more valuable than programmes. The whole is more productive than the compromise. The minority is more capable than the majority. A rough tactic "in the open" is the tactic of to-day. Simplicity is a source of greater strength than complexity.⁸²

In this splendid quotation everything is revealed, both the renunciation of intellect and the call to simplification, to militant faith, and finally to crude violence (to "a rough tactic in the open"). In these few lines the whole ideology of the modern bourgeoisie is to be seen freed from any hypocritical phrases and coverings, the perfection of all those tendencies towards backward and regressive development of which we have spoken above. Here all the i's are dotted. And what is particularly characteristic is that all this call to naked violence proceeds from a minority, as the author himself recognises ("the minority is more capable than the majority"). "The minority" (that is the bourgeois minority) is that famous élite which the representatives of positivist tendencies advanced and will continue to advance as the agent of every intellectual and cultural progress, and it here shows itself without any masks and with an open call to naked violence in the name of simple faith,⁸³ at the same time admitting that intellect and theory are no longer on its side but on the side of its class enemies, on the side of the majority. Spengler may serve as a living example of how the bourgeoisie proceeds from pessimism to fascism and fascist methods. Having begun to write his *Decline of the West* in 1911 under the fresh impression of the Agadir incident, that is under the influence of the sharpening of external contradictions, Spengler after ten years already renounces the so-called pessimism attributed to him. Recognising the bankruptcy of modern (bourgeois) science, philosophy, art, he simply declares that "the historical importance of art and abstract thought are over-estimated", and he decisively

breaks with the "base optimism of the Darwinian epoch" and absolutely in the spirit of fascism (even before the active appearance of the fascists or at its very beginning), he calls from words to deeds, from theoretical work and theoretical thoughts to direct actions (which do not need any theoretical foundation).⁸⁴ And the aims of these actions to which Spengler calls are absolutely fascist. In the first place it is Cæsarism. "We Germans", Spengler pathetically explains, "will no longer go back to Goethe, but we have still to come to Cæsar."⁸⁵ Spengler's Cæsarism, however, wears the dress of socialism. "We are faced with the task of emancipating German socialism from Marx" and replacing Marxian socialism by Prussian socialism, Prussianism. "The old Prussian spirit and the socialist temper which at present hate one another with the hatred of brothers are one and the same thing. . . . We Germans are socialists, even though nobody has made this statement. Other peoples cannot be socialists."⁸⁶ In order to declare socialism and the Prussian semi-feudal monarchy brothers it is clearly necessary to renounce either any kind of theory or any kind of intellect, or else consciously to deceive the masses. So, from words to "deeds", from theory and science to simple faith, from Marxian socialism to Prussianism, from Goethe to Cæsarism, from Darwin to the Pope, here is the whole simple psychology and ideology of the modern German fascist-minded bourgeoisie. The logic of the class struggle laying bare all contradictions has stripped off all the coverings, all the fine and hypocritical phrases which covered this poverty of bourgeois thought and ideology.

If fascism has merged into more definite and perhaps classical forms in Italy and Germany, countries which are the weakest links in the capitalist system, then this of course does not mean that it represents some specially national Italian or German phenomenon, as the German and Italian fascists say, each one on behalf of his own country. Fascism is the international ideology of the bourgeoisie, as Marxism and Leninism is the international ideology of the proletariat. And in France and England where positivist theories still drag out a wretched existence fascist tendencies are maturing and growing impetuously. Hegelianism is penetrating France through Meieron. Bergson's system has won even

BOURGEOIS HISTORICAL SCIENCE

greater popularity in France by attacking Positivism with a purely idealist teaching on creative evolution and the all-powerful "I". Moreover, in France simultaneously with the rise and expansion of idealist systems there is occurring a renaissance of neo-catholicism and a growth of reactionary tendencies.

It [French youth] [wrote one observer even before the war] demands a firm state and social order. . . . It is indifferent to the form of government, whether it be monarchy or republic, so long as it feels a firm reliable hand, so long as it is commanded by a clear and firm will. . . . This youth sees the model of state construction in the church whose hierarchical system appears to it like a precipice standing out above the general ruin. . . . The students of the higher schools are again beginning to go to mass, often against the will of their parents and teachers.⁸⁷

Original and very significant as showing the growth of tendencies of decline among the bourgeoisie is the comparison of the psychology of "Fathers" and "Children". A no less characteristic feature of the evolution of bourgeois ideology in France is, as in Italy, the tendency towards merging idealism and religion. The growth of the influence of the Catholic church is proceeding in close contact with Bergsonism. Representatives of neo-catholicism like Leroi, Luquet, are seeking to utilise Bergson's philosophical teaching in the interests of the Catholic church. "Creative evolution is a hymn to God", declares the author of one such religious book on Bergson (Emile Ott), "not one learned man or philosopher has so made clear the road to a really existing God as Bergson has done."

The same process, though with a certain delay, is taking place in England also. Here a more sharp change in the temper of bourgeois circles is only to be seen in the years of the world war and the subsequent crisis. No trace is now left of the optimism which marked the ideology of the English bourgeoisie even in the pre-war period. In England also a subjective philosophy of values has arisen and is showing a strong tendency not only towards religion and religious mysticism but also towards the church. After "pragmatism" and James' "Religious experience" comes "Anglo-catholicism".

These new reactionary changes in the temper and ideology of

the bourgeoisie have not been long in expressing themselves in historical science also. That retreat and gradual slipping backward in science which continued throughout the whole of the second half of the preceding century has now become a panic flight. No longer back to Kant or Hegel but back to the renaissance of scholastic science is the tendency of modern bourgeois "scientific" thought, and particularly of historical thought. We have seen that Rickert subordinated history to purely philosophical (idealist) tasks and aims. This conversion of history into the servant of philosophy was nothing but a stage, and a very short one at that, on the road to its transformation into the servant of religion, into its transformation into sacred history, the history of the redemption and purification of the human race. So the circle of development of bourgeois science is completed. Beginning by denying scholasticism it returns to scholasticism once more.

In this regard the renaissance of the philosophy of history is very symptomatic in its primary significance, its significance in a general scheme of universal historical motion directed towards a definite and previously determined aim. If this kind of philosophy of history, which is a kind of peculiar offshoot of philosophical idealist and, finally, of theological thought, once had its own representatives (Rougemont, Laurent, in France, Steffenson, Rocholl, in Germany),⁸⁸ it was nevertheless a specific kind of literature calculated for a specific public, as, for example, the special historical journal, *Historisches Jahrbuch*, published in 1876 by the Catholic Historical Society. At the beginning of this century in an article on the philosophy of history, Eiken complained that "the philosophy of history belongs to those philosophical disciplines which have to insist on their right to existence by severe struggle".⁸⁹ To-day, since the pre-war years, the picture has sharply changed. Philosophical historical conceptions and the philosophical historical tendency have become dominant in historical science. In Germany, "philosophies of history" appear in dozens and special text-books on the philosophy of history are published. The philosophy of history is introduced as a compulsory subject into the syllabus of general introductory courses of historical science.⁹⁰ The

BOURGEOIS HISTORICAL SCIENCE

philosophy of history is driving out and replacing the methodology of history. But what is most characteristic of all, the authors of the most popular text-books in historical method recognise this hegemony of the philosophy of history and are prepared in complete agreement with Rickert to make their science dependent not merely on the latter but on religion also. For example, we read in Bernheim : " The all-embracing aim by the help of which alone we are able in the sphere of history to establish the connection of the one, is humanity in its general development, and at this point in particular historical science touches the philosophy of history and religion. Both the one and the other teach that such a general development exists." ⁹¹ Tröltzsch, another authoritative historian, whose work on the method of history is intended as an introduction to his own, still unwritten, philosophy of history, is also convinced that the historian alone cannot move a step without the help of the philosophers (idealist philosophers of course), and the theologians. ⁹² The high priests of science learning from the high priests of religion is the characteristic feature of modern western European science. That these are no empty words is shown by the success of the Jesuit Feders' book on historical methods which establishes supernatural divine causes along with natural and historical causation, a book which has gone through three editions in three years (1921-4). The not unknown opponent of Marxism, Paul Barth, concludes his career as a member of a semi-clerical society in Cologne (though it has the scientific title of the " Institute for the Study of Social Phenomena "), which has as its aim not merely the struggle against materialism but also against harmless Positivism and (in the person of its founder, Max Sholler) opposes feeling to reason and the method of intuition in the spirit of Pascal to the Positivist method.

VII

THE DOMINANCE OF SCHOLASTICISM IN THE FASCIST COUNTRIES. HISTORICAL SCIENCE IN MODERN GERMANY AND ITALY

The tendency towards the transformation of history into a scholasticism subordinated to the interests of the church is no

A. I. TIUMENIEV

simple aspiration. In the fascist countries of Germany and Italy the dominance of the scholastic tendency is an absolutely real fact. In Germany the scholastic point of view is carried into practice not only in special guides to the philosophy of history but it is also more and more applied and assimilated by specialist historians in their research works. Whereas Rickert was merely carefully feeling the ground and deducing his philosophy of history from Kant and the German idealists, the other founder of the value theory, Windelband, establishes the direct succession of his point of view in history from the teaching of the Christian church fathers. Declaring that the historical process "only has value if it is one", Windelband continues, "This principle of Christian philosophy was victoriously (!) defended against Mellinism by the Fathers. At the very centre of its world conception from the beginning were the ideas of the fall and redemption of the human race as actual facts (!). This was the first serious and deep recognition of the inalienable metaphysical right of history to preserve the past in the memory of humanity".⁹³

The complete development and expression of this tendency towards bringing clerical orthodoxy into history is to be found in the immense (more than 700 pages) *Textbook of the Philosophy of History* of Rickert's pupil, George Mehlis. His system, like the teaching of the church, is penetrated with dualism and the opposition of the spiritual and the material. Among the "values" (religious, ethical and æsthetic), he puts religious values in the first place. These are particularly the ideas of holiness and purity which are directly connected with the ideal of God as well as with the ideal of man serving God, and devoting himself to God. The ideas of sin and redemption are also connected with this idea.⁹⁴ In the same way among the "pure" (i.e. emancipated from everything material, A.T.) forms of universal history (religious, ethical and æsthetic), religious universal history takes the first and exclusive place. Even "æsthetic universal history" is understood primarily as "a revelation of divine beauty".⁹⁵ "The sense of history is to be found in the emancipation from the numbing curse of nature and

BOURGEOIS HISTORICAL SCIENCE

the return of the world again to God.”⁹⁶ In this way the chief place is given to “heroes” of two kinds, the type of ruler and the type of prophet. The “synthetic” epochs are connected with the first type, the epochs of the consolidation and establishment of a strict and stable order in the world of values. With the second type are connected the “analytical epochs, the epochs of the concordance of contradictions in the world of values.”⁹⁷ How widespread are these tendencies towards bringing clerical Christian teachings into history can be seen from the example of such an outstanding and serious historian as Tröltzsch who has even partially accepted Marxism (though he is also a doctor of theology), who recognises historical scales as “the work of truth”, whilst history appears to him to be “the expression and revelation of the divine foundation”.⁹⁸ The actual practice of history and historical research is coming more and more under the influence of this scholastic temper and tendency. Such important German historians to-day as G. Below and F. Meinecke are completely under their influence. Below’s methodological views are given by him in a special pamphlet on historical periodisation. Here we encounter directly that denial of a law of history which is traditional in the school of Ranke, together with the recognition of the equal significance of the rôle of various factors (by the way, he even remarks the influence of climate on the outlook and allegiance to definite parties of the Prussian Germans).⁹⁹ In the same spirit as Ranke, Below also does not recognise any connection or even any parallelism between the development of the various aspects of social life. Whilst some aspects of social life may go through a period of rise and prosperity, others are in a condition of decline. This statement is specially aimed against the Marxist teaching of basis and superstructure. No permanent relationship exists between basis and superstructure. What to-day is basis may to-morrow become superstructure and the reverse. It is not, however, these attacks against Marxism nor his idea of historical development as a somersault from feet to head and back again which is characteristic, for it does not represent anything new. Much more curious are the arguments

A. I. TIUMENIEV

of Below on the universal factors which nevertheless bring a definite system into the chaotic scheme of facts, and form as it were the core and skeleton of history according to which periodisation must be constructed. They are not, however, economic, a factor which he does not take into account at all. For Below the most "universal" factors are, on the one hand, political, and on the other, clerical history. Not satisfied with stating these two most important factors in history Below asks the question which of these two is in its turn the most universal. And here there begins the revelation of the unseen. It appears that for "mankind that dwells on earth"¹⁰⁰ the less universal factor is clerical history, but only on the ground that the kingdom of Christ is not of this world. So in Below we encounter a periodisation quite unusual for modern science, but typical of scholastic science, the division of history into the history of temporal man in which the chief part is played by political history, and the history of man in that world where naturally the first place no longer belongs to the temporal powers but to the church, as the representative of the power of the kingdom of heaven.

But in spite of this division the church is also given the decisive part in this sad world. For example, the boundary between mediæval and modern history is fixed by Luther's reforms. It is Luther's reforms and his activity which put an end to the whole mediæval system. If there had been no Luther there would have been no modern age. And it is comical that this nonsense is to serve in the eyes of its author as a shameful reproach to Marxism with its teaching of bases and superstructures.¹⁰¹

Meinecke develops this scholastic point of view in more detail. Meinecke has published a big work on the idea of state reasoning in modern history,¹⁰² in which the state, that weapon of exploitation, of national exclusiveness and imperialist robbery, is declared to be an eternal idea, the idea which moves humanity, an entelechy. In his general introduction he specially analyses the "dark question" as to how far the practical activity of state power is conditioned by utilitarian or ideal factors, whilst he decides this purely scholastic question in a purely scholastic way, starting from the idea of the polarity of common nature and the eternal

BOURGEOIS HISTORICAL SCIENCE

spirit which dwells in humanity. In this same scholastic spirit he also solves the problem of historical causality. Only the material side of historical activity is subject to causality and spiritual culture is free and removed from the action of any causality. To complete Meinecke's picture, we find that he opposes the temporary and transitory character of earthly life to the history of the eternal, divine existence outside time. "The stream of being", he writes, "bears with it everything which is stable in the spirit, not in order to make it the plaything of will (time), but in order that through it the eternal and timeless nature of divinity may be recognised in all its fullness and its inner connection with its manifestation in time."¹⁰³

Lastly, Hans Delbrück who is a no less famous German historian and also a sworn enemy of Marxism has, like Below, published a special work against the materialist conception of history in which we find the resurrection of yet another fundamental idea of scholasticism, i.e. the placing of the earth in the centre of the whole universe. It is true that he cannot make up his mind to declare the earth the proper topographical centre of the universe, but in any case the earth is the centre insofar as it is the dwelling-place of man who is the crown of creation. In this respect the following quotation from Delbrück's *World History* is remarkably instructive :

For the appearance of consciousness the final spirit, which is part of the finite spirit, which is part of the infinite divine spirit, needs an extremely refined material covering like the human body. It is only in man that it can reach consciousness of itself and the earth is the centre of the world not topographically but as the dwelling-place of man. The distant sun and stars only exist so that man may say, "the starry firmament is over me and the law is within me".

In Italy where fascism triumphed earlier than in Germany its victory was also prepared and accompanied by the spread of idealist philosophy. Here the development of idealism went on in the form of criticism of Marxism. Both Benedetto Croce and Giovanni Gentile passed from criticism of Marxism to fascism and an alliance with religion. If this idealist reaction has not here assumed such frankly scholastic forms as in Germany there were local reasons for it. The ancient antagonism between

A. I. TIUMENIEV

temporal and spiritual powers in Italy stood in the path of absolute acceptance of clerical and scholastic doctrine. At the same time the voluntarist tendency in the thought of Italian philosophers expresses, as we have already noticed, the imperialist tendencies which flourished in post-war Italy, whereas in Germany on the other hand, the imperialist aims, as a result of the defeat which deprived Germany of its colonies, were temporarily considerably weakened and paralysed. It is also necessary to take into account the positivist traditions existing in Italy and almost completely absent in Germany. But if fascist Italy did not directly take the path of the resurrection of clerical scholasticism, its ideological development has nevertheless been carried out in the same direction.

The liberal and atheist Gentile becomes the theoretician of fascism and the champion of the main fascist thesis of the authoritarian state as the incarnation of the nation, whilst as Minister of Education he re-introduces the teaching of religion and the law of God into the schools. Though Gentile does not call for the open resurrection of scholasticism, we nevertheless find him justifying the inquisition which burned Bruno. His clever and subtle sophisms cannot conceal the complete emptiness and lack of content of his idealist philosophy. The authoritarian state and the all-saving teaching of the church, that is to say, the way of naked violence and conscious deception of the masses (particularly deceptive and particularly conscious from the pen of the atheist Gentile), this is all that the bourgeoisie and bankrupt ideology and science can oppose to Marxist-Leninist theory. Ideological lack of principle and theoretical emptiness are alike for fascism in Germany and Italy and completely correspond to its political lack of programme.

It is just the ideological helplessness and feebleness of the bourgeoisie which in Italy brings its theoreticians (though by a different path) to the same denial of history and historical development as has been reached by scholasticised history in Germany and Russia. Insofar as the development of history has turned against the bourgeoisie and the bourgeoisie is powerless to direct it according to its class interests, bourgeois theoreticians and

BOURGEOIS HISTORICAL SCIENCE

politicians have nothing left to do but to take extreme measures. If the mystically-minded German professors hide themselves from history in the starry worlds of scholasticism, the more decisive ideologues of Italian fascism act more simply. They simply declare history abolished. In the literal sense of the word they decree it, since the decree of the Italian Minister of Education, Giovanne Gentile, which by a stroke of the pen converted all philosophers into historians, and the reverse, if we take into account the deep anti-historicism of his philosophical system which is close to solipsism and denies both time and space,¹⁰⁴ is nothing but a decree abolishing history. Objective history and the objective process of historical development do not exist, both Croce and Gentile declare, despite partial disagreements and despite the fact that the disciple has gone considerably further than his teacher on the road to a pure subjective perception of the world and to solipsism.

The historical past is dead [says Croce] ; it only lives insofar as it attracts our attention to itself and becomes its object and then only for the time during which our attention is concentrated on it. The ancient Greeks and Romans rested quietly in their tombs until the epoch of the Renaissance called them to life again. The German barbarians were also forgotten and only resurrected in the romantic age.¹⁰⁵

History is static ; Gentile repeats this same thought but in more philosophical language. The historical process is only possible insofar as it relates to the subject.

It is impossible to represent the historical process in the form of a spacial time series like a line. . . . Progress rather consists in the intuition of the line : an intuition which constructs the line itself . . . the process is related to the subject : for the object in itself is merely static ; and the process is correctly attributed to the object only insofar as it is really decided in the life of the subject.¹⁰⁶

What are the facts and events which the Italian fascists and fascist historians draw from the past we can already see from what has been said. They are not, in any case, the facts of economic history. (The latter is also despised by the majority of Italian as well as German historians.) The economic history of the Italian Middle Ages, which prevailed and flourished in the last decades of the preceding century and the first decade of the

A. I. TIUMENIEV

present century (under Marx's influence, as even a bourgeois historian recognises),¹⁰⁷ has either with the triumph of idealism ceased to exist, or else has retired into the background and now occupies in both quality and quantity one of the most modest places. The state and the nation now claim the greatest attention of the fascist historians. We have seen what an exceptional place Gentile gives to the state, in which he sees the embodiment of the nation.

In just the same way, according to the theory of Croce, which he has called ethical-political, the state is also given an all-embracing importance. It includes both the state institutions proper, and the political parties, including revolutionary parties, and religious institutions, and spiritual life, and the prevailing national ideas.¹⁰⁸ "The spirit of ethics finds in politics (and in the state) at once the object and the weapon of its activity." The state is the centre of ethical activity. For Croce and his followers the whole of social life is actually created in the state. In their eyes it is the representative and agent of the unity of the nation. The soul of the Italian people, its embodiment in the person of the best representatives of the Italian nation, the state personifying this soul, the history of the renaissance and unification of Italy, particularly the history of the dynasty of Savoy which is given an exceptional part in the work of unification, these are those factors in history which particularly interest modern Italian authors and which, according to Croce's recipe, they sprinkle with holy water. All the rest is dead and non-existent for them. Not only the historical works of Croce himself, *The History of the Kingdom of Naples*, and *The History of Italy from 1870 to 1915*, are written in this tendency, but also the works of almost all important modern Italian historians—Volpe, who has written a programme work on the plan of a single history of Italy (Volpe, *Plano per una Storia d'Italia*, Bologna, 1925), and two special works on the dynasty of Savoy, which has "individualised" and "forged" the Italian nation and state, and lastly, his well-known work on the Middle Ages (*Medioevo*, Firenze, 1928); Solmi's *L'Unità Fondamentale de la Storia Italiana* (Bologna, 1926); Ferrabino, *Gentile on Giordano Bruno*; Silva's *Il Mediterraneo, dell'Unità di Roma all'Unità d'Italia* (Milano, 1927). A number

BOURGEOIS HISTORICAL SCIENCE

of works by historians of the old school are also affected by this attitude, as Molmenti's *Storia di Venezia* (3rd vol., 1929) ; while old works are being re-written in the same direction (Belloni, *Seicento* ; Toffani, *Cinquecento*).¹⁰⁹

The anti-historicism which has so flourished in the last decades in Germany and Italy has shown itself with particular persistence in the history of literature. In both Germany and Italy as well as in the neighbouring countries which are ideologically under their influence, such as Rumania, Switzerland, Norway, this anti-historical tendency has dug its roots deep into the sphere of literary criticism. The representatives of this tendency in Germany (Tsisarts, Voltsel), in Italy (Farinelli, Luigi, Rosso), in Switzerland (Ermaninger), in Norway (Ekhof), in Rumania (Dragomirescu), have objected strongly to the study of literary works in any kind of connection with the historical conditions and period of their appearance. A literary work is dependent neither upon the time nor the place of its appearance. It is born in the consciousness of the author independently of himself and having once taken form continues to live its own life in the consciousness of others. Literary works must therefore be studied only in their inner content and meaning and their relations to other literary works, and from the point of view of their style, but outside of any dependence on the conditions of the time and place of their appearance. At the first international congress of historians of literature which took place in Budapest on the 21st to 24th May 1921 and was specially devoted to questions of methodology, the representatives of the anti-historical front spoke with a solid united front. And although they were not in the majority their opponents under their decisive pressure were forced to adopt a timidly defensive position and they gained all the advantages of the offensive side.

VIII

THE CRISIS IN THE POSITIVIST TENDENCY

If reaction in the ideological sphere in Italy did not assume such openly scholastic forms as in Germany, in the victorious

A. I. TIUMENIEV

countries, in France, England and America, the growth of a reactionary and clerical temper among the bourgeoisie was relatively slightly reflected in historical science. The bourgeoisie of these countries and particularly of France, which had become the hegemon in Europe, had naturally less foundation for pessimism than the bourgeoisie of conquered Germany. In addition, the internal conditions here were also quite different. The bourgeoisie had here gone through an excellent school of past struggles. It had completed the anti-feudal revolution, and it had more than once had to resist the onslaught of the working class without having to turn for help to the feudal Junker reaction. Possessing in the socialist parties good servants, and a more obedient proletariat than in Germany, where the communist movement was much more powerfully developed, they were still able to rule with the help of the old parliamentary and "democratic" forms without having recourse to direct fascist dictatorship. So there was no ground here for any feeling of open panic. At the same time, as we already know, there existed more stable scientific traditions than in Germany. Positivism had remained here the dominant tendency in history. And at first glance the latter has preserved the external appearance of scientific character. In particular the cyclical theory and the modernisation of antiquity which corresponded to the pessimistic moods of the German bourgeoisie have met with no sympathy and were never applied among the French historians who wrote about antiquity (Francotte, Giraud, Glotz, Toutain and others; cf. also the works of the Italian historian Salvioli and of the English historian Zimmern). The simplified historical methods of Ranke's school did not satisfy the French historians. They had greater pretensions to the discovery of a law of history and an explanation of the historical process.

"Know, in order to foresee" (Savoir pour prévoir), the founder of Positivism once proudly declared. "Knowledge is nothing, it is necessary to understand" (Savoir n'est rien, il faut comprendre), Langlois repeats after him in his *Introduction to Historical Science*. But we have already seen that it was just Positivism which had substituted psychology for the investigation of real

BOURGEOIS HISTORICAL SCIENCE

historical and social facts and reduced historical causality to the psychological motivation of historical facts, and so was least of all in a condition to understand or explain anything of the course of historical development, being in this respect no less helpless than Ranke's school in Germany. And it seems that the helplessness and sterility of the positivist method have never appeared so clearly and openly as to-day, after almost a hundred years of the existence of Positivism. This helplessness has been greatly increased by the famous "freedom of research" which Rostovtsev so warmly defended during the international historical congress at Oslo and which in fact means the complete lack of any kind of discipline in scientific thought. Endless general schemes and partial theories contradicting one another arise and are scattered like houses of cards in order to make way for new schemes and theories. Simultaneously with the limitless growth of material, the inability of bourgeois historians to manage this avalanche of facts increases. And this inability to manage actual material leads the bourgeois historians themselves to despair, and "freedom of research" begins to attract them also. "In this hall", said one of the participators of the discussion on the destiny of capitalism which took place at Zurich in 1928 (Schultze-Gawernitz), "there are represented approximately as many opinions on the prospects of the future as there are learned men here gathered." Another participator in the discussion expressed a no less vivid impression (Professor Saline). "This morning on the way here", he said, "I knew what I ought to understand by capitalism, but after I have listened to the speeches of the orators here I am in very great doubt as to whether I still know it or not." This confusion and consciousness of their own helplessness is not a phenomenon which is specially characteristic of bourgeois historical thought in recent years. It goes as far back as the pre-war period.

In 1913 at the April World Congress of Historians in London [writes one of the participators in the Congress],¹¹⁰ this feature appeared very strongly both in the reports, and during the discussions, and during the spontaneous private conversations afterwards, i.e. embarrassment before the avalanche of fresh material, the consciousness that many convenient things which often have a great importance

A. I. TIUMENIEV

for method and were of help in the schemes and theories, were overcome by this avalanche and carried away, and, most important of all, there appeared mistrust towards any efforts at fresh constructions. But simultaneously there was observed a complete understanding that without construction there is no science, but only an accumulation of material.

As far back as 1900, thirteen years before the London congress, a special centre for historical synthesis was founded in Paris, which was joined by representatives of historical science in various countries. The Centre had as its chief aim the unification of the work of historians and the bringing into it of some kind of unity. And the fate of this Centre, created specially to bring methodological unity into the work of historical research, is extremely significant and instructive. From it, it is particularly easy to follow the full helplessness of bourgeois science and the impossibility of its finding on the path it had chosen any way out from the deadlock which had been created. 1930 was the thirtieth anniversary of the existence of the Centre. Quite a long period; what have its results been? On the occasion of the thirtieth anniversary there appeared in the journal of the Centre—the *Revue de synthèse historique*—a leading article from the founder and chief director of the association, Henri Berr.¹¹¹ And one can see best of all from this article that the results of the Centre's thirty years' activity are precisely nothing. Berr begins by pointing out the backwardness of historical science in comparison with natural science. No unity of method or aim existed in history. Law, morality, religion, literature, art, stood quite apart and did not come into the sphere of general history. Erudition and a sterile satisfaction in knowing all details had become aims in themselves. The aim which the Centre for Historical Synthesis had set itself at its foundation was to embrace all human history in a single synthesis. "To replace the philosophy of history by something which should be quite scientific" (? !). Berr quotes Langlois' loud phrase that to know is nothing, it is necessary to understand. But what are the ways and methods which lead to an understanding of historical facts; what is this mysterious "something quite scientific"? We can find out neither from Berr's article nor any of the other articles in the journal.

BOURGEOIS HISTORICAL SCIENCE

The mysterious "something" remains "something scientific." Certainly the Centre has a considerable number of members and its representatives are among the most distinguished historians in the different countries. But further? They are all agreed that historical science must embrace all aspects of human life, that "nothing human must be alien to history", but on no more than this, since in everything else complete disagreement is to be seen as before. Berr is compelled to state that the Italian historians are taking a different course from the French historians; that among historians in the United States who belong to the Centre there actually exist three different tendencies. But if we take into account the fact that these different tendencies are as before built on psychologism with a bent towards the idealist conception of history, then the results of the thirty years' existence of the Centre can only be recognised as quite pitiful. It is little enough to admit the necessity for investigating the historical process as a whole. It is necessary in addition to have definite general starting-points and methods of research. But bourgeois historians have neither the one nor the other, nor can they have. For this they will have to go back again to the historical materialist point of view and the theory of the class struggle. And this is absolutely impossible for them.

It has become an exceedingly widespread custom in bourgeois historical science to publish collective works on world history (Lavissee and Rambaud, Glotz, the Cambridge histories, etc.). The publishers are chiefly interested in entrusting the various parts of these collected works to important specialists in each sphere. They are least of all concerned with uniformity in editing, with unity of outlook, with the conformity and balance of the separate parts. In this respect the collaborators have the most complete "freedom of research". The Centre for Historical Synthesis also undertook such a collective publication under the important and promising title of *The Evolution of Humanity*, with the director of the Centre, Henri Berr himself, as the editor. It would appear as though in this publication issued under the single editorship of the Centre for Historical Synthesis we might expect some unity of method, and some general work

A. I. TIUMENIEV

connecting the various authors in a united whole with a theoretical basis and establishing a definite law of history. But what do we see? Without giving my own opinion on this work I will simply refer to the review of the American bourgeois historian Morrow Fling, which appeared in the journal of the Centre.¹¹³

It seems to me [Fling writes] that the theory of M. Berr the philosopher is in astonishing contradiction with the excellent practice of M. Berr the historian. What are the laws which are established in the amazing *History of the Evolution of Humanity*? I know these excellent volumes very well but I am quite unable to find there either laws or even attempts to establish them. I certainly find here an historical synthesis, an historical review of the human society of the past, a superb and splendidly developed synthesis which embraces all past civilisations and which has from the beginning been in the mind of M. Berr (?). But what relation does this mighty picture of humanity have to historical laws? None at all.

If we put on one side the exaggerated style of the compliments what remains? There is only left just that "historifying history", the struggle against which is, according to Berr, the chief aim of the Centre. Berr answers Fling,¹¹³ but what real answer can he give? Only that reality is single and it is impossible to cut it into historical and sociological facts as Fling does. So Berr to-day, thirty years after the foundation of the Centre, is forced to confine himself to the general and empty phrase with which the Centre began its apparently far from fruitful activity.

We can judge of the results of the Centre's activity and the direction in which that activity was developed by the two following examples.

In the Centre's journal for 1926 there was a small article by Lévi-Bruhl, "What is Historical Fact?"¹¹⁴ In this small article, six pages in all, the author has contrived to expose the whole precious essence of modern Positivism and show that Positivism, although externally foreign to all metaphysics, is able, insofar as it becomes pure psychologism, to stand real relationships on their head no worse than German idealist philosophy. In the most serious way Lévi-Bruhl here proves that we must recognise as "historical facts" not the facts themselves or his-

BOURGEOIS HISTORICAL SCIENCE

torical personalities, but those ideas about them, even though they are false, which are formed by contemporaries. "If these ideas are deceptive from the psychological point of view, from the historical point of view this alone is true. We may even go further and declare that in fact the object of history is not so much facts in themselves as those collective opinions which are formed around them. Every time we meet with disagreement between real facts and their appearance history must base itself on the latter."¹¹⁵ So it is not being which determines consciousness, but consciousness has the primacy over being. Moreover, being can be completely cancelled out. With the help of this kind of "methodology" it is impossible to construct any kind of science.

As an illustration of the conclusions to which such "methodology" can lead, Varnotte's editorial article on sociology in the *Revue de synthèse historique* which appeared only last year can be taken.¹¹⁶ In this article the rise of the laws which regulate social life, i.e. in other words, at the same time the actual development of social life, is characterised as follows. "Customs and social institutions are of a purely psychological nature." Everything here is built in the first place on "phenomena of attention". Individuals on observing the community of definite acts have desired and demanded their fixation. Hence we have custom, which, as a consequence of this relation to it and under the influence of reflection (for example when a custom is recognised as good), becomes a rule and established. This reflection is the work of a minority. It is necessary that social imperatives should pass from phase to phase in order that the minority might fix its attention on one of these phases and after reflection declare its opinion upon it. It is necessary also that this declaration (of a new law) should be confirmed by the force of compulsion proceeding from prestige, fear, or some other way. . . . The thinking minority fashion the system of social imperatives. This fashioning takes place by continual expansion. After the period of first blossoming, there follows a period of impetuous activity, after which comes extreme accumulation. Different disagreements in interpretation appear

A. I. TIUMENIEV

and become so important that logic is lost. Then the work of curtailment begins. Knowledge indeed appears as an accumulation in which logic finds no ends. The necessity of making a synthesis appears. Hence the fever for documentation, for systems of bibliography, inquiry bureaux. We curtail and introduce order and our successors continue to do the same. After sufficient curtailment it is possible once again to work out and expand.¹¹⁷ So "the thinking minority" invent laws and organise social life while the unthinking masses obediently accept these laws and carry them out. There are no social revolutions and reconstructions. Everything is reduced to the state where, when the production of "the thinking minority" becomes too large and confused in contradictions, the necessity appears for finding agreement between the contradictory opinions and for curtailment. This leads to periods not of revolution but of codifications. And that is all. And this naïve, childish, helpless nonsense is put out in the journal of the most authoritative scientific institution in bourgeois countries as the last word of science summing up the thirty years' activity of the Centre.¹¹⁸

The importance and rôle of the Centre for Historical Synthesis is not, however, limited by the external unification of the historians of different views and tendencies. It also tries to carry on definite systematic work and publishes in the *Revue* periodical bulletins on its activity. We can judge the character of the Centre's activity by the fact that it does not so much place theoretical questions at its foundation as questions of terminology. The Centre has considered the publication of a dictionary of historical terms in which each word is entrusted to a separate collaborator, and then discussed at a general meeting with the participation of the best forces of the Centre. How this work takes place can be seen from the following example. Not so long ago, in 1930, the Centre held a discussion on Toutain's report on the word "Amphictyons".¹¹⁹

The report itself is of no interest, but the discussion, which showed a complete methodological helplessness and a purely formal, absolutely unhistorical approach to the problems of methodology, is extremely instructive and symptomatic. As is

BOURGEOIS HISTORICAL SCIENCE

well known, Amphictyons were leagues of big cities and tribes for the preservation of the national sanctuaries. During the discussion in the Centre, an attempt, however, was made to enlarge the significance of this term by making it cover also modern international institutions. It was perfectly seriously discussed as to whether this term could be applied to the modern League of Nations as well as to the ancient Greek Amphictyons, and one of the participators in the discussion, Toledano, pointed out that the majority of works devoted to the League mention the Greek Amphictyons as the ancestors and predecessors of the League of Nations. And the lecturer, a well-known historian of antiquity, and particularly of ancient economy, did not consider it possible to refute such a stupid comparison of illiterate hired scribblers, did not consider it necessary to point out that it is impossible to compare and bring under one conception institutions which are separated from one another by 3,000 years and belong, the one to slave-owning, and even partially to clan and tribal society, and the other to the modern imperialist age. It is true that he spoke against such a comparison, but for purely formal reasons because the ancient Amphictyons were not merely an assembly of the delegates of nations, but an attempt to create a group of Greek cities on a religious basis. But when another opponent (Eisler) remarked that in this case Amphictyons might be compared with the Holy Alliance, which was formed with reactionary aims by the European monarchs on the overthrow of Napoleon I and whose soul was Metternich, Toutain had no longer any objections. In fact, both the ancient Greek Amphictyons and Metternich's alliance were equally "holy".

Summing up, we may state that if historical science in France, England and America has not yet entered the path of open idealism and clericalism, if, unlike the frank subjectivism of Italian and German science, it still preserves the appearance of objective science and objective scientific methods, it is in fact the same pseudo-science, suffers from the same helplessness to expose the main laws of the process of historical development, is just as anti-democratic and idealist (the idea of the ruling

A. I. TIUMENIEV

élite and the "thinking minority"), and finally is just as anti-historical and scholastical (the concentration of attention on historical terminology and the purely formal approach to questions of terminology) as is historical science in Germany and Italy. If it has not yet made an open alliance with the church it has already expressed complete readiness to collaborate with clerical Catholic science. In February 1932 there met in Paris an international conference on the teaching of history. The conference met, of course, in the spirit of equality and liberty. At this conference the Centre for Historical Synthesis was represented not only together with other scientific institutions, but also with such societies as "The Universal Alliance for International Friendship Through the Churches", the "Catholic Union for International Studies", the "International Women's Council", etc. And the Revue of the Centre was not only not embarrassed by this collaboration, but heartily welcomed it.

One other feature brings the positivist science of France and England near to the fascist science of Italy and Germany, and that is its anti-historical nature which wipes out the division between the epochs of history, the inability or lack of desire to show the specific character of the different historical epochs, of which we have already seen an example in the discussions on the term Amphiptyons. It is this anti-historicism, together with idealist and clerical tendencies, which is the characteristic feature of modern bourgeois "historical" science. If it is not by means of a naked and direct denial of the facts of historical development and the transference of the aims and interests of historical science into the world of the transcendental "I", of transcendental values and pure scholasticism, then it is by other externally more scientific methods that bourgeois historians of the most varying tendencies arrive at the same conclusions. Even historians who not only do not turn their attention away from this corruptible world, but actually concern themselves with the problems of economic history, write their "historical" researches with the special aim of showing that in fact no history nor historical development exists. Insofar as the present and the future spell nothing good to the capitalist system, the bour-

BOURGEOIS HISTORICAL SCIENCE

geois theoreticians try to show the eternity and permanency of capitalism, finding their proofs for this not in their forecasts of the future, but in the past. This task naturally falls to the share of the bourgeois historians. All their efforts are turned towards wiping out the lines of demarcation between the historical epochs and converting historical development into a wave-like movement which varies and retreats around one and the same social and economic forms, that is, the forms of capitalism.

Bourgeois historians find the domination of capitalism and capitalism itself everywhere and in all ages. They find it in both the ancient East (E. Meyer, Breasted, Wipper, L. Brentano)¹²⁰ and in antiquity (E. Meyer, Beloch, Pohlmann, Rostovtsev, the "Marxist" Ciccotti),¹²¹ and on the threshold of mediæval history, among the ancient Germans, and in the monarchy of Charlemagne.¹²² The French historian Hauser in this way finds developed capitalism already existing in the sixteenth and seventeenth centuries, thus bringing the age of the birth of capitalism near to the modern age and trying to show that modern problems have their roots in long past times.¹²³ In his turn, in a collection of articles devoted to the sixteenth century,¹²⁴ he notices features of similarity, which on the one hand bring the sixteenth century close to the mediæval age preceding it, and on the other hand bring it close to the modern age. And in regard to their forecasts of the future, bourgeois theoreticians naturally try in the first place to represent the future economic system as a continuation of the modern capitalist system, though in a variation, either in a feudal form (O. Spann), or of organised capitalism (W. Sombart and others). In a word, nations have replaced nations, the face of the earth has changed, but capitalism was, is, and always will be. Together with researches and works of a more special character which prove the existence of capitalism in different historical epochs and periods, attempts have also been made to follow the fate of "capitalism" throughout the whole history of humanity. As long ago as 1913 Gerlich's book appeared, *The History and Theory of Capitalism*,¹²⁵ whose author, starting from the definition of capitalism as the

A. I. TIUMENIEV

“striving for profit and enrichment”, attempted to show the identity of the manifestations of capitalism at all times and among all nations. Even more persistent efforts in this direction have been made by Dopsch. He has devoted several articles to this question in his collection on the *State and Economic Structure in the Middle Ages*,¹²⁶ his lecture at the international Congress of Historians in Oslo in 1928, and lastly a special book *Natural and Money Economy in History*,¹²⁷ in which he proves the eternal co-existence of natural and money economy, and in his eyes money economy is synonymous for capitalism.

From the last two examples we can see to what devices the bourgeois historians have recourse in order to prove the existence of capitalism at all times and among all nations. In the first place, this is a wide and deliberately indefinite conception of the very term capitalism, which avoids any accurate and clear definitions. The manifestations of capitalism are seen in every effort at enrichment, in the development of money economy, in the presence of large fortunes independently of the method of their formation and their use, in the scale of the different economies independently of the character and organisation of labour within these economies or enterprises. With such a deliberate avoidance of clear definitions of the terms capital and capitalism it is natural that no difference is made between the pre-capitalist forms of capital and industrial capital, while the actual proof of the eternity of capitalism is made by a simple external addition to the conception and term “capitalism” of definitions and epithets which have absolutely no connection with it and are excluded by it, as, for example, capitalism of the manor, town capitalism, feudal capitalism. Dopsch even talks of the existence in the Hellenistic age of the capitalist organisation of natural economy.

By trying to show the eternity of capitalism, by seeking capitalism everywhere and in all periods, by not hesitating in order to do this before absolute falsification of terminology, by representing in this way the whole historical process as a wave-like movement proceeding constantly in the same unchanging forms, the

BOURGEOIS HISTORICAL SCIENCE

bourgeois historians have also reached the denial of any kind of sharp lines of demarcation between the different social formations and historical epochs, the denial of the necessity and inevitability of revolutionary changes and social crises at these lines of demarcation between the historical epochs. It is just this denial of the differences between the historical epochs and the wiping out of the lines between them which forms, we may say, the chief aim of modern bourgeois science. Dopsch in his chief works as well as in a special article, and after him Pirenne and Petrushevsky, have tried with all their might to wipe out the lines of demarcation between the close of antiquity and the commencement of the Middle Ages. Hauser, as we have seen, strives in the same direction at the removal of the difference between the Middle Ages and the New Age on the one hand, and the New Age and modern times, the actual capitalist imperialist age, on the other hand, by showing that all the problems which trouble contemporary society already faced humanity in the sixteenth and seventeenth centuries. In particular he sees no difference between the protectionism of the modern imperialist age and the mercantilism of the seventeenth century, considering them identical phenomena produced by similar conditions.¹²⁸ In his efforts to wipe out the line between the Middle Ages and modern times, Hauser is by no means alone. Sayous,¹²⁹ arguing with Sombart, declares that landed property was not the basis of the economic régime in Genoa and, putting forward the primitive relations of commendation for real institutions of a capitalist character, he reaches the conclusion that "capitalism really existed, at least in its financial form". The well-known specialist in the economic history of England, Lipson, who owes a great deal to Marx, attacks Engels in a special article¹³⁰ proving that domestic industry was already a manifestation of capitalism, and on this basis he attempts to lower the significance of the industrial revolution in England, which had as its consequence not capitalism (the latter has always existed), but machinism and the concentration of production. The no less famous French economic historian Henri Sée has also come forward, as we have seen, in the part of a critic of

A. I. TIUMENIEV

Marxism and goes even further in a small article of ten pages of large type¹³¹ in which he proves that it is not industrial but financial capitalism which is the blood that nourishes the whole capitalist system. The remark of this lackey of finance capital that whereas during the second half of the last century "a certain Marx" was able to underestimate the importance of finance capital, to-day the picture of modern economy teaches us to "understand better" the "predominant rôle of circulation phenomena", has a particularly triumphant ring. But this deliberate emphasis of the rôle of finance capital was particularly necessary to Sée in order to connect modern capitalism with "capitalism" of the preceding epoch when industrial capital did not yet exist or was only in embryo. Setting himself this aim, he does not see and does not want to see that the domination of finance capital is not typical for capitalism in general, but for a definite stage in the development of capitalism, and that it does not represent either vitality or vital and nourishing blood for the capitalist system, but, on the contrary, anæmia and symptoms of the beginning of the decay and dissolution of this system, as Lenin showed long before Sée discovered his America. Sée, of course, does not know Lenin's book on imperialism. What can such a learned gentleman have to do with "a certain Lenin"? To illustrate how widespread in bourgeois history is this tendency to find the phenomena that are characteristic of the latest stage of capitalist development in preceding centuries, we may mention a small article in a provincial French journal in which, out of the fact of an agreement concluded in 1769 at Clermont between two traders on the buying up with speculative aims of the local production of bottles, an agreement which was quickly ended on the complaint of the local population through the interference of the prosecutor-general of the Paris parliament, the conclusion is drawn that there existed in France in the middle of the eighteenth century a "real trust".¹³²

By proving that capitalism has always existed, by wiping out the lines of demarcation between the different historical epochs and thus reducing to nothing the evolution of social forms, the

BOURGEOIS HISTORICAL SCIENCE

bourgeois theoreticians and historians have achieved yet another aim. They have thus reached the denial of the necessity for social crises and revolutionary changes and upheavals. Thus, a true follower of Dopsch who seriously considers that the latter's works have put an end for ever to any kind of social and economic schemes in the field of history, Petrushevsky, insists that we completely withdraw from circulation "the category of natural economy". This category presupposes subsequent evolution with possible "radical breaks",¹³³ a circumstance which is in itself sufficient to justify the statement that "the interests of scientific reasoning call for its complete removal from scientific circulation".¹³⁴ We have already seen that the bourgeois historians of the Restoration epoch, Guizot and Thierry, out of fear of a workers' revolution, renounced the past of the bourgeoisie itself and were ready to see a mistake and a fatal step in the French Revolution. At present the denial of the significance of the French Revolution has become a commonplace in bourgeois historical works. Sée declares that the French Revolution does not mark any sharp line. If we look at the history of France before and after the Revolution, then France in the first half of the last century was nearer to "the old régime" than to modern "so-called capitalist" society.¹³⁵

It is characteristic that an historian of much greater importance, and moreover an historian who is an economist in the first place, no less a person than Sombart, takes up the same position when he declares that the French Revolution had no progressive meaning and did not accelerate but rather for many years held back the economic development of France.¹³⁶ No less symptomatic is the circumstance that among the bourgeois historians of the French Revolution there is continually taking place a movement to the right and a general tendency is to be observed towards a rapprochement of the historians of liberal and even radical tendencies (like Mathiez) with open reactionaries. Seignobos occupies a similar position in regard to the political history of Europe in the nineteenth century when he considers its normal path of development to be an exclusively evolutionary one, whilst it appears that nevertheless the only countries

A. I. TIUMENIEV

to take such a "normal" path in the nineteenth century in Europe were England, Switzerland and Norway. But Seignobos is not even right in regard to these countries. For these countries in no way formed a kind of oasis amid the revolutionary storms of the rest of Europe. England had already experienced its bourgeois revolution and the Chartist Movement of the nineteenth century, while even the history of little Switzerland right into the nineteenth century was also filled with revolutionary changes.¹³⁷

IX

THE CRISIS OF THE ECONOMIC HISTORICAL TENDENCY

All attempts to show the eternity of capitalism, both as attempts to prove the unprovable and as attempts made with unsuitable means, are not only immediately condemned to failure but are also accompanied, and indeed have to be accompanied, by an extreme lowering of the general scientific level and scientific value of bourgeois historical work. All the arguments, conclusions, "proofs" of the bourgeois historians are without value where they concern capitalism, and hardly deserve refutation simply because they are either founded on absolute juggling and cheating (how else can you characterise the introduction of such conceptions as "natural capitalism" or "capitalism of the manor") or else on the exceptional ignorance of the authors in the simplest fundamental economic questions. We may in this respect quote the comment of a bourgeois economist who attacks very sharply this utter economic ignorance of the historians who have ventured to treat of capitalism.

The history of the rise of modern capitalism [we read in Sombart's preface to the second edition of *Modern Capitalism*] can only be written by an economist with a good theoretical preparation who also knows the economic life of our own times. Of course, it is possible for a professional historian to have such an education. But, unfortunately, among historians, particularly among the older historians, such an education is still not considered compulsory. Otherwise such a fact would not be possible as for a famous historian such as Henri Pirenne to read to his colleagues gathered from all over the world (at the London Congress of Historians in 1913) a lecture on

BOURGEOIS HISTORICAL SCIENCE

the phases and development of capitalism which showed a positively astounding ignorance in its author. All the intense intellectual work of the last decades had passed by this learned man absolutely unnoticed, and he behaved with the innocence of a child towards the problems which have tormented us for a whole generation. Unless such types of the historians of economy pass completely from the scene we shall get no further.¹³⁸

Sombart is no less harsh towards Pirenne's colleague and the most prominent representative and defender of the idea of the eternity of the capitalist system, Dopsch. "It is utterly fantastic to talk of capitalism in regard to the age of the Carolingians, if we are going to give any meaning at all to this word," he remarks at the beginning of the second volume of *Modern Capitalism*.

But if Sombart here speaks in a tone of superiority over other bourgeois historians, this circumstance can in no way serve as a basis for seeing in him the representative of any original and really scientific current in bourgeois science. All the advantages which permit Sombart to speak in this way of his superiority over other bourgeois historians are simply what he has borrowed from Marx of fundamental economic conceptions and categories, which even in the castrated form which they have assumed in Sombart put him infinitely higher than other bourgeois theoreticians and of course particularly so in comparison with those historians who are completely ignorant in economic questions. "Anything good in my work I owe to the spirit of Marx", Sombart himself declares. He is not, however, always so modest. He not only accepts Marx but he makes essential corrections in Marx's system which in fact destroy "the spirit" of Marx. He pretends that his eclectic work has taken the place of Marx's fundamental works. In a word, he goes beyond Marx and tries to make his teaching acceptable to the bourgeoisie, in this respect following other bourgeois theoreticians who have been compelled to rob Marx owing to the complete sterility of bourgeois science. It is not, of course, these amusing pretensions of Sombart which interest us. We are interested in the first place by the direction in which he "develops" and refashions Marx's system. For when we look at the evolution of Sombart's views we see that they have evolved in the same

A. I. TIUMENIEV

direction as the other bourgeois historians and theoreticians. And the change in Sombart's outlook coincides in time with the general change in bourgeois ideology at the end of the last century and the beginning of the present one. A legal Marxist who won Engels' approval¹³⁹ for his article on the first volume of Marx's *Capital*¹⁴⁰ at the beginning of the 'nineties,¹⁴¹ Sombart even in the first edition of *Modern Capitalism* (1902) leans towards Kantianism. So, following this path, like other bourgeois theoreticians and historians, he comes to scholasticism and in his classifications of the forms of economic life for which (and this is a characteristic symptom) he cherishes an exceptional inclination, he does not start from real facts or from the forms of economic life which have been historically created, but from "conceivable possibilities".

Conceivably there exist as many economic systems as there are conceivable possibilities for the construction of economic life. . . . I will give a list of all the conceivable possibilities for the construction of economy and hope that this table will cover the whole of these possibilities. . . . The forms of economy which have existed historically are represented by the combination of all the various possible forms of construction shown in our table. But the economic structures of the future insofar as they approximately correspond to the dreams of the socialists, communists or anarchists, have no other possibilities of existence than those which are obtained from inner necessity by the application of the definite foundations contained in the table. A law is here at work which is inherent in all spiritual relationships.

So social laws are replaced by conceivable possibilities and the laws of spiritual relations. The primacy of thought is established in historical development. The types of historical societies represent merely the expression of the conceivable types of societies. Is not this the purest scholasticism? This scholasticism, as in other bourgeois writings, is naturally directed in the first place against the historical necessity of the collapse of capitalism established by Marx and is directly connected with the renunciation of a consistent materialist point of view. By introducing the conception of "the capitalist spirit" into this system Sombart persistently and consistently carries out a dualistic point of view. As factors determining the economic

BOURGEOIS HISTORICAL SCIENCE

system, Sombart establishes (1) spirit (economic outlook), (2) forms (regulation and organisation), (3) technical methods,¹⁴² whilst it is no accident that "spirit" takes first place. It is precisely to "spirit", "the capitalist spirit", that Sombart in both the first and second editions of *Modern Capitalism* as well as in other works attributes an exceptional part in the development of the capitalist system. Capitalism has grown up from the depths of the European spirit! This very spirit which gave birth to a new state and a new religion, a new science, a new technique, has also created a new economic life. All the negative aspects of the rise of capitalism are absolutely lost in this "spirit". The pioneers of capitalism are represented as "various strong men" whose spirit "separates them from the mass of their comrades who live quietly and enjoy their peace", as men with a Faustian soul, etc.¹⁴³ And Sombart insists that it is precisely the capitalist spirit which has given birth to capitalism and not the reverse. He denies the fact of the birth of the capitalist spirit from capitalism.

Many men [we read in his monograph specially devoted to the problem of the origin and development of the capitalist spirit] consider it self-evident that the capitalist spirit is created by capitalism itself since in this spirit they do not imagine they see anything substantial but only a function of economic organisation. I would object to this view which accepts as "self-evident", as "given", what is undoubtedly not so, because it proclaims a dogma where it should be a question of producing proofs.¹⁴⁴

The dualist character of Sombart's conception leads him to a teleological view of historical development and even to pure idealism. "To write history", he says, "means to show in what ways the national spirit approaches its end, what favours and what hinders its aspirations. In other words, it means to show to what extent and by the aid of what means the idea proper to a nation or group of nations is fulfilled."¹⁴⁵ In this way Sombart reaches the denial of the law of economic development although he recognises a certain "psychological law"¹⁴⁶ and even brings him to the Rickertian opposition of the natural and social sciences.¹⁴⁷ He objects categorically to the representation of the rise and development of capitalism by

A. I. TIUMENIEV

a "vegetable process". Sombart also has in common with other bourgeois historians and sociologists the idea of the chosen few and of the higher classes which move historical development forward.¹⁴⁸ In his eyes these chosen natures were, as we have seen, the first representatives of the capitalist spirit. But this is not all. The whole capitalist class as directors of production are further represented as being such chosen ones.

The structure of capitalist economy is aristocratic. . . . The greater part of the power to dispose belongs to a few subjects who carry on economy. . . . The historical cause of the aristocratic division in capitalist society is the capacity of a few based on personal and material circumstances and the incapacity of the many on the same basis to direct the process of production, which by force of the technical and organisational demands which it makes on them excludes from activity those of average gifts and average property as subjects capable of carrying on economy (though this was possible in the age of domestic industry).¹⁴⁹

If Sombart is unable to produce at all consistently his theory of the "psychogenesis" of capitalism, if his "capitalist spirit" which soars proudly so long as it is a matter confined to abstract theoretical arguments, generally collapses rapidly as soon as it comes into contact with the real facts of economic activity, this only once again shows the complete lack of content and the sterility of all psychological theories. Sombart himself practically recognised this feebleness of his theory of the capitalist spirit when in his concluding remarks to his lecture on the fate of capitalism (at the general meeting of the Society for Social Policy in 1928) he declared :

I recognise unequivocally that arguments about economic consciousness, about subjective spirit, are the weakest points in my exposition and could not be anything else, for the simple reason that there is no possibility here of producing any empirical proofs. Insofar as it was possible to advance objective symptoms I have tried to do so, but, I repeat, I recognise unequivocally that the most varying opinions can be upheld in this question.

This recognition by the author of the powerlessness of the theory of the capitalist spirit is the best proof that everything which is of value in Sombart's works is taken from Marx and that everything on the other hand which departs from him—

BOURGEOIS HISTORICAL SCIENCE

the corrections and retreats towards psychologism and idealism—are not only useless but are an anti-scientific ballast which has reflected in the most fatal way on the general results of research. Sombart not only distorts and twists the picture of capitalism and its development which he took from Marx, but even in his views on the pre-capitalist epochs he is not really so very far from those historians whom he despises, as one might think on the basis of his harsh judgment of the latter. So, just like the modernisers, he makes no difference in principle between formations, admitting economic relationships corresponding to the age of early capitalism in Asiatic and ancient peoples and making his generalisations on one-sided and superficial resemblances. This, for example, can be seen from the following characteristic argument which does not stand out very much above the general level of the modernising works of other bourgeois historians :

The economic culture of Europe (at the end of the seventeenth century, A.T.) reached that point which all civilised nations had reached but never passed. Whether in China or India, in Egypt or Babylon, in Greece or Rome—everywhere in the end we find the same position as that of economic life in the early capitalist epoch. In both the one and the other there took place both a wide exploitation of alien peoples, and a considerable trade connected with it, a clearly flourishing credit and financial system was apparent and at the same time to a considerable extent also the germs of an organically formed large-scale industry.¹⁵⁰

At the same time Sombart in his general ideas of the character of economic evolution almost completely joins with Dopsch. If Dopsch definitely attacks the main thesis of Marxism on development as the consequence of the driving out of one economic form by another and insists on “the co-existence” of various social economic systems,¹⁵¹ then Sombart also in exactly the same way represents economic evolution in the form of a gradual stratification and peaceful unification of new forms and means of production to already existing forms, thanks to which “economic life becomes ever richer”. Nor, indeed, do Sombart’s arguments on the future of the capitalist system differ at all from the modernisers’ cyclical theory or from typical

A. I. TIUMENIEV

Dopschianism, for they represent that future as a gradual regression while preserving capitalism, and do not admit any sharp demarcation separating the present from the future.¹⁵²

We may conclude our characterisation of Sombart's theoretical evolution in his own words, expressed in one of his early works : " In our century of worship of facts and unlimited eclecticism in the field of the economic and social sciences, Marxism serves us also as a powerful lighthouse warning and directing us. To the extent that the path of the research worker wanders away from Marxism there arises a lack of system and eclecticism." ¹⁵³ It would be difficult to emphasise more definitely all the barrenness and helplessness of bourgeois science. In these words of the most authoritative bourgeois economic historian there is not only a forecast of his own future evolution, but also a verdict on the whole of bourgeois science. Only Marxism, only the ideology of the advanced revolutionary class is really scientific. The lack of foundation and the anti-scientific character of Sombart's own theoretical and methodological inventions, as well as those of his other bourgeois colleagues, is conditioned by the fact that they are not dictated by scientific interests but by their class psychology and the growing reactionary temper. For all his recognition of the scientific services and significance of Marx, Sombart, like the other bourgeois theoreticians, is absolutely hostile to the revolutionary content and essence of Marx's teaching, to Marxism as the revolutionary ideology of the proletariat. Moreover, Sombart is continually evolving to the right. Behind his theoretical evolution is concealed the evolution of his social views which are in the end the real cause of the former. From a legal Marxist who feels sympathetically towards the labour movement (of course in its non-revolutionary form), and who even recognises the class struggle (but without the dictatorship of the proletariat), Sombart becomes the bard of the " capitalist spirit ", but, not content with this, he reaches the recognition of the significance of the Prussian militarists, bureaucracy and monarchy as " the factors most favouring the growth of industry in Germany ",¹⁵⁴ the recognition of the " vitalising influence " of the Catholic religion on the capitalist spirit, and also on the development of capitalism.¹⁵⁵

BOURGEOIS HISTORICAL SCIENCE

In his pamphlet *War and Capitalism* he emphasises the influence of war on the development of capitalism and at the same time remarks on the onesidedness of the Marxist method.¹⁵⁶ In 1923 in the "Society for Social Policy" he gave a lecture devoted to refuting the class struggle.¹⁵⁷ Sombart particularly fiercely attacked the recognition of the necessity and inevitability of revolution. We have already quoted above his opinion on the negative significance of the French Revolution. In 1924 he printed a special article on the question of revolution¹⁵⁸ which was specially directed against the "revolutionary legend" of Marx. Giving here a wider classification (but purely according to formal characteristics) of the different types of revolution, he reaches the conclusion that all revolutions are accidental and senseless. In particular it was the bourgeois revolutions, the two English ones, and above all the French Revolution, which were aimless in themselves, and played no part in the development of capitalism. This article was a prelude to a vicious caricature of Marxism which Sombart published in the following year (1925) under the title of *Proletarian Socialism* and which already brought him very close to fascism. Here we see in Sombart the appearance without any concealment of the scared bourgeois. He sighs for the Middle Ages and is offended because fate has been too persistently pressed by knowledge.¹⁵⁹ Sombart finishes his career of learning with an appeal for Christian love and by participating in the fascist International Congress called at the end of 1932 by the Academy of Science in Rome. A Prussian Junker, a civil servant, a priest, and open fascist—this, as we see, is the inevitable final stage of the evolution of all the representatives of modern bourgeois science however radical they may appear, and however much they may have flirted with pseudo-radicalism at the beginning of their career.

An absolutely similar evolution from a greater or lesser nearness to Marx to neo-Kantianism, psychologism and scholasticism, has been made by another famous German historian and sociologist who had felt the influence of Marx, Max Weber.

The influence of Marxism and Marxist method is felt most clearly in Max Weber's first works (the monograph on commercial

A. I. TIUMENIEV

societies in the Middle Ages, the *Agrarian History of Rome*, the *Causes of the Collapse of the Ancient World*).¹⁶⁰ From the end of the 'nineties begins Max Weber's departure from Marxism. In 1904 in his well-known methodological article he comes out as a definite anti-Marxist standing absolutely on the ground of Kantian-Rickertian scholasticism. The article is definitely hostile to Marxism. "The so-called materialist conception of history in the old and primitively brilliant meaning of the Communist Manifesto", Weber declares, "to-day only prevails in the minds of those who are not consecrated to science and among dilettantes. Its pretensions to knowledge of a general historical causality must be decisively rejected." Like the other modern bourgeois theoreticians Weber sees no law in actual social reality. Nothing in objective individual activity corresponds to the laws established by us.¹⁶¹ Weber does not renounce interpretation, or even the economic interpretation of history. On the contrary it is precisely the economic interpretation of history which is the task of himself and his journal.¹⁶² But in his eyes such an interpretation is no more than a purely logical auxiliary means which gives us direction in the infinite individual activity, independently of the aim which we give ourselves in each separate case. Weber gives just such a directive significance to his "ideally typical" conception which he opposes to the clear Marxist conception of social formations. In distinction from the conception of social formations which has a scientifically objective meaning, and expresses an actual reality, Weber's ideally typical conceptions are nothing but logical categories deprived of real significance. Such a renunciation in principle of a knowledge adequate to reality at once transfers us on to that ground of scholasticism so general and so desired among modern bourgeois historians. Weber's ideal type is in essence a conception outside time and space. If Weber himself does not say this directly, his Russian follower, D. M. Petrushevsky, reaches just this conclusion, starting from the conception of an ideal type which he openly calls a "Utopia". "If", he says, "an historical category for all its utopian character still continues to remain, even though in very wide but still pretty definite limits of historical reality, then the sociological category passes quite

BOURGEOIS HISTORICAL SCIENCE

outside the limits of space and time and sails high above individual reality." ¹⁶³ Max Weber's ideal types, even though not identical, are at any rate akin to Sombart's "conceivable possibilities", and it is therefore no accident that Weber like Sombart shows in his latest works the same inclination to all kinds of classifications and typologies, and above all in his very important work on economy and society. ¹⁶⁴

Certainly Weber's classifications are not so abstractly formed as Sombart's and are illustrated by constant references to concrete material. However, insofar as Weber's classifications do not proceed from the recognition of the difference of social types as a whole, nor from social formations, but take as a foundation partial forms of social connections, partial phenomena of social life torn out of the general context, ¹⁶⁵ insofar as they are made up from purely externally formal characteristics and absolutely without any relation to conditions of place and time and on the basis of data taken from the most various epochs and the most various nations, to that extent in principle they are in no way different from Sombart's conceivable possibilities.

Weber's retreat from Marx and the evolution of his methodological views has not been slow to express itself in his research works. In his first works Weber's interests turned in the sphere of economic history, whilst in *Roman Agrarian History* he gives a picture not only of the development of the forms of landed property, but also of the development of Roman agriculture, and particularly of the change of the slave method of production by the colonising. ¹⁶⁶ In his article on the causes of the destruction of the ancient world, ancient society is characterised as slave-owning society and the question of the causes of its destruction is decided in this plane. Weber's later works, for all their wealth and abundance of concrete materials, for all the accuracy and value of separate deductions and generalisations, are in general based on absolutely incorrect methodological premises alien to Marxism and in consequence in them he reaches conclusions which are no longer near to Marxism but in their general character and tendencies are often identical with those of other bourgeois historians and sometimes even with the modernising school of history. In

A. I. TIUMENIEV

his religious-sociological works which have undoubtedly a great value both from the abundance of material which they contain and from their different partial generalisations, Weber nevertheless strays like Sombart into a Carlisian point of view which is dualist and even partially idealist, and which is typical for modern bourgeois historians and sociologists, when he introduces the conception of charisma and even abuses it. In his latest works, in his *Agrarian History of the Ancient World*, in his *Economy and Society*, and lastly in his *History of Economy* in which the application of the idealist-typical, that is, in fact, of the formal typological, method, reaches its fullest development, Weber already finally loses the ground from under his feet and slips into the most ordinary pluralism. In the characterisation of ancient society and the town, slave economy, for example, here falls already absolutely into the background. The ancient city is no longer so much a slave-owning society as in the first place a community of military citizenship, whilst its development is not determined by economic causes but by the evolution of its military structure. In just the same way the differences in the fate of the northern and southern cities of mediæval Europe are explained by the fact that the southern cities possessed their own military force whilst the northern cities had no such force and were therefore helpless as regards the local and central feudal powers. Standing on the pluralist point of view and at the same time removing from his method not only what was the correct criterion but in general any kind of criterion, Weber on the fundamental question of capitalism finally reaches the ideas which have become traditional in modern bourgeois science, discovering capitalism, though in two forms—rational and irrational—in all ages.

Capitalism [we read in the *History of Economy*] ¹⁸⁷ is present where the productive economic satisfaction of the needs of any group of persons, independently of the kind of these needs, is fulfilled by means of an enterprise; specially rational capitalist production is production on the basis of capitalist calculation, i.e. such industrial production as carries on an accounting control over its income by means of the new bookkeeping and the drawing up of a balance (the necessity for which was first shown in 1608 by the Dutch theoretician, Simon Stevin).

A whole epoch [we read further] may however be called typically

BOURGEOIS HISTORICAL SCIENCE

capitalist only when the satisfaction of needs in a capitalist way is carried out in such volume that on the destruction of that system the possibility of satisfying them would be completely gone.¹⁶⁸

This definition of production, in which the indefinite conceptions of an enterprise and a ledger have taken the place of production, is such a broad one that any kind of a Dopsch might accept it with both hands. But there is no need for this. Weber himself draws the widest conclusions from his definition of capitalism. "Capitalism in this or that form", he declares, "has existed throughout all periods of human history."¹⁶⁹ The rational form of capitalism belongs to all epochs. To it belong the capitalist enterprises for the purpose of leasing (in the West, in China, in the Near East), and for the purpose of financing wars (in China and in India) and commercial speculative capitalism ("one could hardly mention any kind of historical epoch in which it did not exist"), and usurers' capitalism. Only modern capitalism which is based on the condition of the market is rational capitalism, whilst it is the more rational the more it is based on mass production and marketing.¹⁷⁰ The rise of "rational capitalism" in modern times is not explained by the course of preceding economic development or by a change in economic forms and social economic formations, but in the first place by purely political conditions. Capitalism in ancient times was "political capitalism" and "depended on the partial exploitation of political power. The destruction of the independence of the city by the bureaucratically organised state also brought with it the end of political capitalism."¹⁷¹ The description of the rise of modern capitalism is so characteristic that it is worth quoting literally.

The modern cities were as little free as the ancient ones in the time of Roman rule. The difference only consists in the fact that now they came under the power of national states competing among themselves and waging a continuous struggle both peaceful and military for mastery. This competition created conditions in the highest degree favourable for the development of modern capitalism. Each state strove to invite freely circulating capital and the latter dictated the conditions on which it was willing to serve.¹⁷²

This simplified and comical theory of the rise of modern capitalism may serve as a particularly vivid illustration of the lowering of

A. I. TIUMENIEV

the theoretical level of the works of bourgeois historians of even such great importance as Max Weber owing to their renunciation of the method they have borrowed from Marxism.

Every science and every theory is true and real only insofar as it justifies itself in practice, insofar as it influences the latter, and it can only influence actual reality to the extent that it knows that reality and is able to make forecasts of the future. All Marx's scientific activity was subject to just this tactical aim, the forecasting of the future, based on the study of capitalist reality. His theoretical activity was closely connected with practice and for this very reason gave the most fruitful results. He discovered the law of the development of capitalist society and made a forecast of the future which to-day, fifty years after his death, is brilliantly justified with almost literal exactitude. How is it in this respect with bourgeois science? The question of the future of the capitalist system is beginning more and more to disturb the capitalists and in the fulfilment of their task the bourgeois men of science have undertaken the making of forecasts. At the close of 1928 two lectures on the theme of the destiny of capitalism were discussed—Sombart's at the general meeting of the Society for Social Politics at Zurich, and Schmalenbach's in Vienna (at a congress of Representatives of the Science of the Management of Enterprises). The first lecture is of special interest, for in it Sombart tries to give a forecast of the future "destiny of capitalism". With assumed modesty he however expresses the hope that the forecast he gives will compete with that of Marx. "If in seventy or eighty years", so he ended his winding-up, "the same amount of the forecasts which I have made to-day is fulfilled as has already been fulfilled and recognised correct of the forecasts made by Marx seventy or eighty years ago I shall be really glad."¹⁷³ Sombart is generally pessimistically minded. He makes the curious admission that "he would not like to be alive in 50 or 100 years." He clearly sees that the period of capitalist prosperity, so-called "Hochkapitalismus", had already passed and that the curve of capitalism no longer goes up but down. The famous "capitalist spirit", "the noble passion for profit" and "the audacity of the old and true kind of entrepre-

BOURGEOIS HISTORICAL SCIENCE

neur " are diminishing and declining. But nevertheless in spite of this, capitalism, even though in a changed " connected " (by cartels of capitalists !) form, will continue to exist in the future also. In regard to the future Sombart puts forward his well-known theory of the consistent stratification and unification of the new productive forms with the old. He opposes " social pluralism " to Marx's " social monism ". Capitalism will exist together with pre-capitalist craft industry and small peasant economy and with " post-capitalist " co-operatives, state and municipal enterprises, mixed public enterprises and such systems.¹⁷⁴ In the capitalist system itself Sombart notices : (1) The replacing of the old " market mechanism " by the regulation of prices through cartels, and, in connection with this, (2) " the removal of the former statistics ", i.e. the rhythm of rise and fall belonging to developed capitalism, in other words the end of crises !¹⁷⁵ The condition of the workers will change for the better. The workers will become officials with a guaranteed existence. " In case of unemployment the worker will be put into the reserve and receive his pay like an official. In case of accident or old age he will get a pension just like a civil servant." Of the pre-capitalist "systems" craft industry, "in the broad sense of the word will preserve its old position . . . happy times are coming for the peasantry."¹⁷⁶ In a article which appeared at the same time on the prospect of economic development in Europe, Sombart foretells that " thanks to the immense resurrection of agriculture in Europe, the peasantry will assume the most important economic significance while it is absolutely clear that he (the peasant) will never be subject either to the capitalist or socialist system. The character of agricultural production and the psychology of the agricultural worker make this impossible."

If Sombart, for all his pessimism, foretells the preservation of capitalism, and an improvement of the general well-being, then his opponents are even more radiantly inclined. " The capitalist sphere is undoubtedly . . . in a condition of complete capitalist prosperity . . . there can be no question of any fading " (A. Weber).¹⁷⁷ Technical progress in the conditions of capitalism in which physicists and chemists, engineers and electro-technicians,

A. I. TIUMENIEV

biologists and doctors from all the countries in the world take part, opens out the widest prospects (see Eckert).¹⁷⁸ The collapse of socialist "Utopias", the immovability of capitalism, the ending of crises, exceptional technical progress in which the representatives of all sciences will participate, the guaranteeing of the position of the working class, the growing importance of small peasant economy, in a word, prosperity—this is the forecast which the representatives of bourgeois science oppose to Marxist "dogma". Sombart made his forecasts for at least seventy or eighty years ahead. However, not eighty years nor even eighty months have passed. It did not need much more than eighty days before all these card-houses built by the representatives of bourgeois science (moreover, its best representatives who had themselves turned with contempt from the childish scribblings of Dopsch, Pirenne, Sée and tutti quanti) blew up in smoke at the first touch of reality. Literally every one of the forecasts of the bourgeois men of science has been fulfilled, but in precisely the opposite direction.

X

CONCLUSIONS

Let us sum up. During the French Revolution, when the bourgeoisie was a revolutionary class and when the revolution of the bourgeoisie opened up particularly wide prospects, the bourgeois theoreticians were very near to the true conception of the course of social development and the law of history. It was the bourgeois theoreticians and historians of that time who first proclaimed the class struggle to be the motive force of history and guessed the dialectical law of development. The completion of the revolution and the entry of the working class into the class struggle changed the bourgeoisie from a revolutionary into a reactionary class.

It strives to hold up and even to turn back the course of social development. Its theoreticians, in accordance with the changing temper of the bourgeoisie, and the bourgeois historians in the first place, hastened to renounce the recognition of the fact of

BOURGEOIS HISTORICAL SCIENCE

class struggle in history and declare it "a dangerous prejudice". They even reached the denial of a law of historical development in place of which they want to put the will and initiative of great men, "heroes", "leaders", the representatives of "the thinking minority", the upper "chosen" (i.e. the ruling) classes (élite). When these amusing pretensions to bind history to their will hung fire, when the historical reality of our time brought forward real "leaders and heroes", not from the upper classes, not from the "thinking minority", but from the unthinking mass, the "thinking" minority appeared capable only of arsons, murders and pogroms, and the bourgeois theoreticians again changed front and began to deny not only a law of historical development, but also historical development itself. They decree (in fascist Italy literally so) the abolition of history. They try to prove that the historical process moves continually in one and the same forms. They wish to resurrect mediæval scholasticism, they go back to the mediæval idea of an unchanging world or, at least, social order. There is no need to show that all these attempts to prove the unprovable, to prove the absence of history in history, are as foolish and senseless, as vain and fruitless, as all efforts to hold back the real course of historical development and bend it to their "creative" will. Bourgeois historians have declared the class struggle non-existent, but the real class struggle not only continues to develop but assumes extremely acute forms. Bourgeois historians have abolished the law of history, but the law discovered by Marx, the law of the development of capitalist society, continues to work and inevitably leads to the collapse of the capitalist system and the establishment of classless communist society. Bourgeois historians deny history and historical development but the mole of history is digging as never before, and historical development is moving with such seven-league strides as it never did in any preceding age in history.

NOTES

N. I. BUKHARIN

(Pages 1 to 90.)

¹ See: Th. Nixon Carver, *Capitalism Survives. Current History*, April 1932; W. Sombart's summary, *Der Proletarische Sozialismus*, 2. Bände; modern fascist literature, etc.

² See: W. Sombart, *Der Proletarische Sozialismus*, 1. Band, Jena, G. Fischer, 1924, pp. 317-83, 423; Dr. Fritz Gerlich, *Der Kommunismus als Lehre vom Tausendjährigen Reich*, Verl. Hugo Bruckmann, München, 1920, in which there is a whole chapter "Orthodox Marxism and Chiliasm" (p. 17 et seq.); J. Plenge, *Revolutionierung der Revolutionäre*. See also: Jevons, *An Introduction to the History of Religion*, 1902; Max Weber, *Gesammelte Aufsätze zur Religionssoziologie*, 3. Bände, Tübingen, 1920; Steinbüchel, "Chiliasmus" in the *Staatslexikon*; "Eschatologie" and "Chiliasmus" in *Die Religion in Geschichte und Gegenwart*, 2. Band, Tübingen, Verl. Mohr, 1910; Chiapelli, *Le idee millenarie dei Cristiani* (1888); Ernst Tröeltsch, *Gesammelte Schriften*, IV. Band, Aufsätze zur Geistesgeschichte und Religionssoziologie, hrsq. von Dr. Hans Baron, Tübingen, Verl. Mohr, 1925, particularly: "Glaube und Ethos der hebräischen Propheten" and "Epochen und Typen der Sozialphilosophie des Christentums"; N. Berdjajew, *Christentum und Sozialismus*, Das Neue Reich, Wien-Innsbruck, Jahrg. 7, No. 14 (3d. Jan. 1925). Mr. Ramsay MacDonald expresses the same idea of Marx: "To-day, Marx is known over as wide a world as even Christ or Mohammed. He holds a position equal to any one of the few teachers who have founded religious movements" J. Ramsay MacDonald, *Socialism, Critical and Constructive*. See also, T. G. Masaryk, *Die philosophischen und soziologischen Grundlagen des Marxismus*. Studien Zur Sozialen Frage, Wien, 1899, p. 143.

³ Hans Dellbrück tries unsuccessfully to use the fact of an Egyptian slave rebellion against Marxism. See: *Die Marxsche Geschichtsauffassung*. Preussische Jahrbücher, Bd. 182, Heft 2, pp. 157 ff.

⁴ See E. Tröeltsch, *Gesammelte Schriften*, IV. Band, p. 122.

⁵ Through Marx's enormous influence a whole literature has grown up round the question of the definition of capital and capitalism. The economists and sociologists (Böhm-Bawerk, Sombart, Max Weber, and many others), the historians (E. Meyer, von Below, Dopsch), the philosophers (e.g. Simmel), each give their definition.

NOTES

⁶ W. Sombart, *Das Lebenswerk von Karl Marx*, Jena, G. Fischer, 1909, p. 8.

⁷ *Ibid.*, p. 1.

⁸ Arthur Prinz aus Guatemala, *Das Marxsche System in psychologischer Betrachtung*, Inaugural-Dissertation, Berlin, 1923, p. 193.

⁹ Adolf Held, *Grundriss für Vorlesungen über Nationalökonomie*, 2 Aufl., 1878.

¹⁰ Tröltzsch, loc. cit., p. 11.

¹¹ See Roberto Michels, *Storia del Marxismo in Italia*. Compendio critico, Roma, Luigi Mongini, 1909, especially the chapter, "Lotte e influenza del marxismo nella scienza ufficiale" (p. 91 et seq.).

¹² See the bibliographical works of E. Drahn and also the *Bibliographie Die Literatur über Marx, Engels und über Marxismus seit Beginn des Weltkrieges (mit Ausnahme der russischen)*, Zusammengestellt von E. Czobel und P. Haidu, M.-E. Archiv, 1. Band.

¹³ Sombart, *Das Lebenswerk von Marx*, p. 8. Also Tönnies, K. Marx, *Leben und Lehre*, Verl. Erich Lichtenstein, Jena, 1921, and Sven Helander; *Marx und Hegel*, Jena, G. Fischer, pp. 39, 54 and 82.

¹⁴ See, for example, N. Berdjagew, *The Philosophy of Inequality*, Berlin, 'for many pearls of this description.

¹⁵ W. Wundt, *Einleitung in die Philosophie*, 7. Aufl., Verl. Alfred Kröner in Leipzig, 1918, p. 346. The very term "dialectical materialism" is absent in Wundt, though it can be found in Windelband (W. Windelband, *Einleitung in die Philosophie*, 2. Aufl., Tübingen, 1920, pp. 122-4), who uses it in regard to Feuerbach's teaching.

¹⁶ Marx's first intellectual love was philosophy. His doctor's dissertation was a work, still idealist, on Democritus and Epicurus. Particularly important are the *Holy Family*, a critique of critical critique. Against Bruno Bauer & Co., the *German Ideology* and *Introduction to a Critique of Political Economy*.

¹⁷ In this connection it is worth citing Marx's characterisation of materialism after Bacon. "In its further development materialism becomes one-sided. Hobbes is a systematiser of Baconian materialism. 'Sensuality loses its sharp colours and becomes the abstract sensuality of the geometrician. Physical movement is made a victim to mechanical or mathematical movement, geometry is proclaimed the chief science' (Marx and Engels, *The Holy Family*).

¹⁸ Marx and Engels on Feuerbach, from the *German Ideology*, p. 217.

¹⁹ *Ibid.*

²⁰ *Ibid.*, p. 218.

²¹ See Marx, *Introduction to the Critique of Political Economy*, p. 12.

²² Marx, Preparatory works for *The Holy Family*; Marx and Engels, *Collected Works*, Vol. III, p. 624.

²³ *Ibid.*, p. 625.

²⁴ Marx and Engels on Feuerbach (*German Ideology*). Marx-Engels Archiv., Vol. I, p. 217.

²⁵ *Ibid.*, p. 221.

²⁶ Karl Marx. On the book of A. Wagner, Archiv., Vol. V, 1930, pp. 387-8.

NOTES

²⁷ This point we have dealt with in more detail in our report at the International Congress on the History of Science in London. See *Science at the Cross Roads*.

²⁸ G. W. Fr. Hegels, *Werke*, Berlin, 1833, Bd. III, "Wissenschaft der Logik.", p. 127.

²⁹ Karl Marx, *Theses on Feuerbach*, Second Thesis.

³⁰ We shall speak of the latest "pragmatism" further on.

³¹ Marx, *Capital*, Vol. I, p. 873-4.

³² For "reflection" see Lenin, *Materialism and Empirio-Criticism*.

³³ F. Engels, *Dialectic of Nature*, p. 5.

³⁴ *Ibid.*, p. 7.

³⁵ Lenin gives the most complete and all-round materialist exposition and formulation of these laws. See, *Lenin Miscellany*, IX, p. 274 et seq.

³⁶ *Ibid.*

³⁷ E. Tröeltsch, *Der Historismus und Seine Probleme*, *Gesammelte Schriften*, Bd. III, Tübingen, Verl. Mohr, 1922, pp. 315, 317 and 318.

³⁸ See Lenin, *Materialism and Empirio-Criticism*, p. 327, for a splendid development of this point.

³⁹ H. Rickert, *System der Philosophie*, 1921, Münsterberg, Philosophie der Werte, 1908; E. Tröeltsch, *Der Historismus*, p. 201 et seq.

⁴⁰ W. James, *Pragmatism*, New York, 1908; *The Varieties of Religious Experience*, London, 1909.

⁴¹ *Pragmatism*, pp. 72 and 80.

⁴² R. Carnap, *Die alte und die neue Logik*, Bd. 1, Heft 1, p. 15.

⁴³ See A. Deborin, *Lenin and the Crisis of Modern Physics*, Leningrad, Academy of Science, 1930.

⁴⁴ See Engels, *Dialectic of Nature*, pp. 371-3.

⁴⁵ See A. Kronenberg, *Historischer und naturwissenschaftlicher Materialismus*, "Die Naturwissenschaften", VI. Jahrg., Heft 26 (28 June, 1918).

⁴⁶ Marx and Engels, *German Ideology*. Extract on Feuerbach.

⁴⁷ Engels, *Dialectic of Nature*, p. 147.

⁴⁸ See N. N. Alexeyev, "The Social and Natural Sciences in the Historical Mutual Relationship of their Methods. Essays in the History and Methodology of the Social Sciences". Part I: *Mechanical Theories of Society*. *Historical Materialism*, Moscow, 1912.

⁴⁹ Engels, *Dialectic of Nature*, p. 85.

⁵⁰ See our article "Marxism and Darwinism" in the miscellany "Studies", Moscow-Leningrad, 1932.

⁵¹ F. Engels, *Ludwig Feuerbach*.

⁵² Karl Marx, "Towards the critique of the Hegelian Philosophy of Law", p. 15, *Selected Essays*, London and New York, 1926.

⁵³ Marx and Engels, *The Holy Family*, Works, Vol. I, p. 118.

⁵⁴ *Ibid.*, p. 107.

⁵⁵ Even some bourgeois scientists understand this. See E. R. A. Seligman, *The Economic Interpretation of History*, 2nd ed. revised, New York, 1924: "To the extent, then, that the theory of economic

NOTES

interpretation is simply (!) a part of the general doctrine of social environment, the contention that it necessarily leads to an unreasoning fatalism is baseless. Men are the product of history, but history is made by men" (pp. 100-1).

⁵⁶ Marx, *Introduction to a Critique of Political Economy*, p. 293.

⁵⁷ Max Weber, *Miscellany, Gesammelte Aufsätze zur Wissenschaftslehre*, Tübingen, 1921. Article, "Die Objektivität Sozialwissenschaftlicher und sozialpolitischer Erkenntnis", pp. 178-9.

⁵⁸ *Ibid.*, p. 214.

⁵⁹ G. Tröltzsch, *Der Historismus*, pp. 367-8. Tröltzsch here notes the great influence of Marx.

⁶⁰ Karl Marx and F. Engels on Feuerbach, *Archiv.*, I, p. 225.

⁶¹ *Ibid.*, p. 214.

⁶² *Ibid.*, pp. 215-16.

⁶³ *Ibid.*

⁶⁴ *Ibid.*, p. 227.

⁶⁵ K. Marx, *Critique of Political Economy*.

⁶⁶ Antonio Labriola, *Essais sur la conception matérialiste de l'histoire*.

⁶⁷ R. Stammler, *Wirtschaft und Recht*; R. Stolzmann, *Der Zweck in der Volkswirtschaftslehre*.

⁶⁸ See below, Lenin's classical work, *State and Revolution*.

⁶⁹ K. Marx, *Capital*, Vol. I.

⁷⁰ Engels makes such a limitation in *Anti-Dühring*.

⁷¹ K. Marx, *Introduction to a Critique of Political Economy*.

⁷² Marx, *Capital*, Vol. III, p. 948.

⁷³ See the recently published preparatory work for Chap. VI of Vol. I of *Capital* in which Marx makes fun of the unhistorical definitions of Capital. M.-E. *Archiv.*, Vol. VII, Moscow, 1933.

⁷⁴ For a detailed analysis of the methodology of bourgeois economic theories and particularly the marginal utility school, see N. Bukharin, *The Political Economy of the Rentier*, London and New York, 1928.

⁷⁵ See Marx, *Capital*, Vol. I; Engels, L. Feuerbach.

⁷⁶ K. Marx, *Letters to Kugelmann*, London and New York, 1934.

⁷⁷ Marx, *Capital*, Vol. I.

⁷⁸ Antonio Graziadei, *Preis und Mehrpreis in der kapitalistischen Wirtschaft*, Berlin Prager, 1923.

⁷⁹ Marx gives a detailed analysis of surplus value in *Theorien über den Mehrwert*, hg. von K. Kautsky.

⁸⁰ Cf. Albion W. Small, "The Sociology of Profits", *The American Journal of Sociology*, January, 1925 (Vol. XXX, No. 4), pp. 439 and 441.

⁸¹ K. Marx, *Capital*, Vol. III, p. 952.

⁸² K. Marx, loc. cit., Chap. 48, "The Trinitarian Formula".

⁸³ This is the so-called "contradiction" between Vols. I and III of *Capital* which so many critics of Marx have "discovered"—Masaryk, Böhm-Bawerk, Tugan-Baranowski, Bortkevich, etc.

⁸⁴ K. Marx, *Capital*, Vol. I, p. 712.

⁸⁵ *Ibid.*

⁸⁶ *Ibid.*

⁸⁷ See *Selected Letters of Marx and Engels*, London and New York, 1934, p. 57.

NOTES

⁸⁸ B. A. Kistyakovsky, *The Social Sciences and Law*. Essays in the Methodology of the Social Sciences and the General Theory of Law. Moscow, 1916.

⁸⁹ F. Engels, *Origin of the Family, Private Property and the State*. See also, *Anti-Dühring*; Marx, *Critique of Political Economy*; *Poverty of Philosophy*; *Critique of the Gotha Programme*; *Civil War in France*; *Eighteenth Brumaire of Louis Bonaparte*. Marx and Engels, *Preface to Communist Manifesto* of 24/vi/1872; Engels, *Dell 'Autorita*; Engels, *Letters to Bebel*, *Critique of the Erfurt Programme*, etc. A work of the same genius is Lenin's *State and Revolution*.

⁹⁰ Lenin, *State and Revolution*.

⁹¹ For real commonplaces on the state see Harold Laski, *A Grammar of Politics*, London, 1925. "From such an outlook we may derive a sense of the purpose embodied in the state. In this aspect it becomes an organisation for enabling the mass of men to realise social good on the largest possible scale." Or, "From such a standpoint, the problem of political obligation can, of course, be easily resolved. We obey the state because in the end it most truly represents ourselves."

⁹² Marx, *Works*, Vol. III, p. 11.

⁹³ Marx, *Poverty of Philosophy*.

⁹⁴ See Marx and Engels, *Archiv.*, I, p. 251-2.

⁹⁵ G. Jellinek, *Allgemeine Staatslehre*, 3 Aufl, Berlin, 1914, pp. 195-6.

⁹⁶ See Marx's speech during the trial of the "Neue Rheinische Zeitung", *Works*, Vol. III, p. 254.

⁹⁷ See H. Kelsen, *Sozialismus und Staat*, 2 Aufl., Leipzig, 1923, p. 11, footnote.

⁹⁸ Kelsen, loc. cit., pp. 13-14.

⁹⁹ *Ibid.*, p. 14.

¹⁰⁰ *Ibid.*

¹⁰¹ O. Spann, *Gesellschaftslehre*, p. 147.

¹⁰² Kelsen, loc. cit., p. 61, footnote.

¹⁰³ *Ibid.*, p. 59, footnote.

¹⁰⁴ Marx, *Eighteenth Brumaire of Louis Bonaparte*; Marx, *Letter to Kugelmann* of 12th April, 1871; Marx and Engels, *Preface to Communist Manifesto* of 24th June, 1872, etc.

¹⁰⁵ Marx, *Eighteenth Brumaire*.

¹⁰⁶ Marx and Engels, *Communist Manifesto*.

¹⁰⁷ *Ibid.*

¹⁰⁸ Marx, *Critique of the Gotha Programme*, London and New York, 1933.

¹⁰⁹ H. Kelsen, loc. cit., pp. 41, 43 (footnote), 44.

¹¹⁰ K. Marx, *Eighteenth Brumaire*.

¹¹¹ K. Marx, *Les prétendues scissions de l'Internationale*, 1872, p. 72: "tous les socialistes entendent par l'anarchie ceci: le but du mouvement prolétaire, l'abolition des classes, une fois atteint, le pouvoir de l'Etat, qui sert à maintenir la grande majorité productrice sous le joug d'une minorité exploitante peu nombreuse, disparaît, et les fonctions gouvernementales se transforment en de simples fonctions administratives."

¹¹² R. Michels, *Zur Soziologie der Parteiwesens*, Leipzig, 1910.

¹¹³ M. Ostrogorsky, *Democracy and Political Parties*.

NOTES

¹¹⁴ Hans Gmelin, *Diktatur des Proletariats*, Politisches Handwörterbuch, hg. von Paul Herre, Leipzig, Verl von Koehler, 1923.

¹¹⁵ "The dialectic of development is as follows: from absolutism to bourgeois democracy; from bourgeois democracy to proletarian, from proletarian to none at all." See Lenin on *Critique of the Gotha Programme*.

¹¹⁶ C. Schmitt, loc. cit.

¹¹⁷ K. Marx, *Capital*, Vol. III.

¹¹⁸ Correspondence of Marx and Engels.

¹¹⁹ Marx, *Critique of the Gotha Programme*.

¹²⁰ W. Sombart, *Grundlagen und Kritik des Sozialismus*. Berlin, 1919.

i. Teil, pp. vii, viii.

¹²¹ H. Kelsen, loc. cit., pp. 4, 5.

A. M. DEBORIN

(Pages 91 to 135.)

¹ Archiv. Marx and Engels, Vol. I, p. 170.

² Marx, *Capital*, Vol. III.

³ Of such works we will mention the following: F. Fried, *Das Endedes Kapitalismus*, Jena, 1931; Paul Jostock, *Der Ausgang des Kapitalismus*; Hermans, *Demokratie und Kapitalismus*, München, 1931; W. Sombart, *Die Zukunft des Kapitalismus*, Berlin, 1932 (in defence of planned capitalist economy); Nicolai von Mend, *Weg zum Neo-Kapitalismus*, Helsingfors, 1931.

⁴ An enormous literature on "planning" now exists in all languages and countries. In English it is enough to mention the works of Mr. G. D. H. Cole and Mrs. Barbara Wootton.

⁵ F. Fried, *Das Ende des Kapitalismus*, p. 110.

⁶ F. Fried, *Ibid.*, pp. 116-117.

⁷ Walter-Eucken, *Staatliche Strukturwandlungen und die Krise des Kapitalismus*, Weltwirtschaftliches Archiv., Bd. 36, H. 2, pp. 300-1.

⁸ Moeller van den Bruck, *Das dritte Reich*, 1926.

⁹ O. Strasser, *Aufbau des deutschen Sozialismus*, 1932.

¹⁰ E. Nikisch, *Entscheidung*, Berlin, 1930.

¹¹ T. Hielscher, *Das Reich*, Berlin, 1931.

¹² See Alfred Müller-Armack, *Entwicklungsgesetze des Kapitalismus*, Berlin, 1932.

¹³ *Wir Suchen Deutschland*. Ein freier Disput über die Zeitkrise zwischen Gerhard Schultze-Pfäelzer und Otto Strasser, Major Buchrucker, Herbert Blank, p. 165.

¹⁴ Othmar Spann, *Kategorienlehre*, 1924, p. 211.

¹⁵ "Man will nicht vorwärts, sondern zurück," writes Unru in the article "Zur Achtung des Fortschritts" (*Die Neue Rundschau*, 1933, Heft II, p. 171).

¹⁶ See *Die Neue Rundschau*, 1933, Heft II.

¹⁷ *Wir suchen Deutschland*, p. 160.

¹⁸ George Sorel, whom the fascists, particularly the Italians, consider their forefather, emerged from the Bergsonian school of philosophy.

NOTES

- ¹⁹ Adolf Hitler, *Mein Kampf*, p. 420.
- ²⁰ *Ibid.*, p. 70.
- ²¹ *Wir suchen Deutschland*, pp. 126-7.
- ²² Richard Hammer, *Regierung, Parlament, politische Partei und ihre Wechselbeziehungen*, 1929, pp. 214-15.
- ²³ Beckerath, *Wesen und Werden des fascistischen Staates*, 1927, p. 75.
- ²⁴ Cf. Beckerath, *ibid.*, p. 25 ; Giovanni Gentile, *Che cosa il fascismo*, Firenze, 1924, p. 55 *et seq.* ; Alexander Staliysky, *Die Grundlagen der fascistischen Staatslehre*, 1930, § 4 ; Winreich, Eckart. *Die Nation als Lebensgemeinschaft*, 1931 ; Enrico Corradini, *La vita nazionale*, Siena, 1923, etc.
- ²⁵ Lenin, *Collected works*, Vol. XVIII.
- ²⁶ The German fascists in this respect derive from Adam Müller, Rodbertus, Hegel and the German romantics, and of modern writers, of course, to Spengler, Spann, etc.
- ²⁷ Of his works we refer the reader to *L'homme qui vient*, 1923 ; *Le Fascisme*, 1927. In his journal *Le Nouveau Siècle* he popularises the idea of the "producers' state," chiefly using Saint Simon's ideas.
- ²⁸ Hans Reupke, *Unternehmer und Arbeiter in der fascistischen Wirtschaftsidee*, 1931, p. 14.
- ²⁹ Willy Spühler, *Der Saint-Simonismus, Lehre und Leben von Saint-Amand, Bazard*, 1926, p. 173.
- ³⁰ *Owenism in England*.
- ³¹ The fascists term the employer "alto funzionario dell' economia" (higher economic functionary). We actually find this expression in Bazard.
- ³² Engels, *Anti-Dühring*.
- ³³ Winreich, Eckart, *Die Nation als Lebensgemeinschaft*, 1931.
- ³⁴ A. Liebert, *Geist und Welt der Dialektik*, 1929, Bd. I, p. 387.
- ³⁵ Ernst Bartel, *Die Welt als Spannung und Rhythmus*, p. 113.
- ³⁶ W. Andreae, *Staatssozialismus und Ständestaat*, Jena, 1931.
- ³⁷ O. Spann, *Der Wahre Staat*, 1923, p. 175.
- ³⁸ F. A. Hermans, *Demokratie und Kapitalismus*, p. 106.
- ³⁹ Max Adler, *Das Soziologische in Kants Erkenntniskritik*, p. 414.
- ⁴⁰ K. Kautsky, *Die Materialistische Geschichtsauffassung*, Bd. II, p. 432.
- ⁴¹ K. Kautsky, *ibid.*, Bd. II, p. 559.
- ⁴² Albert Kranold, *Vom ethischen Gehalt der sozialistischen Idee*, 1930, p. 33.
- ⁴³ O. Spann, *Kategorienlehre*, p. 189.
- ⁴⁴ Erik Nölting and Ernst Nölting, *Einführung in die Theorie der Wirtschaft*, 1929, p. 223.
- ⁴⁵ Alfred Braunthal, *Die Wirtschaft der Gegenwart und ihre Gesetze*, p. 230.
- ⁴⁶ P. Lapinsky, *The Crisis of Capitalism and Social-Fascism*, 1930, pp. 258-9.
- ⁴⁷ Nölting, *Einführung in die Theorie der Wirtschaft*, p. 218.

NOTES

- ⁴⁸ Frazer, *Mensch, Gott und Unsterblichkeit*, Leipzig, 1932.
⁴⁹ Hans Freyer, *Die Revolution von rechts*, 1932.
⁵⁰ See his *Fragen und Rätsel*, Bremen, 1932.
⁵¹ Richard Kroner, *Kulturphilosophische Grundlegung der Politik*, Berlin, 1931.

Y. M. URANOVSKY

(Pages 136 to 174.)

- ¹ Lenin, *Works*, Vol. XVIII.
² Stalin, *Problems of Leninism*.
³ *Der Kampf*, Jahrg. 2, Heft 10, 1909, p. 452. See also *Die materialist ; Geschichtsauffassung dargest von K. Kautsky*, Bd. I, 1927, p. 28.
⁴ Marx and Engels, *Archiv.*, I, p. 218.
⁵ See *Der lebendige Marxismus*, herausg. von O. Jenssen, Jena, 1924 ; *Das Weltbild des Kapitalismus*, Von Otto Bauer.
⁶ *Die Neue Zeit*, No. 29, 15 July, 1910. *Historischer Materialismus*, von Franz Mehring, pp. 548-9.
⁷ *Kosmos*, p. 24.
⁸ Oscar Hertwig, *Das Werden der Organismen*, Jena, 1922.
⁹ Lenin, *Materialism and Empirio-Criticism*.
¹⁰ *Die Naturwissenschaften*, Heft 45, 1932 ; *Quantenmechanik und die Grundprobleme der Biologie und Psychologie*, von P. Jordan, Rostok, p. 815.
¹¹ R. N. Coudenhove-Kalergi, *Los vom Materialismus !* Paneuropa-Verlag, Wien-Leipzig-Berlin, p. 29.
¹² Lenin, loc. cit.
¹³ *Die Entwicklung der Biologie im 19 Jahrhundert*, von Oscar Hertwig, Jena, 1908, p. 9.
¹⁴ *Die Naturwissenschaften*, Heft 40, 1930. *Die Stellung der Biologie im naturwiss. Denken der Gegenwart*, von Otto Steche, p. 872.
¹⁵ *Das Lebensproblem im Lichte der modernen Forschung*, Leipzig, 1931. *Der Organismus und die Umwelt*, von Jakob v. Uexküll, p. 224.
¹⁶ *Das Kausalgesetz und seine Grenzen*, von Philipp Frank, Wiens Verl. v. Jul. Springer, 1932, p. 76.
¹⁷ *Das Lebensproblem*, etc., p. 214.
¹⁸ *Ibid.*, *Das Wesen des Organismus*, von Hans Driesch, p. 446.
¹⁹ *Die Naturwissenschaften*, Heft 45, 1932 ; *Die Quantenmechanik und die Grundprobleme der Biologie und Psych.*, von P. Jordan, Rostock, p. 818.
²⁰ *Das Lebensproblem*, etc. Hans Driesch, *Das Wesen des Organismus*, S. 413.
²¹ See *Scientia*, I, iv, 1930 ; Charles Richet, *Le problème des causes finales ; ibid.*, I, vii, 1931 ; D. Kotzowsky, *L'avenir de l'humanité civilisée à la lumière des sciences modernes de la nature*.
²² *Wege zur Physik ; Erkenntnis*, loc. cit., p. 269.
²³ *Scientia*, I, i, 1932 ; H. Driesch ; Eugenio Rignano's *Lehre*, etc, p. 78.

NOTES

²⁴ Friedrich Adler, *Friedrich Engels und die Naturwissenschaften*, p. 175.

²⁵ See *Works* of the November Session of the Academy of Science, U.S.S.R., 12-19 November, 1932.

A. I. TIUMENIEV

(Pages 235 to 319.)

¹ See *Revue historique*, 1931, I, pp. 101-29.

² Pierre Jacomet, *Les drames judiciaires du XIX^e*, 1925; Zévaès, *L'affaire Pierre Buonaparte*, 1929 (the notorious affair in the last year of the Second Empire of the murder of Victor Noire).

³ Dumilard, *Paul Didier et la conspiration de Grenoble*, 4 Mai 1816, 1928; Maurice Soulié, *Autour de l'Aigle enchaîné*, 1929; Grasilier, *L'Aventure des quatre sergents de La Rochelle* (1821), 1929; L. Dabreton, *Les Quatre sergents de La Rochelle*, 1929; A. Praviel, *Vie de S. A. R. mme. la duchesse de Berri*, 1929 (the Duchesse de Berri famous for her adventurous career); G. Aubray, *Le défilé des ombres*, 1928 (in which it is proved that the premature death of the Prince of Rome was a punishment for his father's crimes); Girard, *Les trois glorieuses*, 1928.

⁴ Lucas Dalveton, *La royauté bourgeoise*, 1930; Ferd. Bac, *La princesse Mathilde*, 1928.

⁵ Fr. Daunemann, *Die Naturwissenschaften in ihrer Entwicklung und in ihrem Zusammenhange*, II (Leipzig, 1911, p. 207).

⁶ Engels, *Ludwig Feuerbach*.

⁷ Engels, *ibid.*

⁸ Dupont de Nemours, *De l'origine et des progrès d'une science nouvelle* (Collection des principaux économistes Daire), II, pp. 337-8.

⁹ Montesquieu, *De l'esprit des lois*, L. XIX, Ch. 14.

¹⁰ Holbach, *Système de la nature*.

¹¹ Volney, "La loi naturelle", Ch. IV (*Œuvres complètes*, Paris, 1837, p. 88).

¹² Holbach, *Système de la nature*, T.I, Ch. 15, 16; Helvétius, *De l'homme*, Section I, Ch. 9-13, Section VI, *Système Social* (1773); *La morale universelle* (1776); *La Politique naturelle* (1773).

¹³ The backwardness of the physiocrats was expressed in the predominant place they gave to agriculture, in the recognition of agricultural labour as the sole form of productive labour, in the conception of value as being primarily use value.

¹⁴ Marx, *Theories of Surplus Value*.

¹⁵ Turgot, "Sur la formation et la distribution des richesses", *Œuvres*, Paris, 1844, T. I, p. 14.

¹⁶ *Ibid.*, pp. 10-11.

¹⁷ *Ibid.*, pp. 10, 39, 41.

¹⁸ *Ibid.*, pp. 17-21.

¹⁹ We are not concerned with the socialist ideas of the period.

²⁰ Though Barnave was a consistent Marxist in his historical views, he was not so consistent in his general philosophical views.

NOTES

- ²¹ A. Barnave, "Études sur l'homme", *Œuvres*, Paris, 1843, T. III, p. 39 *et seq.*
- ²² *Œuvres*, T. IV, pp. 250-62.
- ²³ "Introduction à l'histoire de France", *Œuvres*, I, p. 3.
- ²⁴ *Ibid.*, pp. 4-15.
- ²⁵ *Ibid.*, p. 18.
- ²⁶ *Ibid.*, p. 12.
- ²⁷ *Œuvres*, I, pp. 37-8.
- ²⁸ Essay on the Science of Man.
- ²⁹ A. Lueder, *Über Nationalindustrie und Staatswirtschaft*, I-III, Berlin, 1800-4; see also on this author: W. Sulzbach, *Die Anfänge d. materialistischen Geschichtsauffassung*, Karlsruhe, 1911, pp. 46-8.
- ³⁰ Engels, *Ludwig Feuerbach*.
- ³¹ Lavergne-Peguilien, *Die Bewegungs-und Produktionsgesetze*, 1838.
- ³² Barnave, *Œuvres*, I, p. 109.
- ³³ *La société des jacobins. Recueil des documents pour l'histoire du club des jacobins de Paris*, par F. A. Aulard, T. I, pp. 189-90.
- ³⁴ Barnave, *Œuvres*, II, p. 25.
- ³⁵ *Ibid.*, I, pp. 149-50.
- ³⁶ Guizot speaks of the importance of landed property under feudalism, but he deduces actual agrarian relationships from caste-political relationships. "A man's condition", he writes, "determined the character of his property." *Essai sur l'histoire de France*, 14 ed., Paris, 1876, p. 75.
- ³⁷ Thierry, *History of the Origin and Successes of the Third Estate*, Russian trans., Moscow, 1899, p. 54.
- ³⁸ *Ibid.*, pp. 34-5.
- ³⁹ Guizot, *Histoire de la civilisation en France*, T. I.
- ⁴⁰ *Histoire de la civilisation en Europe*, First Lecture.
- ⁴¹ Cf. *Explanation of the Teaching of St. Simon*, Russ. trans., p. 87.
- ⁴² Aug. Comte, *Cours de philosophie positive*, T. V, Leçon 53-4.
- ⁴³ *General Survey of Positivism*, Russ. trans., p. 97.
- ⁴⁴ Rigolage, *Comte's Sociology Explained*, Russian trans., p. 148.
- ⁴⁵ Comte, *Course of Positivist Philosophy*, Vol. I, p. 39, Russ. trans.
- ⁴⁶ Henri Borr, *La Synthèse en histoire*, Paris, 1911, p. 71.
- ⁴⁷ *Ibid.*, *Individualité et ses modes*, pp. 69-109.
- ⁴⁸ Langlois et Seignobos, *Introduction à l'étude de l'histoire*.
- ⁴⁹ E. Bernheim, *Introduction to Historical Science*, Russ. trans., 1908, pp. 64 and 66, and also, in more detail, in the big text-book, *Lehrbuch der historischen Methode und der Geschichtsphilosophie*, Chap. 5, § 4.
- ⁵⁰ G., *German Ideology*: "The Germans never had a territorial foundation for history and therefore never had a historian." Russ. trans., p. 18.
- ⁵¹ L. Ranke, *Weltgeschichte*, I, 1, Leipzig, 1881; Vorrede, pp. viii-ix.
- ⁵² Introductory article to the first volume *Jahrbucher d. deutschen Reiches*, 1837.
- ⁵³ *Collected Works*, Vol. XXXIV, p. 147.
- ⁵⁴ "Geschichte d. romanischen und germanischen Völker 1494-1515", *Sämmtliche Werke*, 2, Ausgabe, Bd. XXXIII, Leipzig, 1874, p. vii.

NOTES

⁵⁵ *Über die Epochen d. neueren Geschichte, Einleitung ; Weltgeschichte, I, 1, Vorrede.*

⁵⁶ Not so externally reactionary or naïve, but essentially the same point of view is found in the most important modern German historian, Ed. Meyer, who also denies historical law and advances the rôle of chance and free will. Meyer writes under the influence of Bismarck and therefore recognises the predominant part played by great men in world history. See Ed. Meyer, *Zur Theorie und Methodik d. Geschichte*, 1902.

⁵⁷ Kant had already noticed the "feebleness and cowardice" of the German burghers, thanks to which they remained adolescent all their lives.

⁵⁸ Schmoller explains his attitude to the Prussian monarchy in a special article "Die soziale Frage und der preussische Staat".

⁵⁹ G. Schmoller, *National Economy, the Science of National Economy and its Method*, Russ. trans., 1902, p. 11.

⁶⁰ *Ibid.*, p. 31

⁶¹ *Ibid.*, p. 23.

⁶² Schönberg, *Handbuch d. politischen Oekonomie*, and articles in Vol. VI, *Handwörterbuch d. Staatswissenschaften*.

⁶³ G. Rickert, *Philosophy of History*, Russ. trans., Vol. II, 1908, p. 112.

⁶⁴ *Ibid.*, pp. 110, 140.

⁶⁵ *Ibid.*, p. 114 et seq. See also his *Natural Sciences and Cultural Sciences*, Russ. trans., 1911, Vol. II, pp. 129-30.

⁶⁶ J. G. Fichte, *Grundzüge des gegenwärtigen Zeitalters*, 1805.

⁶⁷ I. H. Fichte, *Die Seelenfortdauer und die Weltstellung des Menschen*, 1867.

⁶⁸ *Zur eigenen Lebensgeschichte*, hg. V. A. Dove, p. 569.

⁶⁹ F. Meinecke, "Die deutsche Geschichtswissenschaft und die modernen Bedürfnisse", in his collection of articles *Preussen und Deutschland*, Berlin, 1917, pp. 467, 470.

⁷⁰ Rickert, *Natural Sciences and Cultural Sciences*, pp. 27-8.

⁷¹ Meinecke, op. cit., pp. 462, 468.

⁷² See B. Bykhovsky, *Law and its Place in the History of Philosophy ; Under the Banner of Marxism*, No. 6, p. 73 et seq. Liebig began the campaign against Bacon in the middle of last century.

⁷³ Lenin, *Works*, Russ. ed., Vol. XVI, p. 332.

⁷⁴ O. Spengler, *Pessimism*, Russ. trans., 1922, p. 25.

⁷⁵ See Spengler's *Decline of the West*.

⁷⁶ Ed. Meyer, *Die wirtschaftliche Entwicklung des Altertums* (1895), Kleine Schriften, I, 2 Aufl., Halle, 1924.

⁷⁷ R. Wipper, *The Crisis in Historical Science*, Kazan, 1921 ; *The Circuit of History*, Riga, 1924 ; *Communism and Culture*, Riga, 1925.

⁷⁸ Simmel, *The Conflict of Modern Culture*, Russ. trans., 1923, pp. 36-7.

⁷⁹ W. Windelband, "Die Erneuerung des Hegelianismus", *Sitzungsberichte d. Heidelberger Akademie d. Wissenschaften*, Phil.-Hist. Kl., Jahrgang, 1910, Abhandlung 10, p. 7.

⁸⁰ "Behind its mystical and indefinitely theologising formulas", cynically writes one of Gentile's followers, "this philosophy embodies

NOTES

the unceasing spirit of change, the drunken will to conquest, the moral imperialism which are so typical of our age that no longer contemplates eternal ideas and in which the naked passion for an irrational life has overturned all the other altars."

⁸¹ The following quotation is an excellent example of this decadent temper: "In the last thousand years the European soul has never been in such danger as to-day. It is torn by inner conflicts, infected by the poison of its own process of decay, threatened from without by American mechanisation, as was foreseen by Baudelaire, as well as by the freshly growing forces of Asia. The doom of Europe is spelled. But this is not mere imagination. The decision will pass through our will through the medium of the construction and direction of our life. Our fate will be as we choose it."—Ernst Curtius, *Französischer Geist im neuen Europa*, Berlin-Leipzig, 1925, p. 306.

⁸² Franke, *Der Deutsche Faschismus*.

⁸³ The famous German sociologist calls Fascism "Absolut Carlylich". K. Michels, *Sozialismus und Faschismus in Italien*, München, 1925, p. 319.

⁸⁴ O. Spengler, *Pessimism*, Russ. trans., 1922.

⁸⁵ *Ibid.*, p. 32.

⁸⁶ Spengler, *Prussianism and Socialism*, Russ. trans., 1922, p. 6.

⁸⁷ Wechsler, *Die Franzosen und wir*, Jena, 1915, p. 41. See also M. Leblond, *La Société française de la troisième république*, 1914; Bainville, *Histoire des trois générations*, 1918; E. R. Curtius, *Die literarischen Wegbereiter des neuen Frankreich*, 1920, and his *Französischer Geist im neuen Europa*, 1921.

⁸⁸ Rougemont, *Les deux cités, Philosophie de l'histoire*, 1874; F. Laurent, *La philosophie de l'histoire*, Livre I: "Dieu dans l'histoire"; II: "Le progrès dans l'histoire", 1876; Steffenson, *Zur Philosophie d. Geschichte*, 1894; Rocholl, *Philosophie d. Geschichte*, 1893, and *Weltgeschichtliches Gotteswerk*, 1905.

⁸⁹ Eiken's article, "Philosophy of History", in the collection *Philosophy in Systematic Exposition*, Russ. trans., 1909, p. 261.

⁹⁰ See O. Braun, *Geschichtsphilosophie*.

⁹¹ E. Bernheim, *Lehrbuch der historischen Methode*, 5-6 Aufl., Leipzig, 1908, pp. 14, 356 *et seq.*

⁹² E. Tröltzsch, "Der Historismus und seine Probleme" (*Sämtliche Werke*, III), Tübingen, 1922, p. 549 *et seq.*

⁹³ Windelband, *Preludes, Speech, History and Science*, Russ. trans., 1904, p. 329.

⁹⁴ G. Mehlis, *Lehrbuch d. Philosophie der Geschichte*, Berlin, 1915, p. 44.

⁹⁵ *Ibid.*, p. 330.

⁹⁶ *Ibid.*, p. 332.

⁹⁷ *Ibid.*, p. 565.

⁹⁸ E. Tröltzsch, *Historismus* . . ., p. 174.

⁹⁹ G. Below, *Über historische Periodisierungen* (Einzelschrift für Politik und Geschichte hg. von Dr. Hans Roeseler), Berlin, 1925, p. 16.

¹⁰⁰ *Ibid.*, p. 19.

¹⁰¹ *Ibid.*, p. 60.

¹⁰² F. Meinecke, *Die Idee des Staats raison in der neueren Geschichte*, 2 Aufl., 1925.

¹⁰³ F. Meinecke, *Preussen und Deutschland*, 1918, p. 114.

NOTES

¹⁰⁴ Gentile, *Teoria generale dello spirito come atto puro*, Bari, 1924, p. 107. "We do not exist in time and space; rather the reverse, everything which unfolds itself in co-existence and is consecutive, is in us."

¹⁰⁵ B. Croce, *On the Theory and History of Historiography*, 1913.

¹⁰⁶ Gentile, *Teoria generale* . . . , p. 179.

¹⁰⁷ Gino Luzzatto, "Mediæval Economic History in Italy", *Journal of Economic and Business History*, 1932 (IV), No. 4, pp. 708, 713.

¹⁰⁸ Croce, *Storia del regno di Napoli*, Bari, 1925; Croce's latest views are outlined in an article in *Critica*, 1929.

¹⁰⁹ For the condition of historical science in Italy, besides Croce's article referred to above, see Barbagallo in *Journal of Modern History*, Vol. I, 1929, No. 2, and Morandi, "Survey of Italian historiography", in *Revue Historique*, 1932, I, pp. 159-82.

¹¹⁰ *Bourgeois Men of Science on the Decline of Capitalism*, Moscow, 1929, p. 53.

¹¹¹ H. Berr, "Au bout de trente ans", *Revue de synthèse historique*, Vol. L (1930), Décembre, pp. 5-27.

¹¹² Fred. Morrow Fling, *La loi et l'histoire: Revue de synthèse historique*, 1929, Juin, pp. 5-11.

¹¹³ *Revue de synthèse historique*, 1929, Juin, pp. 13-16.

¹¹⁴ Qui est ce que le fait historique? *Revue de synthèse historique*, T. XLII (nouv. série, T. I), 1926, pp. 53-9.

¹¹⁵ *Ibid.*, p. 55.

¹¹⁶ *Ibid.*, T. LII (1932), pp. 131-4.

¹¹⁷ *Ibid.*, pp. 140-1.

¹¹⁸ The Carlylian viewpoint is becoming more widespread among bourgeois historians. See Hauser, *La Modernité au XVI siècle*, Paris, 1930. "The spirit of an age is not that of the masses but of a chosen few (quelques êtres d'élite)."

¹¹⁹ *Revue de synthèse historique*, T. L (1930); *Bulletin de Centre*, No. 10, pp. 24-8.

¹²⁰ Ed. Meyer, *Geschichte d. Altertums*, I, 1-2; Breasted, *History of Egypt* and his article on Egypt in the *Cambridge Ancient History*; Wipper, *The Ancient East and Ægean Culture*, Moscow, 1913; L. Brentano, *Das Wirtschaftsleben d. antiken Welt*, Jena, 1929.

¹²¹ Ed. Meyer, *Kleine Schriften*, I, Halle, 1924 ("Wirtschaftliche Entwicklung d. Altertums" and other articles); *Geschichte des Altertums*, II-V; Beloch, *Griechische Geschichte*; *Die Grossindustrie in Altertum Zeitschrift f. Soc. Wiss.*, 1899, I; *Die Handelsbewegung im Altertum in the Jahrbuch f. Nat. Oekon. u. Statistik*, 1899; R. Pöhlmann, *Geschichte d. antiken Kommunismus u. Sozialismus*, 1893-1901; Ciccotti, *Il tramonto della schiavitù*, 1897, Confronti Storici, 1924; Rostovtsev, "Capitalism and National Economy in the ancient world", *Russkaya Mysl*, 1909, 3.

¹²² In addition to the well-known works of Dopsch, *Wirtschaftliche u. Soziale Grundlagen d. europäischen Kulturentwicklung*, 1918-1920, and *Die Wirtschaftsentwicklung d. karolingerzeit*, I-II, 1912-13, see also his collection of articles "Verfassungs- und Wirtschaftsgeschichte des Mittelalters", in which a number of articles are devoted to this question.

NOTES

- ¹²³ See his book *Les débuts du capitalisme*, 1930.
- ¹²⁴ *La Modernité au XVI Siècle*, 1930.
- ¹²⁵ Gerlich, *Geschichte und Theorie des Kapitalismus*, 1913.
- ¹²⁶ *Verfassungs- und Wirtschaftsgeschichte des Mittelalters*, Wien, 1928.
- ¹²⁷ *Naturalwirtschaft und Geldwirtschaft in der Geschichte*, Wein, 1930.
- ¹²⁸ *Revue historique*, 1930, 6, pp. 363-364.
- ¹²⁹ Andrée Sayous, "Der moderne Kapitalismus de W. Sombart et Gènes au XII et XIII siècles", *Revue d'histoire économique*, 1930, No. 4.
- ¹³⁰ Lipson, "The Perspective of Industrial Capitalism" in the volume dedicated to G. Prato, pp. 91-101.
- ¹³¹ H. Sée, "Remarques sur le rôle du capitalisme financier à l'époque du 'Hochkapitalismus'" in *Weltwirtschaftliches Archiv* (Kiel), 1931, reprinted in *Revue d'histoire économique et sociale* (Paris), 1932, I, pp. 96-108.
- ¹³² Paul Bondonis, "Un trust commercial au XVIII siècle" in *Nouvelle Revue de Champagne et de Brie*, 1931.
- ¹³³ Petrushevsky, *Essays in the Economic History of Mediaeval Europe*, p. 66.
- ¹³⁴ *Ibid.*, p. 78.
- ¹³⁵ H. Sée, "La division de l'histoire en périodes", *Revue de synthèse historique*, T. XLII (1926), p. 65.
- ¹³⁶ *Der Moderne Kapitalismus*, 2. Aufl., II, b. 13-14.
- ¹³⁷ Compare also Seignobos' extremely naïve survey of the political evolution of France in the nineteenth century (*Political History of Modern Europe*).
- ¹³⁸ *Der Moderne Kapitalismus*, 2. Aufl.
- ¹³⁹ Brauns, *Archiv für soziale Gesetzgebung*, VII (1894), Heft 4.
- ¹⁴⁰ In the supplement to the third volume of *Capital*; *Fr. Engels letzte Arbeit. Neue Zeit.*, Bd. X, XIV, I, 1895, p. 9.
- ¹⁴¹ In the article he wrote on the occasion of Engels' death. Sombart is still close to Marxism.
- ¹⁴² "Die Ordnung des Wirtschaftslebens" (*Encyclopädie der Rechts- und Staatswissenschaft.*, Berlin, 1925).
- ¹⁴³ *Der Moderne Kapitalismus*.
- ¹⁴⁴ *The Bourgeois*, Russ. trans., p. 149.
- ¹⁴⁵ *Der Moderne Kapitalismus*.
- ¹⁴⁶ *The Structure of Economic Life*, Russ. trans., p. 78.
- ¹⁴⁷ "Karl Marx und die soziale Wissenschaft", *Archiv f. Sozialwissenschaft und Sozialpolitik*, XXVI (1908).
- ¹⁴⁸ *Der Moderne Kapitalismus*.
- ¹⁴⁹ *The Structure of Economic Life*, pp. 74-5.
- ¹⁵⁰ *Der Moderne Kapitalismus*, 2. Aufl., II, pp. 1154-5.
- ¹⁵¹ A. Dopsch, "Zur Methodologie die Wirtschaftsgeschichte", in the collection of his articles, *Verfassungs- und Wirtschaftsgeschichte des Mittelalters*.
- ¹⁵² *Der Moderne Kapitalismus*.
- ¹⁵³ *Frederick Engels*, Russ. trans., p. 29.
- ¹⁵⁴ *National Economy in Germany*, Russ. trans., 1924, p. 260.

NOTES

- ¹⁵⁵ *The Bourgeois*, Russ. trans., pp. 189 et seq.
- ¹⁵⁶ *Krieg und Kapitalismus*, 1913.
- ¹⁵⁷ "Die Idee des Klassenkampfes", *Schmollers Jahrbuch f. Gesetzgebung, Verwaltung und Volkswirtschaft*, 1924.
- ¹⁵⁸ *Die Formen des gewaltsamen sozialen Kampfes. Kölner Vierteljahrhefte*, 1924, pp. 1-2.
- ¹⁵⁹ *Der proletarische Sozialismus (Marxismus)*, 1925, I, p. 488; II, p. 223.
- ¹⁶⁰ *Zur Geschichte d. Handelsgesellschaften im M.-A.*, 1889; *Die römische Agrargeschichte*, 1891; *Die sozialen Gründe d. Untergangs d. Antiken Welt, Wahrheit*, 1896.
- ¹⁶¹ "Die Objektivität der sozialwissenschaftlichen Erkenntnis", *Archiv für Sozialwissenschaft und Sozialpolitik*, 1904.
- ¹⁶² *Ibid.* ¹⁶³ Petrushevsky, op. cit., p. 55.
- ¹⁶⁴ *Wirtschaft und Gesellschaft*, 1922; cf. also *History of Economy*, II, 1924.
- ¹⁶⁵ In *Wirtschaft und Gesellschaft* Weber distinguishes types of social behaviour, types of rule, types of intercourse and society, racial types, types of religious communion, types of legal thought, types of towns.
- ¹⁶⁶ We should note that even here (though still rather in the shape of an inexact expression) we find the term "agrarian capitalism" applied to agrarian relations in the first centuries of Republican Rome.
- ¹⁶⁷ M. Weber, *History of Economy*, Russ. trans., p. 176.
- ¹⁶⁸ *Ibid.*, pp. 176-7. ¹⁶⁹ *Ibid.*, p. 177. ¹⁷⁰ *Ibid.*, p. 210.
- ¹⁷¹ *Agrarian History of the Ancient World*, Russ. trans., 1923, p. 388; cf. also *History of Economy*, p. 210.
- ¹⁷² *History of Economy*, p. 211.
- ¹⁷³ *Bourgeois Scientists on the Decline of Capitalism*, p. 90. Shortly before, in *Modern Capitalism*, Sombart had written that not one of Marx's prophecies had been fulfilled. This dual attitude is both usual and typical in him.
- ¹⁷⁴ *Ibid.*, p. 24. ¹⁷⁵ *Ibid.*, p. 23. ¹⁷⁶ *Ibid.*, p. 22.
- ¹⁷⁷ *Ibid.*, p. 67. ¹⁷⁸ *Ibid.*, p. 41.

INDEX

- Adler, F., 173
 Adler, M., 119, 123, 124, 138, 173
 Ampère, 186
 Andræ, 120, 121
 Antony, 267
 Archimedes, 181, 182
 Aristophanes, 5
 Aristotle, 21, 181
 Aston, 157
 Augustus, 142
 Avenarius, 146

 Bacon, 140, 144, 171, 239, 240, 242,
 257, 272
 Bakewell, 149
 Baldwin, 260
 Bär, K. E. von, 156, 165, 207
 Barnave, A., 239, 245-50, 252, 253,
 267
 Bartel, 119
 Barth, P., 281
 Bassengo, 137
 Bauer, B., 34, 146
 Bauer, O., 146
 Bauer, W., 262
 Bazard, 116, 117, 256
 Bebel, 96, 97
 Becher, 262, 270
 Beckerath, 113, 116
 Beijerinck, 197
 Belloni, 289
 Beloch, 299
 Below, von, 9, 238, 283, 284, 285
 Berg, L. S., 209
 Bergson, 110, 161, 265, 278, 279
 Berkeley, 12, 169
 Bernard, C., 167
 Bernheim, E., 261, 281

 Bernirulli, 178
 Berr, H., 260, 292, 293, 294
 Bertalanffy, L. von, 162, 168
 Bertolin, E., 178
 Bismarck, 80, 224
 Bleuler, E., 162
 Böhm-Bawerk, 8
 Bohr, N., 156, 165
 Bonus, A., 124
 Borel, E., 170
 Borkheim, 96
 Braunthal, A., 130
 Breasted, 299
 Breisig, 262
 Brentano, L., 299
 Bruno, G., 286
 Buch, L. von, 198
 Bücher, 9
 Büchner, 12, 191, 197, 215
 Buckle, 260

 Cæsar, 267, 278
 Campanella, 87
 Carlyle, 156
 Carnap, 27
 Cauville, A., 237
 Cavendish, 178
 Chamberlain, H. S., 112
 Charlemagne, 299
 Ciccotti, 299
 Cleopatra, 44
 Colding, 137
 Compton, 185
 Comte, 33, 152, 257, 258, 259, 260,
 263
 Condorcet, 243
 Coudenrove-Kalergi, 159
 Coulomb, 186

INDEX

- Cournot, 265
 Corradini, 114, 116
 Croce, B., 9, 276, 285, 287, 288
 Cuvier, 195, 196

 D'Alembert, 178, 248
 Darwin, C., 107, 140, 144, 149, 161,
 173, 179, 192-230, 249, 278
 Darwin, E., 249
 Davy, 137, 145
 Delbrück, H., 285
 De Man, 119, 123
 Deprez, 140, 149
 Descartes, 140, 168, 241
 De Vries, 229
 Diltey, 262
 Dopsch, 9, 300, 301, 303, 305, 309,
 315
 Dragomirescu, 289
 Draper, 260
 Driesch, 26, 134, 163, 164, 165,
 169
 Dühring, E., 216-23
 Dumas, A., 238
 Dupont de Nemours, 241
 Durkheim, 260

 Eckert, 318
 Eckstein, 146, 173
 Einstein, 107, 112, 156
 Eisler, 297
 Ekhof, 289
 Engels, 11, 20, 23, 44, 47, 65, 66,
 67, 78, 85, 91, 92, 94, 96, 97,
 98, 101, 102, 108, 117, 138,
 139, 149, 150-6, 173, 190-6,
 198-234, 240, 249, 301, 305
 Ermaninger, 289
 Euler, 178, 183

 Falais, 182
 Faraday, 137, 179, 186
 Farinelli, 289
 Fechner, 156
 Feders, 281
 Fermat, 178
 Ferrabino, 288
 Ferri, E., 9

 Feuerbach, 12, 13, 141, 142, 143,
 148
 Fichte, 87, 156, 250, 271
 Fling, F. M., 294
 Foulter, 260
 Fourier, 87, 117
 Fraase, 140, 196
 Franck, P., 9, 159, 163
 Francotte, 290
 Frazer, 133
 Fresnel, 188
 Freud, 143
 Freyer, H., 133
 Fried, F., 102

 Galileo, 168, 180, 181, 182
 Geiger, 185
 Genosen, O., 146
 Gentile, G., 9, 114, 276, 285, 286,
 287, 288
 Gerard, 148
 Gerlich, 299
 Gilbert, 182
 Giraud, 290
 Glotz, 290, 293
 Gmelin, H., 81
 Gobineau, J., 112
 Goethe, 17, 156, 249, 272, 278
 Graf, G. E., 143
 Grimaldi, 178
 Grove, 140
 Guericke, O. von, 185
 Guizot, 252, 253, 254, 303
 Günther, 173

 Haeckel, 107, 196, 208, 212, 219,
 220, 222, 224, 227
 Hammer, 113
 Handel-Mazzetti, 206
 Hanotaux, G., 237, 238
 Hauser, 299, 301
 Haustein, H., 173
 Hegel, 9, 12, 17, 18, 19, 21, 22, 23,
 28, 29, 114, 119, 125, 139, 140,
 141, 151, 152, 193, 209, 233,
 234, 239, 250, 255, 256, 265,
 280
 Heine, 112

INDEX

- Heisenberg, W., 158
 Held, A., 8
 Helmholtz, 137, 140, 144
 Helvétius, 242
 Herder, 243
 Hering, E., 173
 Heritier, 9
 Hermans, F., 121
 Herschel, 206
 Hertwig, O., 156, 161, 205
 Hilferding, 130
 Hillscher, 104
 Hitler, 112, 127, 134
 Hobbes, 193, 199, 208, 239
 Holbach, 241, 242
 Holtfreter, 167
 Hooke, 178
 Humboldt, 137, 152
 Hume, 12, 159, 169, 241
 Humplovich, 9, 260
 Huxley, 140, 149
 Huygens, 178, 183

 Jäger, 196
 James, W., 25, 279
 Jaspers, 133
 Jeans, Sir J., 133
 Jellinck, 70
 Jennings, 163
 Jordan, 158, 165
 Joule, 137

 Kant, 17, 140, 159, 165, 205, 206,
 239, 249, 250, 280, 282
 Kareyev, 262
 Kautsky, K., 97, 125, 126, 127, 138,
 143, 173
 Kekuler, 148
 Keller, 265
 Kelliker, 140
 Kelsen, 70, 71, 72, 74, 75, 78, 79, 87
 Kelvin, 182
 Kepler, 140, 168
 Kirchhof, 186
 Kirkwood, 139
 Klages, L., 110, 111
 Kotzowsky, D., 169
 Kovalevsky, M., 9

 Kranold, 119, 124, 128
 Kroner, R., 133
 Kropotkin, P., 80

 Lacombe, 260
 Lagard, 110
 Lamarck, 165, 198, 207, 209, 221,
 249
 Lamprecht, 9, 260, 262
 Langlois, 261, 263, 290, 292
 Lapinsky, 131
 Laplace, 140, 206
 Lassalle, F., 80, 124, 125
 Laurent, 148, 280
 Lavergne-Peguilhen, 249, 265
 Lavissee, 293
 Lavrov, P., 215
 Lazarus, 260
 Lebon, 260
 Lenard, 188
 Lenin, 65, 67, 89, 94, 98, 99, 108,
 115, 121, 132, 134, 135, 136,
 142, 148, 152, 153, 155, 156,
 157, 168, 170, 172, 233, 234,
 274, 302
 Lenôtre, 260
 Lenz, 173
 Leroi, 279
 Lessing, 19, 243
 Lévi-Bruhl, 294
 Liebert, A., 119
 Liebig, 137, 145, 147, 198, 215
 Lindner, 262
 Lipson, 301
 Lomonosov, 178, 179
 Loria, 9
 Ludovici, 119
 Lueder, 249
 Luquet, 279
 Luther, 284
 Lyell, 137, 206

 Mach, 146, 156, 165, 186
 Malthus, 85, 193, 194, 197, 208,
 216
 Mangold, O., 167
 Mark, S., 119
 Markus, 119

INDEX

- Marr, N. Y., 202
 Marwitz, 265
 Marx, K., 3, 4, 6-24, 26-30, 32-7,
 39, 40, 42, 44-8, 50, 52-68, 71,
 73, 76, 78-83, 85-90, 91-9,
 101-4, 106, 112, 118, 121,
 123-6, 128, 132, 134-6, 138-
 151, 153-6, 160, 168, 169, 170,
 172-5, 188, 190-6, 223, 225,
 226-9, 232-5, 238, 239, 243-
 245, 250, 251, 266, 273, 274,
 278, 288, 301, 302, 305, 306,
 308, 319
 Mathiez, 9
 Mayer, J. R., 137, 151
 Maximilian II, 267
 Maxwell, 187, 188, 189
 Mehlis, 270, 271, 282
 Mehring, F., 148
 Meiersehn, 278
 Meinecke, 272, 283, 284, 285
 Meister, 262
 Mendel, 229
 Mendeleev, 7, 156
 Mendelssohn, M., 19
 Menzies, 229
 Messer, 134
 Metternich, 297
 Meyer, E., 9, 275, 299
 Michels, R., 9, 81
 Mignet, 252
 Mikhailovsky, 260
 Millikan, 185
 Moleschott, 12, 191, 192, 215
 Molmenti, 289
 Montesquieu, 241
 Moseley, 156
 Muller, J., 137, 164, 165
 Mussolini, 113, 116, 127
 Napoleon, 44, 297
 Naville, 265
 Necker, 244, 245
 Newton, 140, 145, 157, 168, 179,
 180, 181, 182, 183, 186, 188,
 205
 Nietzsche, 110, 112, 159, 169
 Nikisch, 104
 Noll, A., 160
 Nölting, 129
 Noltsel, 289
 Nordhausen, M., 160
 Ocken, 151, 207
 Oersted, 151
 Olden, R., 134
 Oppenheim, F., 9
 Ostrogorsky, 81
 Ostwald, 143
 Owen, R., 117, 197
 Palant, 260
 Pantaleoni, M., 8
 Pareto, V., 8
 Pascal, 281
 Pasteur, 137, 149, 179
 Pauly, A., 173
 Pavlov, I. P., 160, 163, 164
 Peter the Great, 176
 Petrushevsky, 301, 303, 312
 Petty, Sir W., 6, 243
 Pirenne, 301, 304, 305, 318
 Planck, M., 107, 156, 158, 169
 Plate, 211
 Plato, 82, 87, 240
 Plekhanov, 148
 Podolsky, 143
 Pohlmann, 299
 Prinz, A., 6
 Proudhon, 85
 Pythagoras, 30, 182
 Quesnay, 244
 Ragatz, 133
 Rambaud, 293
 Ranke, 264, 265-70, 272, 283, 290,
 291
 Ratzel, 260
 Raumer, 265
 Rebours, 140, 149
 Reichenbach, 159
 Renner, 129
 Reupke, 116
 Rhumbler, L., 166
 Ricardo, 6, 54, 217, 243, 269

INDEX

- Rickert, 24, 36, 43, 270, 271, 272,
 280, 281, 282
 Ricket, C., 169
 Rignano, E., 173
 Robin, 149
 Rocco, 116
 Rocholl, 280
 Rodbertus, K., 80, 87
 Röntgen, V. K., 156
 Rostovtsev, 291, 299
 Rotenfeldt, 270
 Rougemont, 280
 Rousseau, 246
 Rutherford, 156
 Rutzel, 143

 Saint-Hilaire, G. de, 249
 Saint Simon, 87, 116, 117, 118, 239,
 247, 248, 249, 253, 255, 256,
 257, 263
 Saline, 291
 Salvioi, 290
 Sayous, 301
 Scheler, M., 9, 45
 Schelling, 139, 165, 169
 Schleiden, 140, 213
 Schlick, 159
 Schmalenbach, 97, 316
 Schmoller, 264, 269, 270
 Schönbein, 140, 147, 151
 Schönberg, 270
 Schopenhauer, 169
 Schorlemmer, K., 150
 Schpranger, 262
 Schultze-Gawernitz, 291
 Schwann, 137, 213
 Schwarn, 140
 Sée, 238, 301, 302, 303, 318
 Segal, 260
 Seignobos, 261, 263, 303
 Seligman, 9
 Semon, 173
 Senebrer, 137
 Severing, 130
 Shaunsland, 133
 Siéyès, 245
 Silva, 288
 Simmel, 9, 260, 275

 Smith, A., 53, 54, 243, 244, 269
 Solmi, 288
 Sombart, W., 6, 8, 9, 45, 86, 97,
 135, 262, 274, 299, 301, 303,
 304, 305, 306-14, 316-18
 Somerfeld, 165, 166
 Sorge, 96
 Sossior, 137
 Spann, O., 26, 72, 108, 120, 121,
 128, 143, 161, 299
 Spemann, 163, 166, 167
 Spencer, H., 33
 Spengler, O., 109, 110-12, 116,
 171, 275, 277, 278
 Spinoza, 19, 112, 140, 143, 144
 Spühler, 116
 Stalin, 89, 98, 121, 155, 173, 234
 Stammler, 43
 Stampler, 9
 Steffens, H., 139, 151
 Steffenson, 280
 Steininger, 139
 Steinthal, 260
 Stevin, S., 314
 Stolzmann, 43
 Strasser, O., 104, 107

 Tarde, 260
 Tennis, 260
 Thierry, A., 252, 253, 254, 257,
 263, 303
 Thomson, 144
 Timiryazev, 167, 229
 Toffani, 289
 Toland, J., 239
 Toledano, 297
 Tönnies, 9, 50
 Toutain, 290, 296, 297
 Traube, 140
 Trémaux, 140, 149, 194, 195, 196
 Treviranus, 151
 Trölsch, E., 8, 23, 36, 45, 262,
 274, 281, 283
 Trotsky, 121
 Tsisarts, 289
 Tugan-Baranovski, 9
 Turgot, 243, 244, 245
 Tyndal, 140

INDEX

- | | |
|--|---|
| <p> Uexküll, J. von, 161, 163, 164
 Unterman, E., 227

 Valois, G., 114, 116
 Varnotte, 295
 Versted, 186
 Verweien, 134
 Vinci, Leonardo da, 179
 Virchow, 107, 224
 Vogt, K., 152, 191, 215
 Volney, 241
 Volpe, 288

 Wagner, A., 15
 Ward, 260
 Weber, M., 9, 36, 45, 262, 274,
 311, 312, 313, 314, 315, 316 </p> | <p> Weismann, 203, 228
 Weitling, 87
 Wemeyer, 167
 Weydemeyer, 250
 Weyle, 238
 Wilson, 185
 Windelband, 43, 270, 276, 282
 Wipper, 9, 275, 299
 Wohler, 137
 Wolf, K., 207
 Wundt, W., 9, 16

 Yerkes, 163

 Zeeman, 156
 Zimmern, 290 </p> |
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