

FREDERICK ENGELS
ANTI-DÜHRING

(Herr Eugen Dühring's Revolution in Science)

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PUBLISHER'S NOTE

The present English edition of Engels' *Anti-Dühring*¹ to a substantial extent follows previous English translations. In comparing these translations with the original text of the third German edition of *Herrn Eugen Dührings Umwälzung der Wissenschaft* (1894) it was found necessary to make numerous and sometimes drastic corrections and revisions.

The book includes the author's three Prefaces to the first three German editions.

As he indicated in the Preface to the second German edition (pp. 7-8 below) he revised the "Introduction", Chapter I and Part III, Chapters I and II more or less to conform with the changes he had made in them for his pamphlet *Socialism: Utopian and Scientific*. Words and passages in the pamphlet not included in this revision are here given in square brackets. The most important formulations from Engels' rough draft of the "Introduction" and certain passages in the pamphlet which differ from the corresponding passages in the German edition of *Anti-Dühring* are given in footnotes.

This edition includes the special introduction to the English edition of *Socialism: Utopian and Scientific* which Engels wrote in English himself in 1892.

It is also supplied with notes and subject and name indexes.

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ANTI-DÜHRING

(Herr Eugen Dühring's Revolution in Science)

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F. Engels

PREFACES TO THE THREE EDITIONS

I

The following work is by no means the fruit of any "inner urge". On the contrary.

When three years ago Herr Dühring suddenly issued his challenge to his century as an adept and at the same time a reformer of socialism, friends in Germany repeatedly urged on me their desire that I should subject this new socialist theory to a critical examination in the central organ of the Social-Democratic Party, at that time the *Volksstaat*.² They thought this absolutely necessary in order to prevent a new occasion for sectarian splitting and confusion from developing within the Party, which was still so young, just having finally achieved unity. They were in a better position than I to judge the situation in Germany, and I was therefore duty bound to accept their view. Moreover, it became apparent that the new convert was being welcomed by a section of the socialist press with a warmth which it is true was only extended to Herr Dühring's goodwill, but which at the same time also indicated that its reciprocation of his goodwill itself moved it to accept Herr Dühring's doctrine, and sight unseen into the bargain. Besides, there were people who were already preparing to spread this doctrine in a popularized form among the workers. Finally Herr Dühring and his little sect were using all the arts of advertisement and intrigue to force the *Volksstaat* to take a definite stand in relation to the new doctrine which had come forward with such mighty pretensions.

Nevertheless it was a year before I could make up my mind to neglect other work and get my teeth into this sour apple. It was the kind of apple that, once bitten into, had to be completely devoured; and it was not only very sour, but also very large. The new socialist theory was presented as the ultimate practical fruit of a new philosophical system. It was therefore necessary to examine it in connection with this system, and in doing so to examine the system itself; it was necessary to follow Herr Dühring into that vast territory in which he dealt with all things under the sun and with some others as well. Such was the origin of a series of articles which appeared in the Leipzig *Vorwärts*, the successor of the *Volksstaat*, from the beginning of 1877 and which are here presented as a connected whole.

It was thus the nature of the object itself which forced the criticism to assume a length entirely out of proportion to the scientific content of this object, that is to say, of Dühring's writings. But there

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are two other considerations which may excuse this length. On the one hand, in connection with the very diverse subjects to be touched on here, it gave me the opportunity of setting forth in a positive form my views on controversial issues which are of quite general scientific or practical interest today. This has been done in every single chapter, and although this work cannot in any way aim at presenting another system as an alternative to Herr Dühring's "system", it is to be hoped that the reader will not fail to observe the connection inherent in the various views I have advanced. I have already had proof enough that in this respect my work has not been entirely fruitless.

On the other hand, Herr Dühring the "system-creator" is by no means an isolated phenomenon in contemporary Germany. For some time now in Germany systems of cosmogony, of natural philosophy in general, of politics, of economics, etc., have been springing up by the dozen overnight, like mushrooms. The most insignificant doctor of philosophy, nay, even the students will go in for nothing less than a complete "system". Just as in the modern state it is presumed that every citizen is competent to pass judgement on all the issues on which he is called to vote, and just as in economics it is assumed that every consumer is a connoisseur of all the commodities which he has occasion to buy for his maintenance – so similar assumptions are now to be made in science. Freedom of science is taken to mean that people write on every subject they have not studied and proclaim this as the only strictly scientific method. Herr Dühring is one of the most characteristic types of this bumptious pseudo-science which is nowadays forcing its way to the front everywhere in Germany and is drowning everything with its resounding – sublime nonsense. Sublime nonsense in poetry, in philosophy, in politics, in economics, in historiography, sublime nonsense in the lecture-room and on the platform, sublime nonsense everywhere; sublime nonsense which lays claim to a superiority and depth of thought distinguishing it from the simple, commonplace nonsense of other nations; sublime nonsense, the most characteristic mass product of Germany's intellectual industry – cheap but bad – just like other German-made goods, with which unfortunately it was not exhibited at Philadelphia.³ Particularly since Herr Dühring's good example, even German socialism has lately gone in for a considerable amount of sublime nonsense, producing various persons who give themselves airs about "science", of which they "never really learnt a word". This is an infantile disease which marks, and is inseparable from, the incipient conversion of the German student to

Social-Democracy, but which our workers with their remarkably healthy nature will undoubtedly overcome.

It was not my fault that I had to follow Herr Dühring into realms where at best I can only claim to be a dilettante. In such cases I have for the most part limited myself to putting forward the correct, undisputed facts in opposition to my adversary's false or distorted assertions. This applies to jurisprudence and in some instances also to natural science. In other cases it has been a question of general views connected with theoretical natural sciences that is, a field where even the professional natural scientist is compelled to pass beyond his own speciality and encroach on neighbouring territory – territory on which he is, therefore, just as much a “semi-initiate” as any one of us, as Herr Virchow has admitted. I hope I shall be granted the same indulgence in respect of minor inexactitudes and clumsiness of expression as people show each other in this domain.

Just as I was completing this preface, I received a publisher's notice, composed by Herr Dühring, of a new “authoritative” work of Herr Dühring's, *Neue Grundgesetze zur rationellen Physik und Chemie*.^{*} Conscious as I am of the inadequacy of my knowledge of physics and chemistry, I still believe that I know my Herr Dühring, and therefore, without having seen the work itself, think that I am entitled to say in advance that the laws of physics and chemistry put forward in it will be worthy to take their place, by their erroneous-ness or triteness, among the laws of economics, world schematism, etc., which were discovered earlier by Herr Dühring and are examined in this book of mine; and also that the rhigometer, the instrument constructed by Herr Dühring for measuring extremely low temperatures, will serve as a measure not of temperatures either high or low, but simply and solely of Herr Dühring's ignorant arrogance.

London, June 11, 1878

II

I had not expected that a new edition of this book would have to be published. The object of its criticism is now practically forgotten; the work itself was not only available to many thousands of readers in the form of a series of articles published in the Leipzig *Vorwärts* in 1877 and 1878, but also appeared in its entirety as a separate

^{*} New Basic Laws for Rational Physics and Chemistry. – *Ed.*

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book in a large edition. How then can anyone still be interested in what I had to say about Herr Dühring years ago?

I owe this in the first place probably to the fact that this book was banned within the German Empire immediately after the promulgation of the Anti-Socialist Law,⁴ as was generally the case with almost all my works still circulating at the time. To anyone whose brain has not been ossified by the hereditary bureaucratic prejudices of the countries of the Holy Alliance,⁵ the effect of this measure must have been self-evident: a doubled and trebled sale of the banned books, and the exposure of the impotence of the gentlemen in Berlin who issue bans they cannot enforce. Indeed the kindness of the Imperial Government has brought me more new editions of my minor works than I can claim the credit for; I have had no time to make a proper revision of the text, and in most cases have been obliged simply to allow it to be reprinted as it stood.

But there was also another factor. The “system” of Herr Dühring which is criticized in this book ranges over a very wide theoretical domain; I was compelled to follow him wherever he went and to oppose my conceptions to his. As a result, my negative criticism became positive; the polemic was transformed into a more or less connected exposition of the dialectical method and of the communist world outlook represented by Marx and myself – an exposition covering a fairly comprehensive range of subjects. After it had been first presented to the world in Marx’s *Poverty of Philosophy* and in *The Communist Manifesto* and after it had passed through an incubation period of fully twenty years before the publication of *Capital*,⁶ this outlook of ours has been extending its influence among ever-widening circles with growing rapidity, and now finds recognition and support far beyond the boundaries of Europe, in every country which contains proletarians on the one hand and undaunted scientific theorists on the other. Therefore, it seems that there is a public with an interest in the subject great enough to accept the polemic against the Dühring tenets for the sake of the positive conceptions accompanying it, although the polemic has now largely lost its point.

I must note in passing that since the outlook expounded in this book was founded and developed in far greater measure by Marx, and only in an insignificant degree by myself, it was automatically understood between us that this exposition of mine should not be issued without his knowledge. I read the whole manuscript to him before it was printed, and the tenth chapter of the part on economics (“From the *Critical History*”) was written by Marx but unfortunate-

ly had to be shortened somewhat by me for purely external reasons. As a matter of fact, we had always been accustomed to help each other out in special subjects.

With the exception of one chapter, the present new edition is an unaltered reprint of the previous one. For one thing, I had no time for a thoroughgoing revision, although there was much in the presentation that I should have liked to alter. Besides I am under the obligation to prepare for the press the manuscripts left by Marx, and this is much more important than anything else. Then again, my conscience rebels against making any alterations. The book is a polemic, and I think I owe it to my adversary not to improve anything in my work when he is unable to improve his. I could only claim the right to make a rejoinder to Herr Dühring's reply. But I have not read, and will not read, what Herr Dühring has written concerning my attack, unless there is some special reason to do so; in point of theory I have finished with him. Besides, I must observe the rules of decency in literary warfare all the more strictly in his regard because of the despicable injustice that has since been done to him by the University of Berlin. It is true that the University has not gone unpunished. A university that so abases itself as to deprive Herr Dühring of his academic freedom in circumstances which are well known must not be surprised to find Herr Schweninger forced on it in circumstances which are equally well known.⁷

The only chapter in which I have allowed myself some additional elucidation is the second chapter of Part III, "Theoretical". This chapter deals solely and simply with the exposition of a pivotal point in the world outlook for which I stand, and my adversary cannot therefore complain if I attempt to state it in a more popular form and to make it more coherent. In fact, there was an extraneous reason for doing so. I had revised three chapters of the book (the first chapter of the "Introduction" and the first and second of Part III) for my friend Lafargue with a view to their translation into French as a separate pamphlet; and after the French edition had served as the basis for Italian and Polish editions, I issued a German edition under the title, *Die Entwicklung des Sozialismus von der Utopie zur Wissenschaft*.^{*} This ran through three editions within a few months and also appeared in Russian and Danish translations. In all these editions it was only the chapter in question which had been amplified,

^{*} Published in English under the title *Socialism: Utopian and Scientific*. — Ed.

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and in the new edition of the original work it would have been pedantic to have tied myself down to its original text instead of the later text which had become known internationally.

Whatever else I should have liked to alter relates in the main to two points. First, to the history of primitive society, the key to which was provided by Morgan only in 1877.⁸ But as I have since had the opportunity to work up the material, which had in the meantime become available to me, in my book *Der Ursprung der Familie, des Privateigentums und des Staats** (Zürich, 1884), a reference to this later work meets the case.

The second point concerns the section dealing with theoretical natural science. There is much that is awkward in the exposition, and much of it could be expressed today in a clearer and more definite form. I have not allowed myself the right to improve this section, and for that very reason am under an obligation to criticize myself here instead.

Marx and I were pretty well the only people to salvage conscious dialectics from German idealist philosophy for the materialist conception of nature and history. But a knowledge of mathematics and natural science is essential to a conception of nature which is dialectical and at the same time materialist. Marx was well versed in mathematics, but we could keep up with the natural sciences only piecemeal, intermittently and sporadically. For this reason, when I retired from business and transferred my home to London,⁹ thus enabling myself to give the necessary time to it, I went through as complete a “moulting”, as Liebig calls it, in mathematics and the natural sciences as was possible for me, and spent the best part of eight years on it. I was right in the middle of this “moulting” process when, as it happened, I had to occupy myself with Herr Dühring’s so-called natural philosophy. It was therefore only too natural that in dealing with this subject I was sometimes unable to find the correct technical expression, and in general moved with considerable clumsiness in the field of theoretical natural science. On the other hand, my lack of assurance in this field, which I had not yet overcome, made me cautious, and I cannot be charged with real blunders in relation to the facts as then known or with an incorrect presentation of recognized theories. In this connection there was only one unrecognized genius of a mathematician who complained in a letter to Marx that I had made a wanton attack upon the honour of $\sqrt{-1}$.

* *The Origin of the Family, Private Property and the State.* – Ed.

It goes without saying that my recapitulation of mathematics and the natural sciences was undertaken in order to convince myself in detail – of what in general I was not in doubt – that in nature, amid the welter of innumerable changes, the same dialectical laws of motion impose themselves as those which in history govern the apparent fortuitousness of events; the same laws as those which similarly form the thread running through the history of the development of human thought and gradually rise to consciousness in the mind of man; the laws which Hegel first developed in all-embracing but mystified form, and which we made it one of our aims to strip of this mystic form and to bring clearly before the mind in their complete simplicity and universality. The old natural philosophy – in spite of its real value and the many fruitful seeds it contained* – was

* It is much easier, along with the unthinking mob *à la* Karl Vogt, to assail the old natural philosophy than to appreciate its historical significance. It contains a great deal of nonsense and fantasy, but no more than the unphilosophical theories of the empirical natural scientists of the time, and it began to be perceived after the spread of the theory of evolution that there was much that was sensible and rational in it. Haeckel was therefore fully justified in recognizing the merits of Treviranus and Oken. In his primordial slime and primordial vesicle Oken put forward as a biological postulate what was in fact subsequently discovered as protoplasm and cell. As far as Hegel specifically is concerned, he is in many respects head and shoulders above his empiricist contemporaries, who thought that they had explained all unexplained phenomena when they had endowed them with some force or power – the force of gravity, the power of buoyancy, the power of electrical contact, etc. – or where this would not do, with some unknown substance, the substance of light, of heat, of electricity, etc. The imaginary substances have now been pretty well discarded, but the power humbug against which Hegel fought still pops up gaily. For example, as late as 1869 in Helmholtz's Innsbruck lectures (Helmholtz, *Popular Lectures*, German edition, 1871, Vol. 2, p. 190).¹⁰ In contrast to the deification of Newton which was handed down from the French of the eighteenth century and the English heaping of honours and wealth on him, Hegel brought out the fact that Kepler, whom Germany allowed to starve, was the real founder of the modern mechanics of the celestial bodies, and that the Newtonian law of gravitation was already contained in all three of Kepler's laws, in the third law even explicitly. What Hegel proves by a few simple equations in his *Philosophy of Nature*, §270 and Ad-

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manifestly unable to satisfy us. As is more fully brought out in this book, the old natural philosophy, particularly in the Hegelian form, erred because it did not concede to nature any development in time, any "succession", but only "co-existence". This was on the one hand grounded in the Hegelian system itself, which ascribed continued historical development only to the "spirit", but on the other hand was also due to the whole state of the natural sciences in that period. Here Hegel fell far behind Kant, whose nebular theory had already indicated the origin of the solar system, and whose discovery of the retardation of the earth's rotation by the tides had also proclaimed the doom of that system.¹² Finally, for me there could be no question of superimposing the laws of dialectics on nature but of discovering them in it and developing them from it.

But to do this systematically and in each separate department is a gigantic task. Not only is the domain to be mastered almost limitless; in this entire domain natural science itself is undergoing such a mighty process of revolutionization that even people who can devote the whole of their spare time to it can hardly keep pace. Since Karl Marx's death, however, my time has been requisitioned for more urgent duties, and I have therefore been compelled to lay my work aside. For the present I must content myself with the indications given in this book, and must await some later opportunity to put together and publish the results which I have arrived at, perhaps in conjunction with the extremely important mathematical manuscripts left by Marx.¹³

Yet the advance of theoretical natural science may possibly make my work very largely or entirely superfluous. For the revolution which is being forced on theoretical natural science by the sheer necessity of setting the huge accumulation of purely empirical discoveries in order is such that it must increasingly bring the dialectical character of natural processes to the consciousness even of those empiricists who are most opposed to it. The old rigid antago-

denda (Hegel's *Works*, German edition, 1842, Vol. VII, pp. 98 and 113-15),¹¹ reappears as the outcome of the most recent mathematical mechanics in Gustav Kirchhoff's *Lectures on Mathematical Physics* (2nd German edition, Leipzig, 1877, p. 10) and in essentially the same simple mathematical form as had first been developed by Hegel. The natural philosophers stand in the same relation to consciously dialectical natural science as the Utopians to modern communism. [Note by Engels.]

nisms, the sharp, impassable dividing lines are disappearing more and more. Since even the last “true” gases have been liquefied and since it has been proved that a body can be brought into a condition in which the liquid and the gaseous forms are indistinguishable, the aggregate states have lost the last relics of their former absolute character. With the thesis of the kinetic theory of gases, that in perfect gases at equal temperatures the squares of the speeds with which the individual molecules of gas move are in inverse ratio to their molecular weights, heat also takes its place directly among the forms of motion which can be immediately measured as such. Whereas only ten years ago the great basic law of motion, then recently discovered, was as yet conceived as a mere law of the *conservation* of energy, as the mere expression of the indestructibility and uncreatability of motion, that is, merely in its quantitative aspect, this narrow, negative conception is being more and more supplanted by the positive idea of the *transformation* of energy, in which for the first time the qualitative content of the process comes into its own and the last vestige of an extramundane creator is obliterated. That the quantity of motion (so-called energy) remains unaltered when it is transformed from kinetic energy (so-called mechanical force) into electricity, heat, potential energy of position, etc., and vice versa, no longer needs to be preached as something new; it serves as the basis which has already been secured for the now much more pregnant investigation into the very process of transformation, the great basic process, knowledge of which comprises all knowledge of nature. And since biology has been pursued in the light of the theory of evolution, one rigid boundary line of classification after another has been swept away in the domain of organic nature. The almost unclassifiable intermediate links are growing daily more numerous, closer investigation throws organisms out of one class into another, and distinguishing characteristics which had almost become articles of faith are losing their absolute validity; we now have mammals that lay eggs, and, if the report is confirmed, also birds that walk on all fours.¹⁴ Years ago, following on the discovery of the cell, Virchow was compelled to dissolve the unity of the individual animal being into a federation of cell-states – thus acting more progressively than scientifically and dialectically¹⁵ – and now the conception of animal (and therefore also human) individuality is becoming far more complex owing to the discovery of the white blood corpuscles which creep about amoeba-like within the bodies of the higher animals. But it is precisely the polar antagonisms put forward as irreconcilable and insoluble, the forcibly fixed

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lines of demarcation and class distinctions, which have given modern theoretical natural science its restricted metaphysical character. The recognition that these antagonisms and distinctions, though to be found in nature, are only of relative validity, and that on the other hand their imagined rigidity and absolute validity have been introduced into nature only by our thought – this recognition forms the kernel of the dialectical conception of nature. It is possible to arrive at this recognition because the accumulating facts of natural science compel us to do so; one arrives at it more easily if one approaches the dialectical character of these facts equipped with an understanding of the laws of dialectical thought. In any case natural science has now advanced so far that it can no longer escape dialectical generalization. However, it will make this process easier for itself if it does not lose sight of the fact that the results in which its experiences are summarized are concepts, that the art of working with concepts is not inborn and also is not given with ordinary everyday consciousness but requires real thought, and that similarly this thought has a long empirical history, no more and no less than empirical natural science. Only by learning to appropriate the results of the development of philosophy during the past 2,500 years will it rid itself on the one hand of any natural philosophy standing apart from it, outside it and above it, and on the other of its own limited method of thought inherited from English empiricism.

London, September 23, 1885

III

The following new edition is a reprint of the preceding one, except for a few very unimportant stylistic changes. It is only in one chapter – the tenth of Part II: “From the *Critical History*” – that I have allowed myself to make substantial additions on the following grounds.

As already stated in the preface to the second edition, this chapter was in all essentials the work of Marx. I was forced to make considerable cuts in Marx’s manuscript, which in its first wording had been intended as an article for a journal; and I had to cut precisely those parts in which the critique of Dühring’s propositions was overshadowed by Marx’s own developments regarding the history of economics. But this is just the section of the manuscript which is of the greatest and most permanent interest even today. I consider myself under an obligation to give in as full and faithful a form as possible the passages in which Marx assigns to people like

Petty, North, Locke and Hume their appropriate place in the genesis of classical political economy, and even more his explanation of Quesnay's "Economic Tableau", which has remained an insoluble riddle of the sphinx to all modern political economy. On the other hand, wherever the thread of the argument makes this possible, I have omitted passages which refer exclusively to Herr Dühring's writings.

For the rest I may be perfectly satisfied with the extent to which the views presented here have spread since the previous edition in the scientific and working-class consciousness in every civilized country of the world.

F. Engels

London, May 23, 1894

INTRODUCTION

I

GENERAL

Modern socialism is, in its content, primarily the product of the recognition, on the one hand, of the class antagonisms prevailing in modern society between proprietors and non-proprietors, between capitalists and wage-workers, and on the other, of the anarchy ruling in production. In its theoretical form, however, it originally appears as a more developed and allegedly more consistent extension of the principles laid down by the great French philosophers of the Enlightenment in the eighteenth century.* Like every new theory, modern socialism had at first to link itself with the intellectual data ready to hand, however deeply its roots lay in [material] economic facts.

The great men who in France were clearing men's minds for the coming revolution acted in an extremely revolutionary way themselves. They recognized no external authority of any kind. Religion, conceptions of nature, society, political systems – everything was subjected to the most unsparing criticism: everything had to justify its existence before the judgement-seat of reason or give up existence. The reasoning intellect became the sole measure of everything. It was the time when, as Hegel says, the world was stood on its head,† first in the sense that the human head and the principles

* In a rough outline of the "Introduction" the above passage runs as follows: "*Modern socialism*, although it arose essentially from the perception of the class antagonisms existing in society between proprietors and non-proprietors and between workers and exploiters, first appears in its theoretical form as a more consistent and more developed extension of the principles laid down by the great French philosophers of the Enlightenment in the eighteenth century, who also included Morelly and Mably, socialism's first representatives." – *Ed.*

† [This is the passage on the French Revolution: "The thought, the concept of right, *all at once* asserted itself, and against this the old scaffolding of wrong could make no stand. In this conception of right, therefore, a constitution has now been established, and henceforth everything must be based upon this. Ever since the sun has been in the firmament and the planets have circled round it, the sight had never

arrived at by its thinking claimed to be the basis of all human action and association; but then later also in the wider sense that the reality which was in contradiction with these principles was, in fact, turned upside down. Every previous form of society and state, every old traditional notion was flung into the lumber-room as irrational; the world had hitherto allowed itself to be led solely by prejudice; everything in the past deserved only pity and contempt. The light of day [the realm of reason,] now appeared for the first time; henceforth superstition, injustice, privilege and oppression were to be superseded by eternal truth, eternal justice, equality based on nature, and the inalienable rights of man.

We know today that this realm of reason was nothing more than the idealized realm of the bourgeoisie; that eternal justice found its realization in bourgeois justice; that equality reduced itself to bourgeois equality before the law; that bourgeois property was proclaimed as one of the most essential rights of man; and that the government of reason, Rousseau's Social Contract, came into being, and could only come into being, as a bourgeois democratic republic. The great thinkers of the eighteenth century were no more able than their predecessors to go beyond the limits imposed on them by their own epoch.

But side by side with the antagonism of the feudal nobility and the burghers [who claimed to represent all the rest of society], there was the general antagonism of exploiters and exploited, of the rich idlers and the toiling poor. It was precisely this circumstance that enabled the representatives of the bourgeoisie to put themselves forward as the representatives not of one special class but of the whole of suffering humanity. Still more. From its origin the bour-

been seen of man standing on his head – i.e., on thought – and building reality after this image. Anaxagoras was the first to say that nous, reason, rules the world; but now, for the first time, man had come to recognize that the Idea must rule mental reality. And this was *a magnificent sunrise. All thinking beings have joined in celebrating this epoch. A sublime emotion prevailed at that time, an enthusiasm of reason sent a thrill through the world*, as if the reconciliation of the divine with the profane, had only now come about" (Hegel, *Philosophy of History*, German ed., 1840, p. 535). Is it not high time to set the Anti-Socialist Law in action against these teachings of the late Professor Hegel which are so subversive and such a public danger? (Note by Engels; italics in the last three sentences of the quotation from Hegel are Engels'. – Ed.)

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geoisie was saddled with its antithesis: capitalists cannot exist without wage-workers, and, in the same proportion as the mediaeval burgher of the guild developed into the modern bourgeois, so the guild journeyman and the day-labourer outside the guilds developed into the proletarian. And although, on the whole, the burghers in their struggle with the nobility* could claim to represent at the same time the interests of the different working classes of that period, in every great bourgeois movement there were independent outbursts of that class which was the more or less developed forerunner of the modern proletariat. For example, at the time of the German Reformation and the Peasants' War, Thomas Münzer's trend† in the great English Revolution, the Levellers; in the great French Revolution, Babeuf.¹⁶

There were theoretical manifestations corresponding with these revolutionary uprisings of an as yet immature class; in the sixteenth and seventeenth centuries, utopian pictures of ideal social conditions, in the eighteenth, direct communistic theories (Morelly and Mably). The demand for equality was no longer limited to political rights but was also extended to the social conditions of individuals; it was not merely class privileges that were to be abolished, but class distinctions themselves. An ascetic communism [prohibiting all the pleasures of life] copied from Sparta was thus the first form of the new teaching. Then came the three great Utopians: Saint-Simon, to whom the bourgeois current still had a certain significance side by side with the proletarian, Fourier, and Owen, who in the country where capitalist production was most developed and under the influence of the antagonisms begotten by it systematically worked out his proposals for the abolition of class distinctions in direct relation to French materialism.

One thing is common to all three. Not one of them appears as a representative of the interests of the proletariat which historical development had in the meantime produced. Like the philosophers of the Enlightenment, they want to emancipate not a particular class [to begin with], but all humanity [at once]. Like them, they wish to bring in the realm of reason and of eternal justice, but this realm is

* In *Socialism: Utopian and Scientific*, "in their struggle with the nobility" is italicized. — *Ed.*

† In *Socialism: Utopian and Scientific*, the first part of the sentence reads: "For example, at the time of the German Reformation and the Peasants' War, the Anabaptists and Thomas Münzer;" — *Ed.*

as far as heaven from earth from that of the philosophers of the Enlightenment. For the bourgeois world based upon the principles of these philosophers is also irrational and unjust and, therefore, finds its way to the dustbin just as readily as feudalism and all earlier orders of society. If pure reason and justice have not hitherto ruled the world, it is only because they have not been rightly understood. What was wanting was only the individual man of genius, who has now arisen and who has recognized the truth. The fact that he has now arisen, that the truth has been recognized precisely at this moment, is not an inevitable event following of necessity in the chain of historical development, but a mere happy accident. He might just as well have been born 500 years earlier and might then have spared humanity 500 years of error, strife, and suffering.

This outlook is essentially that of all English and French and of the first German socialists, including Weitling.* [To all these] socialism is the expression of absolute truth, reason and justice and needs only to be discovered to conquer the world by virtue of its own power; as absolute truth is independent of time, space, and human historical development, it is a mere accident when and where it is discovered. At the same time, absolute truth, reason and justice are different for the founder of each different school; and as each one's special brand of absolute truth, reason and justice is in turn conditioned by his subjective understanding, his conditions of existence, the measure of his knowledge and his intellectual training, there is no other ending possible in this conflict of absolute truths than that they should grind each other down. Hence, from this nothing could come but a kind of eclectic, average socialism, such as in fact has dominated the minds of most of the socialist workers in France and England up to the present time; a mish-mash permitting of the most manifold shades of opinion; a mish-mash of the less striking critical statements, economic theories and pictures of future society of the founders of different sects; a mish-mash which is the more easily produced, the more the sharp edges of precision of the individual constituents are rubbed down in the stream of debate, like rounded pebbles in a brook.

* In *Socialism: Utopian and Scientific*, this runs as follows: "The Utopians' outlook has governed the socialist ideas of the nineteenth century for a long time and in part still does. Until very recently all French and English socialists paid homage to it. The earlier German communism, including that of Weitling, also belongs to it." — *Ed.*

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To make a science of socialism, it had first to be placed upon a real basis.

In the meantime, the new German philosophy, terminating in Hegel, had arisen along with and after the French philosophy of the eighteenth century. Its greatest merit was its resumption of dialectics as the highest form of thinking. The old Greek philosophers were all born dialecticians, and Aristotle, the most encyclopaedic intellect among them, had already investigated the most essential forms of dialectical thought.* On the other hand, although the newer philosophy, too, included brilliant exponents of dialectics (e.g., Descartes and Spinoza), it had become – especially under English influence – increasingly stuck in the so-called metaphysical mode of reasoning, by which the French of the eighteenth century were also almost wholly dominated, at all events in their special philosophical works. Outside philosophy in the narrow sense, the French nevertheless produced masterpieces of dialectic; we need only call to mind Diderot's *Rameau's Nephew* and Rousseau's *Discourse on the Origin of Inequality Among Men*.¹⁷ We give here, in brief, the essential character of these two modes of thought; we shall have to return to them later in greater detail.

When we reflect on nature or the history of mankind or our own intellectual activity, at first we see the picture of an endless maze of connections and interactions, in which nothing remains what, where and as it was, but everything moves, changes, comes into being and passes away. [At first therefore, we see the picture as a whole, with its individual parts still more or less kept in the background; we observe the movements, transitions, connections, rather than the *things* that move, change and are connected.] This primitive, naive but intrinsically correct conception of the world is that of ancient Greek philosophy, and was first clearly formulated by Heraclitus: everything is and also is not, for everything is *in flux*, is constantly changing, constantly coming into being and passing away.

But this conception, correctly as it expresses the general character of the picture of phenomena as a whole, does not suffice to explain the details of which this picture is made up, and so long as we

* The rough draft of the "Introduction" runs as follows: "The old Greek philosophers were all been dialecticians, and Aristotle, the Hegel of the ancient world, had already investigated the most essential forms of dialectical thought." – *Ed.*

cannot do this,* we are not clear about the whole picture. In order to understand these details we must detach them from their natural or historical connection and examine each one separately according to its nature, special causes and effects, etc. This is primarily the task of natural science and historical research, branches of science which for the Greeks of classical times occupied only a subordinate position on very good grounds, because they had first of all to piece together the materials [for these sciences to work upon]. [Only after a certain amount of natural and historical material has been collected can critical analysis, comparison, and arrangement in classes, orders, and species be undertaken.] The beginnings of the exact natural sciences were [therefore,] worked out first by the Greeks of the Alexandrian period,¹⁸ and later on, in the Middle Ages, further developed by the Arabs. Genuine natural science dates from the second half of the fifteenth century, and from then on it has advanced with ever increasing rapidity. The analysis of nature into its individual parts, the division of the different natural processes and objects into definite classes, the study of the internal anatomy of organic bodies in their manifold forms – these were the fundamental conditions for the gigantic strides in our knowledge of nature that have been made during the last four hundred years. But this has bequeathed us the habit of observing natural objects and processes in isolation, detached from the general context; of observing them not in their motion, but in their state of rest; not as essentially variable elements, but as constant ones; not in their life, but in their death. And when this way of looking at things was transferred by Bacon and Locke from natural science to philosophy, it begot the narrow, metaphysical mode of thought peculiar to the last centuries.

To the metaphysician, things and their mental images, ideas, are isolated, to be considered one after the other and apart from each other, fixed, rigid objects of investigation given once for all. He thinks in absolutely unmediated antitheses. “His communication is ‘yea, yea; nay, nay’; for whatsoever is more than these cometh of evil.” For him a thing either exists or does not exist; a thing cannot at the same time be itself and something else. Positive and negative absolutely exclude one another; cause and effect stand in a rigid antithesis one to the other.

* *Socialism: Utopian and Scientific* has “we do not know these” instead of “we cannot do this”. – *Ed.*

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At first sight this way of thinking seems to us most plausible* because it is that of so-called sound common sense. Yet sound common sense, respectable fellow that he is in the homely realm of his own four walls, has very wonderful adventures directly he ventures out into the wide world of research. The metaphysical mode of thought, justifiable and even necessary as it is in a number of domains whose extent varies according to the nature of the object, invariably bumps into a limit sooner or later, beyond which it becomes one-sided, restricted, abstract, lost in insoluble contradictions, because in the presence of individual things it forgets their connections; because in the presence of their existence it forgets their coming into being and passing away; because in their state of rest it forgets their motion. It cannot see the wood for the trees. For every day purposes we know and can definitely say, e.g., whether an animal is alive or not. But, upon closer inquiry, we find that this is sometimes a very complex question, as the jurists very well know. They have cudgelled their brains in vain to discover a rational limit beyond which the killing of the child in its mother's womb is murder. It is just as impossible to deter mine the moment of death, for physiology proves that death is not a sudden instantaneous phenomenon, but a very protracted process.

In like manner, every organic being is every moment the same and not the same; every moment it assimilates matter supplied from without and gets rid of other matter; every moment some cells of its body die and others build themselves anew; in a longer or shorter time the matter of its body is completely renewed and is replaced by other molecules of matter, so that every organic being is always itself, and yet something other than itself.

Further, we find upon closer investigation that the two poles of an antithesis, like positive and negative, are as in separable as they are opposed, and that despite all† their opposition, they interpenetrate. In like manner, we find that cause and effect are conceptions which only hold good in their application to the individual case as such; but as soon as we consider the individual case in its general connection with the universe as a whole, they merge, they dissolve in the concept of universal action and reaction in which causes and

* *Socialism: Utopian and Scientific* has “obvious” instead of “plausible”. – Ed.

† In *Socialism: Utopian and Scientific*, “all” is italicized. – Ed.

effects are constantly changing places, so that what is effect here and now will be cause there and then, and vice versa.

None of these processes and modes of thought fit into the frame of metaphysical thinking. But for dialectics, which grasps things and their conceptual images essentially in their interconnection, in their concatenation, their motion, their coming into and passing out of existence, such processes as those mentioned above are so many corroborations of its own procedure.

Nature is the test of dialectics, and it must be said for modern science that it has furnished this test with very rich and daily increasing materials, and thus has shown that in the last resort nature works dialectically and not metaphysically; [that she does not move in an eternally uniform and perpetually recurring circle, but goes through a genuine historical evolution. In this connection Darwin must be named before all others. He dealt the metaphysical conception of nature the heaviest blow by his proof that the organic world of today – plants, animals, and consequently man too – is the product of a process of evolution going on through millions of years]. But since the natural scientists who have learned to think dialectically are still few and far between, this conflict of the results of discovery with traditional modes of thinking explains the endless confusion now reigning in theoretical natural science, the despair of teachers as well as students, of authors and readers alike.

An exact representation of the universe, of its evolution and of that of mankind, and of the reflection of this evolution in the minds of men can therefore only be obtained by the method of dialectics with its constant regard to the general actions and reactions of becoming and ceasing to be, of progressive or retrogressive changes. And it is in this spirit that modern German philosophy immediately set to work. Kant began his career by resolving the stable solar system of Newton and its eternal duration, after the famous initial impulse had once been given, into a historical process, the formation of the sun and all the planets out of a rotating nebulous mass. From this he already drew the conclusion that, given this origin of the solar system, its future death followed of necessity. Half a century later his theory was established mathematically by Laplace, and after another half century the spectroscope confirmed the existence in cosmic space of such incandescent masses of gas in various stages of condensation.

This new German philosophy terminated in the Hegelian system. In this system – and this is its great merit – the whole world, natural, historical, intellectual, is for the first time represented as a

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process, i.e., as in constant motion, change, transformation, development; and the attempt was made to show internal interconnections in this motion and development.* From this point of view the history of mankind no longer appeared as a wild whirl of senseless deeds of violence, all equally condemnable at the judgement-seat of mature philosophic reason and best forgotten as quickly as possible, but as the process of evolution of humanity itself. It was now the task of the intellect to follow the gradual march of this process through all its devious ways, and to trace out the inner logic running through all its apparently contingent phenomena.

That [the] Hegel[ian system] did not solve the problem [it posed itself] is immaterial here. Its epoch-making merit was that it posed the problem. This problem is indeed one that no single individual will ever be able to solve. Although Hegel was – with Saint-Simon – the most encyclopaedic mind of his time, he was restricted, first, by the necessarily limited extent of his own knowledge and, second, by the limited extent and depth of the knowledge and conceptions of his epoch. To these limits a third must be added. Hegel was an idealist. To him the thoughts within his brain were not the more or less abstract images of actual things and processes, but on the contrary, things and their development were only the realized images of the “Idea”, existing somewhere† from eternity before the world existed. Consequently everything was stood on its head and the actual interconnection of things in the world was completely reversed. Although Hegel had grasped some individual interconnections correctly and with genius, yet for the reasons just given there is much that in point of detail necessarily turned out botched, artifi-

* In the rough draft of the “Introduction” Hegelian philosophy is described as follows: “The Hegelian system was the last and most consummate form of philosophy, in so far as the latter is represented as a special science superior to every other. All philosophy collapsed with this system. But what remained was the dialectical method of thinking and the conception of the natural, historical and intellectual world moving and transforming itself endlessly in a constant process of becoming and passing away. Not only philosophy but all the sciences were now required to discover the laws of motion of this constant process of transformation, each in its particular domain. This was the legacy Hegelian philosophy bequeathed its successors.” – *Ed.*

† *Socialism: Utopian and Scientific* has “somehow” instead of “somewhere”. – *Ed.*

cial, laboured, in a word, upside down. The Hegelian system as such was a colossal miscarriage – but it was also the last of its kind. In fact, it was suffering from an internal and incurable contradiction. On the one hand, its essential postulate was the conception that human history is a process of development, which, by its very nature, cannot find its intellectual final term in the discovery of any so-called absolute truth. But on the other hand, it laid claim to being the very essence of precisely this absolute truth. A system of natural and historical knowledge which is all-embracing and final for all time is in contradiction with the fundamental laws of dialectical thinking; which by no means excludes, but on the contrary includes, the idea that systematic knowledge of the entire external world can make giant strides from generation to generation.

The recognition of the complete inversion of previous German idealism necessarily led to materialism, but, it must be noted, not to the purely metaphysical, exclusively mechanical materialism of the eighteenth century. In contrast to the naively revolutionary, flat rejection of all previous history, modern materialism sees history as the process of development of humanity and its own task as the discovery of the laws of motion of this process. The conception was prevalent among the French of the eighteenth century and [later] in Hegel that nature was a whole, moving in narrow circles and [for ever] remaining immutable, with eternal celestial bodies, as in Newton's teaching, and with unalterable species of organic beings, as in Linnaeus' teaching. In opposition to this conception, modern materialism embraces the more recent advances of natural science, according to which nature too has its history in time, the celestial bodies, like the organic species with which they became peopled under favourable conditions, coming into being and passing away, and the recurrent cycles, in so far as they are at all admissible, assuming infinitely vaster dimensions. In both cases modern materialism is essentially dialectical and no longer needs any philosophy standing above the other sciences. As soon as each separate science is required to clarify its position in the great totality of things and of our knowledge of things, a special science dealing with this totality is superfluous. All that remains in an independent state from all earlier philosophy is the science of thought and its laws – formal logic and dialectics. Everything else merges into the positive science of nature and history.

But whilst the revolution in the conception of nature could only be made to the extent that research furnished the corresponding positive materials, certain historical events had already asserted them-

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selves much earlier which led to a decisive change in the conception of history. In 1831, the first working-class rising took place in Lyons; between 1838 and 1842, the first national working-class movement, that of the English Chartists, reached its height. The class struggle between proletariat and bourgeoisie came to the front in the history of the most advanced countries in Europe in proportion to the development, on the one hand, of modern industry, and on the other, of the recently acquired political supremacy of the bourgeoisie. Facts more and more strenuously gave the lie to the teachings of bourgeois economics on the identity of the interests of capital and labour, on the general harmony and general prosperity flowing from free competition.* None of these things could be ignored any longer, any more than the French and English socialism, which was their theoretical, though extremely imperfect, expression. But the old idealist conception of history, which was not yet dislodged, knew nothing of class struggles based on material interests, indeed knew nothing at all of material interests; production and all economic relations appeared in it only as incidental, subordinate elements in the “history of civilization”.

The new facts made imperative a new examination of all past history. Then it was seen that *all* past history [, with the exception of its primitive stages,] was the history of class struggles; that these social classes warring with each other are always the products of the relations of production and exchange – in a word, of the *economic* relations of their epoch; that therefore the economic structure of society always forms the real basis, from which, in the last analysis, the whole superstructure of legal and political institutions as well as of the religious, philosophical, and other ideas of a given historical period is to be explained. [Hegel had freed the conception of history from metaphysics – he had made it dialectical; but his conception of history was essentially idealistic.] But now idealism was driven

* The rough draft of the “Introduction” contains the following addition: “In France the Lyons insurrection of 1834 had likewise proclaimed the struggle of the proletariat against the bourgeoisie. The English and French socialist theories acquired historic importance and were bound to have their repercussion and criticism in Germany as well, although its industry was only just beginning to climb out of the stage of small-scale production. The theoretical socialism that now took shape, among Germans rather than in Germany, had therefore to import all its material....” – Ed.

from its last refuge, the conception of history; new a materialist treatment of history was advanced, and the way found to explain man's consciousness by his being, instead of, as heretofore, his being by his consciousness.

[Henceforward socialism no longer appeared as an accidental discovery by this or that intellect of genius, but as the necessary outcome of the struggle between two classes produced by history – the proletariat and the bourgeoisie. Its task was no longer to manufacture as perfect a system of society as possible, but to examine the historico-economic process from which these classes and their antagonism had of necessity sprung and to discover in the economic situation thus created the means of ending the conflict.] But the earlier socialism was just as incompatible with this materialist conception of history as the French materialists' conception of nature was with dialectics and modern natural science. The earlier socialism certainly criticized the existing capitalist mode of production and its consequences. But it could not explain this mode of production, and, therefore, could not get the mastery of it. It could only simply reject it as evil. [The more violently it denounced the exploitation of the working class, which is inseparable from capitalism, the less able was it clearly to show in what this exploitation consists and how it arises.] But for this it was necessary, on the one hand, to present the capitalist mode of production in its historical interconnection and its necessity for a specific historical period, and therefore also the necessity of its doom; and, on the other, to lay bare its essential character, which was still hidden, as its critics had hitherto attacked its evil consequences rather than the process as such.* This was done by the discovery of *surplus-value*. It was shown that the appropriation of unpaid labour is the basic form of the capitalist mode of production and of the exploitation of the worker effected by it; that even if the capitalist buys the labour-power of his worker at the full value it possesses as a commodity on the market, he still extracts more value from it than he paid for; and that in the last analysis this surplus-value forms those sums of value from which there is heaped up the constantly increasing mass of capital in the hands of the possessing classes. The process both of capitalist production and of the production of capital was explained.

* In *Socialism: Utopian and Scientific*, the clause beginning with "as its critics..." is deleted. – Ed.

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These two great discoveries, the materialist conception of history and the revelation of the secret of capitalist production through surplus-value, we owe to *Marx*. With them socialism became a science, which had now to be elaborated in all its details and interconnections.

This, approximately, was how things stood in the fields of theoretical socialism and extinct philosophy, when Herr Eugen Dühring, not without considerable din, sprang onto the stage and announced that he had accomplished a complete and thoroughgoing revolution in philosophy, political economy and socialism.

Let us see what Herr Dühring promises us and how he fulfils his promises.

II

WHAT HERR DÜHRING PROMISES

The writings of Herr Dühring with which we are here primarily concerned are his *Kursus der Philosophie*, his *Kursus der National- und Sozialökonomie*, and his *Kritische Geschichte der Nationalökonomie und des Sozialismus*.¹⁹ The first of these particularly claims our attention now.

On the very first page Herr Dühring introduces himself as

“the man who *claims to represent* this power” (philosophy) “in his age and for its immediately foreseeable development”.*

He thus proclaims himself the only true philosopher of today and of the “foreseeable” future. Whoever diverges from him diverges from truth. Many people, even before Herr Dühring, have *thought* something of the kind about themselves, but – except for Richard Wagner – he is probably the first who has calmly blurted it out. And the truth to which he refers is “a final and ultimate truth”.

Herr Dühring’s philosophy is

“the *natural* system or the *philosophy of reality*.... In it reality is so conceived as to *exclude any tendency* to a visionary and subjectively limited conception of the world.”

This philosophy, therefore, is such that it lifts Herr Dühring above the bounds set by what he himself can hardly deny are his

* With the exception of Part II, Chapter X. all italics in quotations from Dühring are Engels’. – *Ed.*

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personal and subjective limitations. And this is necessary if he is to be in a position to lay down final and ultimate truths, although so far we do not see how this miracle should come to pass.

This “natural system of knowledge which in itself is of value to the mind” has “*securely established* the basic forms of being without in any way compromising the profundity of thought”. From its “genuinely critical standpoint” it provides “the elements of a philosophy which is real and therefore directed to the reality of nature and of life, a philosophy which cannot allow the validity of any merely apparent horizon, but *unfolds all earths and heavens of outer and inner nature in its mighty revolutionizing sweep* “; it is a “new mode of thought”, and its results are “fundamentally original conclusions and views... system-creating ideas... established truths”. We have before us “a work which must find its strength in concentrated initiative” (whatever that may mean) an “investigation going to the roots... a *deep-rooted science*... a *strictly scientific* conception of things and of men... an *all-round penetrating* work of thought... a *creative* outline of premises and conclusions controllable by thought... the *absolutely fundamental* “.

In the economic and political sphere he gives us not only “historical and systematically comprehensive works”, of which the historical ones are, to boot, notable for “my treatment of history in the grand manner”, while those dealing with economics have brought about “creative changes”,

but he even finishes with a fully worked-out socialist plan of his own for the society of the future, which is the “practical fruit of a *clear theory going to the ultimate roots of things* “ and, like the Dühring philosophy, is consequently infallible and the only way to salvation. For

“*only in that* socialist structure which I have characterized *in my* ‘Course of Political and Social Economy’ can a true Own take the place of the ownership which is merely apparent and transitory or even based on violence”. And the future has to follow these directions.

This bouquet of glorifications of Herr Dühring by Herr Dühring could easily be multiplied tenfold. It may already have created some doubt in the reader’s mind as to whether it is really a philosopher with whom he is dealing, or a – but we must beg the reader to reserve judgement until he has got to know the above-mentioned deep-rootedness at closer quarters. We have given the above anthology only for the purpose of showing that we have before us not

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any ordinary philosopher and socialist, who merely expresses his ideas and leaves it to the future to judge their worth, but quite an extraordinary creature, who claims to be no less infallible than the Pope, and whose doctrine is the one way to salvation and simply must be accepted by anyone who does not want to fall into the most abominable heresy. What we are here confronted with is certainly not one of those works to be found in plenty in all socialist literature and recently in the German, too, works in which people of various calibres, in the most straightforward way in the world, try to become clear on problems the solution of which requires material that to a greater or lesser extent is not at their disposal; works whose socialist goodwill is always deserving of recognition, whatever their scientific and literary shortcomings. On the contrary, Herr Dühring offers us principles which he declares are final and ultimate truths, and besides which any other views are therefore false from the outset; he is in possession not only of the exclusive truth but also of the sole strictly scientific method of investigation, in contrast with which all others are unscientific. Either he is right – and in this case we have before us the greatest genius of all time, the first superhuman, because infallible, human being. Or he is wrong, and in that case, whatever our judgement may be, benevolent regard for his possibly good intentions would nevertheless be the most deadly insult to Herr Dühring.

When a man is in possession of the final and ultimate truth and of the only strictly scientific approach, it is only natural that he should have a certain contempt for the rest of erring and unscientific humanity. We must therefore not be surprised that Herr Dühring should speak of his predecessors with the most extreme disdain and that there are only a few great men who, by way of exception, are so entitled by him and who find mercy at the bar of his “deep-rootedness”.

Let us first hear what he has to say about the philosophers:

“*Leibnitz*, devoid of any better sentiments... that best of all possible courtier-philosophizers.”

Kant is barely tolerated; but after *Kant* everything got into a muddle:

there followed the “wild ravings and equally inane and windy stupidities of the immediate epigoni, notably, a *Fichte* and a *Schelling*... monstrous caricatures of ignorant natural philosophizing... the post-Kantian monstrosities” and “the delirious fantasies” crowned by “a *Hegel* “. The

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latter used a “Hegel jargon” and spread the “Hegel pestilence” by means of his “method which was unscientific even in form” and by his ‘crudities”.

The natural scientists fare no better, but as only Darwin is cited by name, we must confine ourselves to him:

“Darwinian semi-poetry and dexterity in metamorphosis, with its gross-minded narrowness of comprehension and blunted sense of differentiation.... In our view what is specific to Darwinism, from which of course the Lamarckian elements must be excluded, is a *piece of brutality directed against humanity*.”

But the socialists come off worst of all. With the exception at most of Louis Blanc – the most insignificant of them all – they are sinners, all and sundry, and they fall short of the reputation they should have before (or behind) Herr Dühring. And not only in regard to truth and scientific approach – no, also in regard to their character. Except for Babeuf and a few of the Communards of 1871, not a single one of them is a “man”. The three Utopians are called “social alchemists”. As for them, a certain indulgence is shown in the treatment of Saint-Simon, in so far as he is merely charged with “mental queerness”, and there is a charitable insinuation that he suffered from religious mania. With Fourier, however, Herr Dühring completely loses patience. For Fourier

“revealed every element of insanity... ideas which one would normally have most expected to find in madhouses... the wildest dreams... products of insanity... the unspeakably silly Fourier”, “this childish mind”, this “idiot”, is withal not even a socialist; his phalanstery²⁰ has not the least bit of rational socialism in it but is “a misshapen edifice on the pattern of everyday commerce”.

Finally:

“Anyone who does not find these effusions” (of Fourier’s, about Newton) “sufficient to convince him that it is only the first syllable in Fourier’s name and in the whole of Fourierism” (*fou* = crazy) “that has any truth in it, should *himself be classed under some category of idiot*.”

Lastly, Robert Owen

“had feeble and paltry ideas... his reasoning, so crude in its ethics... a few commonplaces which degenerated into perversions... nonsensical and crude way of looking at things.... Owen’s range of ideas is hardly worth subjecting to more serious criticism... his vanity” – and so on.

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Herr Dühring characterizes the Utopians according to their names with devastating wit: Saint-Simon – *saint* (holy); Fourier – *fou* (crazy); Enfantin – *enfant* (childish); he only need add: Owen – o woe! and a whole important period in the history of socialism has been condemned – in four words, too, and anyone who has any doubts about it “should himself be classed under some category of idiot”.

As for Dühring’s opinions on the later socialists, for the sake of brevity we will only cite those on Lassalle and Marx:

Lassalle : “Pedantic, hair-splitting efforts at popularization... rampant scholasticism... a monstrous hash of general theories and paltry trash... senseless and formless Hegel-superstition... a horrifying example... peculiarly limited... pompousness combined with the most pettifogging trifles... our Jewish hero... pamphleteer... vulgar... inherent instability in his view of life and of the world.”

Marx : “Narrowness of conception... his works and achievements in and by themselves, that is, regarded from a purely theoretical standpoint, are without any permanent significance in our domain” (the critical history of socialism), “and in the general history of intellectual tendencies they are to be cited at most as symptoms of the influence of one branch of modern sectarian scholastics... impotence of the faculties of concentration and organization... deformity of thought and style, undignified affectation of language... Anglicized vanity... duping... barren conceptions which in fact are only bastards of historical and logical fantasy... deceptive twisting... personal vanity... scurrilous ways... scurvy... buffoonery passing for wit... Chinese erudition... philosophical and scientific backwardness.”

And so on and so forth – for this too is only a small bouquet superficially culled from the Dühring rose garden. It must be understood that, at the moment, we are not in the least concerned whether these amiable expressions of abuse, which, if he had any education, should forbid Herr Dühring from finding *anything* scurrilous and scurvy, are also final and ultimate truths. For the moment we will guard against voicing any doubt about their deep-rootedness, as we might otherwise be prohibited from trying to find out the category of idiot to which we belong. We only thought it was our duty, on the one hand, to give an example of what Herr Dühring calls

“the select language of the considerate and, in the real sense of the word moderate mode of expression”,

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and on the other, to make it clear that to Herr Dühring the worthlessness of his predecessors is no less established a fact than his own infallibility. Whereupon we sink to the ground in deepest reverence before the mightiest genius of all time – if that is how things really stand.

PART I

PHILOSOPHY

III

CLASSIFICATION. APRIORISM

According to Herr Dühring, philosophy is the development of the highest form of consciousness of the world and of life, and in a wider sense embraces the *principles* of all knowledge and volition. Wherever a series of cognitions or stimuli or a group of forms of being come to be examined by human consciousness, the *principles* of these configurations are necessarily the object of philosophy. These principles are the simple, or the hitherto supposedly simple, constituents of which the manifold of knowledge and volition is composed. Like the chemical composition of bodies, the general constitution of things can also be reduced to basic forms and basic elements. These ultimate constituents or principles, once they have been discovered are valid not only for the immediately known and accessible, but also for the world which is unknown and inaccessible to us. Philosophical principles consequently provide the final complement required by the sciences in order to become a uniform system by which nature and human life can be explained. Apart from the fundamental forms of all existence, properly speaking, philosophy has only two subjects for investigation – nature and the world of man. Thus we find our material *quite spontaneously* arranged in three groups, namely, the general schematism of the universe, the science of the principles of nature, and finally the science of mankind. At the same time, this succession contains *an inner logical sequence*, for the formal principles which are valid for all being take precedence, and the objective realms to which they are *to be applied* then follow in the degree of their subordination.

So far Herr Dühring, and almost entirely word for word.

What he is dealing with are therefore *principles*, formal basic principles derived from *thought* and not from the external world, which are to be applied to nature and the realm of man, and to which therefore nature and man have to conform. But whence does thought obtain these principles? From itself? No, for Herr Dühring himself says the realm of pure thought is limited to logical schemata and mathematical forms (the latter is wrong, as we shall see). Logical schemata can only relate to *forms of thought* ; but what we are dealing with here are only forms of *being*, of the external world, and

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these forms can never be created and derived by thought out of itself, but only from the external world. But with this the whole relationship is inverted: the principles are not the starting point of the investigation, but its final result; they are not applied to nature and human history, but abstracted from them; it is not nature and the realm of humanity which conform to these principles, but the principles are only valid in so far as they are in conformity with nature and history. That is the only materialist conception of the question, and Herr Dühring's contrary conception is idealistic, makes things stand completely on their heads, and fashions the real world out of the Idea, out of schemata, schemes or categories existing somewhere prior to the world, from eternity, just like – a *Hegel*.

In fact, let us compare Hegel's *Encyclopaedia* and all its delirious fantasies with Herr Dühring's final and ultimate truths. With Herr Dühring we have in the first place general world schematism, which Hegel calls *Logic*. Then with both of them we have the application of these schemata or logical categories to nature, the philosophy of nature; and finally their application to the realm of man, which Hegel calls the philosophy of mind. The "inner logical sequence" of the Dühring succession therefore leads us "quite spontaneously" back to Hegel's *Encyclopaedia*, from which it has been taken with a fidelity which would bring tears to the eyes of that wandering Jew of the Hegelian school, Professor Michelet of Berlin.

That is what comes of accepting "consciousness", "thought", quite naturalistically as something given, something opposed to being, to nature, from the outset. If this were so, it must seem most odd that consciousness and nature, thinking and being, the laws of thought and the laws of nature, should so closely correspond. But if we then ask what thought and consciousness are and whence they come, we find that they are products of the human brain and that man himself is a product of nature, who has developed in and along with his environment; whence it is self-evident that the products of the human brain, which in the last analysis are also products of nature, do not contradict the rest of nature's interconnections but correspond to them.²¹

But Herr Dühring cannot permit himself such a simple treatment of the subject. He thinks not only in the name of humanity – in itself no small achievement – but in the name of conscious and reasoning beings on all celestial bodies.

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Indeed, it would be “a degradation of the basic forms of consciousness and knowledge to attempt to rule out or even to put under suspicion their sovereign validity and their unconditional claim to truth by applying the epithet ‘human’ to them”.

Hence, in order that no suspicion may arise that twice two may make five on some celestial body or other, Herr Dühring cannot designate thought as human, and so he has to cut it off from the only real foundation on which we find it, namely, man and nature; and with that he tumbles hopelessly into an ideology which reveals him as the epigone of the “epigone”, Hegel. In passing, we shall often meet Herr Dühring again on other celestial bodies.

It goes without saying that no materialist doctrine can be founded on such an ideological basis. We shall see later that Herr Dühring is forced more than once to endow nature with conscious activity, with, therefore, what in plain language is called God.

But our philosopher of reality also had other motives for shifting the basis of all reality from the real world to the world of thought. The science of this general world schematism, of these formal basic principles of being, is indeed precisely the foundation of Herr Dühring’s philosophy. If we deduce this world schematism not from our minds, but only *through* our minds from the real world, if we deduce the basic principles of being from what is, we need no philosophy for this purpose, but positive knowledge of the world and of what happens in it; and what this yields is not philosophy either, but positive science. But in that case Herr Dühring’s whole volume would be nothing but love’s labour lost.

Further, if no philosophy as such is needed any longer, then no system, not even a natural system of philosophy, is needed any longer either. The recognition of the fact that all the processes of nature are systematically interconnected drives science on to prove this systematic interconnection throughout, both in general and in detail. But an adequate, exhaustive scientific exposition of this interconnection, the formation of an exact mental image of the world system in which we live, remains impossible for us, as it does for all times. If at any epoch in the development of mankind such a final, definitive system of the interconnections within the world – physical as well as mental and historical – were constructed, this would mean that the realm of human knowledge had reached its limit, and that further historical development would be cut short from the moment when society had been brought into accord with that system – which would be an absurdity, pure nonsense. Mankind there-

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fore finds itself faced with a contradiction: on the one hand, it has to gain an exhaustive knowledge of the world system in all its interconnections, and on the other hand, this task can never be completely fulfilled because of the nature both of men and of the world system. But this contradiction not only lies in the nature of the two factors – the world and man – it is also the main lever of all intellectual advance, and constantly finds its solution, day by day, in the endless progressive development of humanity, just as for example mathematical problems find their solution in an infinite series or continued fractions. Actually, each mental image of the world system is and remains limited, objectively by the historical situation and subjectively by its author's physical and mental constitution. But Herr Dühring explains in advance that his mode of reasoning is such that it excludes any disposition to take a subjectively limited view of the world. We saw above that he was omnipresent – on all possible celestial bodies. We now see that he is omniscient, too. He has solved the ultimate problems of science and so nailed boards across the future of all science.

As with the basic forms of being, so also Herr Dühring thinks he can produce out of his head the whole of pure mathematics a priori, that is, without making use of the experiences offered us by the external world.

In pure mathematics, in his view, the mind deals “with its own free creations and imaginations”; the concepts of number and form are “its adequate object, which it itself creates”, hence mathematics has “a validity which is independent of *particular* experience and of the real content of the world”.

To be sure, it is correct that pure mathematics has a validity which is independent of the *particular* experience of each individual, and this is true of all established facts in every science and indeed of all facts whatsoever. The magnetic poles, the fact that water is composed of hydrogen and oxygen, the fact that Hegel is dead and that Herr Dühring is alive, are valid independently of my own experience or of that of any other individual, and even independently of Herr Dühring's experience, when he begins to sleep the sleep of the just. But it is not at all true that in pure mathematics the mind deals only with its own creations and imaginations. The concepts of number and form have been derived from no source other than the world of reality. The ten fingers on which men learnt to count, that is, to carry out the first arithmetical operation, are anything but a free creation of the mind. Counting requires not only objects that

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can be counted, but also the ability to abstract from all properties of the objects being considered except their number – and this ability is the product of a long historical development based on experience. Like the concept of number, so the concept of form is derived exclusively from the external world and does not arise in the mind as a product of pure thought. There must have been things which had shape and whose shapes were compared before anyone could arrive at the concept of form. Pure mathematics deals with the spatial forms and quantitative relations of the real world – that is, with material which is very real indeed. The fact that this material appears in an extremely abstract form can only superficially conceal its origin in the external world. But in order to make it possible to investigate these forms and relations in their pure state, it is necessary to separate them entirely from their content, to put the content aside as irrelevant; hence we get points without dimensions, lines without breadth and thickness, a 's and b 's and x 's and y 's, constants and variables, and only at the very end do we for the first time reach the mind's own free creations and imaginations, that is to say, imaginary magnitudes. Even the apparent derivation of mathematical magnitudes from each other does not prove their *a priori* origin, but only their rational interconnection. Before the idea was arrived at of deducing the *form* of a cylinder from the rotation of a rectangle about one of its sides, a number of real rectangles and cylinders, in however imperfect a form, must have been examined. Like all other sciences, mathematics arose out of the *needs* of men, from the measurement of land and of the content of vessels, from the computation of time and from mechanics. But, as in every department of thought, at a certain stage of development the laws abstracted from the real world become divorced from the real world and are set over against it as something independent, as laws coming from outside, to which the world has to conform. This is how things happened in society and the state, and in this way, and not otherwise, *pure* mathematics is subsequently *applied* to the world, although it is borrowed from this same world and represents only one part of its forms of interconnection – and it is precisely *only because of this* that it can be applied at all.

But just as Herr Dühring imagines that he can deduce the whole of pure mathematics without any empirical ingredients out of the axioms of mathematics, which “in accordance with pure logic are neither capable nor in need of proof”, and then apply it to the world, so he imagines that he can first produce out of his head the basic forms of being, the simple elements of all knowledge, the axioms of

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philosophy, that he can deduce the whole of philosophy or the world schematism from them, and then, by sovereign decree, impose this constitution of his on nature and humanity. Unfortunately nature is not at all, and humanity only to an infinitesimal degree, composed of Manteuffel's Prussians of 1850.²²

Mathematical axioms are expressions of the scantiest thought content, which mathematics is obliged to borrow from logic. They can be reduced to two.

1) The whole is greater than the part. This statement is a pure tautology, as the quantitatively conceived idea "part" is in advance related to the idea "whole" in a definite way, and particularly in such a way that "part" announces without further ado that the quantitative "whole" consists of several quantitative "parts". In stating this explicitly, the so-called axiom does not take us a step further. This tautology can to a certain degree even be *proved* by saying: a whole is that which consists of many parts; a part is that of which many make a whole, therefore the part is less than the whole – in which the emptiness of repetition brings out even more clearly the emptiness of content.

2) If two magnitudes are equal to a third, then they are equal to one another. This statement, as Hegel has already shown, is a conclusion, the correctness of which is guaranteed by logic, and which is therefore proved, although outside of pure mathematics.²³ The remaining axioms relating to equality and inequality are merely logical extensions of this conclusion.

These meagre principles could not cut much ice, either in mathematics or anywhere else. In order to get any further, we are obliged to import real relations, relations and spatial forms which are taken from real bodies. The ideas of lines, planes, angles, polygons, cubes, spheres, etc., are all taken from reality, and it requires a pretty good portion of naive ideology to believe the mathematicians – that the first line came into existence through the movement of a point in space, the first plane through the movement of a line, the first solid through the movement of a plane, and so on. Even language rebels against such a conception. A mathematical figure of three dimensions is called a solid body, *corpus solidum*, hence even in Latin, a tangible object; it therefore has a name derived from sturdy reality and not at all from the free imagination of the mind.

But why all this prolixity? After Herr Dühring has enthusiastically sung the independence of pure mathematics from the world of experience, its *a priori* nature, its preoccupation with its own free

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mental creations and imaginations of the mind on pages 42 and 43, he says on page 63:²⁴

“It is, of course, easy to overlook that these mathematical elements” (number, magnitude, time, space and geometric motion) “are *ideal only in their form... absolute magnitudes* are therefore something completely *empirical*, no matter to what species they belong”, but “mathematical schemata are capable of being described in a way which is adequate even though *divorced* from actual experience”.

This last statement is more or less true of every abstraction, but in no way proves that it is not abstracted from reality. In the world schematism pure mathematics arose out of pure thought – in the philosophy of nature it is something completely empirical, taken from the external world and then divorced from it. Which are we to believe?

IV

WORLD SCHEMATISM

“All-embracing being is *one*. In its self-sufficiency it has nothing alongside of it or over it. To associate a second being with it would be to make it something that it is not, namely, a part or constituent of a more comprehensive whole. Since we extend our *undivided* thought like a framework, nothing that should be comprised in this *unity* of thought can contain a duality within itself. Nor again can anything escape this unity of thought.... The essence of all thinking consists in the union of the elements of consciousness into a unity.... It is the point of unity of the synthesis which gave rise to the *indivisible concept of the world*, and the universe, as the name itself implies, is apprehended as something in which everything is united into a *unity*.”

Thus far Herr Dühring. This is the first example of the application of the mathematical method:

“Every question is to be decided axiomatically in accordance with simple basic forms, as if simple... basic principles of mathematics were being dealt with.”

“All-embracing being is one.” If tautology, the simple repetition in the predicate of what is already expressed in the subject – if that makes an axiom, then we have one of the purest water here. Herr Dühring tells us in the subject that being embraces everything,

and he intrepidly declares in the predicate that in that case there is nothing outside it. What colossal “system-creating thought”!

System-creating indeed! Within the space of the next six lines, Herr Dühring has transformed the *oneness* of being, by means of our undivided thought, into its *unity*. As the essence of all thinking consists in bringing things together into a unity, so being, as soon as it is conceived, is conceived as undivided, and the concept of the world as indivisible, and because being *as conceived*, the *concept of the world*, is undivided, therefore real being, the real universe, is also an indivisible unity. Thus

“there is no longer any room for things beyond, once the mind has learnt to conceive being in its homogeneous universality”.

Here is a campaign which puts Austerlitz and Jena, Königgratz and Sedan completely in the shade.²⁵ In a few sentences, hardly a page after we have mobilized the first axiom, we have already abolished, eliminated, annihilated, everything beyond the world – God and the heavenly hosts, heaven, hell and purgatory, along with the immortality of the soul.

How do we get from the oneness of being to its unity? By the very act of conceiving it. In so far as we spread our undivided thought around being like a frame, individual being becomes undivided, a unity of thought; for the essence of *all* thinking consists in bringing together the elements of consciousness into a unity.

This last statement is simply untrue. In the first place, thinking consists just as much in the splitting up of objects of consciousness into their elements as in the union of related elements into a unity. Without analysis, no synthesis. Secondly, without committing blunders thinking can bring together into a unity only those elements of consciousness in which or in whose real prototypes this unity *already existed before*. If I include a shoe brush in the unity of mammals, this does not help it to get mammary glands. The unity of being, or rather, the legitimacy of its conception as a unity, is therefore precisely what was to be proved, and when Herr Dühring assures us that he conceives being as undivided and not perchance as a duality, he tells us nothing more than his own humble opinion.

If we try to state his process of thought in unalloyed form, we get the following: ‘I begin with being. I therefore conceive being. The thought of being is undivided. But thinking and being must be in agreement, they correspond to each other, they ‘coincide’. Therefore being is undivided in reality also. Therefore there cannot be anything ‘beyond’.’ But if Herr Dühring had spoken openly in this

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way, instead of treating us to the above-cited oracular passages, the ideology would have been clearly visible. To attempt to prove the reality of any product of thinking by the identity of thinking and being, that was indeed one of the wildest delirious fantasies of – a Hegel.

Even if his whole method of proof had been correct, Herr Dühring would still not have won an inch of ground from the spiritualists. The latter would reply briefly: to us, too, the universe *is* simple; the cleavage between the here below and the beyond exists only from our specifically earthly standpoint which is imbued with original sin; in and for itself, that is in God, all being is a unity. And they would accompany Herr Dühring to his other beloved celestial bodies and show him one or more on which there had been no original sin, where therefore no opposition exists between the here below and the beyond, and where the unity of the universe is a requirement of faith.

The most comical part of the business is that Herr Dühring uses the ontological proof for the existence of God in order to prove the non-existence of God from the concept of being. This runs: when we think of God, we conceive him as the sum total of all perfections. But the sum total of all perfections includes existence above all, since a non-existent being is necessarily imperfect. We must therefore include existence among the perfections of God. Therefore God must exist. Herr Dühring reasons in exactly the same way: if we think of being, we think of it as *one* concept. Whatever is included in *one* concept is undivided. Being would not correspond to the concept of being if it were not undivided. Therefore it must be undivided. Therefore there is no God, and so on.

When we speak of being, and purely of being, unity can only consist in this, that all the objects to which we are referring – *are*, exist. They are included in the unity of this being, and in no other unity, and the general statement that they all *are* not only cannot give them any additional qualities, whether common or not, but for the time being excludes all such qualities from consideration. For as soon as we stray even a millimetre from the simple basic fact that being is common to all these things, the *differences* between these things begin to emerge before our eyes, and we cannot decide from the fact that mere existence is in equal manner ascribed to them all whether these differences consist in some being white and the others black, some being animate and the others inanimate, some being perhaps here below and the others perhaps beyond.

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The unity of the world does not consist in its being, although its being is a precondition of its unity, since it must surely first *be* before it can be *one*. Indeed, being is always an open question beyond the point where our sphere of observation ends. The real unity of the world consists in its materiality, and this is proved not by a few juggling phrases, but by a long and laborious development of philosophy and natural science.

To return to the text. The *being* which Herr Dühring is telling us about is

“not that pure being which is self-identical, lacks all special determinations, and in fact represents only the counterpart of the thought of *nothing* or of the absence of thought”.

But we shall see very soon that Herr Dühring’s universe starts with a being which lacks all internal differentiation, all motion and change, and is therefore in fact only a counterpart of the thought of nothing, and is therefore really nothing. Only out of this *being-nothing* does the present differentiated, variable state of the world develop, representing a development, a *becoming*; and only after we have grasped this are we able “to hold fast to the concept of universal self-identical being”, even within this perpetual variation.

Thus we now have the concept of being at a higher plane, where it includes in itself both constancy and change, both being and becoming. Having reached this point, we find that

“genus and species, or generally speaking the general and the particular are the simplest means of differentiation, without which the constitution of things cannot be understood”.

But these are means of differentiation of quality; and after these have been dealt with, we proceed:

“The concept of magnitude stands in opposition to genus as that homogeneity in which no further differences of kind exist”;

and so from quality we pass to *quantity*, and this is always “*measurable*”.

Let us now compare this “acute sifting of these general schemata of effects” and its “genuinely critical standpoint” with the crudities, ravings and delirious fantasies of a Hegel. We find that Hegel’s logic starts from *being* – as with Herr Dühring; that being turns out to be *nothing*, as with Herr Dühring; that from this being-nothing there is a transition to *becoming*, the result of which is determinate being (*Dasein*), i.e., a higher, more replete form of being (*Sein*) –

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just as with Herr Dühring. Determinate being leads on to *quality*, and quality on to *quantity* – just as with Herr Dühring. And so that no essential feature may be missing, Herr Dühring tells us on another occasion:

“From the realm of non-sensation man enters that of sensation, in spite of all quantitative gradualness, only through a *qualitative leap*, of which we can say that it is infinitely different from the mere gradation of one and the same quality.”

This is precisely the Hegelian nodal line of measure relations, in which, at certain definite nodal points, the purely quantitative increase or decrease gives rise to a *qualitative leap*; for example, in the case of water which is heated or cooled, where boiling-point and freezing-point are the nodes at which – under normal pressure – the transition to a new state of aggregation takes place, where therefore quantity changes into quality.

Our investigation has likewise tried to reach down to the roots, and it finds the roots of Herr Dühring’s deep-rooted basic schemata to be – the “delirious fantasies” of a Hegel, the Categories of Hegel’s *Logic*, Part I, the Doctrine of Being, in strictly old-Hegelian “succession” and with hardly any attempt to cloak the plagiarism!

Not content with pilfering from his worst-slandered predecessor the latter’s whole scheme of being, Herr Dühring, after he himself has given the above example of the sudden leap from quantity into quality, has the effrontery to say of Marx:

“How ridiculous, for example, is the reference” (Marx’s) “to Hegel’s *confused and nebulous notion that quality changes into quantity!*”

Confused and nebulous notion! Who has changed here, and who is ridiculous here, Herr Dühring?

Thus all these pretty knicknacks are not only not “axiomatically decided” as prescribed, but are merely imported from outside, that is to say, from Hegel’s *Logic*. And in such a form that in the whole chapter there is not even the semblance of any internal coherence except in so far as it is borrowed from Hegel, and that it all finally trickles out in empty logic-chopping about space and time, constancy and change.

From being Hegel passes to essence, to dialectics. Here he is dealing with the determinations of reflections, their internal *opposites* and contradictions, as for example, positive and negative; he then comes to *causality* or the relation of cause and effect, and ends with *necessity*. Not otherwise Herr Dühring. What Hegel calls the

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doctrine of essence Herr Dühring translates into “logical properties of being”. But these consist above all of the “antagonism of forces”, of *opposites*. On the other hand, Herr Dühring absolutely denies contradiction; we will return to this topic later. Then he passes over to *causality*, and from this to *necessity*. Therefore, when Herr Dühring says of himself, “We, who do not philosophize *out of a cage*,” he apparently means that he philosophizes *in a cage*, namely, the cage of the Hegelian schema of categories.

V

NATURAL PHILOSOPHY. TIME AND SPACE

We now come to *natural philosophy*. Here again Herr Dühring has every cause for dissatisfaction with his predecessors.

Natural philosophy “sank so low that it became a chaotic doggerel founded on ignorance”, and “fell to the lot of the prostituted philosophistics of a Schelling and others of that ilk rummaging in the priesthood of the Absolute and hoodwinking the public”. Fatigue has saved us from these “deformities”, but up to now it has only given place to “instability”; “and as far as the public at large is concerned, it is well known that the disappearance of a great charlatan is often only the opportunity for a lesser but commercially more experienced successor to put out the products of his predecessor under another sign-board again”. Natural scientists themselves feel little “inclination to make excursions into the realm of world-encompassing ideas”, and consequently jump to “incoherent and hasty conclusions” in the theoretical sphere.

The need for deliverance is therefore urgent, and by a stroke of good luck Herr Dühring is at hand.

In order correctly to appreciate the revelations which now follow on the development of the world in time and its limitation in space, we must turn back again to certain passages in *World Schematism*.

Infinity – which Hegel calls bad infinity – is attributed to being, also in accordance with Hegel (*Encyclopaedia* §93),²⁶ and then this infinity is investigated.

“The clearest form of an infinity which can be conceived *without contradiction* is the unlimited accumulation of numbers in a numerical series.... Just as we can add yet another unit to any number without ever exhausting the possibility of further numbers, so also a further state

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aligns itself to every state of being, and infinity consists in the unlimited begetting of these states. This *exactly conceived* infinity has consequently only one single basic form with one single direction. For although it is immaterial to our thinking whether or not it conceives an opposite direction in the accumulation of states, this retrogressing infinity is nevertheless only a rash mental product. Indeed, since in reality this infinity would have to be traversed in the *reverse* direction, in each of its states it would have an infinite succession of numbers behind it. But this would involve the impermissible contradiction of a counted infinite numerical series, and so it turns out to be contrary to reason to postulate any second direction in infinity.”

The first conclusion drawn from this conception of infinity is that the chain of causes and effects in the world must at some time have had a beginning:

“an infinite number of causes which should have already fallen into line one behind the other is inconceivable, just because it presupposes that the uncountable has been counted.”

Thus a *final cause* is proved.

The second conclusion is

“the Law of Determinate Number: the accumulation of identities of any actual species of independent things is only conceivable as forming a determinate number”. Not only must the number of celestial bodies existing at any point of time be in itself determinate, the total number of all the tiniest independent particles of matter existing in the universe must also be determinate. This latter requisite is the real reason why no combination can be conceived without atoms. Every actual state of being divided invariably has a finite determinateness, and must do so if the contradiction of the counted uncountable is to be avoided. For the same reason, not only must the number of the earth’s revolutions round the sun up to the present time be finite though unstatable, but all periodical processes of nature must have had some beginning, and all differentiation, all the successive manifold elements of nature must have their roots in one *self-identical state*. This state may have existed from eternity without contradiction; but even this idea would be excluded if time in itself were composed of real parts instead of being merely arbitrarily divided up by our minds through the positioning of possibilities. The case is quite different with the real and intrinsically differentiated content of time; this real filling of time with differentiable facts of a certain kind and the forms of being of this sphere are countable precisely because of their differentiation. If we imagine a state in which no

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change occurs and which in its self-identity offers no differences whatever in the order of succession, the more specialized idea of time is transformed into the more general idea of being. What the accumulation of empty duration would mean is quite unimaginable."

Thus far Herr Dühring, and he is not a little edified by the significance of these discoveries. At first he hopes that they will "at least not be regarded as paltry truths"; but later we find:

"If the *extremely simple* methods by which *we* helped procure a *hitherto unknown scope* for the concepts of infinity and their critique are recalled... the elements of the universal conception of space and time, which have been given so *simple* a form by their present sharpening and deepening."

We helped! Their present deepening and sharpening! Who are "we", and what time is our "present"? Who is deepening and sharpening?

"Thesis: The world has a beginning in time, and is also limited as regards space.

"Proof: If we assume that the world has no beginning in time, then up to every given moment an eternity has elapsed, and there has passed away in the world an infinite series of successive states of things. Now the infinity of a series consists in the fact that it can never be completed through successive synthesis. It thus follows that it is impossible for an infinite world-series to have passed away, and that a beginning of the world is therefore a necessary condition of the world's existence. This was the first point that called for proof.

"As regards the second point, let us again assume the opposite, namely, that the world is an infinite given whole of co-existing things. Now the magnitude of a quantum which is not given in intuition as within certain limits, can be thought only through the synthesis of its parts, and the totality of such a quantum only through a synthesis that is brought to completion through repeated addition of unit to unit. In order, therefore, to think, as a whole, the world which fills all spaces, the successive synthesis of the parts of an infinite world must be viewed as completed, that is, an infinite time must be viewed as having elapsed in the enumeration of all co-existing things. This, however, is impossible. An infinite aggregate of actual things cannot therefore be viewed as a given whole, nor consequently as *simultaneously* given. The world is, therefore, as regards extension in space, not infinite, but is enclosed within limits. This was the second point in dispute."

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These sentences are copied word for word from a celebrated book which first appeared in 1781 and is called *Critique of Pure Reason*, by *Immanuel Kant*, where all and sundry can read them in the first part, Second Division, Book II, Chapter II, Section II: The First Antinomy of Pure Reason.²⁷ So that Herr Dühring's fame rests solely on his having tacked on the title – Law of Determinate Number – to an idea expressed by Kant, and on having made the discovery that there was once a time when as yet there was no time, though there was a world. As for all the rest, that is, anything at all meaningful in Herr Dühring's exegesis, “we” – is Immanuel Kant, and the “present” is only ninety-five years ago. Certainly “extremely simple”! Remarkable “hitherto unknown scope”!

But Kant makes absolutely no claim that the above propositions are established by his proof. On the contrary; he states and proves the opposite in a parallel column: that the world has no beginning in time and no end in space; and it is precisely in this that he places the antinomy, the insoluble contradiction, that the one is just as demonstrable as the other. People of smaller calibre might perhaps feel a little doubt here on account of “a Kant” having found an insoluble difficulty. But not our valiant fabricator of “fundamentally original conclusions and views”; he cheerfully copies down as much of Kant's antinomy as suits his purpose and throws the rest aside.

The problem itself has a very simple solution. Eternity in time, infinity in space, signify from the start, and in the simple meaning of the words, that there is no end in *any* direction, neither forwards nor backwards, upwards or downwards, to the right or to the left. This infinity is something quite different from that of an infinite series, for the latter always starts from one, with a first term. The inapplicability of this idea of a series to our object becomes clear directly we apply it to space. The infinite series, transferred to the sphere of space, is the line drawn from a definite point in a definite direction to infinity. Is the infinity of space expressed in this even in the remotest way? On the contrary, it requires at least six lines drawn from this one point in three opposite directions to conceive the dimensions of space; and consequently we would have six of these dimensions. Kant saw this so clearly that he transferred his numerical series only indirectly, in a roundabout way, to the spatiality of the world. Herr Dühring, on the other hand, compels us to accept six dimensions in space, and immediately afterwards can find no words adequate to express his indignation at the mathematical mysticism of Gauss, who would not rest content with the usual three dimensions of space.

As applied to time, the line or series of units which is infinite in both directions has a certain metaphorical meaning. But if we think of time as a series counted from *one* forward, or as a line starting from a definite *point*, we imply in advance that time has a beginning: we assume precisely what we are to prove. We give the infinity of time a one-sided, halved character; but a one-sided, halved infinity is also a contradiction in itself, the exact opposite of an “infinity conceived without contradiction”. We can only get past this contradiction if we assume that the one from which we begin to count the series, the point from which we proceed to measure the line, is any one in the series, is any one of the points in the line, and that it is a matter of indifference to the series or to the line where we place them.

But what of the contradiction of “the counted infinite numerical series”? We shall be in a position to examine it more closely as soon as Herr Dühring has performed the clever trick of *counting it* for us. When he has completed the task of counting from $-\infty$ (minus infinity) to 0, let him come again. It is certainly obvious that, wherever he begins to count, he will leave behind him an infinite series and, with it, the task which he has to fulfil. Just let him invert his own infinite series $1 + 2 + 3 + 4 \dots$ and try to count from the infinite end back to 1; it would obviously only be attempted by a man who has not the faintest understanding of what the problem is. Still more. When Herr Dühring asserts that the infinite series of lapsed time has been counted, he is thereby asserting that time has a beginning; for otherwise he would have been unable to start “counting” at all. Once again, therefore, he smuggles into the argument, as a premise, what he has to prove. The idea of an infinite series which has been counted, in other words, the world-encompassing Dühringian Law of Determinate Number, is therefore a *contradiction in adjecto*,* contains within itself a contradiction, and indeed an *absurd* contradiction.

It is clear that an infinity which has an end but no beginning is neither more nor less infinite than one with a beginning but no end. The slightest dialectical insight should have told Herr Dühring that beginning and end necessarily belong together, like the North Pole and the South Pole, and that if the end is left out, the beginning just becomes the end – the one end which the series has; and vice versa. The whole deception would be impossible but for the mathematical usage of working with infinite series. Because in mathematics it is

* A contradiction in terms. – *Ed.*

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necessary to start from determinate, finite terms in order to reach the indeterminate, the infinite, all mathematical series, positive or negative, must start with 1, or they cannot be used for calculation. But the logical need of the mathematician is far from being a compulsory law for the real world.

For that matter, Herr Dühring will never succeed in conceiving real infinity without contradiction. Infinity *is* a contradiction, it is full of contradictions. It is already a contradiction that an infinity is composed of purely finite terms, and yet this is the case. The limited nature of the material world leads no less to contradictions than its unlimited nature, and every attempt to eliminate these contradictions leads, as we have seen, to new and worse contradictions. It is just *because* infinity is a contradiction that it is an infinite process, unrolling endlessly in time and in space. The removal of the contradiction would be the end of infinity. Hegel already understood this quite correctly, and for this reason treated the gentlemen who chop logic over this contradiction with well-merited contempt.

Let us continue. So time had a beginning. What was there before this beginning? The universe, which was then in a self-identical, unchanging state. And as no changes succeed one another in this state, the more specialized idea of time transforms itself into the more general idea of *being*. In the first place, we are not in the least concerned here with what concepts change in Herr Dühring's head. The subject at issue is not the *concept of time*, but *real time*, which Herr Dühring will by no means rid himself of so cheaply. In the second place, however much the concept of time may be converted into the more general idea of being, this takes us not one step further. For the basic forms of all being are space and time, and being out of time is just as gross an absurdity as being out of space. The Hegelian "timelessly past being" and the neo-Schellingian "unpreconceivable being" are rational ideas compared with this being out of time.²⁸ For this reason Herr Dühring sets to work very cautiously; actually it is of course time, but of such a kind as cannot really be called time; time does not in itself consist of real parts, and is only divided up arbitrarily by our understanding – only an actual filling of time with differentiable facts is susceptible of being counted – what the accumulation of empty duration means is quite unimaginable. What this accumulation is supposed to mean is immaterial here; the question is whether the world, in the state assumed here, has duration, passes through a duration in time. We have long known that we can get nothing by measuring such a duration without content, just as we can get nothing by measuring with-

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out aim or purpose in empty space; and Hegel calls this infinity *bad* precisely because of the tedium of this procedure. According to Herr Dühring, time exists only through change, and change does not exist in and through time. Just because time is different from change, is independent, it is possible to measure it by change, for measurement always requires something different from what is to be measured. And time in which no recognizable changes occur is very far removed from *not* being time *at all* ; rather it is *pure* time, untouched by any foreign admixtures, that is, real time, time *as such*. In fact, if we want to grasp the idea of time in all its purity, divorced from all foreign and improper admixtures, we are compelled to put aside, as not being relevant here, all the various events which occur simultaneously or successively in time, and in this way to imagine a time in which nothing happens. In this way, we have not let the concept of time be submerged in the general idea of being, but have for the first time arrived at the pure concept of time.

But all these contradictions and impossibilities are mere child's play compared with the confusion into which Herr Dühring falls with his self-identical initial state of the world. If the world had ever been in a state in which no change whatever was taking place, how could it pass from this state to one of change? The absolutely unchanging, especially when it has been in this state from eternity, cannot possibly get out of such a state by itself and pass over into a state of motion and change. An initial impulse must have therefore come from outside, from outside the universe, an impulse which set it in motion. But as everyone knows, the "initial impulse" is only another expression for God. God and the beyond, which Herr Dühring pretended to have so beautifully unriddled in his world schematism, are both introduced again by him here, sharpened and deepened, into natural philosophy itself.

Further. Herr Dühring says:

"Where magnitude is attributed to a constant element of being, it will remain unchanged in its determinateness. This holds good... of matter and mechanical energy."

The first sentence, it may be noted in passing, is a precious example of Herr Dühring's axiomatic-tautological grandiloquence: where magnitude does not change, it remains the same. Therefore the amount of mechanical energy which once exists in the world remains the same for all eternity.²⁹ We will overlook the fact that, in so far as this is correct, Descartes already knew and said it in philosophy nearly three hundred years ago, that the theory of the con-

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servation of energy has held sway in natural science for the last twenty years; and that in limiting it to *mechanical* energy Herr Dühring in no way improves on it. But where was the mechanical energy at the time of the unchanging state? Herr Dühring obstinately refuses to give us any answer to this question.

Where, Herr Dühring, was the eternally self-identical mechanical energy then, and what did it do?

Answer:

“The original state of the universe, or more plainly, of an unchanging existence of matter which comprised no accumulation of changes in time is a question which can be spurned only by a mind that sees the acme of wisdom in the self-mutilation of its own potency.”

Therefore, either you accept without examination my unchanging original state, or I, the potent Eugen Dühring, certify you as intellectual eunuchs. Of course, that may frighten off a good many people. But we, who have already seen some examples of Herr Dühring’s potency, can permit ourselves to leave this elegant abuse unanswered for the moment, and ask once again: But Herr Dühring, if you please, what about that mechanical energy?

Herr Dühring at once grows embarrassed. In actual fact, he stammers,

“the absolute identity of that initial boundary state does not in itself provide any principle of transition. But we must remember that at bottom the same holds for every new link, however small, in the chain of existence with which we are familiar. Therefore, whoever wants to raise difficulties in the fundamental case now under consideration must take care that he does not allow himself to pass them by on less obvious occasions. Moreover, there is the possibility of interpolating progressively graduated intermediate stages, and thus of keeping open the bridge of continuity in order to arrive at the extinction of the process of change by moving backwards. It is true that purely conceptually this continuity does not help us get beyond the main idea, but for us it is the basic form of all regularity and of every transition which is otherwise known, so that we are entitled to use it also as a mediation between that initial equilibrium and its disturbance. But if we had conceived the so to speak (!) motionless equilibrium on the model of the concepts which are accepted without any particular objection (!) in our present-day mechanics, there would be no way of explaining how matter could have arrived at the process of change.” But apart from the mechanics of masses, there is also, we are told, a transformation of mass movement

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into the movement of extremely small particles, but as to how this takes place – “we have no general principle for this at our disposal up to the present, and consequently we should not be surprised if these processes end somewhat *in the dark*.”

That is all Herr Dühring has to say. In fact, we would have to see the acme of wisdom not only in the self-mutilation of our generative power but also in blind implicit faith, if we allowed ourselves to be put off with these really pitiable and rank subterfuges and circumlocutions. Herr Dühring admits that absolute identity cannot of itself arrive at change. Nor is there any means whereby absolute equilibrium can of itself pass into motion. What is there, then? Three rotten swindles.

Firstly, it is just as difficult to show the transition from each link, however small, in the chain of existence with which we are familiar to the next one. Herr Dühring seems to think his readers are infants. The establishment of individual transitions and connections between the tiniest links in the chain of existence is precisely the content of natural science, and when there is anything amiss at some point, no one, not even Herr Dühring, thinks of explaining prior motion as having arisen out of nothing, but always only out of a transmission, transformation or propagation of some previous motion. But here the issue is admittedly one of accepting motion as having arisen out of immobility, that is, *out of nothing*.

In the second place, we have the “bridge of continuity”. Purely conceptually of course, this does not help us over the difficulty, but all the same we are entitled to *use* it as a mediation between immobility and motion. Unfortunately the continuity of immobility consists in *not* moving; how therefore it is to produce motion remains more mysterious than ever. And however infinitely small the parts into which Herr Dühring minces his transition from non-motion to universal motion and however long the duration he assigns to it, we have not got a ten-thousandth of a millimetre further. Without an act of creation we can never get from nothing to something, even if the something were as small as a mathematical differential. The bridge of continuity is therefore not even an asses’ bridge;* it is passable only for Herr Dühring.

* In the original a play on words: *Eselsbrücke* (asses’ bridge) also means a translation or key used as an unauthorized aid by lazy students.
– *Ed.*

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Thirdly, so long as present-day mechanics holds good – and according to Herr Dühring it is one of the most essential levers for the formation of thought – it is absolutely impossible to explain the passage from immobility to motion. But the mechanical theory of heat shows us that the movement of masses under certain conditions changes into molecular movement (although here too one motion originates from another motion, but never from immobility); and this, Herr Dühring shyly suggests, may possibly furnish a bridge between the strictly static (in equilibrium) and dynamic (in motion). But these processes take place “somewhat in the dark”. And that’s where Herr Dühring leaves us – in the dark.

This is the point we have reached with all his deepening and sharpening – that we have perpetually gone more deeply into ever sharper nonsense, and finally land up where we were bound to land up – “in the dark”. But this does not abash Herr Dühring much. Right on the next page he has the effrontery to declare that he has

“been able to provide a real content for the idea of self-identical inertia directly from the behaviour of matter and *mechanical forces*”.

And this man describes other people as “charlatans”!

Fortunately, with all this helpless wandering and confusion “in the dark”, we are left with one consolation, and this is certainly edifying to the soul:

“The mathematics of the inhabitants of other celestial bodies can rest on no other axioms than our own!”

VI

NATURAL PHILOSOPHY. COSMOGONY, PHYSICS, CHEMISTRY

Continuing, we come now to the theories concerning the manner in which the present world came into existence.

A state of universal dispersion of matter, we are told, was the point of departure of the Ionic philosophers, but particularly from the time of Kant, the assumption of a primordial nebula played a new role, gravitation and the radiation of heat having been instrumental in the gradual formation of separate solid celestial bodies. The contemporary mechanical theory of heat makes it possible to give conclusions about the earlier states of the universe a far more definite form. However, “the state of gaseous dispersion can be a starting-point for serious deductions only

when it is possible more definitely to characterize beforehand the mechanical system given in it. Otherwise, not only does the idea remain extremely nebulous, but also the original fog really grows increasingly dense and impenetrable as the deductions progress;... meanwhile it all remains in the vagueness and formlessness of an idea of diffusion that cannot be more closely determined”, and so “this gaseous universe only” provides us with “an extremely airy conception”.

The Kantian theory of the origin of all existing celestial bodies from rotating nebular masses was the greatest advance made by astronomy since Copernicus. For the first time the idea that nature had no history in time began to be shaken. Until then the celestial bodies were believed to have remained in the same permanent orbits and states from the beginning; and even though individual organisms on particular celestial bodies died out, genera and species were nevertheless held to be immutable. It is true that nature was conceived as obviously being in constant motion, but this motion appeared as the incessant repetition of the same processes. Kant made the first breach in this conception, which corresponded exactly to the metaphysical mode of thought, and indeed he did it so scientifically that most of the proofs furnished by him still hold good today. At the same time, the Kantian theory is, strictly speaking, still only a hypothesis. But the Copernican world system, too, is still no more than this,* and since the irrefutable spectroscopic proof of the existence of such red hot gaseous masses in the starry heavens, the scientific opposition to Kant's theory has been silenced. Even Herr Dühring cannot complete his construction of the world without such a nebular stage, but takes his revenge by demanding to be shown the mechanical system existing in this nebular stage, and because no one can do so, he applies all kinds of depreciatory epithets to this nebular stage of the universe. It is a pity contemporary science cannot

* In *Ludwig Feuerbach and the End of Classical German Philosophy* (1888) Engels said of the Copernican system: “For three hundred years the Copernican solar system was a hypothesis with a hundred, a thousand or ten thousand chances to one in its favour, but still always a hypothesis. But when Leverrier, by means of the data provided by this system, not only deduced the necessity of the existence of an unknown planet, but also calculated the position in the heavens which this planet must necessarily occupy, and when Galle really found this planet, the Copernican system was proved.”³⁰ See Marx and Engels, *Selected Works*, Moscow, 1958, Vol. II, p. 336. – *Ed.*

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describe this system to Herr Dühring's satisfaction. It can just as little answer many other questions. To the question, why do toads have no tails? – to this day it can only answer, because they have lost them. But should anyone get excited over that and say that this is to leave the whole question in the vagueness and formlessness of an idea of loss which cannot be determined more closely and that it is an extremely airy conception, such an application of morals to natural science does not take us one step further. Such expressions of dislike and bad temper can be used always and everywhere, and for that very reason they should never be used anywhere. After all, who is stopping Herr Dühring from discovering the mechanical system of the primordial nebula himself?

Fortunately we now learn that the Kantian nebular mass

“is fat from coinciding with a completely identical state of the world medium, or, to put it another way, with the self-identical state of matter”.

It was really fortunate for Kant that he could be content with going back from the existing celestial bodies to the nebular ball, and that he did not even dream of the self-identical state of matter! It may be remarked in passing that when contemporary natural science describes the Kantian nebular ball as a primordial nebula, it is self-evident that this is only to be understood in a relative sense. It is a primordial nebula, on the one hand, because it is the origin of the existing celestial bodies, and on the other, because it is the earliest form of matter which up to now we have been able to work back to. This certainly does not exclude but rather implies the supposition that matter passed through an infinite series of other forms before the nebular stage.

Herr Dühring sees his advantage here. Where we stop for the time being in the company of science at the provisional primordial nebula, his science of sciences helps him much further back to that

“state of the world medium which cannot be understood either as purely static in the present meaning of the idea, or as dynamic”

– which therefore cannot be understood at all.

“The unity of matter and mechanical energy which we call the world medium is what might be termed a logical-real formula for indicating the self-identical state of matter as the presupposition of all enumerable stages of evolution.”

We are clearly not by a long shot rid of the self-identical primordial state of matter. Here it is spoken of as the unity of matter and mechanical energy, and this as a logical-real formula, etc. Hence, as soon as the unity of matter and mechanical energy comes to an end, motion begins.

The logical-real formula is nothing but a lame attempt to make the Hegelian categories “in itself” (*an sich*) and “for itself” (*für sich*) usable in the philosophy of reality. With Hegel, “in itself” covers the original identity of the hidden, undeveloped contradictions within a thing, a process or a concept; “for itself” contains the differentiation and separation of these hidden elements and their antagonism begins. We are therefore to think of the motionless primordial state as the unity of matter and mechanical energy, and of the transition to movement as their separation and opposition. What we have thus gained is not any proof of the reality of that fantastic primordial state, but only the fact that it can be grasped under the Hegelian category of “in itself”, and likewise its equally fantastic termination under the category of “for itself”. Hegel help us!

Matter, Herr Dühring says, is the bearer of all reality; accordingly, there can be no mechanical energy apart from matter. Mechanical energy is furthermore a state of matter. Now in the primordial state, when nothing happened, matter and its state, mechanical energy, were one. Afterwards, when something began to happen, this state must apparently have become different from matter. So we are to let ourselves be dismissed with these mystical phrases and with the assurance that the self-identical state was neither static nor dynamic, neither in equilibrium nor in motion. We still do not know where mechanical energy was in that state, and how we are to get from absolute immobility to motion without an impulse from outside, that is, without God.

The materialists before Herr Dühring spoke of matter and motion. He reduces motion to mechanical energy as its supposed basic form, and thereby makes it impossible to understand the real connection between matter and motion, which moreover was also obscure to all former materialists. And yet it is simple enough. *Motion is the mode of existence of matter*. Never anywhere has there been matter without motion, nor can there be. Motion in cosmic space, mechanical motion of smaller masses on the various celestial bodies, the vibration of molecules as heat or as electrical or magnetic currents, chemical decomposition and combination, organic life – at each given moment each individual atom of matter in the world is in one or another of these forms of motion, or in several forms at once.

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All rest, all equilibrium, is only relative, only has meaning in relation to one or another definite form of motion. On the earth, for example, a body may be in mechanical equilibrium, may be mechanically at rest; but this in no way prevents it from participating in the motion of the earth and in that of the whole solar system, just as little as it prevents its most minute physical particles from carrying out the vibrations determined by its temperature, or its atoms of matter from passing through a chemical process. Matter without motion is just as inconceivable as motion without matter. Motion is therefore as uncreatable and indestructible as matter itself; as the older philosophy (Descartes) expressed it, the quantity of motion existing in the world is always the same. Motion therefore cannot be created; it can only be transmitted. When motion is transmitted from one body to another, it may be regarded as active and as the cause of motion in so far as it transmits itself, as passive in so far as it is transmitted. We call this active motion *energy*, and the passive, the *manifestation of energy*. Hence it is as clear as daylight that the energy is as great as its manifestation, because in fact *the same* motion takes place in both.

A motionless state of matter therefore proves to be one of the most empty and nonsensical of ideas – a “delirious fantasy” of the purest water. In order to arrive at such an idea, it is necessary to conceive as absolute rest the relative mechanical equilibrium in which a body on earth may find itself, and then to extend this absolute rest over the whole universe. This is certainly made easier if universal motion is reduced to purely mechanical energy. And then the restriction of motion to purely mechanical energy has the further advantage that energy can be conceived as at rest, as tied up, and therefore for the moment inoperative. For if the transmission of a motion is a somewhat complex process with a number of intermediate links, as is very often the case, it is possible to postpone the actual transmission to any moment desired by omitting the last link in the chain. This is the case, for instance, if a man loads a gun and postpones the moment when, by the pulling of the trigger, the discharge, the transmission of the motion set free by the combustion of the powder, takes place. It is therefore possible to imagine that during its motionless, self-identical state, matter was loaded with energy, and this, if anything at all, seems to be what Herr Dühring understands by the unity of matter and mechanical energy. This conception is nonsensical, because it transfers as absolute to the entire universe a state which by its nature is relative and which therefore can never be simultaneously applied except to *a part* of matter.

Even if we overlook this point, the difficulty still remains: first, how did the world come to be loaded, since nowadays guns do not load themselves? And second, whose finger then pulled the trigger? We may turn and twist as much as we like, but under Herr Dühring's guidance we always return to – the finger of God.

From astronomy our philosopher of reality passes on to mechanics and physics, and complains that in the generation since its discovery the mechanical theory of heat has not been materially advanced beyond the point to which Robert Mayer had gradually developed it. Apart from this, the whole business is still very obscure;

we must “always remember that in the states of motion of matter static relations are also present, and that these latter are not measurable by mechanical work;... if we previously described nature as a great worker and now construe this expression strictly, we must add that self-identical states and static relations do not represent mechanical work. So once again we miss the bridge from the static to the dynamic, and if so-called latent heat has so far remained a stumbling-block for theory, we must here too recognize a defect which can least be denied in its cosmic applications.”

All this oracular verbiage is once again nothing but the outpouring of a bad conscience, which is very well aware that with its creation of motion out of absolute immobility it became irretrievably stuck, but is nevertheless ashamed to appeal to the only possible saviour, namely, the creator of heaven and earth. If the bridge from the static to the dynamic, from equilibrium to motion, cannot be found even in mechanics, including the mechanics of heat, under what obligation should Herr Dühring be to find the bridge from his motionless state to motion? In this way he neatly extricates himself from his predicament.

In ordinary mechanics the bridge from the static to the dynamic is – the external impulse. If a stone weighing a hundredweight is raised from the ground ten yards into the air and is freely suspended in such a way that it remains hanging there in a self-identical state and in a condition of rest, it would be necessary to have an audience of infants to be able to maintain that the present position of this body does not represent any mechanical work, or that its distance from its previous position is not measurable by mechanical work. Any passer-by will easily explain to Herr Dühring that the stone did not rise of itself to the rope, and any manual of mechanics will tell him that if he lets the stone fall again, it performs in falling just as

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much mechanical work as was necessary to raise it the ten yards in the air. Even the very simple fact that the stone is hanging up there represents mechanical work, for if it remains hanging long enough, the rope breaks as soon as it is no longer strong enough to bear the weight of the stone as a result of chemical decomposition. But it is to such simple basic forms, to use Herr Dühring's language, that all mechanical processes can be reduced, and the engineer is still to be born who cannot find the bridge from the static to the dynamic, so long as he has a sufficient external impulse at his disposal.

To be sure, it is a hard nut and a bitter pill for our metaphysician that motion should find its measure in its opposite, in rest. That is indeed a crying contradiction, and every contradiction, according to Herr Dühring, is *contrasense*. It is none the less a fact that a suspended stone represents a definite quantity of mechanical motion, which is measurable exactly by the weight of the stone and its distance from the ground, and may be used in various ways at will, for example, by its direct fall, by sliding down an inclined plane, or by turning a shaft. The same is true of a loaded gun. From the dialectical standpoint, the possibility of expressing motion in its opposite, in rest, presents absolutely no difficulty. For the dialectical conception the whole antithesis, as we have seen, is only relative; there is no such thing as absolute rest, unconditional equilibrium. Each separate movement strives towards equilibrium, and the total motion again puts an end to the equilibrium. Wherever therefore rest and equilibrium occur, they are the result of limited motion, and it is self-evident that this motion is measurable by its result, can be expressed in it, and can be re-established from it in one form or another. But Herr Dühring cannot allow himself to be satisfied with so simple a presentation of the matter. As a good metaphysician he first tears open a non-existent yawning gulf between motion and equilibrium and is then surprised that he cannot find any bridge across this self-fabricated gulf. He might just as well mount his metaphysical Rosinante and chase the Kantian "thing-in-itself"; for it is that and nothing else which in the last analysis is hidden away behind this undiscoverable bridge.

But what about the mechanical theory of heat and the tied up or latent heat which "has remained a stumbling-block" for this theory?

If a pound of ice at freezing point temperature and under normal atmospheric pressure is transformed by heat into a pound of water of the same temperature, a quantity of heat disappears which would be sufficient to warm the same pound of water from 0° to 79.4° C, or to raise the temperature of 79.4 pounds of water by one

degree. If this pound of water is heated to boiling point, that is, to 100°C , and is then transformed into steam of 100°C , the amount of heat that disappears by the time the last of the water has changed into steam is almost seven times greater, or enough to raise the temperature of 537.2 pounds of water by one degree.³¹ The heat that disappears is called *tied-up*. If the steam is again transformed into water by cooling and the water, in its turn, into ice, the same quantity of heat as was previously tied up is now again set *free*, i.e., is perceptible and measurable as heat. This liberation of heat on the condensation of steam and the freezing of water is the reason why steam is only gradually transformed into water when cooled to 100° , and why a mass of water at freezing point temperature is only very gradually transformed into ice. These are the facts. The question is, what happens to the heat while it is tied up?

The mechanical theory of heat, according to which heat consists of the vibration of the smallest physically active particles (molecules) of bodies, a vibration which is greater or smaller in accordance with the temperature and the state of aggregation, and which under certain conditions can change into any other form of motion, explains that the heat that has disappeared has done work, has been transformed into work. When ice melts, the close and firm connection between the individual molecules is broken and transformed into a loose juxtaposition; when water at boiling point becomes steam, a state is reached in which the individual molecules have no noticeable influence whatsoever on one another and under the influence of heat even fly apart in all directions. Now it is clear that the individual molecules of a body are endowed with far greater energy in the gaseous state than in the fluid state, and in the fluid state likewise than in the solid state. The tied-up heat has therefore not disappeared, it has merely been transformed and has assumed the form of molecular tension. As soon as the condition under which the separate molecules are able to maintain this absolute or relative freedom in regard to one another ceases to exist – that is, as soon as the temperature falls below the minimum of either 100° or 0° – this tension relaxes, the molecules again press towards each other with the same force with which they had previously flown apart; and this force disappears, but only to reappear as heat, and as precisely the same quantity of heat as had previously been tied up. This explanation is of course a hypothesis, as is the whole mechanical theory of heat, since as yet no one has ever seen a molecule, let alone one in vibration. For this very reason, like the whole theory which is still very young, it is certain to be full of defects, but it can at least ex-

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plain what happens without in any way coming into conflict with the indestructibility and uncreatability of motion, and it can even account in a precise way for the where-abouts of heat during its transformation. Latent, or tied up, heat is therefore in no way a stumbling-block for the mechanical theory of heat. On the contrary, this theory provides the first rational explanation of what takes place, and it involves no stumbling-block except in so far as physicists continue to designate heat which has been transformed into another form of molecular energy by the term “tied-up”, which has become obsolete and unsuitable.

Therefore, the self-identical states and conditions of rest in the solid, liquid and gaseous states of aggregation do represent mechanical work, in so far as mechanical work is the measure of heat. Both the solid crust of the earth and the water of the ocean in their present aggregate states represent a quite definite quantity of liberated heat, to which of course an equally definite quantum of mechanical energy corresponds. In the transition of the gaseous ball from which the earth has developed into the liquid and later mostly into the solid aggregate state, a definite quantum of molecular energy was radiated as heat into cosmic space. Thus the difficulty about which Herr Dühring mumbles mysteriously does not exist, and even if we may come up against defects and gaps in applying the theory cosmically – defects and gaps which are due to our imperfect means of knowledge – we nowhere come up against theoretically insuperable obstacles. Here too the bridge from the static to the dynamic is the external impulse – the cooling or heating brought about by other bodies acting on the object which is in a state of equilibrium. The further we explore this natural philosophy of Dühring’s, the more impossible appear all attempts to explain motion out of immobility or to find the bridge over which the purely static, the resting, can *by itself* pass to the dynamic, to motion.

With this we have fortunately rid ourselves for a time of the primordial self-identical state. Herr Dühring passes on to chemistry, and takes the opportunity to reveal to us nature’s three laws of inertia which have so far been discovered by his philosophy of reality, viz.:

(1) The quantity of matter in general, (2) that of the simple (chemical) elements, and (3) that of mechanical energy, are constant.

Hence, the uncreatability and indestructibility of matter and of its simple component parts, in so far as it has them, as well as of motion – these old facts known the world over and expressed here

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most inadequately – this is the only positive thing Herr Dühring can provide us with as a result of his natural philosophy of the inorganic world. We knew all this long ago. But what we did not know was that they were “laws of inertia” and as such “schematic properties of the system of things”. It’s the same story as we had with Kant.* Herr Dühring picks up some old familiar yarn, sticks a Dühring label on it, and calls it,

“fundamentally original conclusions and views... system-creating ideas... deep-rooted science”.

But we need not yet despair on this account. Whatever defects even the most deep-rooted science and the best ordered society may have, Herr Dühring can assert one thing with confidence:

“The amount of gold on hand in the universe must at all times have been the same, and it can have increased or diminished just as little as matter in general.”

Unfortunately Herr Dühring does not tell us what we can buy with this “gold on hand”.

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“A single and uniform ladder of intermediate steps leads from the mechanics of pressure and impact to the linking together of sensations and ideas.”

With this assurance Herr Dühring saves himself the trouble of saying anything further about the origin of life, although it might reasonably have been expected that a thinker who had traced the development of the world back to its self-identical state and is so much at home on other celestial bodies would have known exactly what’s what on this point too. For the rest, the assurance he gives us is only half right unless it is completed by the Hegelian nodal line of measure relations which has already been mentioned.† Despite all gradualness, the transition from one form of motion to another always remains a leap, a decisive change. This is true of the transition from the mechanics of celestial bodies to that of smaller masses on

* See pp. 46-48 above. – *Ed.*

† See p. 43 above. – *Ed.*

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a particular celestial body; it is equally true of the transition from the mechanics of masses to the mechanics of molecules – including the forms of motion investigated in physics proper, heat, light, electricity and magnetism. In the same way, the transition from the physics of molecules to the physics of atoms – chemistry – in turn involves a decided leap; and this is even more clearly the case in the transition from ordinary chemical action to the chemism of protein which we call life.³² Then within the sphere of life the leaps become ever more infrequent and imperceptible. – Once again, therefore, it is Hegel who has to correct Herr Dühring.

The concept of purpose provides Herr Dühring with the conceptual transition to the organic world. Once again, this is borrowed from Hegel, who in his *Logic* – the Doctrine of the Notion – makes the transition from chemism to life by means of teleology, or the science of purpose. Wherever we look in Herr Dühring, we run into a Hegelian “crudity”, which he quite unblushingly gives out as his own deep-rooted science. It would take us too far afield to investigate here the extent to which it is legitimate and appropriate to apply the ideas of means and end to the organic world. In any case, even the application of the Hegelian “inner purpose” – i.e., a purpose which is not imported into nature by some third party acting purposively, such as the wisdom of providence, but which lies in the necessity of the thing itself – constantly leads people who are not too well versed in philosophy to the thoughtless interpolation of conscious and purposive activity. The same Herr Dühring who is filled with boundless moral indignation at the slightest “spiritistic” tendency in other people assures us

“with certainty that the instinctive sensations were primarily created for the sake of the satisfaction involved in their activity”.

He tells us that poor nature

“is obliged incessantly to re-establish order in the world of objects”, and in doing so she has to settle more than one matter, “which requires more subtlety on nature’s part than is usually credited to her”. But nature not only *knows* why she does one thing or another, she not only has to perform the duties of a housemaid, she not only possesses subtlety, in itself a pretty good accomplishment in subjective conscious thought, she also has a will. For what the instincts do in addition, incidentally fulfilling real natural functions such as nutrition, propagation, etc., “we should regard not as directly, but only as indirectly, *willed*”.

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So we have arrived at a consciously thinking and acting nature, and are thus already standing on the “bridge” – not indeed from the static to the dynamic, but from pantheism to deism. Or is Herr Dühring perhaps just for once indulging in a little “natural-philosophical semi-poetry”?

Impossible. All our philosopher of reality can tell us of organic nature is restricted to the fight against this natural philosophical semi-poetry, against “charlatanism with its frivolous superficialities and pseudo-scientific mystifications”, against the “poetizing features” of *Darwinism*.

The main reproach levelled against Darwin is that he transferred the Malthusian population theory from political economy to natural science, that he was held captive by the ideas of the animal breeder, that in his theory of the struggle for existence he pursued unscientific semi-poetry, and that the whole of Darwinism, after subtracting what had been borrowed from Lamarck, is a piece of brutality directed against humanity.

Darwin brought back from his scientific travels the view that plant and animal species are not constant but subject to variation. In order to follow up this idea after his return home, there was no better field available than that of the breeding of animals and plants. It is precisely in this field that England is the classical country; the achievements of other countries, for example Germany, fall far short of what England has achieved in this connection. Moreover, most of these successes have been won during the last hundred years, so that there is little difficulty in establishing the facts. Now Darwin found that this breeding artificially produced differences among animals and plants of the same species greater than those occurring in what are generally recognized as different species. Thus there was established the variability of species up to a certain point, on the one hand, and the possibility of a common ancestry for organisms with different specific characteristics, on the other. Darwin then investigated whether there were not possibly causes in nature which – without the conscious intention of the breeder – would nevertheless necessarily produce in living organisms over the long run changes similar to those produced by artificial breeding. He discovered these causes in the disproportion between the immense number of embryonic germs created by nature and the insignificant number of organisms actually attaining maturity. But as each embryonic germ strives to develop, there necessarily arises a struggle for existence which manifests itself not merely as direct bodily combat or devouring but also as a struggle for space and

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light, even in the case of plants. It is evident that in this struggle those individuals possessing some individual characteristic, however insignificant, which nevertheless gives them an advantage in the struggle for existence, will have the best prospect of reaching maturity and propagating themselves. These individual characteristics have thus the tendency to descend by heredity, and when they occur among many individuals of the same species, to become enhanced through accumulated heredity in the direction once taken; while those individuals without these characteristics succumb more easily in the struggle for existence and gradually disappear. In this way a species is modified through natural selection, through the survival of the fittest.

Against this Darwinian theory Herr Dühring now says that the origin of the idea of the struggle for existence, as, he claims, Darwin himself admitted, has to be sought in a generalization of the views of the economist and population theorist, Malthus, and that the idea therefore suffers from all the defects inherent in Malthus' clerical views on over-population.

Now Darwin would not dream of saying that the *origin* of the idea of the struggle for 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 Darwin's blunder in accepting the Malthusian theory so naively and uncritically, anyone can see at the first glance that no Malthusian spectacles are required to perceive the struggle for existence in nature – the contradiction between the countless host of embryonic germs nature so lavishly produces and the small number of those which can ever reach maturity, a contradiction which in fact finds its solution for the most part in a struggle for existence – often of extreme cruelty. And just as the law of wages has retained its validity even after the Malthusian arguments on which Ricardo based it have long been consigned to oblivion, so the struggle for existence can 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 practically uninvestigated, although their establishment would be of decisive importance for the theory of the evolution of species. But who was it that lent the decisive impetus to work in this direction too? None other than Darwin.

Herr Dühring carefully avoids an examination of this positive side of the question. Instead, the struggle for existence is picked on again and again. It is obvious, according to him, that there can be no

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talk of a struggle for existence among unconscious plants and good-natured plant-eaters:

“In the precise and definite sense the struggle for existence is found in the realm of the brutes to the extent that they get their food by devouring their prey.”

After he has reduced the concept of the struggle for existence to these narrow limits, he can give full vent to his indignation at the brutality of this concept, which he himself has thus restricted to the realm of the brutes. But this moral indignation only rebounds upon Herr Dühring himself, for he is the sole author of this narrowly conceived struggle for existence and is therefore solely responsible for it. It is consequently not Darwin who

“seeks the laws and understanding of all nature’s actions in the domain of the beast” –

Darwin had in fact expressly included the whole of organic nature in the struggle – but an imaginary bugbear dressed up by Herr Dühring himself. The *name* struggle for existence can for that matter be willingly sacrificed to Herr Dühring’s highly moral indignation. That the *fact* exists among plants also can be demonstrated to him by every meadow, every corn field, every wood; and the question at issue is not whether it is to be called “struggle for existence” or “lack of conditions of life and mechanical effects”, but how this fact influences the preservation or variation of species. On this point Herr Dühring maintains an obstinate and self-identical silence. Therefore for the time being we may as well stick to natural selection.

But Darwinism “produces its transformations and differences out of nothing”.

It is true that, when considering natural selection, Darwin leaves out of account the causes which have produced the variations in separate individuals, and deals in the first place with the way in which such individual deviations 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 completely unknown, and in part can only be stated in quite general terms – than to find a rational form in which their effects become fixed, 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 variation of species and neglected the

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causes of repeated individual variations for the form in which these variations become general; but this is the kind of mistake which he shares with most other people who make any real advance. Moreover, if Darwin produces his individual transformations out of nothing and thus exclusively applies “the wisdom of the breeder”, the breeder, too, must produce his transformations in animal and plant forms out of nothing, transformations which are not merely imaginary but real. But once again, the man who gave the impetus to the investigation of how exactly these transformations and differences arise is none other than Darwin.

The idea of natural selection has recently been extended, particularly by Haeckel, and the variation of species conceived as a result of the mutual interaction of adaptation and heredity, with adaptation being represented as the variation-producing factor and heredity as the preserving factor in the process. This again displeases Herr Dühring.

“Real adaptation to conditions of life which are offered or withheld by nature presupposes impulses and actions determined by ideas. Otherwise the adaptation is only apparent, and the operative causality does not rise above the low grades of the physical, chemical and plant-physiological.”

Once again it is the name which makes Herr Dühring angry. But whatever name he may give the process, the question here is whether variations in the species of organisms are produced through such processes or not. And again Herr Dühring gives no answer.

“If, in growing, a plant takes the path along which it will receive most light, this effect of the stimulus is nothing but a combination of physical forces and chemical agents, and any attempt to describe it as adaptation – not metaphorically but literally – must introduce a *spiritistic* confusion into the concepts.”

Such is the severity meted out to others by the very man who knows exactly by whose *will* nature does one thing or another, who speaks of nature’s *subtlety* and even of her *will* ! Spiritistic confusion, yes – but where, in Haeckel or in Herr Dühring?

And not only spiritistic, but also logical, confusion. We saw that Herr Dühring insists with might and main on establishing the validity in nature of the concept of purpose:

“The relation between means and end does not in the least presuppose a conscious intention.”

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What, then, is adaptation without conscious intention, without the mediation of ideas which he so zealously opposes, if not such unconscious purposive activity?

If therefore tree-frogs and leaf-eating insects are green, desert animals sandy-yellow, and animals of the polar regions mainly snow-white in colour, they have certainly not adopted these colours on purpose or in conformity with any idea; on the contrary, the colours can only be explained on the basis of physical forces and chemical agents. Yet it cannot be denied that these animals are purposively *adapted* through those colours to the environment in which they live, since they have thus become far less visible to their enemies. In 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. Consequently, if Herr Dühring insists that this adaptation must be effected through ideas, he is only saying in other words that purposive activity must likewise be brought about through ideas, must be conscious and intentional. As is usually the case in the philosophy of reality, this again brings us to a purposive creator, to God.

“An explanation of this kind used to be called deism, and was not thought much of” – Herr Dühring tells us – “but in this connection, too, *things* now seem to have retrogressed.”

From adaptation we now move on to heredity. Here, too, according to Herr Dühring, Darwinism is completely on the wrong track. The whole organic world, Darwin is said to have asserted, descended from one primordial being, is so to speak the progeny of one single being. For Darwin, it is alleged, there is no such thing as the independent coexistence of homogeneous products of nature unmediated by descent, and therefore Darwin with his backward-looking views had perforce to come to a dead end immediately at the point where the thread of procreation or other reproduction breaks off.

To put it politely, the statement that Darwin traced all existing organisms back to one primordial being is 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 beings* “. ³³

Haeckel goes considerably further, assuming

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“a quite independent stock for the vegetable kingdom, a second for the animal kingdom”, and between the two “a number of independent stocks of protista, each of which, quite independently of the former, has developed out of one special archegon of the moneron type” (*Schöpfungsgeschichte*,* p. 397).³⁴

This primordial being was only invented by Herr Dühring in order to bring it into as great disrepute as possible by drawing a parallel with the original Jew Adam; and in this he – that is to say, Herr Dühring – has the bad luck to be ignorant of the fact that [George] Smith’s Assyrian discoveries have shown that this original Jew emerged from the chrysalis of the original Semite, and that the whole biblical history of the creation and the flood turns out to be a fragment of the old cycle of heathen religious myths which the Jews have in common with the Babylonians, Chaldeans and Assyrians.

It is certainly a bitter and unanswerable reproach against Darwin that he comes to a dead end immediately at the point where the thread of descent breaks off. Unfortunately it is a reproach earned by the whole of our natural science. Where the thread of descent breaks off for it, it is at “a dead end”. It has not yet succeeded in producing organic beings without descent; indeed, it has not yet succeeded in producing even simple protoplasm or other proteins out of chemical elements. With regard to the origin of life, therefore, so far natural science is only able to say with certainty that it must have been the result of chemical action. But perhaps the philosophy of reality is in a position to give some help on this point, as it has at its disposal the independent coexistence of products of nature unmediated by descent. How can these have come into existence? By spontaneous generation? But even the most audacious advocates of spontaneous generation have not as yet claimed that it has produced anything but bacteria, spores of moulds and other very primitive organisms – no insects, fishes, birds or mammals. But if these homogeneous products of nature – organic, of course, as here we are only dealing with such – are not connected by descent, they or each of their ancestors must have been put into the world by a separate act of creation at the point “where the thread of descent breaks off”. So we arrive once again at a creator and at what is called deism.

Herr Dühring further declares that it was very superficial on Darwin’s part

* The Natural History of Creation. – *Ed.*

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“to make the mere act of the sexual composition of properties the fundamental principle of the origin of these properties”.

This is another free creation and imagination of our deep-rooted philosopher's. Darwin categorically states the opposite: the expression natural selection only comprises the *preservation* of variations, not their origin (p. 63). This new imputation to Darwin of things he never said nevertheless helps us to grasp the profundity of Dühringian thought in the following:

“If some principle of independent variation had been sought in the inner schematism of generation, this idea would have been quite rational; for it is a natural idea to combine the principle of universal genesis with that of sexual propagation into a unity, and to regard so-called spontaneous generation, from a higher standpoint, not as the absolute antithesis of reproduction but just as a production.”

And the man who can write such a farrago is not ashamed to reproach Hegel for his “jargon”!

But enough of the peevish, contradictory grumbling and nagging with which Herr Dühring gives vent to his anger at the colossal upsurge natural science owes to the impetus of the Darwinian theory. Neither Darwin nor his followers among natural 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 up again on his pedestal. But we must not overlook the fact that in Lamarck's time science was as yet far from having sufficient material available to enable it to answer the question of the origin of species except in an anticipatory way, prophetically, as it were. In addition to the enormous mass of material, both of descriptive and anatomical botany and zoology, which has accumulated in the interim, two completely new sciences have arisen since Lamarck's time which are of decisive importance here, the study of the development of plant and animal embryos (embryology) and that of the organic remains preserved in the various strata of the earth's surface (palaeontology). There is in fact a peculiar agreement between the gradual development of organic embryonic germs into mature organisms and the sequence of plants and animals succeeding each other in the history of the earth. And it is precisely this agreement which has given the theory of evolution its most secure basis. But the theory of evolution itself is still very young, and there is no doubt therefore that further research will very appreciably modify our present con-

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ceptions of the process of the evolution of species, including the strictly Darwinian ones.

What has the philosophy of reality to say of a positive character about the evolution of organic life?

“The... variability of species is an acceptable assumption.” But in addition “the independent coexistence of homogeneous products of nature, unmediated by descent”, is valid, too.

From this we are apparently to infer that the heterogeneous products of nature, i.e., the species showing variations, descend from each other, but not so the homogeneous products. But this is not altogether correct either; for even with species which show variations “mediation by descent is on the contrary quite a secondary act of nature”.

So we get descent after all, but only “second class”. Let us rejoice that, after Herr Dühring has ascribed so much that is evil and obscure to descent, we nevertheless find it finally readmitted by the backdoor. It is the same with natural selection, for, after all his moral indignation over the struggle for existence through which natural selection operates, we suddenly read:

“The deeper basis of the constitution of creatures is thus to be sought in the conditions of life and cosmic relations, while the natural selection emphasized by Darwin can only come in as a secondary factor.”

So we get natural selection after all, though only second class, and along with natural selection also the struggle for existence, and with that also Malthus’ clerical over-population! That is all, and for the rest Herr Dühring refers us to Lamarck.

In conclusion he warns us against the misuse of the terms metamorphosis and development. Metamorphosis, he maintains, is an obscure concept, and the concept of development is permissible only in so far as laws of development can be really established. In place of both these terms we should use the term “composition”, and then everything would be all right. It is the old story over again: things remain as they were, and Herr Dühring is quite satisfied as soon as we just change the names. When we speak of the development of the chicken in the egg, we are creating confusion, for we are able to prove the laws of development only in an incomplete way. But if we speak of its composition, everything becomes clear. We shall therefore no longer say: This child is developing splendidly, but: It is composing itself magnificently. We can congratulate

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Herr Dühring on being a worthy peer of the author of the *Nibelungenring* not only in his noble self-esteem but also in his capacity as a composer of the future.³⁵

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“Ponder... how much positive knowledge is required to equip our section on natural philosophy with all its scientific premises. Its basis is provided firstly by all the essential achievements of mathematics, then by the principal propositions established by exact science in mechanics, physics and chemistry, as well as by the general conclusions of natural science in physiology, zoology and similar branches of inquiry.”

Such is the confidence and assurance with which Herr Dühring speaks of the mathematical and scientific erudition of Herr Dühring. It is impossible to detect from the meagre section concerned, and still less from its even more paltry conclusions, what deep-rooted positive knowledge lies hidden behind them. In any case, in order to create the Dühring oracles on physics and chemistry, it is not necessary to know any more of physics than the equation which expresses the mechanical equivalent of heat, or any more of chemistry than that all bodies can be divided into elements and combinations of elements. Moreover, a person who can talk of “gravitating atoms”, as Herr Dühring does (p. 131), only proves that he is completely “in the dark” on the difference between atoms and molecules. As is well known, atoms do not exist in relation to gravitation or other mechanical or physical forms of motion, but only in relation to chemical action. And if anyone should read as far as the chapter on organic nature, with its empty, self-contradictory and, at the decisive point, oracularly senseless drivel and with its absolutely fatuous conclusion, he will be forced from the very start to the opinion that Herr Dühring is here speaking of things of which he knows remarkably little. This opinion becomes certainty when the reader reaches his proposal that the term composition should be used instead of development in the science of organic beings (biology). The person who can make such a proposal shows that he has not the slightest inkling of the formation of organic bodies.

All organic bodies, except the very lowest, consist of cells, small globules of protein which are only visible when considerably

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magnified, with a cell nucleus inside. As a rule the cells also develop an outer membrane and the contents are then more or less liquid. The lowest cellular bodies consist of a single cell; the immense majority of organic beings are multicellular, interrelated complexes of many cells which in lower organisms remain of a homogeneous type, but in higher organisms assume more and more varied forms, groupings and functions. In the human body, for example, bones, muscles, nerves, tendons, ligaments, cartilages, skin, in a word, all tissues, are either composed of cells or originated from them. But in all organic cellular structures, from the amoeba, which is a simple and generally skinless globule of protein with a nucleus inside, up to man, and from the tiniest unicellular Desmidiaceae³⁶ up to the most highly developed plant, the manner in which the cells multiply is the same, by division. The cell nucleus first becomes constricted in the middle, the constriction separating the two halves of the nucleus gets more and more pronounced, and at last they separate from each other and form two cell nuclei. The same process takes place in the cell itself; each of the two nuclei becomes the centre of an accumulation of cellular substance, linked to the other by a strip which steadily grows narrower, until at last the two separate from each other and continue to exist as independent cells. Through such repeated cell division the whole animal is gradually developed in full out of the embryonal vesicle of the animal egg after it has been fertilized, and the replacement of used-up tissues is effected in the same way in the adult animal. To call such a process composition and to say that to describe it as development is “pure imagination” undoubtedly indicates a person who – however difficult this may be to believe at the present day – knows absolutely nothing of this process; here it is precisely and *exclusively* development that is going on, and indeed development in the most literal sense, and composition has absolutely nothing to do with it!

Later on we shall have something more to say about what Herr Dühring understands in general by life. In particular, he pictures life as follows:

“The inorganic world too is a system of automatic movements; but it is only at the point where real differentiation and the interposition of the circulation of substances through special channels from one internal point and according to an embryonic scheme transmissible to a smaller structure begins that we may venture to speak of real life in the narrower and stricter sense.”

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In the narrower and stricter sense, this sentence is a system of automatic movements (whatever they may be) making nonsense, quite apart from its hopelessly confused grammar. If life first begins where real differentiation commences, we must declare the whole Haeckelian kingdom of protista and perhaps much else besides to be dead, according to the meaning we attach to the concept of differentiation. If life only begins when this differentiation can be transmitted through a smaller embryonic scheme, then at least all organisms up to and including unicellular ones are not living things. If the interposition of the circulation of substances through special channels is the distinguishing mark of life, then, in addition to the foregoing, we must strike from the ranks of the living the whole of the higher class of the Coelenterata (excepting however the Medusae), that is, all polyps and other plant-animals.³⁷ If the circulation of substances through special channels from one internal point is the essential characteristic of life, then we must declare that all those animals with no heart and those with more than one heart are dead. That is, besides those already enumerated, all worms, starfish and rotifers (Annuloida and Annulosa, Huxley's classification³⁸, a section of the Crustacea, and finally even a vertebrate animal, the Amphioxus.³⁹ And moreover all plants.

Thus, in undertaking to define real life in the narrower and stricter sense, Herr Dühring gives us four totally self-contradictory distinguishing marks of life, one of which condemns to eternal death not only the whole vegetable kingdom but also about half the animal kingdom. Really, no one can say that he misled us when he promised us "fundamentally original conclusions and views"!

Another passage runs:

"In nature, too, one simple type is the basis of all organisms, from the lowest to the highest," and this type is "fully and completely present in its general essence even in the most subordinate impulse of the most undeveloped plant".

This statement is again "full and complete" nonsense. The most simple type found in the whole of organic nature is the cell; and certainly it is the basis of the highest organisms. On the other hand, among the lowest organisms there are many which are far below the cell – the protamoeba, a simple globule of protein without any differentiation whatever, and a whole series of other monera and all bladder seaweeds (Siphonaeae). All these are linked with the higher organisms only by the fact that their essential component is protein

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and that they consequently perform the functions of protein, i.e., live and die.

Herr Dühring further tells us:

“Physiologically, sensation is bound up with the presence of some kind of nervous apparatus, however simple. It is therefore characteristic of all animal beings that they are capable of sensation, i.e., of a subjectively conscious apprehension of their states. The sharp border line between plant and animal lies at the place where the leap to sensation occurs. So far from being obliterated by the known transitional structures, this border line becomes a logical necessity precisely through these externally undecided or undecidable forms.”

And again:

“On the other hand, plants are completely and for all time devoid of the slightest trace of sensation and even of any capacity for it.”

In the first place, Hegel says (*Philosophy of Nature*, German ed., § 351, Addendum) that

“sensation... is the *differentia specifica*, the absolutely characteristic feature of the animal”.⁴⁰

So once again we find a Hegelian “crudity”, which through the simple process of annexation by Herr Dühring is elevated to the noble rank of a final and ultimate truth.

In the second place, we hear for the first time here of transitional structures, externally undecided or undecidable forms (fine gibberish!) between plant and animal. That these intermediate forms exist; that there are organisms of which we cannot say flatly that they are plants or animals; that therefore we are wholly unable to draw a sharp border line between plant and animal – it is precisely this fact that makes it a logical necessity for Herr Dühring to establish a criterion of differentiation which in the same breath he admits is unsound! But we have no need whatever to go back to the doubtful territory between plants and animals; are the sensitive plants which at the slightest touch fold their leaves or close their flowers, are the insect-eating plants devoid of the slightest trace of sensation and even of any capacity for it? This cannot be asserted even by Herr Dühring without “unscientific semi-poetry”.

In the third place, it is once again a free creation and imagination on Herr Dühring’s part when he asserts that sensation is physiologically bound up with the presence of some kind of nervous apparatus, however simple. Not only all primitive animals, but also the

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plant-animals, or at any rate the great majority of them, show no trace of a nervous apparatus. It is only from the worms on that such an apparatus is regularly found, and Herr Dühring is the first person to make the assertion that those animals have no sensation because they have no nerves. Sensation is not necessarily associated with nerves, but quite probably with certain proteins which up to now have not been more precisely determined.

For the rest, Herr Dühring's biological knowledge is sufficiently characterized by the question which he is not afraid to put to Darwin: "Is it to be supposed that animals have developed out of plants?" Such a question could only be put by a person who has not the slightest knowledge of either animals or plants.

Of life in general Herr Dühring can only tell us:

"The metabolism which is carried out through a plastically creating schematization" (what in the world can that be?) "always remains a distinguishing characteristic of the real life process."

That is all we learn about life, while incidentally the "plastically creating schematization" leaves us stuck knee-deep in the meaningless twaddle of the purest Dühring jargon. If therefore we want to know what life is, we shall evidently have to search for it more closely ourselves.

That organic metabolism is the most general and most characteristic phenomenon of life has been said times out of number during the last thirty years by physiological chemists and chemical physiologists, and it is here merely translated by Herr Dühring into his own elegant and lucid language. But to define life as organic metabolism is to define life as – life; for organic metabolism or metabolism with plastically creating schematization is precisely a phrase which in its turn itself needs explanation through life, explanation through the distinction between the organic and the inorganic, that is, that which is living and that which is not living. This explanation therefore does not get us any further.

Metabolism as such takes place even without life. There is a whole series of processes in chemistry which, given an adequate supply of raw material, constantly reproduce their own conditions, and in such a way that a definite body is the carrier of the process. This is the case in the manufacture of sulphuric acid by the burning of sulphur. In this process sulphur dioxide, SO_2 , is produced, and when steam and nitric acid are added, the sulphur dioxide absorbs hydrogen and oxygen and is converted into sulphuric acid, H_2SO_4 . The nitric acid gives off oxygen and is reduced to nitric oxide; this

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nitric oxide immediately re-absorbs new oxygen from the air and is transformed into the higher oxides of nitrogen, but only to transfer this oxygen immediately to sulphur dioxide and to go through the same process again; so that theoretically an infinitesimal quantity of nitric acid should suffice to change an unlimited quantity of sulphur dioxide, oxygen and water into sulphuric acid.

Metabolism also takes place in the passage of liquids through dead organic and even through inorganic membranes, as in Traube's artificial cells. Here too it is clear that we cannot get any further by means of metabolism; for the peculiar exchange of matter which is to explain life needs itself to be explained through life. We must therefore try some other way.

*Life is the mode of existence of proteins (Eiweisskörper),*⁴¹ and this mode of existence essentially consists in the constant self-renewal of the chemical constituents of these bodies.

The term *Eiweisskörper* is used here in the sense in which it is employed in modern chemistry, which includes under this name all bodies constituted similarly to ordinary white of egg, otherwise also known as protein substances. The name is an unhappy one, because ordinary white of egg plays the most lifeless and passive role of all the substances related to it, since, together with the yolk, it is merely food for the developing embryo. But while so little is yet known of its chemical composition, this name is better than any other because it is more general.

Wherever we find life, we find it associated with proteins, and wherever we find a protein not in the process of dissolution, there also without exception we find phenomena of life. Undoubtedly, the presence of other chemical combinations is also necessary in a living body in order to evoke particular differentiations of these phenomena of life; but they are not requisite for naked life, except in so far as they enter the body as food and are transformed into protein. The lowest living beings known to us are in fact nothing but simple globules of protein, and they already exhibit all the essential phenomena of life.

But what are these universal phenomena of life which are equally present among all living organisms? Above all, the fact that a protein absorbs other appropriate substances from its environment and assimilates them, while other, older parts of the body are decomposed and are excreted. Other, non-living, bodies also change, are decomposed or combine in the natural course of events; but in doing this they cease to be what they were. A rock worn away by atmospheric action is no longer a rock; metal which oxidizes turns

into rust. But what is the cause of destruction for non-living bodies is *the fundamental condition of existence* for protein. From the moment when this uninterrupted metamorphosis of its constituents, this constant alternation of nutrition and excretion, comes to an end in protein, from that moment the protein itself comes to an end, it decomposes, that is, *dies*. Life, the mode of existence of protein, therefore consists primarily in the fact that every moment it is itself and at the same time something else; and this not as a result of a process to which it is subjected from without, which may also be the case with inanimate bodies. On the contrary, life, the metabolism which takes place through nutrition and excretion, is a self-implementing process which is inherent in, native to, its bearer, protein, without which it cannot exist. From which it follows that if chemistry ever succeeds in producing protein artificially, this protein must show the phenomena of life, however weak these may be. It is certainly open to question whether chemistry will at the same time also discover the right food for this protein.

From metabolism – the essential function of protein – by means of nutrition and excretion and from its peculiar plasticity there are derived all the other most elementary processes of life: capacity for excitation, which is already included in the interaction between the protein and its food; contractibility, which is shown, already at a very low stage, in the consumption of food; the possibility of growth, which in the lowest stage includes propagation by division; internal movement, without which neither the consumption nor the assimilation of food is possible.

Our definition of life is naturally very inadequate because, so far from including *all* the phenomena of life, it has to be limited to the simplest and the commonest of all. All definitions are scientifically of little value. In order to gain an exhaustive knowledge of what life is, we should have to go through all the forms in which it appears, from the lowest to the highest. But for ordinary usage such definitions are very convenient and in places cannot well be dispensed with; nor can they do any harm, provided their inevitable deficiencies are not forgotten.

But back to Herr Dühring. When things are faring badly with him in the sphere of earthly biology, he knows where to find consolation, he takes refuge in his starry heaven.

“It is not merely the special apparatus of an organ of sensation but the whole objective world which is adapted to the production of pleasure and pain. For this reason we take it for granted that the antithesis between

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pleasure and pain, and indeed *exactly* in the form with which we are familiar, is a universal antithesis, and must be represented *in the various worlds of the universe* by essentially homogeneous feelings.... This conformity, however, is of *no little* significance, for it is the key to the *universe of sensations*.... Hence the subjective cosmic world is not much more unfamiliar to us than the objective. The constitution of both spheres must be conceived according to one harmonious type, and we have the beginnings of a science of consciousness here whose range is wider than merely terrestrial.”

What do a few gross blunders in terrestrial natural science matter to the man who carries in his pocket the key to the universe of sensations? *Allons donc!**

IX

MORALS AND LAW. ETERNAL TRUTHS

We refrain from giving samples of the mish-mash of platitudes and oracular sayings, in a word, of the simple *balderdash* with which Herr Dühring regales his readers for full fifty pages as the deep-rooted science of the elements of consciousness. We will cite only this:

“He who can think only by means of language has never yet learnt what is meant by *abstract* and *authentic* thought.”

On this basis animals are the most abstract and most authentic thinkers, because their thought is never obscured by the obtrusive interference of language. In any case one can see from the Dühringian thoughts and the language in which they are couched how little suited these thoughts are to any language, and how little suited the German language is to these thoughts.

At last the fourth section brings us deliverance; apart from the liquefying pap of rhetoric, it does offer us, at least here and there, something tangible on *morals* and *law*. This time we are invited right at the outset to take a trip to the other celestial bodies:

the elements of morals must “occur harmoniously among all extra-human beings whose active reason has to deal with the conscious ordering of life impulses in the form of instincts.... And yet our interest in such deductions will remain small.... Nevertheless it is an idea which *advantageous*-

* Get on with you! – *Ed.*

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ly extends our range of vision, when we think that individual and communal life on other celestial bodies must be based on a scheme which... is unable to abrogate or escape from the general fundamental constitution of a rationally acting being.”

In this case, by way of exception, the validity of the Dühringian truths for all other possible worlds too is put at the beginning instead of the end of the relevant chapter, and for a sufficient reason. If the validity of the Dühringian conceptions of morals and justice is first established for all *worlds*, it is all the easier advantageously to extend their validity to all *times*. But once again what is involved is nothing less than final and ultimate truth.

The world of morals, “just as much as the world of knowledge in general,” has “its permanent principles and simple elements”. Moral principles stand “above history and above present differences in national characteristics.... The special truths out of which a more complete moral consciousness and, so to speak, conscience are built up in the course of evolution, may, in so far as their ultimate basis is understood, claim a validity and range similar to mathematical insights and their applications. *Genuine truths are absolutely immutable...* so that it is altogether stupid to think that the correctness of knowledge is something that can be affected by time and changes in reality.” Hence, when we are in possession of our senses, the certitude of strict knowledge and the adequacy of common knowledge leave no room for despairing of the absolute validity of the principles of knowledge. “Persistent doubt itself is already a pathological state of weakness and nothing but the expression of *sterile confusion*, which sometimes seeks to contrive the appearance of some stability in the systematic consciousness of its *nothingness*. In the sphere of ethics, the denial of general principles clutches at the geographical and historical variety of customs and principles, and once the inevitable necessity of moral wickedness and evil is conceded, it believes itself to be far above the recognition of the serious validity and actual efficacy of harmonious moral impulses. This *mordant scepticism*, which is not directed against particular false doctrines but against mankind’s very capacity to develop conscious morality, resolves itself ultimately into a real Nothing, in fact into something that is worse than mere nihilism.... It flatters itself that it can easily reign within its *confused chaos* of dissolved moral ideas and open the gates to unprincipled arbitrariness. But it is greatly mistaken: for mere reference to the inevitable fate of reason in error and truth suffices to show by this analogy alone that natural fallibility does not necessarily exclude the attainment of accuracy.”

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Up to now we have calmly put up with all these pompous phrases of Herr Dühring's about final and ultimate truths, the sovereignty of thought, the absolute certainty of knowledge, and so forth, because it is only at the point we have now reached that the matter can be brought to a head. So far it has been enough to inquire how far the separate assertions of the philosophy of reality had "sovereign validity" and "an unconditional claim to truth"; now we come to the question whether any, and if so which, products of human knowledge ever can have sovereign validity and an unconditional claim to truth. When I say "of *human* knowledge", I do not use the phrase with the intention of insulting the inhabitants of other celestial bodies, whom I don't have the honour of knowing, but only because animals also have knowledge, though it is in no way sovereign. A dog acknowledges his master to be his God, though this master may be the biggest scoundrel on earth.

Is human thought sovereign? Before we can answer yes or no, we must first inquire, what is human thought? Is it the thought of the individual man? No. But it exists only as the individual thought of many billions of past, present and future men. If, then, I say that the total thought of all these human beings, including the as yet unborn, which is embraced in my idea, is *sovereign*, able to know the world as it exists, if only mankind lasts long enough and in so far as no limits are imposed on its knowledge by its organs of knowledge or the objects to be known, then I am saying something which is pretty banal and, what is more, pretty barren. For the most valuable result would be that it should make us extremely distrustful of our present knowledge, since in all probability we are just about at the beginning of human history, and the generations which will correct us are likely to be far more numerous than those whose knowledge we are in a position to correct – often enough with considerable contempt.

Herr Dühring himself declares it to be a necessity that consciousness, and therefore also thought and knowledge, can become manifest only in a series of individual beings. We can only ascribe sovereignty to the thought of each of these individuals in so far as we know of no power capable of forcibly imposing any idea on him, when he is of sound mind and wide awake. But as for the sovereign validity of the knowledge in each individual thought, we all know that there can be no talk of such a thing, and that according to all previous experience such knowledge without exception always contains much more that is capable of being improved upon than is not or than is correct.

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In other words, the sovereignty of thought is realized in a succession of human beings whose thinking is most unsovereign; the knowledge which has an unconditional claim to truth is realized in a series of relative errors; neither the one nor the other can be fully realized except through an unending duration of human existence.

Here again we find the same contradiction as we found above between the character of human thought, necessarily conceived as absolute, and its reality in individual human beings who think only limitedly.* This is a contradiction which can be resolved only in the course of an infinite progression, in what is – at least for us – the practically endless succession of generations of mankind. In this sense human thought is just as much sovereign as not sovereign, and its capacity for knowledge just as much unlimited as limited. It is sovereign and unlimited in its disposition, its vocation, its possibilities and its final historical goal; it is not sovereign and it is limited in its individual fulfilment and in reality at any particular moment.

It is just the same with eternal truths. If mankind ever reached the stage at which it worked only with eternal truths, with intellectual conclusions which possess sovereign validity and an unconditional claim to truth, it would have reached the point where the infinity of the intellectual world had been exhausted both in its actuality and in its potentiality, and the famous miracle of the counted uncountable would have thus been performed.

But then are there any truths which are so well established that any doubt about them seems to us to be tantamount to insanity? That twice two makes four, that the three angles of a triangle are equal to two right angles, that Paris is in France, that a man who gets no food dies of hunger, and so forth? Are there then *eternal* truths, final and ultimate truths?

Of course there are. We can divide the whole realm of knowledge in the traditional way into three great departments. The first includes all sciences that deal with inanimate nature and are to a greater or lesser degree susceptible of mathematical treatment: mathematics, astronomy, mechanics, physics, chemistry. If it gives anyone any pleasure to use big words for very simple things, it can be asserted that *certain* results obtained by these sciences are eternal truths, final and ultimate truths, for which reason these sciences are called the *exact* sciences. But this is very far from being the case for

* See p. 36 above. – *Ed.*

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all their results. With the introduction of variable magnitudes and the extension of their variability to the infinitely small and infinitely large, mathematics, which was so strictly moral in other respects, fell from grace; it ate of the tree of knowledge which opened up to it a path of most colossal achievements but at the same time a path of error, too. The virgin state of absolute validity and irrefutable proof of everything mathematical was gone forever; the realm of controversy was inaugurated, and we have reached the point where most people differentiate and integrate not because they understand what they are doing but from pure faith, because up to now it has always come out right. Things are even worse with astronomy and mechanics, and in physics and chemistry hypotheses swarm around us like bees. And it cannot be otherwise. In physics we are dealing with the motion of molecules, in chemistry with the formation of molecules out of atoms, and unless the interference of light waves is a myth, we have absolutely no prospect of ever seeing these interesting objects with our own eyes. As time goes on, final and ultimate truths become remarkably rare here.

We are even worse off in geology, which by its nature has to deal chiefly with processes which took place not only in our absence but in the absence of any human being whatever. Consequently, the yield of final and ultimate truths is extremely scanty and involves a great deal of trouble here.

The second department of science is the one which covers the investigation of living organisms. In this field there is such a multiplicity of interrelations and causal connections that not only does the solution of each problem give rise to a host of other problems, but each separate problem can in most cases only be solved piecemeal, through a series of investigations which often require centuries; besides, the need for a systematic presentation of interconnections constantly makes it necessary to surround the final and ultimate truths with a luxuriant growth of hypotheses again and again. What a long series of intermediaries from Galen to Malpighi was necessary for correctly establishing such a simple matter as the circulation of the blood in mammals, how little do we know about the origin of blood corpuscles, and how numerous are the missing links even today, for example, in the establishment of a rational relationship between the symptoms of a disease and its causes! Again, often enough discoveries such as that of the cell are made which compel us to revise completely all formerly established final and ultimate truths in the realm of biology, and to discard whole piles of them once and for all. Therefore, anyone who wants to set up really genu-

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ine and immutable truths here will have to be content with such platitudes as all men are mortal, all female mammals have mammary glands, and the like; he will not even be able to assert that the higher animals digest with their stomachs and intestines and not with their heads, for nervous activity, which is centralized in the head, is indispensable to digestion.

But eternal truths are in an even worse plight in the third group of sciences, the historical ones; what they investigate in their historical sequence and in their resultant present state are the conditions of human life, social relations and forms of law and government, with their ideal superstructure of philosophy, religion, art, etc. In organic nature we are at least dealing with a succession of processes which, so far as our immediate observation is concerned, recur with fair regularity within very wide limits. Organic species have on the whole remained unchanged since the time of Aristotle. In social history, however, the repetition of conditions is the exception and not the rule, once we pass beyond the primitive state of man, the so-called Stone Age; and when such repetitions occur, they never arise under exactly the same circumstances. Such, for example, is the occurrence of an original common ownership of the land among all civilized peoples, or the way it was dissolved. In the sphere of human history our knowledge is therefore even more backward than in the realm of biology. What is more, when by way of exception the inner connections of the social and political forms of existence in an epoch come to be known, this occurs as a rule only when these forms have already by half outlived themselves and are nearing their decline. Therefore, knowledge is here essentially relative, because it is limited to the investigation of the interconnections and consequences of certain forms of society and state which exist only in a particular epoch and among particular peoples and are transitory by their very nature. Therefore, anyone who sets out here to hunt down final and ultimate truths, genuine, absolutely immutable truths, will bring home but little, apart from platitudes and commonplaces of the sorriest kind – for example, that generally men cannot live without working; that up to the present they have for the most part been divided into rulers and ruled; that Napoleon died on May 5, 1821; and so on.

Now it is a remarkable thing that it is precisely in this sphere that we most frequently encounter truths which claim to be eternal, final and ultimate and all the rest of it. That twice two makes four, that birds have beaks, and similar statements are proclaimed as eternal truths only by someone who aims at drawing from the existence

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of eternal truths in general the conclusion that there are also eternal truths in the sphere of human history – eternal morality, eternal justice, and so on – which claim a validity and scope similar to those of the truths of mathematics and its applications. And then we can confidently rely on this same friend of humanity to assure us at the first opportunity that all previous fabricators of eternal truths have been to a greater or lesser extent asses and charlatans, that they were all entangled in error and made mistakes; but that *their* error and *their* fallibility are in accordance with nature's laws, and prove the existence of truth and correctness precisely in *his* case; and that he, the prophet who has now arisen, has in his bag, all ready-made, final and ultimate truth, eternal morality and eternal justice. This has all happened so many hundreds and thousands of times that we can only feel astonished that there should still be people credulous enough to believe this, not of others, oh no! but of themselves. Nevertheless we have here before us at least one more such prophet, who also flies into a highly moral temper much in the usual way when other people deny that any individual whatsoever is in a position to deliver the final and ultimate truth. Such a denial, or indeed mere doubt, is weakness, sterile confusion, nothingness, mordant scepticism, worse than sheer nihilism, utter chaos and other such pleasantries. As with all prophets, instead of critical and scientific examination and judgement we find moral condemnation out of hand.

We might have also mentioned above the sciences which investigate the laws of human thought, i.e., logic and dialectics. But here eternal truths do not fare any better. Herr Dühring declares that dialectics proper is pure nonsense; and the many books which have been and are still being written on logic provide abundant proof that here, too, final and ultimate truths are much more sparsely sown than some people believe.

For that matter, there is absolutely no need to be alarmed by the fact that the stage of knowledge which we have now reached is as little final as all that have preceded it. It already embraces a vast accumulation of knowledge and requires highly specialized study on the part of anyone who wants to become at home in any particular science. But a man who applies the measure of genuine, immutable, final and ultimate truth to knowledge which, by its very nature, must either remain relative for many generations and be completed only bit by bit, or which, as in cosmogony, geology and the history of man, must always remain defective and incomplete because of the inadequacy of the historical material – such a man is

only proving his own ignorance and perversity, even if the real background is not, as in this case, the claim to personal infallibility. Truth and error, like all determinations of thought which move in polar opposites, have absolute validity only in an extremely limited field. as we have just seen, and as even Herr Dühring would realize if he had any acquaintance with the first elements of dialectics, for it is precisely with the inadequacy of all polar opposites that they deal. As soon as we apply the antithesis between truth and error outside that narrow field referred to above, it becomes relative and therefore unserviceable for exact scientific modes of expression; but if we try to apply it as absolutely valid outside that field, then we really come a cropper: both poles of the antithesis become transformed into their opposites, truth becomes error and error truth. Let us take as an example Boyle's well-known law, according to which, if the temperature remains constant, the volume of a gas varies inversely with the pressure to which it is subjected. Regnault found that this law does not hold good in certain cases. Had he been a philosopher of reality, he would have been obliged to say: Boyle's Law is mutable, hence it is not a genuine truth, hence it is not a truth at all, hence it is an error. But had he done so, he would have committed an error far greater than the one contained in Boyle's Law; his grain of truth would have been lost in a sand-hill of error; he would therefore have wrought his originally correct conclusion into an error compared with which Boyle's Law, together with the particle of error that clings to it, would have seemed like truth. However, Regnault, being a man of science, did not indulge in such childishness, but continued his investigations and discovered that in general Boyle's Law is only approximately true and in particular loses its validity in the case of gases which can be liquefied by pressure, i.e., as soon as the pressure approaches the point at which liquefaction begins. Therefore Boyle's Law was proved to be true only within definite limits. But is it absolutely and finally true within those limits? No physicist would assert that. He would say that it holds good within certain limits of pressure and temperature and for certain gases; and even within these more restricted limits he would not exclude the possibility of a still narrower limitation or of an altered formulation as the result of future investigations.* This is how things stand with

* Since I wrote the above, it would seem to have already been confirmed. According to the latest researches carried out with more exact apparatus by Mendelejev and Bogusky, all true gases show a variable

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final and ultimate truths in physics, for example. Therefore, really scientific works as a rule avoid such dogmatically moral expressions as error and truth, while we meet them everywhere in works such as the philosophy of reality, in which empty phrasemongering attempts to impose itself on us as the most sovereign result of sovereign thought.

But, a naive reader may ask, where has Herr Dühring expressly stated that the content of his philosophy of reality is final and indeed ultimate truth? Where? Well, for example, in the dithyramb on his system (page 13), part of which we cited in chapter II.* Or when he says, in the passage quoted above: Moral truths, in so far as their ultimate bases are understood, claim a validity similar to mathematical truths.† And doesn't Herr Dühring assert that, working from his really critical standpoint and by means of those researches of his which go to the root of things, he has forced his way through to these ultimate foundations, the basic schemata, and has thus bestowed final and ultimate validity on moral truths? Or, if Herr Dühring does not advance this claim either for himself or for his age, if he only means to say that perhaps some day in the dark and nebulous future final and ultimate truths may be established, if therefore he means to say, only in a more confused way, much the same as "mordant scepticism" and "sterile confusion" – then why all the din, what is my master's pleasure?

If, then, we have not made much progress with truth and error, we can make even less with good and evil. This antithesis manifests itself exclusively in the domain of morals, that is, a domain belonging to the history of mankind, and it is precisely in this field that final and ultimate truths are most sparsely sown. The conceptions of

relation between pressure and volume; the coefficient of expansion for hydrogen, at all the pressures so far applied, has been positive (that is, the diminution of volume was slower than the increase of pressure); in the case of atmospheric air and the other gases examined, there is for each a zero point of pressure, so that this coefficient is positive with pressure below this point and negative above. So Boyle's Law, which has hitherto always been usable in practice, will have to be supplemented by a whole series of special laws. (We also know now – in 1885 – that there are no "true" gases at all. They have all been reduced to a liquid form.) [*Note by Engels.*]

* See pp. 27-28 above. – *Ed.*

† See p. 83 above. – *Ed.*

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good and evil have varied so much from nation to nation and from age to age that they have often been in direct contradiction with each other.

But all the same, someone may object, good is not evil and evil is not good; if good is confused with evil, there is an end to all morality and everyone can do or leave undone whatever he wants. Stripped of all oracular pomposity, this is also Herr Dühring's opinion. But the matter cannot be so simply disposed of. If it were such an easy business, there would certainly be no dispute at all over good and evil; everyone would know what was good and what was bad. But how do things stand today? What morality is preached to us today? There is first Christian-feudal morality, inherited from past centuries of faith; and this again is divided, essentially, into a Catholic and a Protestant morality, each of which in turn has no lack of subdivisions, from the Jesuit-Catholic and the Orthodox-Protestant to the lax and "enlightened" morality. Beside the Christian-feudal morality we find the modern-bourgeois morality and again beside the latter the proletarian morality of the future, so that in the most advanced European countries alone the past, present and future provide three great groups of ethical theories which are in force simultaneously and side by side. Which, then, is the true one? Not one of them, in the sense of absolute finality; but certainly that morality which contains the most elements promising permanence, which, in the present, represents the overthrow of the present, represents the future, and therefore the proletarian morality.

But when we see that the three classes of modern society, the feudal aristocracy, the bourgeoisie and the proletariat, each have a morality of their own, we can only draw the conclusion that men, consciously or unconsciously, derive their ethical ideas in the last resort from the practical relations on which their class position is based – from the economic relations in which they carry on production and exchange.

But even so there is quite a lot which the three moral theories mentioned above have in common – is this not at least a portion of a morality which is fixed once and for all? These moral theories represent three different stages of the same historical development, have therefore a common historical background, and for that reason alone necessarily have much in common. Even more. At the same or approximately the same stages of economic development, moral theories must of necessity be more or less in agreement. From the moment when private ownership of personal property developed, all

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societies in which this private ownership existed had to have this moral injunction in common: Thou shalt not steal. Does this injunction thus become an eternal moral injunction? Not at all. In a society in which the motives for stealing are done away with, in which therefore in the course of time at the very most only lunatics can steal, how the preacher of morals would be jeered at who tried solemnly to proclaim the eternal truth: Thou shalt not steal!

We therefore reject every attempt to impose on us any moral dogma whatsoever as an eternal, ultimate and forever immutable ethical law on the pretext that the moral world, too, has its permanent principles which stand above history and the differences between nations. We maintain on the contrary that so far every moral theory has, in the last analysis, been the product of the economic conditions of society obtaining at the time. And just as society has so far moved in class antagonisms, so morality has always been class morality; it has either justified the domination and the interests of the ruling class, or, as soon as the oppressed class became powerful enough, it has represented its revolt against this domination and the future interests of the oppressed. It is not to be doubted that, by and large, some progress has occurred in morals, as in all other branches of human knowledge. But we have not yet passed beyond class morality. A really human morality which stands above class antagonisms and above any remembrance of them becomes possible only at a stage of society which has not only overcome class antagonisms but has even forgotten them in practical life. One can now gauge the presumption of Herr Diihring, who, from the midst of the old class society, advances the claim on the eve of a social revolution that he can impose an eternal morality independent of time and of changes in the real world on the classless society of the future! Even assuming something we don't know yet – that he understands the structure of this society of the future at least in its main outlines.

Finally, one more revelation which is “fundamentally original” but which for that reason “goes to the roots” nonetheless. With regard to the origin of evil,

“the fact that the *type of the cat* with the guile associated with it is found in animal form stands on the same plane with the fact that a similar type of character is also found in human beings.... There is therefore nothing mysterious about evil, unless someone wants to scent out something mysterious in the existence of a *cat* or of any animal of prey”.

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Evil is – the cat. So the devil has no horns or cloven hoof, but claws and green eyes. And Goethe committed an unpardonable error in presenting Mephistopheles as a black dog instead of a black cat. Evil is the cat! That is morality, not only for all worlds, but also – for the cat!*

X

MORALS AND LAW. EQUALITY

We have already had more than one occasion to become acquainted with Herr Dühring's method. It consists in splitting up each group of objects of knowledge into their allegedly simplest elements, applying to these elements similarly simple and allegedly self-evident axioms, and then continuing to operate with the results so obtained. Even a problem in the sphere of social life

“is to be decided axiomatically, in accordance with particular, simple basic forms, just as if we were dealing with the simple... basic forms of mathematics”.

Thus the application of the mathematical method to history, morals and law is to provide us in these fields, too, with mathematical certainty for the truth of the results obtained, is to characterize them as genuine, immutable truths.

This is only giving a new twist to the old favourite ideological method, also known as the *a priori* method, which consists in ascertaining the properties of an object not from the object itself but by a logical deduction from the concept of the object. First, the concept of the object is formed from the object; then the spit is turned round, and the object is measured by its image, the concept. The object is then to conform to the concept, not the concept to the object. With Herr Dühring the simplest elements, the ultimate abstractions he can reach, do service for the concept, which does not alter matters; these simplest elements are at best of a purely conceptual nature. The philosophy of reality, therefore, proves here again to be pure ideology, the deduction of reality not from itself but from its representation.

Now when such an ideologist constructs morals and law from the concept, or the so-called simplest elements “of society”, instead of from the real social relations of the people around him, what ma-

* In German a play on words: *für die Katze* (for the cat) means useless. – Ed.

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terial is then available for this construction? Material clearly of two kinds: first, the meagre residue of real content which may possibly survive in the abstractions from which he starts, and, second, the content which our ideologist reintroduces from his own consciousness. And what does he find in his consciousness? For the most part, moral and legal notions which are a more or less accurate expression (positive or negative, corroborative or antagonistic) of the social and political relations amidst which he lives; perhaps also ideas drawn from the literature on the subject; and finally maybe some personal idiosyncrasies. Our ideologist may twist and turn as he likes, but the historical reality which he cast out at the door comes in again at the window, and while he thinks he is framing a doctrine of morals and law for all times and for all worlds, he is in fact only fashioning an image of the conservative or revolutionary tendencies of his day, an image which is distorted because it has been torn from its real basis and, like a reflection in a concave mirror, is standing on its head.

Herr Dühring thus splits society up into its simplest elements, and discovers in doing so that the simplest society consists of at least *two* people. With these two people he then proceeds to operate axiomatically. And so the basic moral axiom spontaneously presents itself:

“Two human wills are as such *completely equal* to each other, and in the first place one can demand positively nothing from the other.” This “characterizes the basic form of moral justice”, and equally that of legal justice, for “we need only the utterly simple and elementary relation of *two persons* for the development of the fundamental concepts of right”.

Not only is it not an axiom that two people or two human wills are as such *completely equal* to each other, it is actually a gross exaggeration. In the first place, two people, even as such, may be unequal in sex, and this simple fact leads us on at once to the conclusion that the simplest elements of society – if we enter into this childishness for a moment – are not two men, but a man and a woman, who found a *family*, the simplest and first form of association for the purpose of production. But this cannot in any way suit Herr Dühring. For, on the one hand, the two founders of society must be made as equal as possible; and, secondly, even Herr Dühring could not succeed in constructing the moral and legal equality of man and woman from the primitive family. Consequently, one thing or the other: either the Dühringian social molecule, by

the multiplication of which the whole of society is to be built up, is doomed from the first, because two men can never by themselves bring a child into the world; or we must think of them as two heads of families. And in that case the whole simple basic scheme is turned into its opposite: instead of the equality of people it proves at most the equality of heads of families, and as women are not consulted, it further proves that they are subordinate.

We have now to make the unpleasant announcement to the reader that henceforward he will not get rid of this famous twosome for a long time. In the sphere of social relations they play a similar role to that hitherto played by the inhabitants of other celestial bodies, with whom it is to be hoped we have now finished. Whenever there is a question of economics, politics, etc., to be solved, the two men instantly march up and settle the matter in the twinkling of an eye, "axiomatically". An excellent, creative and system-building discovery on the part of our philosopher of reality. But unfortunately, if we want to pay homage to truth, the two men are not his discovery. They are the common property of the whole eighteenth century. They are already to be found in Rousseau's discourse on inequality (1754), where, by the way, they axiomatically prove the opposite of what is asserted by Herr Dühring. They play a leading part with the economists, from Adam Smith to Ricardo; but here they are at least unequal in that each of the two pursues a different occupation – as a rule one is a hunter and the other a fisherman – and in that they mutually exchange their products. Besides, throughout the eighteenth century, they serve in the main as a purely illustrative example, and Herr Dühring's originality consists only in elevating this method of illustration into a basic method for all social science and a yardstick for all historical forms. Certainly it would be impossible to simplify the "strictly scientific conception of things and men any further".

In order to establish the fundamental axiom that two people and their wills are completely equal to each other and that neither lords it over the other, we cannot use any couple of men at random. They must be two people who are so thoroughly detached from all reality, from all the national, economic, political and religious relations present in the world, from all sexual and personal characteristics, that nothing is left of either of them beyond the mere concept, human being, and then of course they are "completely equal". They are therefore two perfect phantoms conjured up by that very Herr Dühring who scents out and denounces "spiritistic" tendencies everywhere. These two phantoms are of course obliged to do every-

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thing the man who conjured them up wants them to do, and for that very reason all their feats are of no interest whatever to the rest of the world.

But let us pursue Herr Dühring's axiomatics a little further. The two wills can demand positively nothing from each other. Nevertheless, if one of them does so and has his way by force, this gives rise to a state of injustice; and it is by this fundamental scheme that Herr Dühring explains injustice, tyranny, servitude – in short, the whole reprehensible history of the past. Now Rousseau, in the essay referred to above, had already proved the exact opposite – and at that no less axiomatically – by means of the two men, that is, given two men, A cannot enslave B by force, but only by putting B into a position in which the latter cannot do without A, a conception, however, which is much too materialistic for Herr Dühring. Let us put the same thing in a slightly different way. Two shipwrecked people are alone on an island and form a society. Formally, their wills are completely equal, and this is acknowledged by both. But from a material standpoint there is great inequality. A has determination and energy, B is irresolute, lazy and flabby. A is quick-witted, B stupid. How long will it be before A regularly imposes his will on B, first by persuasion, later by dint of habit, but always in a voluntary form? Servitude remains servitude, whether the voluntary form is retained or is trampled underfoot. Voluntary entry into servitude was known throughout the Middle Ages, and in Germany until after the Thirty Years' War.⁴² When serfdom was abolished in Prussia after the defeats of 1806 and 1807, and with it the obligation of the liege lords to provide for their subjects in need, illness and old age, the peasants petitioned the king asking to be left in servitude – for otherwise who would look after them when in distress? The scheme of two men is therefore just as "appropriate" to inequality and servitude as to equality and mutual help; and since we are forced, on pain of extinction, to assume that they are heads of families, hereditary servitude is also foreseen from the start.

But let this entire matter rest for the moment. Let us assume that Herr Dühring's axiomatics have convinced us and that we are enthusiastic supporters of complete equality of rights as between the two wills, of "general human sovereignty", of the "sovereignty of the individual" – veritable verbal colossi, compared with whom Stirner's "Ego" together with his Own is a mere amateur, although he too could claim a modest part in them.⁴³ Well, then, we are now all *completely equal* and independent. All? No, not quite all.

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There are also cases of “permissible dependence”, but these can be explained “on grounds which are to be sought not in the activity of the two wills as such, but in a third sphere, as for example in regard to children, in the inadequacy of their self-determination”.

Indeed! The grounds of dependence are not to be sought in the activity of the two wills as such! Naturally not, for the activity of one of the wills is being actually impeded. But in a third sphere! And what is this third sphere? The concrete determination of the one subjected will as inadequate! Our philosopher of reality has so far departed from reality that, as against the abstract and empty term “will”, he regards the real content, the characteristic determination of this will, as a “third sphere”. But be that as it may, we must state that the equality of rights has an exception. It does not hold good for a will afflicted with inadequacy of self-determination. *Retreat No. 1.*

To proceed.

“Where beast and man are blended in one person, the question may be asked, on behalf of a second, entirely human, person, whether his mode of action should be the same as if only human persons, so to speak, were confronting each other... our hypothesis of two morally unequal persons, one of whom in some sense or other has something of the real beast in his character, is therefore the typical basic form for all relations which may come about in accordance with this difference... within and between groups of people.”

Now let the reader see for himself the pitiful diatribe that follows these clumsy subterfuges, in which Herr Dühring twists and turns like a Jesuit priest in order to determine casuistically how far the human man can interfere with the bestial man, how far he may show distrust and employ stratagems and harsh, nay terrorist means, as well as deception against him, without himself deviating in any way from immutable morality.

So equality also ceases when two persons are “morally unequal”. But then it was surely not worth while to conjure up two completely equal people, for there are no two persons who are completely equal morally. But the inequality is supposed to consist in this, that one person is human and the other has a streak of the beast in him. But then it is inherent in the descent of man from the animal world that he can never entirely rid himself of the beast in him, so that it can always be only a question of more or less, of a difference in the degree of bestiality or of humanity. Apart from the philoso-

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phy of reality, a division of mankind into two sharply differentiated groups, into human men and bestial men, into good and bad, sheep and goats, is only to be found in Christianity, which quite logically also has its judge of the universe to make the separation. But who is to be the judge of the universe in the philosophy of reality? Presumably the procedure will have to be the same as in Christian practice, in which the pious lambs themselves assume the office of judge of the universe in relation to their profane goat-neighbours, and discharge this duty with notorious success. The sect of philosophers of reality, if it ever comes into being, will assuredly not yield precedence in this respect to the pious of the land. This, however, is of no concern to us; what interests us is the admission that as a result of the moral inequality between men equality has vanished once again. *Retreat No. 2.*

Once more, let us proceed.

“If one man acts in accordance with truth and science and the other in accordance with some superstition or prejudice, then... as a rule mutual interference must occur.... At a certain degree of incompetence, brutality or perversity of character, conflict is always inevitable.... It is not only children and madmen in relation to whom the ultimate resource is *force*. The character of whole natural groups and cultural classes of human beings may inexorably necessitate the *subjection* of their will, which is hostile because of its perversity, if it is to be led back to the common social ties. Even in such cases the alien will is still considered as *having equal rights*; but the perversity of its injurious and hostile activity has provoked an *equalization*, and if it is subjected to force, it is only reaping the reaction to its own unrighteousness.”

So not only moral but also mental inequality is enough to remove the “complete equality” of the two wills and to call into being a morality by which all the infamous deeds of civilized robber states against backward peoples, down to the Russian atrocities in Turkestan, can be justified.⁴⁴ When in the summer of 1873 General Kaufmann ordered the Tatar tribe of the Yomuds to be attacked, their tents to be burnt and their wives and children butchered – “in the good old Caucasian way”, as the order was worded – he, too, declared that the subjection of the hostile, because perverted, will of the Yomuds had become an inexorable necessity if it were to be led back to the common social ties, that the means he employed were best suited to the purpose, and that whoever willed the end had also to will the means. Only he was not so cruel as to insult the Yomuds on top of it all and to say that in massacring them for purposes of

equalization it was precisely the possession by their wills of equal rights that he was respecting. Once again in this conflict it is the elect, those who claim to be acting in accordance with truth and science and therefore in the last resort the philosophers of reality, who have to decide what are superstition, prejudice, brutality and perversity of character and when force and subjection are necessary for purposes of equalization. Equality, therefore, is now – equalization by force; and the second will is recognized by the first to have equal rights through subjection. *Retreat No. 3*, here already degenerating into ignominious flight.

Incidentally, the phrase that the alien will is recognized as having equal rights precisely through forcible equalization is only a distortion of the Hegelian theory, according to which punishment is the right of the criminal:

“punishment is regarded as containing the criminal’s right and hence by being punished he is honoured as a rational being.” (*Rechtsphilosophie*, § 100, Anmerk.)⁴⁵

With that we can break off. It would be superfluous to follow Herr Dühring further in his piecemeal destruction of the equality which he set up so axiomatically, of his general human sovereignty, and so on; to observe how he manages to set up society with his two men, but how in order to create the state he requires a third because – to put the matter briefly – without the third no majority decisions can be arrived at, and without these and so without the rule of the majority over the minority, no state can exist; and how he then gradually steers into the calmer waters of the construction of his socialitarian state of the future, where one fine morning we shall have the honour to look him up. We have sufficiently observed that the complete equality of the two wills exists only so long as these two wills *will nothing*; that as soon as they cease to be human wills as such and are transformed into real, individual wills, into the wills of two real people, equality comes to an end; that childhood, madness, so-called bestiality, alleged superstition, assumed prejudice and putative incapacity on the one hand, and pretensions to humanity and knowledge of truth and science on the other – that therefore every difference in the quality of the two wills and in that of the intelligence associated with them justifies an inequality which may go as far as subjection. What more can we ask, when Herr Dühring has so deep-rootedly and fundamentally demolished his own edifice of equality?

But even though we have finished with Herr Dühring’s shallow, amateurish treatment of the idea of equality, this does not mean that

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we have finished with the idea itself, which played a theoretical role especially thanks to Rousseau and a practical political role during and since the Great Revolution, and which to this day still plays an important agitational role in the socialist movement of almost every country. The establishment of its scientific content will also determine its value for proletarian agitation.

The idea that all men, as men, have something in common and to that extent are also equal is of course very, very ancient. But the modern demand for equality is something entirely different; it consists rather in deducing from that common quality of being human, from that equality of men as men, a claim to equal political and social status for all human beings, or at least for all citizens of a state or all members of a society. Before that original conception of relative equality could lead to the conclusion that men should have equal rights in the state and in society, before that conclusion could even appear to be something natural and self-evident, thousands of years had to pass and did pass. In the oldest primitive communities equality of rights could apply at most to members of the community; women, slaves, and strangers were excluded from this equality as a matter of course. Among the Greeks and Romans the inequalities of men were of much greater importance than any equality. It would necessarily have seemed crazy to the ancients that Greeks and barbarians, freemen and slaves, citizens and denizens, Roman citizens and Roman subjects (to use a comprehensive term) should have a claim to equal political status. Under the Roman Empire all these distinctions gradually dissolved, except that between freemen and slaves; in this way there arose, for the freemen at least, that equality as between private individuals on the basis of which Roman law developed – the fullest elaboration we know of law based on private property. But so long as the antithesis between freemen and slaves existed, there could be no talk of drawing legal conclusions from a general human equality; we saw this again recently in the slave states of the North American Union.

Christianity knew only *one* equality on the part of all men, that of an equal possession of original sin, which corresponded perfectly to its character as the religion of the slaves and the oppressed. Apart from this it recognized, at most, the equality of the elect, which however was only stressed at the very beginning. The traces of common ownership which are also found in the early stages of the new religion can be ascribed to solidarity among the proscribed rather than to genuine equalitarian ideas. Within a very short time the

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establishment of the distinction between priests and laymen put an end to even this incipient Christian equality.

The overrunning of Western Europe by the Germans abolished for centuries all ideas of equality through the gradual building up of a complicated social and political hierarchy such as had never existed before. But at the same time the invasion drew Western and Central Europe into the course of historical development, created a compact cultural area for the first time, and within this area also for the first time a system of predominantly national states influencing each other and mutually holding each other in check. It thus prepared the ground on which alone the question of the equal status of men, of the rights of man, could be raised at a later period.

Moreover, mediaeval feudalism developed in its womb the class which in the course of its further development was destined to become the standard-bearer of the modern demand for equality, the bourgeoisie. Originally itself a feudal estate, the bourgeoisie had developed the predominantly handicraft industry and the exchange of products within feudal society to a relatively high level, when at the end of the fifteenth century the great maritime discoveries opened up to it a new career of wider scope. Trade beyond the confines of Europe, which had previously been carried on only between Italy and the Levant, was now extended to America and India, and soon surpassed in importance both the mutual exchange between the various European countries and the internal trade within each individual country. American gold and silver flooded Europe and forced its way like a disintegrating element into every gap, fissure and pore of feudal society. Handicraft industry could no longer satisfy the rising demand; in the leading industries of the most advanced countries it was replaced by manufacture.

But this mighty revolution in the economic conditions of society was not followed by any immediate corresponding change in its political structure. The state order remained feudal, while society became more and more bourgeois. Trade on a large scale, that is to say, particularly international and, even more so, world trade, requires free owners of commodities who are unrestricted in their movements and as such enjoy equal rights, who may exchange their commodities on the basis of laws that are equal for them all, at least in each particular place. The transition from handicraft to manufacture presupposes the existence of a number of free workers – free on the one hand from the fetters of the guild and on the other from the means by which they could themselves utilize their labour-power – workers who can contract with the manufacturer for the hire of their

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labour-power, and who hence, as parties to the contract, have rights equal to his. And finally the equality and equal status of all *human* labour, because and in so far as it is human labour, found its unconscious but clearest expression in the law of value of modern bourgeois political economy, according to which the value of a commodity is measured by the socially necessary labour embodied in it.*

However, where economic relations required freedom and equality of rights, the political system opposed them at every step with guild restrictions and special privileges. Local privileges, differential duties, exceptional laws of all kinds affected in their trade not only foreigners and people living in the colonies, but often enough whole categories of nationals proper; everywhere and ever anew the privileges of the guilds barred the development of manufacture. Nowhere was the road clear and were the chances equal for the bourgeois competitors – and yet this was the prime and ever more pressing demand.

The demand for liberation from feudal fetters and the establishment of equality of rights by the abolition of feudal inequalities was soon bound to assume wider dimensions, once the economic advance of society had placed it on the order of the day. If it was raised in the interests of industry and trade, it was also necessary to demand the same equality of rights for the great mass of the peasantry who, in every degree of bondage, from total serfdom onwards, were compelled to give the greater part of their labour-time to their liege lord without compensation and in addition to render innumerable other dues to him and to the state. On the other hand, it was inevitable that a demand should also be made for the abolition of the feudal privileges, of the nobility's freedom from taxation and of the political privileges of the separate estates. As people were no longer living in a world empire such as the Roman Empire had been but in a system of independent states dealing with each other on an equal footing and at approximately the same level of bourgeois development, it was a matter of course that the demand should assume a general character reaching out beyond the individual state, that

* This derivation of the modern ideas of equality from the economic conditions of bourgeois society was first demonstrated by Marx in *Capital*. [Note by Engels.] See Marx, *Capital*, English edition, Moscow, 1961, Vol. I, p. 60. All subsequent references in the editor's notes to *Capital*, Vol. I, are to this edition. – Ed.

freedom and equality should be proclaimed *human rights*. It is significant of the specifically bourgeois character of these human rights that the American Constitution, the first to recognize the rights of man, in the same breath confirms the slavery of the coloured races existing in America: class privileges are proscribed, race privileges sanctioned.

But as is well known, from the moment when the bourgeoisie emerged from feudal burgherdom, when this mediaeval estate changed into a modern class, it was always and inevitably accompanied by its shadow, the proletariat. In the same way bourgeois demands for equality were accompanied by proletarian demands for equality. From the moment when the bourgeois demand for the abolition of class *privileges* was put forward, there appeared beside it the proletarian demand for the abolition of *classes themselves* – at first in a religious form, leaning towards primitive Christianity, and later drawing support from the bourgeois equalitarian theories themselves. The proletarians took the bourgeoisie at its word: equality must not be merely apparent, must not apply merely to the sphere of the state, but must also be real, must also be extended to the social and economic sphere. In particular, ever since the French bourgeoisie, from the Great Revolution on, brought civil equality to the forefront, the French proletariat has answered blow for blow with the demand for social and economic equality, and equality has become the battle-cry especially of the French proletariat.

The demand for equality in the mouth of the proletariat has therefore a double meaning. It is either the spontaneous reaction against the crying social inequalities, against the contrast between rich and poor, the feudal lords and their serfs, the surfeiters and the starving, as was the case especially at the very start, for example in the Peasants' War; as such it is simply an expression of the revolutionary instinct and finds its justification in that, and in that alone. Or, on the other hand, this demand has arisen from the reaction against the bourgeois demand for equality, drawing more or less correct and more far-reaching demands from the latter and serving as an agitational means in order to stir up the workers against the capitalists with the aid of the capitalists' own assertions; and in this case it stands or falls with bourgeois equality itself. In both cases the real content of the proletarian demand for equality is the demand for the *abolition of classes*. Any demand for equality which goes beyond that of necessity passes into absurdity. We have given examples of this and shall find plenty more when we come to Herr Dühring's fantasies of the future.

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Thus the idea of equality, whether in its bourgeois or in its proletarian form, is itself a historical product, the creation of which required definite historical conditions that in turn themselves presuppose a long previous history. It is consequently anything but an eternal truth. If today it is taken for granted by the general public – in one sense or another – if, as Marx says, it “already possesses the fixity of a popular prejudice”,* this is not the result of its axiomatic truth but of the general diffusion and the persistent up-to-dateness of the ideas of the eighteenth century. If therefore Herr Dühring is able to let his famous twosome function economically on the basis of equality without more ado, this is so because it seems quite natural to popular prejudice. In fact Herr Dühring calls his philosophy *natural* because it is derived solely from things which seem quite natural to him. But why they seem natural to him is a question which of course he does not ask.

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“In the sphere of politics and law the principles expounded in this course are based on the *most exhaustive specialized studies*. It is therefore... necessary to proceed from the fact that what we have here... is a consistent exposition of the *conclusions* reached in the sphere of legal and political science. My original special subject was precisely jurisprudence and I not only devoted to it the customary three years of theoretical university preparation but also continued to study it during a further three years of court practice, particularly with a view to the *deepening* of its scientific content.... And *certainly* the critique of private law relationships and the corresponding legal inadequacies could not have been put forward with *such confidence* but for the consciousness that all the weaknesses of the subject as well as its stronger sides *were known* to it.”

A man who is justified in saying this of himself must from the outset inspire confidence, especially in contrast with the “one-time, admittedly neglected, legal studies of Herr Marx”.

Therefore it must surprise us to find that the critique of private law relationships which is advanced with such confidence is restricted to telling us that

* *Ibid.* – *Ed.*

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“the scientific character of jurisprudence has not got very far”, that positive civil law is non-law because it sanctions property based on force, and that the “natural basis” of criminal law is *revenge* –

an assertion in which in any case only the mystical wrapping of its “natural basis” is new. The conclusions in political science are limited to the transactions of the familiar trio, one of whom has done violence to the others, with Herr Dühring in all seriousness conducting an investigation into whether it was the second or the third who first introduced violence and subjection.

However, let us go a little more deeply into our confident jurist’s most exhaustive specialized studies and his erudition deepened by three years of court practice.

Herr Dühring tells us of Lassalle that

he was prosecuted for “*inciting* to an attempt to steal a cash-box” but that “no court sentence could be recorded, as the so-called *acquittal for lack of evidence*, which was *then still possible*, supervened... this *half acquittal*”.

The Lassalle case here referred to came up in the summer of 1848 before the assizes at Cologne, where, as in almost the whole of the Rhine province, French criminal law was in force.⁴⁶ The Prussian *Landrecht* had been introduced by way of exception only for political offences and crimes, but already in April 1848 this exceptional measure had been abrogated by Camphausen.⁴⁷ French law has no knowledge whatever of the loose Prussian *Landrecht* category of “inciting” to a crime, let alone inciting to an attempt to commit a crime. It knows only *instigation* to crime, and this, to be punishable, must have occurred “by means of gifts, promises, threats, abuse of authority or of power, machinations or culpable artifices” (*Code pénal*, art. 60).⁴⁸ The Ministry of State, steeped in the Prussian *Landrecht*, overlooked, just as Herr Dühring does, the essential difference between the sharply defined French code and the vagueness and indefiniteness of the *Landrecht* and, subjecting Lassalle to a tendentious trial, egregiously failed in the case. Only a person who is completely ignorant of modern French law can venture to assert that French criminal procedure permitted the Prussian *Landrecht* form of acquittal for lack of evidence, this *half acquittal*; criminal procedure under French law knows only conviction or acquittal, nothing in between.

So we are forced to say that Herr Dühring would certainly not have been able to perpetrate this “treatment of history in the grand

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manner” against Lassalle with such confidence if he had ever had the *Code Napoléon* in his hands.⁴⁹ We must therefore state as a fact that modern French law, the *only* modern civil code, which rests on the social achievements of the great French Revolution and translates them into legal form, is *completely unknown* to Herr Dühring.

In another place, in the criticism of trial by jury with majority decision which was adopted throughout the Continent in accordance with the French model, we are taught:

“Yes, it will *even* be possible to familiarize oneself with the idea, which for that matter is not without historical precedent, that a conviction *where opinion is divided* should be one of the impossible institutions in a perfect community.... However, as already indicated above, this *serious* and *profoundly intelligent* mode of thought must seem unsuitable for the traditional forms, because it is *too good* for them.”

Once again, Herr Dühring is ignorant of the fact that under English common law, i.e., the unwritten customary law which has been in force since time immemorial, and certainly at least since the fourteenth century, the unanimity of the jury is absolutely essential, not only for convictions in criminal cases but also for judgements in civil suits. Thus the serious and profoundly intelligent mode of thought, which according to Herr Dühring is *too good* for the present-day world, had legal validity in England as far back as the darkest Middle Ages, and from England it was brought to Ireland, the United States of America and all the English colonies. Yet the most exhaustive specialized study failed to reveal to Herr Dühring the faintest whisper of all this! The area in which a unanimous verdict by the jury is required is therefore not only infinitely greater than the tiny area where the Prussian *Landrecht* is in force, but is also more extensive than all the areas taken together in which juries decide by majority vote. Not only is French law, the only modern law, totally unknown to Herr Dühring; he is equally ignorant of the only Germanic law which has developed independently of Roman authority up to the present day and spread to all parts of the world – English law. And why not? Because the English brand of the juridical mode of thought

“would in any case be unable to stand up against the schooling in the pure concepts of the classical Roman jurists achieved on German soil”, says Herr Dühring; and he proceeds:

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“What is the English-speaking world with its childish hodge-podge of a language as compared with our natural language structure?”

To which we might answer with Spinoza: *Ignorantia non est argumentum*, ignorance is no argument.”⁵⁰

We can accordingly come to no other conclusion than that Herr Dühring’s most exhaustive specialized study consisted in his absorption for three years in the theoretical study of the *Corpus juris*,⁵¹ and for a further three years in the practical study of the noble Prussian *Landrecht*. That is certainly quite meritorious and would be ample for a really respectable district judge or lawyer in old Prussia. But when a person undertakes to compose a philosophy of law for all worlds and all ages, he should at least have some degree of acquaintance with legal systems like those of the French, English and Americans, nations which have played quite a different role in history from that played by the little corner of Germany in which the Prussian *Landrecht* flourishes. But let us see further.

“The variegated medley of local, provincial and national laws, which arbitrarily run counter to one another in the most diverse directions sometimes as common law, sometimes as written law, often cloaking the most important issues in a purely statutory form – this pattern-book of disorder and contradiction, in which particular points override general principles and general principles sometimes override particular points – is really not calculated to enable anyone... to form a clear conception of jurisprudence.”

But where does this confusion exist? Once again, within the area where the Prussian *Landrecht* holds sway, where alongside, over or under this *Landrecht* there are provincial laws and local statutes, here and there also common law and other trash, ranging through the most diverse degrees of relative validity and eliciting from all practising jurists that cry for help which Herr Dühring here so sympathetically echoes. He need not even go outside his beloved Prussia – he need only come as far as the Rhine to convince himself that all this has ceased to be an issue there for the last seventy years – not to speak of other civilized countries, where these antiquated conditions have long since been abolished.

Further:

“In a less blunt form the natural responsibility of individuals is veiled by means of secret and therefore anonymous collective decisions and actions on the part of *collegia* or other official institutions of public authority, which mask the personal share of each separate member.”

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And in another passage:

“In our present situation it will be regarded as an *astonishing* and extremely stringent demand if one opposes the cloaking and covering up of individual responsibility by collective bodies.”

Perhaps Herr Dühring will regard it as an astonishing piece of information when we tell him that in the sphere of English law each member of a judicial bench has to give his decision separately and in open court, stating the grounds on which it is based; that administrative collective bodies which are not elected and do not transact business or vote publicly are essentially a *Prussian* institution and are unknown in most other countries; and that therefore his demand can only be regarded as astonishing and extremely stringent – in *Prussia*.

Similarly, his complaints about the compulsory introduction of religious practices in birth, marriage, death and burial apply to Prussia alone of all the larger civilized countries, and since the introduction of civil registration no longer even there. What Herr Dühring can accomplish only by means of a future “socialitarian” state of things, even Bismarck has meanwhile managed by means of a simple law.⁵²

It is just the same when he strikes up a specifically Prussian jeremiad with his “complaint over the inadequate preparation of jurists for their profession”, a complaint which could be extended to cover “administrative officials”; and even his ridiculously inflated hatred of the Jews, which he exhibits on every possible occasion, is a feature which if not specifically Prussian is yet specific to the region east of the Elbe. That same philosopher of reality who has a sovereign contempt for all prejudices and superstitions is himself so deeply immersed in personal crotchets that he calls the popular prejudice against the Jews, inherited from the bigotry of the Middle Ages, a “natural judgement” based on “natural grounds”, and he rises to pyramidal heights in asserting that

“socialism is the only power which can oppose population conditions with a rather strong Jewish admixture” (conditions with a Jewish admixture! What “natural” German!).

Enough of this. The grandiloquent boasts of legal erudition have as their basis – at best – only the most common-place professional knowledge possessed by a very ordinary jurist from old Prussia. The sphere of legal and political science, the achievements of which Herr Dühring consistently expounds, “coincides” with the

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area where the Prussian *Landrecht* holds sway. Apart from Roman law, with which every jurist is fairly familiar, even in England nowadays, his knowledge of law is confined wholly and solely to the Prussian *Landrecht* – that legal code of an enlightened patriarchal despotism which is written in the kind of German Herr Dühring appears to have been trained in, and which, with its moral glosses, its juristic vagueness and inconsistency, its caning as a means of torture and punishment, belongs entirely to the pre-revolutionary epoch. Whatever exists beyond this Herr Dühring regards as evil – both modern French civil law and English law with its quite peculiar development and its safeguarding of personal liberty, which is unknown anywhere on the Continent. The philosophy which “cannot allow the validity of any merely apparent horizon, but unfolds all earths and heavens of outer and inner nature in its mighty revolutionizing sweep” – has as its real horizon the boundaries of the six eastern provinces of old Prussia, and in addition perhaps the few other patches of land where the noble *Landrecht* holds sway; and beyond this horizon it unfolds neither earths nor heavens, neither outer nor inner nature, but only a picture of the crassest ignorance of what is happening in the rest of the world.

It is hard to deal with morals and law without coming up against the question of the so-called freedom of the will, of man’s responsibility for his actions, of the relation between necessity and freedom. The philosophy of reality has not one but actually two solutions of this problem.

“All false theories of freedom must be replaced by what we know from experience is the nature of the relation between rational judgement on the one hand and instinctive impulses on the other, a relation which *so to speak* unites them into a single mean force. The fundamental facts of this form of dynamics must be drawn from observation and must in general also be estimated *as closely as possible* according to their nature and magnitude with regard to the calculation in advance of events which have not yet occurred. In this manner the silly delusions of inner freedom, which people have chewed and fed on for thousands of years, are not only thoroughly cleared away, but are replaced by something positive, which can be made use of for the practical regulation of life.”

On this basis freedom consists in rational judgement pulling a man to the right while irrational impulses pull him to the left, and in this parallelogram of forces the actual movement follows the direction of the diagonal. Freedom would therefore be the mean between

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judgement and impulse, between reason and unreason, and its degree in each individual case could be determined on the basis of experience by a "personal equation", to use an astronomical expression.⁵³ But a few pages later on we find:

"We base moral responsibility on freedom, which however means nothing more to us than susceptibility to conscious motives in accordance with our natural and acquired intelligence. All such motives operate with the inevitability of natural law, notwithstanding an awareness of the possible contradictions in the actions; but it is precisely on this unavoidable compulsion that we rely when we apply the moral levers."

This second definition of freedom, which quite unceremoniously gives a knock-out blow to the first, is again nothing but an extreme vulgarization of the Hegelian conception. Hegel was the first to state the relation between freedom and necessity correctly. To him, freedom is the recognition of necessity. "Necessity is *blind only in so far as it is not understood* ."⁵⁴ Freedom does not consist in an imaginary independence from natural laws, but in the knowledge of these laws and in the possibility which is thus given of systematically making them work towards definite ends. This holds good in relation both to the laws of external nature and to those which govern the bodily and mental existence of men themselves – two classes of laws which we can separate from each other at most only in thought but not in reality. Freedom of the will therefore means nothing but the capacity to make decisions with knowledge of the facts. Therefore the *freer* a man's judgement in relation to a definite point in question, the greater the *necessity* with which the content of this judgement will be determined; while the uncertainty founded on ignorance, which seems to make an arbitrary choice among many different and contradictory possibilities of decision, shows precisely by this that it is not free, that it is commanded by the very object it should itself command. Freedom therefore consists in command over ourselves and over external nature, a command founded on knowledge of natural necessity; it is therefore necessarily a product of historical development.

The first men who separated themselves from the animal kingdom were in all essentials as unfree as the animals themselves, but each step forward in civilization was a step towards freedom. On the threshold of human history there stands the discovery that mechanical motion can be transformed into heat, the production of fire by friction; at the close of the development traversed so far there stands the discovery that heat can be transformed into mechanical

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motion, the steam-engine. In spite of the gigantic liberating revolution which the steam-engine is carrying through in the social world – and which is not yet completed by half – it is beyond all doubt that the generation of fire by friction has had an even greater effect on the liberation of mankind. For the generation of fire by friction for the first time gave man command over one of the forces of nature, and thus separated him forever from the animal kingdom. The steam-engine will never bring about such a mighty leap forward in human development, however important it may seem in our eyes as representing all those immense productive forces dependent on it, forces which alone make possible a state of society in which there are no longer class distinctions or anxiety over the means of subsistence for the individual, and in which for the first time there can be talk of real human freedom, of an existence in harmony with the known laws of nature. But the simple fact that all past history can be characterized as the history of the epoch from the practical discovery of the transformation of mechanical motion into heat up to that of the transformation of heat into mechanical motion shows how young the whole of human history still is, and how ridiculous it would be to attempt to ascribe any absolute validity to our present views.

True, Herr Dühring's treatment of history is different. In general, as a story of error, ignorance and barbarity, of violence and subjugation, it is a repulsive object to the philosophy of reality, but considered in detail it is divided into two great periods, namely (1) from the self-identical state of matter up to the French Revolution; (2) from the French Revolution up to Herr Dühring; the nineteenth century remains

“still essentially reactionary, indeed from the intellectual standpoint it is that (!) even more so than the eighteenth”. Nevertheless, it bears socialism in its womb, and therewith “the germ of a mightier regeneration than was imagined (!) by the forerunners and heroes of the French Revolution”.

The philosophy of reality's contempt for all past history is justified as follows:

“The few thousand years, the historical recollection of which has been facilitated by original documents, are, together with the constitution of man so far, *of little significance* when one thinks of the succession of thousands of years to come.... The human race as a whole is still very young, and when in time to come scientific recollection has tens of

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thousands instead of thousands of years to reckon with, the intellectually immature childhood of our institutions becomes a self-evident premise undisputed in relation to our epoch, which will then be revered as hoary antiquity."

Without dwelling on the really "natural language structure" of the last sentence, we shall note only two points. Firstly, this "hoary antiquity" will in any case remain a historical epoch of the greatest interest for all future generations, because it forms the basis of all subsequent higher development and because it has for its starting-point the moulding of man from the animal kingdom and for its content the overcoming of obstacles such as will never again confront the associated men of the future. Secondly, the close of this hoary antiquity – contrasted with which the future periods of history hold the promise of quite other scientific, technical and social achievements because they will no longer be retarded by these difficulties and obstacles – this close is in any case a very strange moment to choose for laying down the law for these thousands of years to come in the form of final and ultimate truths, immutable truths and deep-rooted conceptions discovered on the basis of the intellectually immature childhood of our so very "backward" and "retrogressive" century. Only the Richard Wagner of philosophy – but minus Wagner's talents – could fail to see that all the depreciatory epithets flung at previous historical development also remain attached to what is claimed to be its final outcome – the so-called philosophy of reality.

One of the most significant morsels of the new deep-rooted science is the section on the individualization of life and the enhancement of its value. Here oracular commonplaces bubble up and gush forth in an irresistible torrent for three full chapters. Unfortunately we must limit ourselves to a few short samples.

"The deeper essence of all sensation and therefore of all subjective forms of life rests on the *difference* between states.... But for a *full* (!) life it can be shown without much trouble (!) that appreciation is heightened and the decisive stimuli are developed, not by persistence in a particular state but by a transition from one situation in life to another.... The approximately self-identical state which is *so to speak* in permanent inertia and *as it were* continues in the same position of equilibrium, whatever its nature may be, has but little significance for the testing of existence.... Habituation and *so to speak* inurement make it something of absolute in difference and unconcern, something which is not very distinct from being dead. At most the torment of boredom also

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enters into it as a kind of negative life impulse.... A life of stagnation extinguishes all passion and all interest in existence, both for individuals and for peoples. *But it is our law of difference through which all these phenomena become explicable.*"

The rapidity with which Herr Dühring establishes his fundamentally original conclusions passes all belief. The commonplace that the continued stimulation of the same nerve or the continuation of the same stimulus fatigues each nerve or each nervous system, and that therefore in a normal condition nerve stimuli must be interrupted and varied – which for years has been stated in every textbook of physiology and is known to every philistine from his own experience – is first translated into the language of the philosophy of reality. No sooner has this hoary platitude been translated into the mysterious formula that the deeper essence of all sensation rests on the difference between states than it is further transformed into "*our law of difference*". And this law of difference makes "absolutely explicable" a whole series of phenomena, which in turn are nothing more than illustrations and examples of the pleasantness of variety, and which require no explanation whatever even for the most common philistine understanding and gain not the breadth of an atom in clarity by reference to this alleged law of difference.

But this far from exhausts the deep-rootedness of "*our law of difference*".

"The sequence of ages in life and the emergence of the different conditions of life bound up with them furnish a very obvious example with which to illustrate *our* principle of difference.... Child, boy, youth and man experience the intensity of their appreciation of life not so much when the state in which they find themselves has already become fixed as in the periods of transition from one stage to another."

Even this is not enough.

"Our law of difference can be given an even more distant application if we take into consideration the fact that the repetition of what has already been tried or done has no attraction."

And now the reader can himself imagine the oracular twaddle for which sentences of the profundity and deep-rootedness of those cited form the starting-point. Herr Dühring may well shout triumphantly at the end of his book:

"The law of difference has become decisive both in theory and in practice for the appreciation and enhancement of the value of life!"

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This is likewise true of Herr Dühring's appreciation of the intellectual value of his public: he must believe that it is composed of sheer asses or philistines.

We are further given the following extremely practical rules of life:

"The method whereby total interest in life can be kept active" (a fitting task for philistines and those who want to become such!) "consists in allowing the particular and *so to speak* elementary interests, of which the total interest is composed, to develop or succeed each other in accordance with natural periods of time. Simultaneously, for the same state the succession of stages may be made use of by replacing the lower and more easily satisfied stimuli by higher and more permanently effective excitations in order to avoid the occurrence of any gaps that are entirely devoid of interest. However, it will also be necessary to ensure that natural tensions or those arising in the normal course of social existence are not arbitrarily accumulated or forced or – the opposite perversion – satisfied by the lightest stimulation, and thus prevented from developing a want which is capable of gratification. In this as in other cases the maintenance of the natural rhythm is the precondition of all harmonious and agreeable movement. Nor should anyone set himself the insoluble problem of trying to prolong the stimuli of any situation beyond the period allotted them by nature or by the circumstances" – and so on.

The good fellow who takes as his rule for the "testing of life" these solemn oracles of philistine pedantry splitting hairs over the shallowest platitudes will certainly not have to complain of "gaps entirely devoid of interest". It will take him all his time to prepare his pleasures and get them in the right order, so that he will not have a moment left to enjoy them.

We should try out life, full life. There are only two things which Herr Dühring prohibits us:

first "the uncleanness of indulging in tobacco", and second beverages and foods which "have properties that rouse disgust or are in general reprehensible to the more refined feelings".

In his *Course of Political Economy*, however, Herr Dühring writes such a dithyramb on the distilling of spirits that it is impossible that he should include liquor in this category; we are therefore forced to conclude that his prohibition covers only wine and beer. He has only to prohibit meat, too, and he will have then raised the philosophy of reality to the same height as that on which the late

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Gustav Struve moved with such great success – the height of pure childishness.

For the rest, Herr Dühring might be slightly more liberal in regard to liquor. A man who, by his own admission, still cannot find the bridge from the static to the dynamic has surely every reason to be indulgent in judging some poor devil who for once has had a drop too much and so gropes in vain for the bridge from the dynamic to the static.

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“The first and most important principle of the basic logical properties of being refers to the *exclusion of contradiction*. The contradictory is a category which can only appertain to a combination of thoughts, but not to reality. There are no contradictions in things, or, in other words, contradiction accepted as reality is itself the apex of absurdity.... The antagonism of forces measured against each other in opposite directions is in fact the basic form of all actions in the life of the world and its creatures. But this opposition of the directions taken by the forces of elements and individuals does not in the slightest degree coincide with the absurd idea of contradictions.... We can be content here with having cleared the fogs which generally rise from the supposed mysteries of logic by presenting a clear picture of the actual absurdity of contradictions in reality, and with having shown the uselessness of the incense which has been wasted here and there in honour of the dialectics of contradiction – the very clumsily carved wooden doll which is substituted for the antagonistic world schematism.”

This is practically all we are told about dialectics in the *Course of Philosophy*. In his *Critical History*, on the other hand, the dialectics of contradiction, and with it particularly Hegel, are treated quite differently.

“Contradiction, according to the Hegelian logic, or rather the doctrine of the Logos, is objectively present not in thought, which by its nature can only be conceived as subjective and conscious, but in things and processes themselves and can be met with in so to speak corporeal form, so that absurdity does not remain an impossible combination of thought but becomes an actual force. The reality of the absurd is the first article of faith in the Hegelian unity of the logical and the illogi-

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cal.... The more contradictory a thing, the truer it is, or in other words, the more absurd, the more credible it is. This maxim, which is not even newly invented but is borrowed from the theology of the Revelation and from mysticism, is the naked expression of the so-called dialectical principle.”

The thought contained in the two passages cited can be summed up in the statement that contradiction = contra-sense and therefore cannot occur in the real world. People who in other respects show a fair degree of common sense may regard this statement as having the same self-evident validity as the statement that a straight line cannot be a curve and a curve cannot be straight. But, regardless of all protests made by common sense, the differential calculus assumes that under certain circumstances straight lines and curves are nevertheless identical, and thus obtains results which common sense, by insisting on the absurdity of straight lines being identical with curves, can never attain. And in view of the important role which the so-called dialectics of contradiction has played in philosophy from the time of the earliest Greeks up to the present, even a stronger opponent than Herr Dühring should have felt obliged to attack it with other arguments besides a single assertion and a good many abusive epithets.

True, so long as we consider things as at rest and lifeless, each one by itself, side by side and in succession, we do not run up against any contradictions in them. We find certain qualities which are partly common to, partly different from, and even contradictory to, each other, but which in this case are distributed among different objects and therefore contain no contradiction in them. Within the limits of this sphere of observation we can get along on the basis of the usual metaphysical mode of thought. But the position is quite different as soon as we consider things in their motion, their change, their life, their reciprocal influence. Then we immediately become involved in contradictions. Motion itself is a contradiction: even simple mechanical change of place can only come about through a body being both in one place and in another place at one and the same moment of time, being in one and the same place and also not in it. And the continual assertion and simultaneous solution of this contradiction is precisely what motion is.

Here, therefore, we have a contradiction which “is objectively present in things and processes themselves and can be met with in so to speak corporeal form”. What has Herr Dühring to say about it? He avers that

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up to the present there has been “no bridge” whatever “in rational mechanics from the strictly static to the dynamic”.

The reader can now at last see what is hidden behind this favourite phrase of Herr Dühring's – it is nothing but this: the mind which thinks metaphysically is absolutely unable to pass from the idea of rest to the idea of motion, because the contradiction pointed out above blocks its path. To it, motion is simply inconceivable because it is a contradiction. And in asserting the inconceivability of motion, it admits against its will the existence of this contradiction, and thus admits that there is a contradiction objectively present in things and processes themselves, a contradiction which is moreover an actual force.

If simple mechanical change of place contains a contradiction, this is even truer of the higher forms of motion of matter, and especially of organic life and its development. We saw above that life consists precisely and primarily in this – that a living thing is at each moment itself and yet something else.* Life is therefore also a contradiction which is present in things and processes themselves, and which constantly asserts and resolves itself; and as soon as the contradiction ceases, life, too, comes to an end, and death steps in. We likewise saw that we could not escape contradictions in the sphere of thought as well, and that for example the contradiction between man's intrinsically unlimited cognitive faculty and its actual presence in men who are all extrinsically limited and possess limited knowledge finds its solution in what is practically – at least for us – an endless succession of generations, in infinite progress.†

We have already noted that one of the main foundations of higher mathematics is the contradiction that in certain circumstances straight lines and curves may be identical. It also achieves this other contradiction: that lines which intersect before our eyes can nevertheless be shown to be parallel only five or six centimetres from their point of intersection, that is, that they will never meet even if extended to infinity. Yet, working with these and even with far greater contradictions, it attains results which are not only correct but also quite unattainable for lower mathematics.

But even lower mathematics teems with contradictions. For example, it is a contradiction that a root of A should be a power of A ,

* See p. 81 above. – *Ed.*

† See pp. 36 and 84 ff. above. – *Ed.*

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and yet $4^{1/2} = \sqrt{4}$. It is a contradiction that a negative magnitude should be the square of anything, for every negative magnitude multiplied by itself gives a positive square. The square root of minus one is therefore not only a contradiction, but even an absurd contradiction, a real absurdity. And yet $\sqrt{-1}$ is in many cases a necessary result of correct mathematical operations. Furthermore, where would mathematics – lower or higher – be, if it were prohibited from operating with $\sqrt{-1}$?

In its operations with variable magnitudes mathematics itself enters the field of dialectics, and it is significant that it was a dialectical philosopher, Descartes, who introduced this advance. The relation between the mathematics of variable and the mathematics of constant magnitudes is in general the same as the relation between dialectical and metaphysical thought. Which by no means prevents the great mass of mathematicians from recognizing dialectics solely in the sphere of mathematics, and a good many of them from continuing to work entirely in the old, limited, metaphysical way with methods that were obtained dialectically.

It would only be possible to go more closely into Herr Dühring's antagonism of forces and his antagonistic world schematism if he had given us something more on this theme than the mere *phrase*. After he accomplishes this feat, this antagonism is not shown to us in operation even once, whether in his world schematism or in his natural philosophy – the most convincing admission that Herr Dühring can do absolutely nothing of a positive character with his “basic form of all actions in the life of the world and its creatures”. When Hegel's “Doctrine of Essence” has in fact been reduced to the platitude of forces moving in opposite directions but not in contradictions, surely the best thing to do is to avoid any application of this commonplace.

Marx's *Capital* furnishes Herr Dühring with another occasion for venting his anti-dialectical spleen.

“The absence of natural and intelligible logic which characterizes these dialectical frills and mazes and arabesques of ideas... even to the part that has already appeared we must apply the principle that in a certain respect and also in general (!), according to a well-known philosophical prejudice, all must be sought in each and each in all, and that therefore, according to this hybrid and hobbled idea, everything is all the same in the end.”

Thus this insight of his into the well-known philosophical prejudice also enables Herr Dühring to prophesy with assurance what

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will be the “end” of Marx’s economic philosophizing, that is, what the following volumes of *Capital* will contain, and this he does exactly seven lines after he has declared that

“speaking in plain human language it is really impossible to foresee what is still to come in the two” (final) “volumes”.

However, this is not the first time that Herr Dühring’s writings are revealed to us as belonging to the category of “things” in which “contradiction is objectively present and can be met with in so to speak corporeal form”. But this in no wise prevents him from victoriously continuing:

“Yet sound logic will predictably triumph over its caricature.... This pretence of superiority and this mysterious dialectical rubbish will tempt no one who has even a modicum of sound judgement left to have anything to do... with these deformities of thought and style. With the demise of the last relics of the follies of dialectics this means of duping... will lose its deceitful influence, and no one will believe any longer that he has to torture himself in order to get behind some profound piece of wisdom, the kernel of which, when purged of its excrescences, reveals at best the features of standard theories if not of absolute commonplaces.... It is quite impossible to reproduce the” (Marxist) “contortions in accordance with the doctrine of the Logos without prostituting sound logic.” Marx’s method, it would seem, consists in “contriving dialectical miracles for his faithful followers”, and so on.

For the moment, we are concerned in no way with the correctness or incorrectness of the economic results of Marx’s researches, but only with the dialectical method applied by Marx. But this much is certain: most readers of *Capital* will have learnt for the first time from Herr Dühring what it is that they have really read. And among them there will also be found Herr Dühring himself, who in the year 1867 (*Ergänzungsblätter* III, Heft 3)* was still able to provide what for a thinker of his calibre was a relatively rational review of the book without being obliged to translate the Marxist argument into Dühringian language, a procedure which he now declares to be indispensable. Though he even then committed the blunder of identifying Marxist with Hegelian dialectics, he had not quite lost the capacity to distinguish between the method and the results obtained

* *Supplementary Sheets*, III, No. 3. – *Ed.*

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by using it, and to understand that the latter are not refuted in particular by vilifying the former in general.

At any rate, Herr Dühring's most astonishing statement is that from the Marxist standpoint "everything is all the same in the end," that therefore to Marx capitalists and wage workers, and the feudal, capitalist and socialist modes of production, for example, are also "all the same" – no doubt in the end even Marx and Herr Dühring are "all the same". Such utter nonsense can only be explained if we suppose that the mere mention of the word dialectics throws Herr Dühring into such a state of irresponsibility that, as a result of a certain hybrid and hobbled idea, what he says and does is "all the same" in the end.

Here we have a sample of what Herr Dühring calls

"my historical treatment in the grand manner", or "the summary procedure which settles with genus and type, and does not condescend to honour what a Hume called the learned mob with an exposure in micrological detail; this treatment in a loftier and nobler style is the only one compatible with the interests of the whole truth and with one's duty to the non-professional public".

Indeed, historical treatment in the grand manner and the summary settlement with genus and type are very convenient for Herr Dühring, since he can neglect all known facts as micrological and equate them to zero by this means, so that instead of proving anything he need only use general phrases, make assertions and thunder his denunciations. The method has the further advantage that it offers no real foothold to an opponent, who is consequently left with almost no other possibility of reply than to make similar summary assertions in the grand manner, to resort to general phrases and finally thunder back denunciations at Herr Dühring – in a word, as they say, to engage in a slanging match, which is not to everyone's taste. We must therefore be grateful to Herr Dühring for dropping the loftier and nobler style once in an exceptional while, and giving us at least two examples of the detestable Marxist doctrine of the Logos.

"What a comical effect, for example, is produced by the appeal to the confused and nebulous Hegelian notion that quantity changes into quality, and that therefore an advance, when it reaches a certain limit, becomes capital merely by this quantitative increase!"

Certainly it all looks curious enough in Herr Dühring's "expurgated" presentation. Let us see how it looks in the original in Marx

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(page 313, 2nd edition of *Capital**). On the basis of his previous examination of constant and variable capital and surplus-value, Marx draws the conclusion that “not every sum of money, or of value, is at pleasure transformable into capital. To effect this transformation, in fact, a certain minimum of money or of exchange-value must be presupposed in the hands of the individual possessor of money or commodities”. He then takes as an example the case of a worker in any branch of industry, who works eight hours daily for himself – that is, in producing the value of his wages – and the following four hours for the capitalist, in producing surplus-value, which immediately flows into the capitalist’s pocket. In this case, a person would have to have at his disposal a sum of value allowing him to provide two workers with raw materials, instruments of labour and wages, in order to pocket enough surplus-value every day to live as well as one of his workers. As the aim of capitalist production is not mere subsistence but the increase of wealth, our man with his two workers would still not be a capitalist. Now in order to live twice as well as an ordinary worker and turn half the surplus-value produced back into capital, he would have to be able to employ eight workers, that is, he would have to possess four times the sum of value assumed above. It is only after this, and in the course of further explanations elucidating and substantiating the fact that not every petty sum of values is enough to be transformable at pleasure into capital but that in this respect each period of development and each branch of industry have their definite minimum sum, that Marx observes: “Here, as in natural science, *is shown* the correctness of the law discovered by Hegel (in his *Logic*), that merely quantitative differences beyond a certain point pass into qualitative changes.”†

Now let the reader admire the loftier and nobler style by virtue of which Herr Dühring attributes to Marx the opposite of what he really said. Marx says: The fact that a sum of value can be transformed into capital only when it has reached a certain size, varying according to the circumstances but in each case a definite, minimum size – this fact is a *proof of the correctness* of the Hegelian law. Herr Dühring makes him say: *Because*, according to the Hegelian law, quantity changes into quality, “*therefore* an advance, when it reaches a certain limit, becomes capital”. That is to say, the very opposite.

* *Capital*, English ed., Vol. I, pp. 307-08. – *Ed.*

† *Ibid.*, p. 309, Engels’ italics. – *Ed.*

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Herr Dühring's habit of quoting incorrectly in "the interests of the whole truth" and from his sense of "duty to the non-professional public" has already become familiar to us in the matter of his treatment of Darwin. It becomes more and more evident that this habit is an internal necessity of the philosophy of reality, and it is certainly a very "summary procedure". Not to mention the fact that Herr Dühring makes Marx speak of any kind of "advance", whereas Marx refers only to an advance made in the form of raw materials, instruments of labour and wages, and that Herr Dühring thus succeeds in making Marx talk pure nonsense. He then has the cheek to describe as *comic* the nonsense which he himself has fabricated. Just as he rigged up an imaginary Darwin to try out his strength on, so here he rigs up an imaginary Marx. "Historical treatment in the grand manner", indeed!

In discussing world schematism we have already seen that Herr Dühring had a little accident and that in a weak moment he himself recognized and used the Hegelian nodal line of measure relations, in which a qualitative transformation suddenly sets in at certain points of quantitative change.* We there gave one of the best-known examples – that of the change of the aggregate state of water, which under normal atmospheric pressure changes at 0° C. from the liquid into the solid state and at 100° C from the liquid into the gaseous state, so that at both these turning-points the mere quantitative change of temperature brings about a qualitative change in the state of the water.

In proof of this law we might have cited hundreds of other similar facts from nature as well as from human society. Thus, for example, the whole of Part IV of Marx's *Capital* – "Production of Relative Surplus-Value", relating to co-operation, division of labour and manufacture, machinery and modern industry – deals with innumerable cases in which quantitative change alters the quality, and qualitative change likewise alters the quantity, of the things under consideration; in which therefore, to use the expression so hated by Herr Dühring, quantity is transformed into quality and vice versa. As for example the fact that the co-operation of a number of people, the fusion of many forces into one single force, creates, to use Marx's phrase, a "new power", which is essentially different from the sum of its separate forces.†

* See p. 43 above. – *Ed.*

† *Capital*, Vol. I, p. 326. – *Ed.*

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What is worse, Marx had added this footnote to the passage which Herr Dühring perverted into its opposite in the interests of the whole truth: "The molecular theory of modern chemistry first scientifically worked out by Laurent and Gerhardt rests on no other law."^{*} But what did that matter to Herr Dühring? Of course, he knew that

"the eminently modern educative elements provided by the natural-scientific mode of thought are lacking precisely among those who, like Herr Marx and his rival Lassalle, make a smattering of science and of philosophistics the meagre armour for their parade of learning" –

while Herr Dühring bases himself – we have seen in what fashion – on "the main achievements of exact knowledge in mechanics, physics and chemistry", etc. However, in order to enable third persons to judge for themselves, we shall look a little more closely into the example cited in Marx's footnote.

What is referred to here is the homologous series of carbon compounds, a great many of which are already known and each of which has its own algebraic formula of composition. If for example, as is done in chemistry, we denote an atom of carbon by C, an atom of hydrogen by H, an atom of oxygen by O, and the number of atoms of carbon contained in each compound by n , the molecular formulas for some of these series can be expressed as follows:

C_nH_{2n+2} – the series of normal paraffins

$C_nH_{2n+2}O$ – the series of primary alcohols

$C_nH_{2n}O_2$ – the series of the monobasic fatty acids.

Let us take as an example the last of these series, and let us assume successively that $n = 1$, $n = 2$, $n = 3$, etc. We then obtain the following results (omitting the isomers):

CH_2O_2	– formic acid	boiling point	100°	melting point	1°
$C_2H_4O_2$	– acetic acid	" "	118°	" "	17°
$C_3H_6O_2$	– propionic acid	" "	140°	" "	–
$C_4H_8O_2$	– butyric acid	" "	162°	" "	–
$C_5H_{10}O_2$	– valerianic acid	" "	175°	" "	–

^{*} *Ibid.*, p. 309, first footnote. – *Ed.*

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and so on to $C_{30}H_{60}O_2$, melissic acid, which melts only at 80° and has no boiling point at all, because it does not evaporate without disintegrating.

Here therefore we have a whole series of qualitatively different bodies, formed by the simple quantitative addition of elements, and in fact always in the same proportion. This is most clearly evident in cases where the quantity of all the elements of the compound changes in the same proportion. Thus, in the normal paraffins C_nH_{2n+2} , the lowest is methane, CH_4 , a gas; the highest known, hexadecane, $C_{16}H_{34}$, is a solid body forming colourless crystals which melts at 21° and boils only at 278° . Each new member of both series comes into existence through the addition of CH_2 , one atom of carbon and two atoms of hydrogen, to the molecular formula of the preceding member, and this quantitative change in the molecular formula produces a qualitatively different body at each step.

These series, however, are only one particularly obvious example; throughout practically the whole of chemistry, even in the various oxides of nitrogen and oxygen acids of phosphorus or sulphur, one can see how “quantity changes into quality” and how this allegedly confused and foggy Hegelian notion is to be found in so to speak corporeal form in things and processes – and no one but Herr Dühring is confused and befogged by it. If Marx was the first to call attention to it, and if Herr Dühring read the reference without even understanding it (otherwise he would certainly not have allowed this unparalleled outrage to pass unchallenged), this is enough – even without looking back at the celebrated Dühringian philosophy of nature – to make it clear which of the two, Marx or Herr Dühring, is lacking in “the eminently modern educative elements provided by the natural-scientific mode of thought” and in acquaintance with “the main achievements in... chemistry”.

In conclusion we shall call one more witness for the transformation of quantity into quality, namely Napoleon. He describes the combat between the French cavalry, who were bad riders but disciplined, and the Mamelukes, who were undoubtedly the best horsemen of their time for single combat but who lacked discipline, as follows:

“Two Mamelukes were undoubtedly more than a match for three Frenchmen; 100 Mamelukes were equal to 100 Frenchmen; 300 Frenchmen could generally beat 300 Mamelukes, and 1,000 Frenchmen invariably defeated 1,500 Mamelukes.”⁵⁵

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Just as with Marx a definite, though varying, minimum sum of exchange-value was necessary to make possible its transformation into capital, so with Napoleon a detachment of cavalry had to be of a definite minimum number in order to permit the force of discipline, embodied in close order and planned utilization, to manifest itself and even rise superior to greater numbers of irregular cavalry, who were better mounted, more dexterous horsemen and fighters, and at least as brave as the former. But what does this prove as against Herr Dühring? Was not Napoleon miserably vanquished in his conflict with Europe? Did he not suffer defeat after defeat? And why? Solely in consequence of having introduced the confused and foggy Hegelian notion into cavalry tactics!

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“This historical sketch” (of the genesis of the so called original accumulation of capital in England) “is relatively the best part of Marx’s book, and would be even better if it had not supported itself with the dialectical crutch in addition to the scholarly crutch. In default of anything better and clearer, the Hegelian negation of the negation has in fact to serve here as the midwife to deliver the future from the womb of the past. The abolition of individual property, which has been effected in the way indicated above since the sixteenth century, is the first negation. It will be followed by a second, which bears the character of a negation of the negation and hence of a restoration of ‘individual property’, but in a higher form, based on the common ownership of land and of the instruments of labour. Herr Marx calls this new ‘individual property’ also ‘social property’, and in this there appears the Hegelian higher unity, in which the contradiction is supposed to be sublated, that is to say, in the Hegelian verbal jugglery, both overcome and preserved.... Consequently, the expropriation of the expropriators is, as it were, the automatic result of historical reality in its materially external relations.... It would be difficult to convince a sensible man of the necessity of the common ownership of land and capital on the basis of credence in Hegelian dodges such as the negation of the negation.... However, the nebulous hybrids of Marx’s conceptions will not appear strange to anyone who realizes what nonsense can be concocted with Hegelian dialectics as its scientific basis, or rather what nonsense must necessarily spring from it. For the benefit of the reader who is not familiar with these tricks, it must be expressly pointed out that Hegel’s first negation

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is the catechismal idea of the fall from grace, and his second is that of a higher unity leading to redemption. The logic of facts can hardly be based on this farcical analogy borrowed from the religious sphere.... Herr Marx cheerfully remains in the nebulous world of his property which is at once both individual and social, and leaves it to his adepts to solve for themselves this profound dialectical enigma.”

Thus far Herr Dühring.

So Marx has no other way of proving the necessity of the social revolution and of establishing the common ownership of land and of the means of production produced by labour than by appealing to the Hegelian negation of the negation; and because he bases his socialist theory on these farcical analogies borrowed from religion, he arrives at the result that an ownership at once both individual and social will prevail in the society of the future as a Hegelian higher unity of the sublated contradiction.

Let the negation of the negation rest for the moment, and let us have a look at the ownership which is “at once both individual and social”. Herr Dühring characterizes this as a “nebulous world”, and curiously enough he is actually right on this point. Unfortunately, however, it is not Marx but again Herr Dühring himself who is to be found in this nebulous world. Just as his dexterity with the Hegelian method of “delirious raving” enabled him to determine without any difficulty what the still unfinished volumes of *Capital* are sure to contain, so here, too, without any great effort he can, following Hegel, put Marx right by foisting on him the higher unity of a property, of which there is not a word in Marx.

Marx says: “It is the negation of negation. This re-establishes individual property for the producer, but based on the acquisitions of the capitalist era, on the co-operation of free workers and on their common property in land and in the means of production produced by labour itself. The transformation of the scattered private property of individuals, arising from their own labour, into capitalist private property is, naturally, a process, incomparably more protracted, violent, and difficult, than the transformation of capitalist private property, already actually resting on socialized production, into socialized property.”* That is all. The state of things brought about by the

* *Capital*, Vol. 1, pp. 763-64. The English translation of *Capital*, Vol. I, follows the text of the third German edition (1883), whereas Engels cites the second German edition (1872), which is slightly different in this passage and which is accordingly followed here. – *Ed.*

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expropriation of the expropriators is therefore characterized as the re-establishment of individual property, but *on the basis* of the social ownership of the land and of the means of production produced by labour itself. To anyone who understands plain language, this means that social ownership extends to land and the other means of production and individual ownership to the products, that is, to articles of consumption. In order to make the matter comprehensible even to children of six, Marx assumes on page 56 "a community of free individuals, carrying on their work with the means of production in common, in which the labour-power of all the different individuals is consciously applied as the combined labour-power of the community", that is, a society organized on a socialist basis; and he continues: "The total product of the community is a social product. One portion of this product serves as means of production again. *It remains social.* But another portion is consumed by the members of the community as means of subsistence. *A distribution of this portion among them is consequently necessary.*"* Surely that is clear enough even for Herr Dühring's Hegelianized brain.

The property which is at once both individual and social, this confusing hybrid, this nonsense which necessarily springs from Hegelian dialectics, this nebulous world, this profound dialectical enigma which Marx leaves his adepts to solve for themselves – is yet another free creation and imagination of Herr Dühring's. As an alleged Hegelian, Marx is obliged to produce a true higher unity as the outcome of the negation of the negation, and as Marx does not do this to Herr Dühring's taste, the latter has again to slip back into his loftier and nobler style and to foist on Marx in the interests of the whole truth things of Herr Dühring's very own manufacture. A man who is so totally incapable of quoting correctly, even by way of exception, may well lapse into moral indignation at the "Chinese erudition" of other people who always quote correctly, but who precisely by doing so "poorly conceal their lack of insight into the totality of ideas of every writer they quote". Herr Dühring is right. Long live historical treatment in the grand manner!

So far we have proceeded from the assumption that Herr Dühring at least showed good faith in his inflexible practice of quoting falsely and that it was due either to his total incapacity to understand things or to a habit of quoting from memory, a habit which seems to be peculiar to historical treatment in the grand manner but

* *Ibid.*, p. 78, translation revised, Engels' italics. – *Ed.*

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which is usually described as slovenly. But we seem to have reached the point at which quantity is transformed into quality even with Herr Dühring. For we must take the following facts into consideration. Firstly, the passage in Marx is perfectly clear by itself and is moreover amplified in the same book by a further passage leaving absolutely no room for misunderstanding. Secondly, Herr Dühring had discovered the monstrosity of “property which is at once both individual and social” neither in the critique of *Capital* appearing in the *Supplementary Sheets*, which was referred to above, nor yet in the critique in the first edition of his *Critical History*, but only in the second edition – that is, on his *third* reading of *Capital*. Further, in this second edition, which was rewritten in a socialist sense, it was deemed necessary by Herr Dühring to make Marx talk the worst possible nonsense about the future organization of society, in order to enable him, by way of contrast, to trot out all the more triumphantly – as he in fact does – “the economic commune which I outlined economically and juridically in my *Course* “. When we take all this into consideration, we are almost forced to the conclusion that Herr Dühring has here deliberately made an “advantageous extension” of Marx’s idea – to his own advantage.

Now what role does the negation of the negation play in Marx? On page 791 and the following pages* he sets out the final conclusions which he draws from the preceding fifty pages of economic and historical investigation into the so-called original accumulation of capital. Before the capitalist era, petty industry existed, at least in England, on the basis of the private property of the worker in his means of production. The so-called original accumulation of capital here consisted in the expropriation of these immediate producers, that is, in the dissolution of private property based on the labour of its owner. This became possible because the petty industry referred to above is compatible only with narrow and crude bounds of production and society, and at a certain stage brings forth the material agencies for its own annihilation. This annihilation, the transformation of the individual and scattered means of production into socially concentrated ones, forms the prehistory of capital. As soon as the workers are turned into proletarians and their conditions of labour into capital, as soon as the capitalist mode of production stands on its own feet, the further socialization of labour and further transformation of the land and other means of production, and therefore

* *Ibid.*, pp. 761-64. – *Ed.*

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the further expropriation of private proprietors, takes a new form. "That which is now to be expropriated is no longer the worker working for himself, but the capitalist exploiting many workers. This expropriation is accomplished by the action of the immanent laws of capitalist production itself, by the concentration of capital. One capitalist kills many. Hand in hand with this concentration, or this expropriation of many capitalists by few, there develop, on an ever extending scale, the co-operative form of the work-process, the conscious technological application of science, the methodical collective cultivation of the soil, the transformation of the instruments of labour into instruments of labour only usable in common, the economizing of all means of production by their use as the collective means of production of combined socialized labour. Along with the constantly diminishing number of the magnates of capital, who usurp and monopolize all the advantages of this process of transformation, grows the mass of misery, oppression, slavery, degradation and exploitation; but with this too there grows the revolt of the working class, a class always increasing in numbers, and disciplined, united, organized by the very mechanism of the process of capitalist production itself. The monopoly of capital becomes a fetter on the mode of production, which has sprung up and flourished along with and under it. Concentration of the means of production and socialization of labour reach a point where they become incompatible with their capitalist integument. This integument is burst asunder. The knell of capitalist private property sounds. The expropriators are expropriated."

Now I ask the reader: Where are the dialectical frills and mazes and arabesques of ideas, where the hybrid and hobbled ideas as a result of which everything is all the same in the end, where the dialectical miracles for his faithful followers, where the mysterious dialectical rubbish and the contortions in accordance with the Hegelian doctrine of the Logos, without which Marx, according to Herr Dühring, is unable to put his exposition into shape? Giving a brief summary here, Marx shows in a simple historical way that, just as formerly petty industry by its very development necessarily created the conditions for its own annihilation, i.e., for the expropriation of the small proprietors, so now the capitalist mode of production has itself created the material conditions which will necessarily make it perish. The process is a historical one, and if it is at the same time a dialectical one, this is not Marx's fault, however annoying it may be to Herr Dühring.

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It is only at this point, after Marx has completed his historico-economic proof, that he proceeds: "The capitalist mode of production and appropriation, and consequently capitalist private property, is the first negation of individual private property based on one's own labour. The negation of capitalist production is begotten by itself with the inexorability of a natural process. It is the negation of the negation" – and so on (as quoted above).*

Thus, by characterizing the process as the negation of the negation, Marx does not intend to prove that the process was historically necessary. On the contrary. After he has proved from history that in fact the process has in part already occurred, and in part must occur in the future, he also characterizes it as a process which develops in accordance with a definite dialectical law. That is all. It is therefore once again a pure distortion of Herr Dühring's when he declares that the negation of the negation has to serve here as the midwife to deliver the future from the womb of the past, or that Marx wants anyone to be convinced of the necessity of the common ownership of land and capital (which is itself a Dühringian contradiction in corporeal form) on the basis of credence in the negation of the negation.

Herr Dühring's total lack of understanding of the nature of dialectics is shown by the very fact that he holds it to be an instrument of mere proof, as in a more limited way perhaps formal logic or elementary mathematics can be regarded. Even formal logic is primarily a method of discovering new results, of advancing from the known to the unknown, and the same holds, only much more eminently so, for dialectics, which, by breaking through the narrow horizon of formal logic, also contains the germ of a more comprehensive world outlook. The same relation exists in mathematics. Elementary mathematics, the mathematics of constant quantities, moves, by and large at least, within the confines of formal logic; the mathematics of variables, the most important part of which is the infinitesimal calculus, is essentially nothing but the application of dialectics to mathematical relations. Here mere proof is decidedly pushed into the background, as compared with the manifold applications of the method to new spheres of research. But almost all the proofs of higher mathematics, from the first proofs of the differential calculus on, are strictly speaking wrong from the standpoint of elementary mathematics. This is necessarily so, when, as in this

* *Ibid.*, pp. 763-64; see footnote on p. 129 above. – *Ed.*

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case, an attempt is made to prove by formal logic results obtained in the field of dialectics. To attempt to prove anything by dialectics alone to a crass metaphysician like Herr Dühring would be as much a waste of time as was the attempt made by Leibnitz and his pupils to prove the principles of the infinitesimal calculus to the mathematicians of their time. The differential gave them the same convulsions as Herr Dühring gets from the negation of the negation, in which the differential also plays a certain role, as we shall see. Finally these gentlemen – or such as had not died in the interval – grudgingly gave way, not because they were convinced, but because it always came out right. As he himself tells us, Herr Dühring is only in his forties, and if he attains old age, as we hope he will, perhaps his experience will be the same.

But what then is this terrible negation of the negation which makes life so bitter for Herr Dühring and is the same unpardonable crime for him as the sin against the Holy Ghost is for Christianity?

A very simple process that is taking place everywhere and every day, that any child can understand as soon as it is stripped of the veil of mystery behind which it was hidden by the old idealist philosophy, and behind which it is to the advantage of helpless metaphysicians of Herr Dühring's calibre to keep it hidden. Let us take a grain of barley. Billions of such grains of barley are milled, boiled and brewed and then consumed. But if such a grain of barley meets with conditions which are normal for it, if it falls on suitable soil, then under the influence of heat and moisture a specific change occurs in it, it germinates; the grain as such ceases to exist, it is negated, and in its place there appears the plant which has arisen from it, the negation of the grain. But what is the normal life-process of this plant? It grows, flowers, is fertilized and finally once more produces grains of barley, and as soon as these have ripened, the stalk dies, is in its turn negated. As a result of this negation of the negation we have the original grain of barley once again, but not as a single unit, but ten-, twenty- or thirty-fold. Species of grain change extremely slowly, and so the barley of today is almost the same as it was a century ago. But if we take a plastic ornamental plant, for example a dahlia or an orchid, and treat the seed and the plant which grows from it according to the gardener's art, as a result of this negation of the negation we get not only more seeds, but also qualitatively improved ones, which produce more beautiful flowers, and each repetition of this process, each fresh negation of the negation, enhances this improvement.

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With most insects, this process follows the same lines as in the case of the grain of barley. Butterflies, for example, spring from the egg by a negation of the egg, pass through certain transformations until they reach sexual maturity, pair and are in turn negated, dying as soon as the pairing process has been completed and the female has laid its numerous eggs. We are not concerned at the moment with the fact that the process does not take such a simple form with other plants and animals, that before they die they produce seeds, eggs or offspring not once but many times; our purpose here is only to show that the negation of the negation *really does take place* in both kingdoms of the organic world.

Furthermore, the whole of geology is a series of negated negations, a series in which old rock formations are successively shattered and new ones deposited. First the original earth crust formed by the cooling of the liquid mass was broken up by oceanic, meteorological and atmospherico-chemical action, and these fragmented masses were stratified on the ocean bed. Local elevations of the ocean bed above the surface of the sea subjected portions of these first strata once more to the action of rain, the changing temperature of the seasons and the oxygen and carbon dioxide of the atmosphere. These same influences acted on the molten masses of rock which issued from the interior of the earth, broke through the strata and subsequently cooled off. In this way, in the course of millions of centuries, ever new strata were formed and in turn were for the most part destroyed, ever anew serving as material for the formation of new strata. But the result of this process has been a very positive one: the production of a soil out of a mixture of the most varied chemical elements and in a state of mechanical pulverization, which makes possible the most abundant and diversified vegetation.

It is the same in mathematics. Let us take any algebraic quantity we like: for example, a . If it is negated, we get $-a$ (minus a). If we negate that negation by multiplying $-a$ by $-a$, we get $+a^2$, i.e., the original positive quantity, but at a higher degree, raised to its second power. It makes no difference in this case that we can obtain the same a^2 by multiplying the positive a by itself, thus likewise getting a^2 . For the negated negation is so securely entrenched in a^2 that the latter always has two square roots, namely a and $-a$. The fact that it is impossible to get rid of the negated negation, the negative root of the square, acquires very obvious significance as soon as we come to quadratic equations.

The negation of the negation appears even more strikingly in higher analysis, in those "summations of infinitely small magnitudes"

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which Herr Dühring himself declares are the highest operations of mathematics and which in ordinary parlance are known as the differential and integral calculus. How are these forms of calculus used? In a given problem, for example, I have two variables, x and y , neither of which can vary without the other also varying in a ratio determined by the facts of the case. I differentiate x and y , i.e., I take x and y as so infinitely small that in comparison with any real quantity, however small, they disappear, that nothing is left of x and y but their reciprocal relation without any, so to speak, material basis, a quantitative ratio in which there is no quantity. Therefore, dy/dx , the ratio between the differentials of x and y , is equal to $0/0$, but $0/0$ taken as the expression of x/y . I only mention in passing that this ratio between two vanished quantities, caught at the moment of their vanishing, is a contradiction; however, it cannot disturb us any more than it has disturbed the whole of mathematics for almost two hundred years. Now what have I done but negate x and y , though not in such a way that I need not bother about them any more, which is the way metaphysics negates, but in the way that corresponds with the facts of the case? In place of x and y , therefore, I have their negation, dx and dy , in the formulas or equations before me. Now I continue to operate with these formulas, treating dx and dy as quantities which are real, though subject to certain exceptional laws, and at a certain point I *negate the negation*, i.e., I integrate the differential formula, and in place of dx and dy again get the real quantities x and y , and then am not back where I was at the beginning, but on the contrary have in this way solved the problem on which ordinary geometry and algebra might perhaps have broken their jaws in vain.

It is the same in history. All civilized peoples begin with the common ownership of the land. With all peoples who have passed a certain primitive stage, this common ownership becomes a fetter on production in the course of the development of agriculture. It is abolished, negated, and after a longer or shorter series of intermediate stages is transformed into private property. But at a higher stage of agricultural development brought about by precisely this private property in land, private property becomes contrariwise a fetter on production, as is the case today with small as well as with large landownership. The demand necessarily arises that it, too, should be negated, that it should once again be transformed into common property. But this demand does not mean the restoration of the old primitive common ownership, but the institution of a much higher and more developed form of possession in common which, far from being a hindrance to production, will on the contrary free produc-

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tion for the first time from all fetters and enable it to make full use of modern chemical discoveries and mechanical inventions.

Or let us take another example. The philosophy of antiquity was primitive, natural materialism. As such, it was incapable of clearing up the relation between thought and matter. But the need to get clarity on this question led to the doctrine of a soul separable from the body, then to the assertion of the immortality of this soul, and finally to monotheism. The old materialism was therefore negated by idealism. But in the course of the further development of philosophy, idealism, too, became untenable and was negated by modern materialism. This modern materialism, the negation of the negation, is not the mere re-establishment of the old, but adds to the lasting foundations of this old materialism the whole intellectual content of two thousand years of progress in philosophy and natural science, as well as in these two thousand years of history itself. Generally speaking, it is no longer philosophy at all, but a simple world outlook which has to be verified and implemented, not in a science of sciences standing apart, but in the positive sciences. Philosophy is therefore “sublated” here, that is, “both overcome and preserved”; overcome in its form, and preserved in its real content. Thus, where Herr Dühring sees only “verbal jugglery”, closer inspection reveals an actual content.

Finally, even Rousseau’s doctrine of equality, of which Dühring’s is only a feeble and spurious imitation, could not have seen the light but for the midwife’s services rendered by the Hegelian negation of the negation – rendered, what is more, well-nigh twenty years before Hegel was born. So far from being ashamed of this, in its first presentation the doctrine bears almost ostentatiously the imprint of its dialectical origin. In the state of nature and savagery men were equal; and as Rousseau regards even language as a perversion of the state of nature, he is fully justified in extending the equality of animals within the limits of a *single* species also to the animal-men recently classified by Haeckel hypothetically as *Alali*, speechless. But these equal animal-men had one quality which gave them an advantage over the other animals, perfectibility, the capacity to develop further; and this became the cause of inequality. So Rousseau sees progress in the birth of inequality. But this progress contained an antagonism, it was at the same time retrogression.

“All subsequent advances” (beyond the original state of nature) “meant so many steps seemingly towards the *perfection of the individual*, but in reality towards the *decay of the species*.... Metallurgy and

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agriculture were the two arts the discovery of which produced this great revolution" (the transformation of the primeval forest into cultivated land, but also the introduction of poverty and slavery through property). "For the poet it is gold and silver, but for the philosopher it is iron and corn, which have civilized *men* and ruined the human *race*."⁵⁶

Each new advance in civilization is at the same time a new advance in inequality. All institutions set up by the society which has arisen with civilization turn into the opposite of their original purpose.

"It is an incontestable fact, and the basic maxim of all constitutional law, that the peoples gave themselves chiefs to safeguard their liberty and not to enslave them."

Nevertheless, the chiefs necessarily become the oppressors of the peoples and intensify their oppression to the point at which inequality, carried to the utmost extreme, is again turned into its opposite and becomes the cause of equality: before the despot all are equal – equally ciphers.

"Here we have the final measure of inequality, *the last point which completes the circle and meets the point from which we set out* : here all private individuals become equal once more, just because they are nothing, and the subjects have no other law than their master's will." But the despot is only master so long as he possesses force, and therefore he cannot "complain of the use of force as soon as he is driven out.... Force alone maintained him, force alone overthrows him, and thus everything takes its natural course."

So inequality once more turns into equality, though not into the former natural equality of speechless primitive men, but into the higher equality of the social contract. The oppressors are oppressed. It is the negation of the negation.

Already in Rousseau, therefore, we find not only a line of thought which corresponds exactly to the one developed in Marx's *Capital*, but in detail, too, a whole series of the same dialectical turns of speech as Marx used: processes which in their nature are antagonistic, contain an internal contradiction; transformation of one extreme into its opposite; and finally, as the kernel of the whole thing, the negation of the negation. Although Rousseau was not yet able to speak the Hegelian jargon in 1754, he was nevertheless deeply bitten by the Hegelian pestilence, the dialectics of contradiction, the doctrine of the Logos, theologizing, etc., sixteen years before Hegel was born. And when Herr Dühring begins to operate

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with his victorious twosome in his vulgarization of Rousseau's theory of equality, he is himself already perched on the inclined plane down which he must slide helplessly into the arms of the negation of the negation. The state of affairs in which the equality of the two men flourished, which was also described as an ideal state, is characterized on page 271 of his *Philosophy* as the "original state". However, according to page 279, this original state was necessarily sublated by the "robber system" – the first negation. But now, thanks to the philosophy of reality, we have gone so far as to abolish the robber system and establish in its stead the economic commune based on equality which has been discovered by Herr Dühring – the negation of the negation, equality on a higher plane. What a delightful spectacle, and how advantageously it extends our range of vision to witness his eminence Herr Dühring in person committing the capital crime of negating the negation!

So what is the negation of the negation? An extremely general, and for this very reason extremely far-reaching and important, law of development of nature, history, and thought; a law which, as we have seen, holds good in the animal and vegetable kingdoms, in geology, in mathematics, in history and in philosophy, and which even Herr Dühring has to follow unwittingly and in his own way, in spite of all his huffing and puffing. It is self-evident that I am not saying anything concerning the *particular* process of development of, for example, a grain of barley from germination to the death of the fruit-bearing plant, if I say it is a negation of the negation. For, as the integral calculus is also a negation of the negation, if I said anything of the sort I should only be making the nonsensical statement that the life-process of a barley plant was integral calculus or for that matter even socialism. That, however, is precisely what the metaphysicians are constantly accusing dialectics of. When I say that all these processes are a negation of the negation, I am bringing them altogether under this one law of motion, and for this very reason I am leaving out of account the specific peculiarities of each individual process. In fact, dialectics is nothing more than the science of the general laws of motion and development of nature, human society and thought.

But someone may object: the negation that has taken place here is not a real negation at all: I also negate a grain of barley when I grind it, an insect when I crush it underfoot, or the positive quantity *a* when I cancel it, and so on. Or I negate the sentence, the rose is a rose, when I say, the rose is not a rose; and what do I get if I again negate this negation and say, but after all the rose is a rose?

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These objections are in fact the chief arguments of the metaphysicians against dialectics, and they are wholly worthy of the narrow-mindedness of this mode of thought. Negation in dialectics does not mean simply saying no, or declaring that something does not exist, or destroying it in any way one likes. Long ago Spinoza said: *Omnis determinatio est negatio* – every limitation or determination is at the same time a negation.⁵⁷ Further, the kind of negation is here determined, firstly, by the general, and, secondly, by the particular, nature of the process. I should not only negate, but also in turn sublimate the negation. I must therefore set up the first negation in such a way that the second remains or becomes possible. In what way? According to the particular nature of each individual case. If I grind a grain of barley, if I crush an insect, it is true I have carried out the first act, but have made the second act impossible. Therefore, every kind of thing has its characteristic kind of way of being negated, of being negated in such a way that it gives rise to a development, and it is just the same with every kind of conception or idea. In the infinitesimal calculus negating is done differently from negating in the establishment of positive powers from negative roots. This has to be learnt, like everything else. I can no more grow barley successfully or differentiate and integrate with the bare knowledge that the barley stalk and the infinitesimal calculus both come under the negation of the negation than I can play the violin right off by the bare laws of the determination of sound by the dimensions of the strings.

But it is clear that nothing but the silliness of the person adopting such tedious procedures emerges from a negation of the negation which consists in the childish pastime of alternately writing and cancelling *a*, or in alternately asserting of a rose that it is a rose and that it is not a rose. Yet the metaphysicians would have us believe that if ever we wanted to accomplish the negation of the negation, this would be the right way.

Once again, therefore, it is no one but Herr Dühring who is mystifying us when he asserts that the negation of the negation is a stupid analogy invented by Hegel, borrowed from the sphere of religion and based on the story of the fall of man and his redemption. Men thought dialectically long before they knew what dialectics was, just as they spoke prose long before the term prose existed. The law of the negation of the negation, which is unconsciously operative in nature and history and in our heads as well until it has been recognized, was first clearly formulated by Hegel. If Herr Dühring wants to operate with it himself on the quiet and it is only that he cannot stand the name, then

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let him find a better name. But if his aim is to banish the process itself from thought, we must ask him to be so good as first to banish it from nature and history and to invent a mathematical system in which $-a \times -a$ is not $+ a^2$ and in which differentiation and integration are prohibited under severe penalties.

XIV

CONCLUSION

We have now finished with philosophy; such other fantasies of the future as the *Course* contains will be dealt with when we come to Herr Dühring's revolution in socialism. What did Herr Dühring promise us? Everything. And what promises has he kept? Not one. "The elements of a philosophy which is real and accordingly directed to the reality of nature and of life", the "strictly scientific conception of the world", the "system-creating ideas", and all Herr Dühring's other achievements trumpeted forth to the world by Herr Dühring in high-sounding phrases, turned out to be *a pure swindle*, wherever we laid hold of them. The world schematism which "without the slightest detraction from the profundity of thought, securely established the basic forms of being", proved to be an infinitely vulgarized copy of Hegelian logic and with the latter shares the superstition that these "basic forms" or logical categories have led a mysterious existence somewhere prior to and outside the world to which they are "to be applied". The philosophy of nature offered us a cosmogony whose starting point is a "self-identical state of matter", a state which can only be conceived by means of the most hopeless confusion over the relation between matter and motion, and which, moreover, can only be conceived on the assumption of an extramundane personal God who alone can get it into motion. In its treatment of organic nature, the philosophy of reality first rejected the Darwinian struggle for existence and natural selection as "a piece of brutality directed against humanity", and then had to readmit both by the backdoor as factors operative in nature, though of the second rank. In addition, the philosophy of reality found occasion to exhibit ignorance in the biological domain such as must be sought out with a magnifying glass even among the daughters of the educated classes, now that popular science lectures are no longer to be escaped. In the domain of morals and law, the philosophy of reality was no more successful in its superficial version of Rousseau than it had been in its previous vulgarization of

Hegel; and as for jurisprudence, in spite of all its assurances to the contrary, it displayed a lack of knowledge such as is rarely found even among the most commonplace jurists of old Prussia. The philosophy “which cannot allow the validity of any merely apparent horizon” is content with a real horizon in legal matters which is co-extensive with the territory in which the Prussian *Landrecht* holds sway. We are still waiting for the “earths and heavens of outer and inner nature” which this philosophy promised to reveal to us in its mighty revolutionizing sweep, just as we are for the “final and ultimate truths” and the “absolutely fundamental”. The philosopher whose mode of thought “excludes” any tendency to a “subjectively limited conception of the world” proves to be subjectively limited not only by what has been shown to be his extremely defective knowledge, his narrow metaphysical mode of thought and his grotesque conceit, but even by his childish personal crotchets. He cannot produce his philosophy of reality without dragging in his repugnance to tobacco, cats and Jews as a general law valid for all the rest of humanity, including the Jews. His “really critical standpoint” in relation to other people is shown by his persistently foisting on them things which they never said and which are of Herr Dühring’s very own manufacture. His long-winded inanities on petty-bourgeois themes, such as the value of life and the best way to enjoy it, are so steeped in philistinism that they explain his anger at Goethe’s *Faust*. It was really unpardonable of Goethe to make the immoral *Faust* his hero and not that serious philosopher of reality, Wagner.

In short, taking it all in all the philosophy of reality proves to be what Hegel would call “the diluted dregs of the diluted German Enlightenment”, dregs the thinness and transparent banality of which are thickened and muddled only by the admixture of crumbs of cryptic rhetoric. Now that we have finished the book, we are just as wise as we were at the start, and we are forced to confess that although the “new mode of thought”, the “fundamentally original conclusions and views” and the “system-creating ideas” have certainly shown us a great variety of original nonsense, they have not provided us with a single line from which we might have been able to learn something. And this man, who praises his talents and his wares to the blare of cymbals and trumpets as loudly as any mountebank and behind whose big words there is nothing, absolutely nothing – this man has the temerity to say of people like Fichte, Schelling and Hegel, the least of whom is a giant compared to him, that they are charlatans. Charlatan, indeed! But who?

PART II

POLITICAL ECONOMY

I

SUBJECT MATTER AND METHOD

Political economy, in the widest sense, is the science of the laws governing the production and exchange of the material means of subsistence in human society. Production and exchange are two different functions. Production may occur without exchange, but exchange – by the very fact that it is only an exchange of products – cannot occur without production. Each of these two social functions is subject to the influence of what are for a large part special external factors, and consequently each has what are also for a large part its own special laws. But on the other hand, they constantly determine and influence each other to such an extent that they might be termed the abscissa and the ordinate of the economic curve.

The conditions under which men produce and exchange vary from country to country, and within each country again from generation to generation. Political economy, therefore, cannot be the same for all countries and for all historical epochs. A tremendous distance separates the bow and arrow, the stone knife and the exceptional occurrence of exchange transactions among savages from the steam-engine of a thousand horse power, the mechanical loom, the railways and the Bank of England. The inhabitants of Tierra del Fuego have not attained mass production and world trade, any more than they have bill-jobbing or a Stock Exchange crash. Anyone who attempted to bring the political economy of Tierra del Fuego under the same laws as are operative in present-day England would obviously produce nothing but the most banal commonplaces. Political economy is therefore essentially a historical science. It deals with material which is historical, that is, constantly changing; it first investigates the special laws of each individual stage in the development of production and exchange, and only when it has completed this investigation will it be able to establish the few quite general laws which hold good for production and exchange in all cases. At the same time it goes without saying that the laws which are valid for definite modes of production and forms of exchange also hold good for all historical periods to which these modes of production and forms of exchange are common. Thus, for example, the introduction of metallic money brought into operation a series of laws

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which remain valid for all countries and historical epochs in which metallic money is a medium of exchange.

The nature and mode of distribution of the products of a specific historical society are simultaneously given with the nature and mode of production and exchange in that society and with its historical preconditions. In the tribal or village community with common ownership of land, with which, or with the easily recognizable survivals of which, all civilized peoples enter history, a fairly equal distribution of products is altogether a matter of course; where a more marked inequality of distribution among the members of the community sets in, this is an indication that the community is already beginning to break up.

Both large- and small-scale agriculture admit of very diverse forms of distribution, according to the historical preconditions from which they developed. But it is clear that large-scale farming always entails a distribution which is quite different from that in small-scale farming; that the former presupposes or creates a class antagonism – slave-owners and slaves, feudal lords and serfs, capitalists and wage-workers – while the latter by no means entails class differences between the individuals engaged in agricultural production, and that on the contrary the mere existence of such differences indicates the incipient decline of small-holding economy.

The introduction and extensive use of metallic money in a country in which natural economy was hitherto universal or predominant is always associated with either a slower or a faster revolutionization of the previous mode of distribution, and this in such a way that the inequality of distribution among individuals and therefore the contrast between rich and poor becomes more and more pronounced.

The local, guild handicraft production of the Middle Ages precluded the existence of big capitalists and lifelong wage workers, just as these two categories are inevitably created by modern large-scale industry, the present-day credit system, and the form of exchange corresponding to the development of both the latter – free competition.

But with the differences in distribution, *class differences* emerge. Society divides into classes, the privileged and the dispossessed, the exploiters and the exploited, the rulers and the ruled; and henceforward the state, which the primitive groups of communities of the same tribe had at first arrived at only in order to safeguard their common interests (e.g., irrigation in the East) and for protection against the outside world, has the equal purpose of maintaining

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by force the conditions of existence and domination of the ruling class against the subject class.

Distribution, however, is not a merely passive result of production and exchange; it reacts just as much on both. Each new mode of production or form of exchange is at first obstructed not only by the old forms and their corresponding political institutions, but also by the old mode of distribution. It must first secure the distribution which corresponds to it in the course of a long struggle. But the more mobile a given mode of production and exchange, the more capable it is of expansion and development, the more rapidly does distribution reach the stage at which it outgrows its progenitor, and in which it comes into conflict with the hitherto prevailing mode of production and exchange. The old primitive communities which have already been mentioned could remain in existence for thousands of years – as in India and among the Slavs up to the present day – before intercourse with the external world gave rise to the internal inequalities of property as a result of which they began to break up. On the other hand, modern capitalist production, which is hardly three hundred years old and has become predominant only since the introduction of large-scale industry, that is, only in the last hundred years, has in this short time brought about antagonisms in distribution – concentration of capital in a few hands on the one side and concentration of the propertyless masses in the big towns on the other – which must of necessity bring about its downfall.

The connection between distribution and the material conditions of existence of society in any period lies so much in the nature of things that it is regularly reflected in popular instinct. So long as a mode of production is still in its rising phase of development, it is enthusiastically welcomed even by those who come off badly from its corresponding mode of distribution. This was the case with the English workers during the emergence of large-scale industry. So long as this mode of production remains the social norm, on the whole there is contentment with distribution, and if objections begin to be raised, they come from within the ruling class itself (Saint-Simon, Fourier, Owen) and find no response at all among the exploited masses. Only when the mode of production in question is already well into its declining phase, when it has half outlived its day, when the conditions of its existence have to a large extent disappeared and its successor is already knocking at the door – only then does the constantly increasing inequality of distribution appear unjust, only then is appeal made from the facts which have had their day to so-called eternal justice. From a scientific standpoint, this

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appeal to morals and law does not help us an inch further; economic science can regard moral indignation, however justifiable, not as an argument, but only as a symptom. Its task is rather to show that the social abuses coming to the fore are necessary consequences of the existing mode of production, but at the same time also indications of its impending dissolution; and to reveal, within the already dissolving form of economic motion, the elements of the future new organization of production and exchange which will put an end to those abuses. The wrath which makes the poet is totally in place in describing these abuses as well as in attacking those apostles of harmony in the service of the ruling class who deny or prettify them; but how little it *proves* in any particular case is evident from the fact that there has been no lack of material for such wrath in *every* historical epoch up to now.

But political economy as the science of the conditions and forms under which the various human societies have produced and exchanged and have always correspondingly distributed their products – political economy in this wider sense has still to be brought into being. Such economic science as we possess up to the present is almost exclusively limited to the genesis and development of the capitalist mode of production: it begins with the critique of the survivals of the feudal forms of production and exchange, shows the necessity of their replacement by capitalist forms, then develops the laws of the capitalist mode of production and its corresponding forms of exchange in their positive aspects, that is, the aspects in which they further the general aims of society, and ends with the socialist critique of the capitalist mode of production, that is, with the exposition of its laws in their negative aspects, with the demonstration that by virtue of its own development this mode of production is being driven towards the point at which it makes itself impossible. This critique proves that the capitalist forms of production and exchange increasingly become an intolerable fetter on production itself; that the mode of distribution necessarily determined by these forms has produced a class situation which is growing daily more intolerable, has produced the daily sharpening antagonism between ever fewer and ever richer capitalists and ever more numerous and – by and large – ever more badly situated propertyless wage-workers; and finally, that the colossal productive forces, which are created within the capitalist mode of production and which the latter can no longer tame, are only waiting to be taken possession of by a society organized for co-operative work on a planned basis to ensure to all members of society in constantly in-

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creasing measure the means of existence and of the free development of their capacities.

In order to carry out this critique of bourgeois economics completely, it was not enough to be acquainted with the capitalist form of production, exchange and distribution. The forms preceding it or still existing alongside it in less developed countries had also to be examined and compared, at least in their main features. By and large, this kind of investigation and comparison has as yet been undertaken only by Marx, and so we owe almost exclusively to his researches all that has so far been established concerning pre-bourgeois theoretical economics.

Although it first took shape in the minds of a few men of genius towards the end of the seventeenth century, political economy in the narrower sense, in its positive formulation by the Physiocrats and Adam Smith, is nevertheless essentially a child of the eighteenth century, and ranks with the achievements of the great contemporary French philosophers of the Enlightenment, with all the merits and defects of that period. What we have said of the philosophers* is also true of the economists of that time. To them, the new science was not the expression of the conditions and needs of their epoch but the expression of eternal reason; the laws of production and exchange it discovered were not laws of a historically determined form of those activities, but eternal laws of nature; they were deduced from the nature of man. But when examined more closely, this man proved to be the middle burgher of the time in the process of becoming a bourgeois, and his nature consisted in manufacturing and trading in accordance with the historically determined conditions of that period.

Now that we have acquired sufficient knowledge of our “builder of critical foundations”, Herr Dühring, and his method in the philosophical field, we can easily foretell how he will handle political economy. In philosophy, in so far as his writings were not just drivel (as in his philosophy of nature), his outlook was a distortion of that of the eighteenth century. It was not a question of historical laws of development, but of laws of nature, eternal truths. Social relations such as morality and law were determined, not by the actual historical conditions of the age, but by the famous twosome, one of whom either oppresses or does not oppress the other, the latter, sad to say, never having yet come to pass. We are therefore

* See pp. 14-15 above. – *Ed.*

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hardly likely to go astray if we conclude that Herr Dühring will also trace political economy back to final and ultimate truths, eternal laws of nature, and the most empty and dreary tautological axioms; that nevertheless he will again smuggle in by the backdoor the whole positive content of political economy, so far as this is known to him; and that he will not evolve distribution, as a social phenomenon, out of production and exchange, but will hand it over to his glorious twosome for final solution. Since these are all old familiar tricks to us, we can be that much briefer here. In fact, Herr Dühring tells us already on page 2⁵⁸ that

his economics links up with what has been “*established* “ in his “philosophy”, and “in certain essential points depends on *truths* of a higher order *which have already been put out* in a higher field of investigation”.

Everywhere the same importunate self-praise. Everywhere Herr Dühring is gloating over what Herr Dühring has established and put out. Put out, yes, we have seen it to surfeit – but put out in the way that people put out a sputtering candle.*

Immediately afterwards we find “the most general *laws of nature* governing every economy” – so our forecast was right.

But these natural laws permit of a correct understanding of past history only if they are “investigated in that more precise determination which their results have experienced through the political forms of subjection and grouping. Institutions such as slavery and wage bondage, with which their twin-brother, property based on force, is associated, must be regarded as socio-economic constitutional forms of a purely political nature, and have hitherto constituted the frame within which the consequences of the economic laws of nature could alone manifest themselves.”

This sentence is the fanfare which, like a *leitmotif* in Wagner’s operas, announces the approach of the famous twosome. But it is still more, it is the basic theme of Herr Dühring’s whole book. In the sphere of law, Herr Dühring could offer us nothing save a bad translation of Rousseau’s theory of equality into the language of socialism,[†] such as one has long been able to hear on a far higher

* An untranslatable play on words: *ausmachen* means to settle and also to put out. – *Ed.*

† See pp. 94-101 above. – *Ed.*

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level in any workers' tavern in Paris. Now he gives us an equally bad socialist translation of the economists' laments over the distortion of the eternal economic laws of nature and of their effects through the intervention of the state, of force. In this Herr Dühring deservedly stands quite alone among socialists. Every socialist worker of whatever nationality knows quite well that force only protects exploitation, but does not cause it; that the relation between capital and wage-labour is the basis of his exploitation, and that this arose from purely economic causes and not at all by means of force.

Then we are further told that

in all economic questions "two processes, that of production and that of distribution, can be distinguished". Also that the notoriously superficial J. B. Say added yet a third process, that of use, of consumption, but that he was unable to say anything sensible about it, any more than his successors; but that exchange or circulation is only a department of production, which comprises all the operations required for the products to reach the final and actual consumers.

By confounding the two processes of production and circulation, which though conditioning each other are essentially different, and unblushingly asserting that the avoidance of this confusion can only "give rise to confusion", Herr Dühring merely shows that he either does not know or does not understand the colossal development which this very process of circulation has undergone during the last fifty years, as indeed is further borne out by the rest of his book. But this is not all. After lumping production and exchange together into production as such, he puts distribution *alongside* production, as a second, wholly external process which has nothing whatever to do with the first. Now we have seen that in its decisive features distribution is always the necessary result of the relations of production and exchange in a particular society, as well as of the historical preconditions of this society; so much so that when we know these relations and preconditions, we can definitely infer the prevailing mode of distribution in this society. But we see too that if Herr Dühring does not want to be unfaithful to the basic principles "established" by him in his interpretation of morals, law and history, he must deny this elementary economic fact, especially if he is to smuggle his indispensable twosome into economics. This great event can come to pass once distribution has been happily released from all connection with production and exchange.

But let us first recall how things went in morals and law. Herr Dühring started originally with *one* man, saying:

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“One man conceived as being alone, or, which comes to the same thing, out of all connection with other men, can have no *obligations* ; for him there is no *duty* but only will.”

But what is this man without obligations and conceived as being alone but the fateful “original Jew Adam” in paradise, where he is without sin precisely because he can’t commit any?

But original sin is impending even for this philosophy-of reality Adam. By the side of this Adam there suddenly appears – not, it is true, an Eve with rippling tresses, but still a second Adam. And Adam instantly acquires obligations and – breaks them. Instead of clasping his brother to his bosom as his equal in rights, he subjects him to his domination, he enslaves him – and it is the consequence of this first sin, the original sin of enslavement, from which the whole of world history has suffered down to the present day, which is also why according to Herr Dühring it is not worth threepence.

Incidentally, Herr Dühring believed that he had brought the “negation of the negation” sufficiently into contempt by characterizing it as a feeble imitation of the old fable of original sin and redemption. But what are we to say of *his* latest version of the same story? (For, in due course, we shall, to use an expression of the government-bought press, “get down to brass tacks” on redemption as well.) In any case, we prefer the old Semitic tribal legend, according to which it was worthwhile for the good little man and woman to abandon the state of innocence, and we leave to Herr Dühring the uncontested glory of having constructed his original sin with two men.

Let us now see how he translates this original sin into economic terms:

“If need be, we can get an appropriate conceptual schema for the idea of production from the conception of a Robinson Crusoe who is facing nature alone with his own resources and has nobody else to share anything with,... The conceptual schema of two persons, who combine their economic forces and must evidently come to some form of mutual understanding as to their respective shares, is equally appropriate for the illustration of what is most essential for the idea of distribution. In fact nothing more than this simple dualism is required to enable us to portray some of the most important relations of distribution in all their rigour and to study their laws embryonically in their logical necessity.... Co-operative work on an equal footing is here just as conceivable as the combination of forces through the complete subjection of one party, who is then compelled to render economic service

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as a slave or as a mere tool and is also only maintained as a tool.... Between the state of equality and that of nullity on the one hand and of omnipotence and sole active participation on the other, there is a range of stages which the events of world history have filled in rich variety. A universal survey of the various historical institutions of *justice* and *injustice* is here an essential presupposition”....

and in conclusion the whole question of distribution is transformed into an “economic right of distribution”.

Now at last Herr Dühring has firm ground under his feet again. Arm in arm with his two men, he can issue his challenge to his age. But behind this trinity stands yet another, an unnamed man.

“Capital has not invented surplus-labour. Wherever a part of society possesses the monopoly of the means of production, the labourer, free or not free, must add to the working-time necessary for his own maintenance an extra working-time in order to produce the means of subsistence for the owners of the means of production, whether this proprietor be the Athenian *kalos kagathos*,* Etruscan theocrat, *civis Romanus* (Roman citizen), Norman baron, American slave-owner, Wallachian Boyard, modern landlord or capitalist” (Marx, *Capital*, Vol. I, 2nd edition, p. 227).†

When Herr Dühring had thus learned what the basic form of exploitation common to all forms of production up to the present is – so far as they move in class antagonisms – all he had to do was to apply his two men to it, and the deep-rooted foundation of the economics of reality was completed. He did not hesitate for a moment to carry out this “system-creating idea”. Labour without compensation, beyond the labour-time necessary for the maintenance of the worker himself – that is the point. The Adam, who is here called Robinson Crusoe, makes his second Adam, Man Friday, drudge for all he is worth. But why does Friday drudge more than is necessary for his own subsistence? To this question, too, Marx provides a partial answer. But it is far too long-winded for the two men. The matter is settled in a trice: Crusoe “oppresses” Friday, compels him “to render economic service as a slave or a tool” and maintains him, but “only as a tool”. With this latest “creative turn” of his, Herr Dühring kills two birds with one stone. Firstly, he saves himself the trouble of explaining the various forms of distribution up to now, their dif-

* Aristocrat. – *Ed.*

† *Capital*, English ed., Vol. I, p. 235. – *Ed.*

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ferences and their causes; the whole lot are simply worthless, they rest on oppression, on force. We shall have to deal with this before long. Secondly, he in this way transfers the whole theory of distribution from the sphere of economics to that of morals and law, that is, from the sphere of established material facts to that of more or less fluctuating opinions and sentiments. Therefore he no longer needs to investigate or to prove things, but can just go on merrily declaiming and demand that the distribution of the products of labour should be regulated, not in accordance with its real causes, but in accordance with what seems ethical and just to him, Herr Dühring. But what seems just to Herr Dühring is not at all immutable, and hence very far from being a genuine truth. For genuine truths, according to Herr Dühring himself, are “absolutely immutable”. In 1868 Herr Dühring asserted in *Die Schicksale meiner sozialen Denkschrift*, etc.* that it is

“a tendency of all higher civilization to put more and more emphasis on property, and that the essence and the future of modern development lie in this, not in the confusion of rights and spheres of sovereignty”.

Furthermore, he was quite unable to see

“how a transformation of wage-labour into another manner of gaining a livelihood is ever to be reconciled with the laws of human nature and the naturally necessary structure of the body social”.

Thus in 1868, private property and wage-labour are naturally necessary and therefore just; in 1876, both are the emanation of force and “robbery” and therefore unjust.⁵⁹ As we cannot possibly tell what may well seem ethical and just to such a mighty and impetuous genius in a few years’ time, we should in any case do better to stick to genuine, objective, economic laws in considering the distribution of wealth and not to depend on Herr Dühring’s momentary, changeable, subjective conceptions of what is just or unjust.

We should be in a pretty bad way and might have a long time to wait for the impending overthrow of the present mode of distribution of the products of labour with its crying contrasts of misery and luxury and of famine and feasting, if we had no better guarantee than the consciousness that this mode of distribution is unjust and that justice must eventually triumph. The mediaeval mystics who

* *The Fate of My Memorandum on the Social Problem for the Prussian Ministry of State.* – Ed.

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dreamed of the coming millennium were already conscious of the injustice of class antagonisms. On the threshold of modern history, three hundred and fifty years ago, Thomas Münzer loudly proclaimed it to the world. In the English and the French bourgeois revolutions the same call resounded – and died away. If today the same call for the abolition of class antagonisms and class distinctions, which had left the working and suffering classes cold up to 1830, if today this call is re-echoed a million-fold, if it takes hold of one country after another in the same order and in the same degree of intensity that large-scale industry develops in each country, if in one generation it has gained a strength that enables it to defy all the forces combined against it and to be sure of victory in the near future – what is the reason for this? The reason is that modern large-scale industry has on the one hand created a proletariat, a class which for the first time in history can demand the abolition, not of this or that particular class organization or of this or that particular class privilege but of classes themselves, and which is so situated that it must carry through this demand on pain of sinking to the level of the Chinese coolie. And that this same large-scale industry has on the other hand created in the bourgeoisie a class which has the monopoly of all the instruments of production and means of subsistence, but which in each speculative boom period and in each ensuing crash proves that it has become incapable of any longer governing the productive forces which have grown beyond its power; a class under whose leadership society is racing to ruin like a locomotive whose jammed safety-valve the driver is too weak to open. In other words, the reason is that both the productive forces engendered by the modern capitalist mode of production and the system of distribution of goods established by it have come into crying contradiction with that mode of production itself, so much so that if the whole of modern society is not to perish, a revolution in the mode of production and distribution must take place, a revolution which will put an end to all class distinctions. It is on this palpable material fact which is more or less clearly impressing itself with irresistible necessity on the minds of the exploited proletarians – it is on this fact, and not on any armchair philosopher's conceptions of justice and injustice, that the sure confidence of modern socialism in victory is founded.

II

THE FORCE THEORY

“In my system, the relation between general politics and the forms of economic rights is determined in so decisive and at the same time *so original* a way that it would not be superfluous to make special reference to this point in order to facilitate study. The formation of *political* relationships is the *historically fundamental factor*, and instances of *economic* dependence are only effects or special cases and are consequently always *facts of a second order*. Some of the newer socialist systems take as their guiding principle the striking semblance of a completely reverse relationship by making the political infrastructures as it were grow out of economic conditions. It is true that these second order effects do exist as such and are most clearly perceptible at the present time; but the *primary factor must* be sought in *direct political force* and not in any indirect economic power.”

This is also asserted in another passage, in which Herr Dühring “starts from the principle that political conditions are the decisive cause of the economic situation and that the reverse relationship represents only a second order reaction... so long as anyone takes the political grouping not as the starting point for its own sake, but merely as *a means of getting grub*, he must be harbouring a hidden dose of reaction in his mind, however radical a socialist and revolutionary he may seem to be”.

That is Herr Dühring’s theory. In this and in many other passages it is simply set up, decreed, so to speak. Nowhere in the three fat tomes is there the slightest attempt to prove it or to disprove the opposite point of view. Even if the arguments for it were as cheap as blackberries, Herr Dühring wouldn’t give us any. For the whole affair has already been proved through the famous original sin when Robinson Crusoe made Friday his slave. That was an act of force, hence a political act. Since this enslavement was the starting-point and the basic fact for all past history and inoculated it with the original sin of injustice, so much so that in later periods it was only softened down and “transformed into the more indirect forms of economic dependence”, and since all “property founded on force” which has maintained its legality right up to the present day is likewise based on this original act of enslavement, it is clear that all economic phenomena must be explained by political causes, that is,

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by force. Anyone who is not satisfied with that is a reactionary in disguise.

We must first point out that only someone as self-infatuated as Herr Dühring could regard this view as so very “original”, which it is not in the least. The idea that the political actions of leaders and states are decisive in history is as old as written history itself, and is the main reason why so little has been preserved for us concerning the development of the peoples, which occurs quietly, in the background, behind these noisy scenes on the stage, and which really pushes things forward. This idea dominated the whole conception of history in the past and only received its first blow from the French bourgeois historians of the Restoration period;⁶⁰ the only “original” thing about it is that Herr Dühring once again knows nothing of all this.

Furthermore, even if we assume for the moment that Herr Dühring is right in saying that all past history can be traced back to the enslavement of man by man, we are still very far from having got to the bottom of the matter. For the question immediately arises, how did Crusoe come to enslave Friday? Just for the fun of it? No such thing. On the contrary, we see that Friday “is compelled to render *economic* service as a slave or as a mere tool and is maintained only as a tool”. Crusoe enslaved Friday only in order that Friday should work for Crusoe’s benefit. And how can he derive any benefit for himself from Friday’s labour? Only through Friday’s producing by his labour more of the necessities of life than Crusoe has to give him to keep him fit to work. Therefore, in violation of Herr Dühring’s express orders, Crusoe “takes the political grouping” arising out of Friday’s enslavement “not as the starting-point for its own sake, but exclusively *as a means of getting grub*”; and now let him see to it that he gets along with his lord and master, Dühring.

Thus the childish example expressly selected by Herr Dühring in order to prove that force is “the historically fundamental factor” proves that force is only the means, and that the end is economic advantage. In proportion as the end is “more fundamental” than the means, so the economic side of the relationship is more fundamental in history than the political. The example therefore proves precisely the opposite of what it was supposed to prove. And as in the case of Crusoe and Friday, so in all cases of domination and enslavement up to the present. Subjugation has always been – to use Herr Dühring’s elegant expression – a “means of getting grub” (taking getting grub in its widest sense), but never and nowhere a political

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grouping established “for its own sake”. It takes a Herr Dühring to be able to imagine that state taxes are only “second order effects”, or that the present-day political grouping of the dominant bourgeoisie and the dominated proletariat has come into existence “for its own sake”, and not as a “means of getting grub” for the dominant capitalists, that is to say, for the sake of making profits and accumulating capital.

However, let us get back to our twosome. Crusoe, “sword in hand”, makes Friday his slave. But in order to pull this off, Crusoe needs something else besides his sword. Not everyone is served by a slave. To be able to make use of a slave, one must possess two things: first, the instruments and material for the slave’s labour, and second, the means of bare subsistence for him. Therefore, a certain level of production must have already been reached and a certain inequality of distribution must have already occurred before slavery becomes possible. For slave-labour to become the dominant mode of production in a whole society, a far higher increase in production, trade and accumulation of wealth is needed. In the ancient primitive communities with common ownership of the land, slavery either does not exist at all or plays only a very subordinate role. It was the same in the originally peasant city of Rome; but when Rome became a “world city” and Italic landownership increasingly fell into the hands of a numerically small class of enormously rich proprietors, the peasant population was squeezed out by a population of slaves. If the number of slaves in Corinth rose to 460,000 and in Aegina to 470,000 at the time of the Persian wars and there were ten slaves to every freeman, something else besides “force” was required, namely, a highly developed arts and handicraft industry and an extensive commerce. Slavery in the United States of America was based far less on force than on the English cotton industry; in those areas where no cotton was grown or which, unlike the border states, did not breed slaves for the cotton-growing states, it died out of itself without any force being used, simply because it did not pay.

Hence, Herr Dühring is standing the whole relationship on its head when he calls property as it exists today property founded on force and characterizes it as

“that form of domination *at the root of which there lies* not merely the exclusion of fellow-men from the use of the natural means of subsistence, but also, and what is far more important, the subjugation of man to menial service”.

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The subjugation of a man to menial service in all its forms presupposes that the subjugator has at his disposal the means of labour through which alone he can employ the person placed in bondage, and in the case of slavery, in addition, the means of subsistence which enable him to keep the slave alive. In all cases, therefore, it already presupposes the possession of a certain amount of property in excess of the average. How did this property come into existence? In any case it is clear that it may have been robbed and therefore may be based on force, but that this is by no means necessary. It may have been obtained by labour, by theft, by trade or by fraud. Nevertheless, it must have been obtained by labour before there was any possibility of its being robbed.

Private property by no means makes its appearance in history as the result of robbery or force. On the contrary. It already existed, though limited to certain objects, in the ancient primitive communes of all civilized peoples. It developed into the form of commodities already within these communes, at first through barter with foreigners. The more the products of the commune assumed the commodity form, that is, the less they were produced for the producers' own use and the more for the purpose of exchange, and the more the original natural division of labour was supplanted by exchange within the commune as well, the more unequal became the property status of the individual commune members, the more deeply was the ancient common ownership of the land undermined, and the more rapidly did the commune move towards its dissolution and transformation into a village of small-holding peasants. For thousands of years Oriental despotism and the changing rule of conquering nomad peoples were unable to injure these old communities; the gradual destruction of their primitive home industry by the competition of the products of large-scale industry brought them nearer and nearer to dissolution. Force was as little involved in this process as in the dividing up of the land held in common by the village communities (*Gehöferschaften*) on the Moselle and in the Hochwald, which is still taking place today; the peasants simply find it to their advantage that the private ownership of land should take the place of common ownership. Even the formation of a primitive aristocracy, as in the case of the Celts, the Germans and the Indian Punjab, took place on the basis of common ownership of the land, and was not at first based in any way on force, but on voluntariness and custom. Wherever private property was instituted, it was the result of altered relations of production and exchange, in the interest of increased production and of the furtherance of trade – hence as a re-

sult of economic causes. Force plays no part in this at all. Indeed, it is clear that the institution of private property must already be in existence before a robber can *appropriate* another person's property, and that therefore force may be able to change the possession of, but cannot create, private property as such.

Nor can we use either force or property founded on force to explain the "subjugation of man to menial service" in its most modern form, wage-labour. We have already mentioned the role played in the dissolution of the ancient communities, that is, in the direct or indirect general spread of private property, by the transformation of the products of labour into commodities, by their production not for one's own consumption but for exchange. Now in *Capital*, Marx proved to the hilt – and Herr Dühring carefully avoids the slightest reference to this – that at a certain stage of development, the production of commodities becomes transformed into capitalist production, and that at this stage "the laws of appropriation or of private property, laws that are based on the production and circulation of commodities, become by their own inner and inexorable dialectic changed into their very opposite. The exchange of equivalents, which appeared as the original operation, has now become turned round in such a way that there is only an ostensible exchange. This is owing to the fact, first, that the portion of capital which is exchanged for labour-power is itself but a portion of the product of others' labour appropriated without an equivalent; and, secondly, that this capital must not only be replaced by its producer, the worker, but replaced together with an added surplus.... At first property seemed to us to be based on a man's own labour.... Now (at the end of the Marxist analysis) property turns out to be the right, on the part of the capitalist, to appropriate the unpaid labour of others, and to be the impossibility, on the part of the worker, of appropriating his own product. The separation of property from labour becomes the necessary consequence of a law that ostensibly originated in their identity."*

In other words, even if we exclude the possibility of any robbery, any act of violence and any fraud, if we assume that all private property was originally based on the owner's own labour, and that throughout the whole subsequent process there was only exchange of equal values for equal values, the progressive evolution of production and exchange nevertheless brings us of necessity to the present capitalist mode of production, to the monopolization of

* *Capital*, Vol. I, pp. 583-84, translation revised. – *Ed.*

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the means of production and the means of subsistence in the hands of the one, numerically small, class, to the degradation into propertyless proletarians of the immense majority forming the other class, to the periodic alternation of speculative production booms and commercial crises, and to the whole of the present anarchy of production. The entire process is explained by purely economic causes, without the necessity for recourse even in a single instance to robbery, force, the state, or political interference of any kind. Here also “property founded on force” proves to be nothing but the phrase of a braggart designed to cover up his lack of understanding of the real course of things.

Expressed historically, this course of events is the story of the development of the bourgeoisie. If “political conditions are the decisive cause of the economic situation”, then the modern bourgeoisie cannot have developed in the struggle with feudalism, but must be the latter’s voluntarily be gotten pet child. Everyone knows that it was the opposite which occurred. Originally an oppressed estate tributary to the ruling feudal nobility, recruited from all manner of serfs and villeins, the burghers conquered one position after another in their constant struggle with the nobility, and finally took power in its stead in the most highly developed countries: in France, by directly overthrowing the nobility, in England, by increasingly bourgeoisifying it and incorporating it as their own ornamental head. How did they accomplish this? Simply through a change in the “economic situation”, which whether sooner or later, whether voluntarily or as the outcome of combat, was followed by a change in the political conditions. The struggle of the bourgeoisie against the feudal nobility is the struggle of town against country, industry against landed property, money economy against natural economy; and the decisive weapon of the burghers in this struggle was their resources of *economic* power, which were constantly expanding through the development of industry, at first handicraft and progressing at a later stage to manufacture, and through the spread of commerce. Throughout this struggle political force was on the side of the nobility, except for a period when the crown played the burghers against the nobility in order to keep one estate in check by means of the other; but from the moment when the as yet politically powerless bourgeoisie began to grow dangerous owing to its increasing economic power, the crown resumed its alliance with the nobility and by so doing called forth the bourgeois revolution, first in England and then in France. The “political conditions” in France had remained unaltered, while the “economic situation” had out-

grown them. In terms of political status, the nobleman was everything, the burgher nothing; but in terms of the social situation the burgher now formed the most important class in the state, while the nobleman had been shorn of all his social functions and was now only pocketing his revenues in payment for these vanished functions. Nor was that all. Throughout the whole range of their productive activity, the burghers were still hemmed in by the feudal political forms of the Middle Ages, which this production – not only manufacture, but even handicraft industry – had long outgrown, hemmed in by the thousand-fold guild privileges and local and provincial customs barriers which had become mere devices against and fetters on production.

The burghers' revolution put an end to this. Not, however, by adapting the economic situation to the political conditions, in accordance with Herr Dühring's principle – this was precisely what the nobility and the crown had been vainly trying to do for years – but, on the contrary, by casting aside the old mouldering political rubbish and creating political conditions in which the new "economic situation" could continue and develop. And it did develop brilliantly in this political and legal atmosphere suited to its needs, so brilliantly that the bourgeoisie has already approached the position held by the nobility in 1789: it is increasingly becoming not only socially superfluous, but a social hindrance; it is increasingly abandoning productive activity, and, like the nobility in the past, increasingly becoming a merely revenue-pocketing class; and it has accomplished this revolution in its own position and the creation of a new class, the proletariat, without any hocus-pocus of force whatever, in a purely economic way. Even more. In no wise did it will this result of its own doings and actions – on the contrary, this result established itself with irresistible force, against the will and contrary to the intentions of the bourgeoisie; its own productive forces have grown beyond its control, and, as if by a necessity of nature, are driving the whole of bourgeois society towards ruin or towards revolution. If the bourgeoisie now appeals to force in order to save the collapsing "economic situation" from collapse, it is only showing that it is labouring under the same delusion as Herr Dühring, the delusion that "political conditions are the decisive cause of the economic situation"; that, just like Herr Dühring, it imagines that it can regenerate those "second order facts", the economic situation and its inevitable development, by means of the "primary factor", of "direct political force", and that it can shoot and kill with Krupp guns and Mauser rifles the economic consequences of

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the steam-engine and the modern machinery driven by it, and of world trade and the present-day development of banking and credit.

III

THE FORCE THEORY

(Continued)

Let us look a little more closely at this almighty “force” of Herr Dühring’s. Crusoe enslaved Man Friday “sword in hand”. Where did he get the sword? Even on the imaginary islands of the Robinson Crusoe epic, swords have not up to now been known to grow on trees, and Herr Dühring provides no answer to this question. If Crusoe could procure a sword for himself, we are equally entitled to assume that one fine morning Friday may appear with a loaded revolver in his hand, and then the whole “force” relationship is inverted. Friday is in command, and it is Crusoe who has to drudge. We apologize to the reader for returning with such insistence to the Robinson Crusoe and Man Friday story, which properly belongs to the nursery and not to the field of science, but how can we help it? We are obliged to apply Herr Dühring’s axiomatic method conscientiously, and it is not our fault if in doing so we are continually moving within the sphere of pure puerility. So the revolver triumphs over the sword; and this will probably make even the most puerile lover of axioms comprehend that force is no mere act of the will, but requires the existence of very real preconditions for its functioning, especially, *instruments*, the more perfect of which vanquishes the less perfect; that further these instruments have to be produced, which at the same time implies that the producer of more perfect instruments of force, commonly called arms, vanquishes the producer of the less perfect instruments, and that, in a word, the triumph of force is based on the production of arms, and this in turn on production in general – therefore, on “economic power”, on the “economic situation”, on the *material* means which force has at its disposal.

Force, nowadays, is the army and navy, and both, as we all know to our cost, are “devilishly expensive”. But force cannot make any money; at most it can take away money that has already been made, and this does not help much either, as we have seen, also to our cost, in the case of the French milliards.⁶¹ In the last analysis, therefore, money must be provided through the medium of economic produc-

III. THE FORCE THEORY (Continued)

tion; and so once more force is conditioned by the economic situation, which furnishes the means for the equipment and maintenance of its instruments. But that is not all. It is precisely the army and navy that are most dependent on economic preconditions. Armament, composition, organization, tactics and strategy depend above all on the stage reached in production at any particular time as well as on communications. It is not the "free creations of the mind" of generals of genius that have had a revolutionizing effect here, but the invention of better weapons and the change in the human material, the soldiers; in the best of cases, the part played by generals of genius is limited to adapting methods of fighting to the new weapons and combatants.

At the beginning of the fourteenth century, gunpowder came from the Arabs to Western Europe, and, as every school child knows, completely revolutionized the methods of warfare. The introduction of gunpowder and fire-arms, however, was not at all an act of force, but an industrial, and therefore an economic, advance. Industry remains industry, whether it is oriented towards the production or the destruction of things. The introduction of fire-arms had a revolutionizing effect not only on the conduct of war itself, but also on the political relationships of domination and subjection. The procurement of powder and fire-arms required industry and money, both of which were in the hands of the burghers in the towns. From the outset, therefore, fire-arms were the weapons of the towns and of the rising monarchy, which was supported by the towns, against the feudal nobility. The stone walls of the noblemen's castles, which had hitherto been unapproachable, fell before the cannon of the burghers, the bullets of whose arquebuses pierced the armour of the knights. With the defeat of the armour-clad cavalry of the nobility, the latter's supremacy was broken; with the development of the burghers, infantry and artillery increasingly became the decisive types of armed power; artillery compelled the military profession to provide itself with a new and entirely industrial subsection, the corps of engineers.

The development of fire-arms was a very slow process. Ordnance remained ponderous and, despite many inventions in detail, the musket was crude. Over three hundred years were needed for the construction of a weapon that was suitable for the equipment of the whole body of infantry. It was not until the start of the eighteenth century that the flint-lock musket with a bayonet finally displaced the pike in the equipment of the infantry. The foot soldiers were then the mercenaries of princes; they were rigorously drilled but quite unreliable and only held together by the rod; they were

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recruited from among the most demoralized elements in society and often from enemy prisoners of war who had been pressed into service. The only type of fighting in which these soldiers could apply the new weapon was the tactics of the line, which reached its highest perfection under Frederick II. All the infantry of an army was drawn up in triple ranks in the form of a very long, hollow square, and moved in battle order only as a whole; at the very most, either of the two wings might advance or hold back a little. This cumbrous mass could move in formation only on completely level ground, and even then only very slowly (seventy-five paces a minute); a change of formation in battle was impossible, and once the infantry was engaged, victory or defeat was decided rapidly and at one blow.

In the American War of Independence, these unwieldy lines were met by bands of rebels, who although undrilled were for that very reason better able to shoot from their rifled guns; they were fighting for their own interests and therefore did not desert like the mercenaries; they did not do the English the favour of encountering them in line and across the open plain, but fought in scattered groups of rapidly moving sharpshooters, under cover of the woods. Here the line was powerless and succumbed to its invisible and inaccessible opponents. Skirmishing was re-invented – a new method of warfare which was the result of a change in the human war material.

The French Revolution completed and in the military sphere too what the American Revolution had begun. It too could oppose to the well-trained mercenary armies of the Coalition only poorly trained masses but in large numbers, the levy of the entire nation. But these masses had to protect Paris, that is, to hold a definite area, and for this purpose victory in open mass battle was essential. Mere skirmishes were not enough; a form had to be found to make use of large masses and this form was discovered in the *column*. Column formation made it possible for even poorly trained troops to move in passable order and yet with greater speed (a hundred paces and more a minute); it made it possible to break through the rigid forms of the old line formation and therefore to fight on any ground, even on ground which was most unfavourable to the line formation; to group the troops in any appropriate way; and, in conjunction with skirmishes by scattered bands of sharpshooters, to contain the enemy's lines, keep them engaged and wear them out until the moment came for masses held in reserve to break through them at the decisive point in the position. This new method of warfare, based on the combined action of skirmishers and columns and on the partitioning

III. THE FORCE THEORY (Continued)

of the army into independent divisions or army corps, composed of all arms of the service – a method brought to full perfection by Napoleon in both its tactical and strategic aspects – had become necessary primarily because of the changed combat personnel of the French Revolution. But it also had two very important technical prerequisites: first, the lighter carriages for field guns constructed by Gribeauval, which alone made possible the more rapid movement now required of them; and second, the slanting of the rifle butt, which had hitherto been quite straight, continuing the line of the barrel. Introduced in France in 1777, it was borrowed from hunting guns and made it possible to shoot at a particular individual without the odds being on missing him. But for this improvement, it would have been impossible to skirmish with the old weapons.

The revolutionary system of arming the whole people was soon restricted to conscription (with substitution for the rich, who paid for their release) and in this form was adopted by most of the large states on the Continent. Only Prussia attempted, through its *Landwehr* system, to draw to a greater extent on the military strength of the nation.⁶² Prussia was also the first state to equip its whole infantry – after the rifled muzzle-loader, which had been improved between 1830 and 1860 and found fit for use in war, had played a brief role – with the most up-to-date weapon, the rifled breech loader. Its successes in 1866 were due to these two innovations.⁶³

The Franco-German War was the first in which two armies faced each other, with each equipped with breech-loading rifles and with each fundamentally in the same tactical formations as in the time of the old smoothbore flint-locks. The only difference was that the Prussians had introduced the company column formation in an attempt to find a form of fighting better adapted to the new type of arms. But when the Prussian Guard tried to apply the company column formation seriously at St.-Privat on August 18, the five regiments which were chiefly engaged lost more than a third of their strength (176 officers and 5,114 men) in less than two hours.⁶⁴ Henceforward, the company column, too, was condemned as a battle formation, no less than the battalion column and the line; all idea of further exposing troops in any kind of close formation to enemy gun-fire was abandoned, and all subsequent fighting on the German side was conducted only in those compact bodies of skirmishers into which the columns had so far regularly dissolved of themselves under a deadly hail of bullets, although this had been opposed by the higher commands as contrary to order; and in the same way the only form of movement when under fire from enemy rifles became

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the *double*. Once again the soldier had proved shrewder than the officer; it was *he* who instinctively found the only way of fighting which has so far proved of service under the fire of breech-loading rifles, and in spite of his officers' resistance he carried it through successfully.

The Franco-German War marked a turning-point quite different in significance from all previous ones. In the first place weapons are now so perfected that further progress which would have any revolutionizing influence is no longer possible. Once armies have guns capable of hitting a battalion at any range at which the eye can distinguish it and rifles which are equally effective against individual men and with which loading takes less time than aiming, all further improvements are more or less unimportant for field warfare. The era of development is therefore, in essentials, closed in this direction. But secondly, this war has compelled all continental powers to introduce the Prussian *Landwehr* system in a stricter form, and with it a military burden which must bring them to ruin within a few years. The army has become the main purpose of the state, an end in itself; the peoples are there only to provide soldiers and feed them. Militarism dominates and is swallowing Europe. But this militarism also bears within itself the seed of its own destruction. Competition among the individual states forces them, on the one hand, to spend more money each year on the army and navy, artillery, etc., thus increasingly hastening their financial collapse, and, on the other, to resort to universal compulsory military service more and more seriously, thus in the long run making the whole people familiar with the use of arms, and therefore enabling them at a certain point to make their will prevail against the top military command in all its glory. This point will be reached as soon as the mass of the people – town and country workers and peasants – *has* a will. At this point the armies of the princes become transformed into armies of the people; the machine refuses to work, and militarism collapses by the dialectic of its own development. What the bourgeois democracy of 1848 could not accomplish, precisely because it was *bourgeois* and not proletarian, namely, to give the labouring masses a will whose content corresponds with their class position – socialism will secure without fail. And this will mean the bursting asunder *from within* of militarism and with it of all standing armies.

That is the first moral of our history of modern infantry. The second moral, which brings us back again to Herr Dühring, is that the army's whole organization and method of warfare, and with them victory or defeat, prove to be dependent on material, that is, on

III. THE FORCE THEORY (Continued)

economic conditions, on the human material and the war material, and therefore on the quality and quantity of the population and on technical development. Only a hunting people like the Americans could rediscover skirmishing tactics – and they were hunters as a result of purely economic causes, just as now it is as a result of purely economic causes that these same Yankees of the old States have transformed themselves into farmers, industrialists, seamen and merchants who no longer skirmish in the primeval forests, but instead skirmish all the more effectively in the field of speculation, where they have likewise made great advances in utilizing masses.

Only a revolution such as the French, which brought about the economic emancipation of the burghers and, especially, of the peasantry, could simultaneously discover the mass armies and the free forms of movement which shattered the old rigid lines – the military counterparts of the absolutism which they were defending. We have seen in case after case how, as soon as advances in technique became militarily applicable – and applied they were – they immediately and almost forcibly produced changes and even revolutions in the methods of warfare, often, what is more, against the will of the army command. Nowadays any go-ahead NCO could explain to Herr Dühring how greatly the conduct of a war depends on the productivity and means of communication of the army's own hinterland as well as of the theatre of war. In short, always and everywhere it is the economic conditions and instruments of power which help "force" to victory and without which force ceases to be force, and anyone who tried to reform methods of warfare from the opposite standpoint, according to Dühringian principles, would certainly earn nothing but a beating.*

If we now pass from land to sea, the last twenty years alone show an even more sweeping revolution. The battleship of the Crimean War was the wooden two- and three-decker of 60 to 100 guns which was still mainly propelled by sail, with a low-powered auxiliary steam-engine only for emergencies. The guns on these warships were for the most part 32-pounders, weighing approximately 2 1/2 tons, with only a few 68-pounders weighing 4 3/4 tons. Towards the

* This is already perfectly well known to the Prussian General Staff. Herr Max Jahns, a captain of the General Staff, says in a scientific lecture, "The *basis* of warfare is primarily the *economic* way of life of the peoples in general." (*Kölnische Zeitung*, April 20, 1876, p. 3.) [*Note and italics by Engels.*]

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end of the war, ironclad floating batteries appeared on the scene, clumsy and almost immobile, but invulnerable monsters to the guns of that period. Soon, iron armour-plating was applied to battleships, too; at first the plates were still thin, a thickness of four inches being regarded as extremely heavy armour. But soon the progress made with artillery outstripped the armour-plating; each successive increase in the strength of the armour used was countered by a new and heavier gun which easily pierced the plates. So we have already reached armour-plating ten, twelve, fourteen and twenty-four inches thick (Italy proposes to have a ship built with plates three feet thick) on the one hand, and on the other, rifled guns weighing 25, 35, 80 and even 100 tons, which can hurl projectiles weighing 300, 400, 1,700 and up to 2,000 pounds to distances never dreamed of before. The battleship of the present day is a gigantic armoured screw-driven steamer of 8,000 to 9,000 tons displacement and 6,000 to 8,000 horse power, with revolving turrets and four or at most six heavy guns, the bow being extended under the water line into a ram for running down enemy vessels. It is a single colossal machine, in which steam not only drives the ship at a high speed, but also works the steering-gear, raises the anchor, swings the turrets, changes the elevation of the guns and loads them, pumps out water, hoists and lowers the boats – some of which are themselves steam-driven – and so forth. And the rivalry between armour-plating and the fire power of guns is so far from being at an end that nowadays a ship is almost always not up to requirements, already out of date, before it is launched. The modern battleship is not only a product, but at the same time a specimen, of modern large-scale industry, a floating factory, mainly producing – a lavish waste of money. The country in which large-scale industry is most highly developed has almost a monopoly in the construction of these ships. All Turkish, almost all Russian and most German armoured vessels have been built in England; armour-plates that are at all serviceable are made almost solely in Sheffield; of the three steel-works in Europe which alone are able to make the heaviest guns, two (Woolwich and Elswick) are in England, and the third (Krupp) in Germany. In this sphere it is most palpably evident that the “direct political force” which, according to Herr Dühring, is the “decisive cause of the economic situation”, is on the contrary completely subordinate to the economic situation, that not only the construction but also the manipulation of the marine instrument of force, the battleship, has itself become a branch of modern large-scale industry. That this is so distresses no one more than force itself, that is, the state, which has now to pay for a

III. THE FORCE THEORY (Continued)

single ship as much as a whole small fleet used to cost; which must resign itself to seeing these expensive vessels become obsolete, and therefore worthless, even before they slide into the water; and which must certainly be just as disgusted as Herr Dühring that the man of the “economic situation”, the engineer, is now of far greater importance on board than the man of “direct force”, the captain. On the other hand, we have absolutely no cause for annoyance when we see that, in this competitive struggle between armour-plating and guns, the battleship is being developed to a pitch of perfection which is making it both outrageously costly and unusable in war,* and that this struggle makes manifest in the sphere of naval warfare too those immanent dialectical laws of motion according to which militarism, like every other historical phenomenon, is perishing in consequence of its own development.

Here too, therefore, we see absolutely clearly that it is in no wise true that “the primary factor must be sought in direct political force and not in any indirect economic power”. On the contrary. For what precisely does “the primary factor” in force itself prove to be? Economic power, the disposal over the means of power of large-scale industry. Naval political force, which reposes on modern battleships, proves to be not “direct” at all, but on the contrary *mediated* by economic power, highly developed metallurgy, command of skilled technicians and productive coal-mines.

But it’s all no good anyhow. If we put Herr Dühring in supreme command in the next naval war, without torpedoes or any other artifices he will destroy all fleets of armoured ships, slaves as they are of the economic situation, solely by virtue of his “direct force”.

IV

THE FORCE THEORY

(Concluded)

“It is a circumstance of great importance that in fact domination over nature, generally speaking(!), only proceeded” (a domination pro-

* The perfecting of the latest product of large-scale industry for use in naval warfare, the self-propelled torpedo, seems likely to bring this to pass; it would mean that the smallest torpedo boat would be superior to the most powerful armoured battleship. (It should be borne in mind that the above was written in 1878.)⁶⁵ [Note by Engels.]

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ceeded!) “through domination over *man*. The cultivation of landed property in tracts of considerable size never took place anywhere without the prior subjection of man in some form of slave-labour or corvée. The establishment of an economic domination over things has presupposed the political, social and economic domination of man over man. How could a large landed proprietor even be conceived without at the same time including in this idea his domination over slaves, serfs, or indirectly unfree men? What could the efforts of an individual, at most supplemented by those of his family, have signified or signify in large-scale agriculture? The exploitation of the land, or the extension of economic control over it on a scale exceeding the natural capacities of the individual, was only made possible in previous history by the establishment, either before or simultaneously with the introduction of domination over land, of the enslavement of man which this involves. In the later periods of development this servitude was mitigated,... its present form in the more highly civilized states is wage-labour, to a greater or lesser degree carried on under police rule. Thus wage-labour provides the practical possibility of that form of contemporary wealth which is represented by domination over wide areas of land and (!) large-scale landed property. It goes without saying that all other types of distributed wealth must be explained historically in a similar way, and the indirect dependence of man on man, which is now the essential feature of economically speaking the most fully developed situations, cannot be understood and explained by their own nature, but only as a somewhat transformed heritage of an earlier direct subjugation and expropriation.”

Thus says Herr Dühring.

Thesis: The domination of nature (by man) presupposes the domination of man (by man).

Proof: The cultivation of landed *property in tracts of considerable size* never took place anywhere except by the use of serfs.

Proof of the proof: How can there be large landowners without serfs, since the large landowner, even with his family, could cultivate only a tiny part of his property in the absence of serfs?

Therefore, in order to prove that man first had to subjugate man before he could bring nature under his control, Herr Dühring transforms “nature” without further ado into “landed property in tracts of considerable size”, and then this landed property – ownership unspecified – is immediately transformed again into the property of a large landed proprietor, who naturally cannot cultivate his land without serfs.

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In the first place, “domination over nature” and the “cultivation of landed property” are by no means the same thing. In industry, domination over nature is exercised on quite another and more gigantic scale than in agriculture, which must still submit to the command of weather conditions instead of commanding them.

Secondly, if we confine ourselves to the cultivation of landed property in extensive tracts, what it boils down to is whose landed property it is. We find in the early history of all civilized peoples, not the “large landed proprietors” whom Herr Dühring interpolates here with the usual sleight of hand he calls “natural dialectics”, but tribal and village communities with common ownership of the land. From India to Ireland the cultivation of landed property in extensive tracts was originally carried on by such tribal and village communities; sometimes the arable land was tilled jointly for account of the community, and sometimes in separate plots temporarily allotted to families by the community, while woodland and pasture-land continued to be used in common. It is once again characteristic of Herr Dühring’s “most exhaustive specialized studies in the domain of politics and law” that he knows nothing of all this; that all his works breathe total ignorance of Maurer’s epoch-making writings on the primitive constitution of the German Mark,⁶⁶ the basis of all German law, and of the ever-increasing mass of literature, chiefly stimulated by Maurer, which is devoted to proving the primitive common ownership of the land among all the civilized peoples of Europe and Asia, and to showing the various forms of its existence and dissolution. Just as in the domain of French and English law Herr Dühring “acquired all his ignorance himself”, great as it was, so it is with his even greater ignorance in the domain of German law. In this domain the man who flies into such a violent rage over the limited horizon of university professors is today, at the very most, still where the professors were twenty years ago.

It is purely a “free creation and imagination” on Herr Dühring’s part when he asserts that landed proprietors and serfs were required for the cultivation of landed property in extensive tracts. In the whole of the Orient, where the village community or the state owns the land, the very term landed proprietor is not to be found in the various languages, a point on which Herr Dühring can consult the English jurists, whose efforts in India to solve the question, who is the owner of the land? – were as vain as those of the late Prince Heinrich LXXII of Reuss-Greiz-Schleitz-Lobenstein-Eberswalde in his attempts to solve the question of who was the night-watchman. The Turks were the first to introduce a sort of feudal ownership of

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land in the countries conquered by them in the Orient. As far back as the heroic epoch, Greece made its entry into history with a system of social estates which was itself evidently the product of a long but unknown prehistory; even there, however, the land was mainly cultivated by independent peasants; the larger domains of the nobles and tribal chiefs were the exception, and they disappeared soon after. Italy was brought under cultivation chiefly by peasants; when, in the final period of the Roman Republic, the great complexes of estates, the *latifundia*, displaced the small peasants and replaced them by slaves, they also replaced tillage by stock-raising, and, as Pliny already realized, brought Italy to ruin (*latifundia Italiam perdidere*). During the Middle Ages, peasant farming was predominant throughout Europe (especially in bringing virgin soil into cultivation); and in relation to the question we are now considering it is of no importance whether these peasants had to pay dues, and if so what dues, to any feudal lords. The colonists from Friesland, Lower Saxony, Flanders and the Lower Rhine, who brought under cultivation the land east of the Elbe which had been wrested from the Slavs, did this as free peasants under very favourable rentals, and not at all under "some form of *corvée*".

In North America, by far the largest portion of the land was opened for cultivation by the labour of free farmers, while the big landed proprietors of the South, with their slaves and their rapacious tilling of the land, exhausted the soil until it could only grow firs, so that the cultivation of cotton was forced further and further west. In Australia and New Zealand, all attempts of the British government artificially to establish a landed aristocracy came to nothing. In short, if we except the tropical and subtropical colonies, where the climate makes agricultural labour impossible for Europeans, the big landed proprietor who subjugates nature by means of his slaves or serfs and brings the land under cultivation proves to be a pure figment of the imagination. The very reverse is the case. Where he makes his appearance in antiquity, as in Italy, he does not bring wasteland into cultivation, but transforms arable land brought under cultivation by peasants into stock pastures, depopulating and ruining whole countries. Only in a more recent period, when the increasing density of population raised the value of land, and particularly after the development of agricultural science made even poorer land more cultivable – it is only from this period that large landowners began to participate on an extensive scale in bringing wasteland and grassland under cultivation, and this mainly through the robbery of common land from the peasants, both in England and in Germany.

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But there was another side even to this. For every acre of common land which the large landowners brought into cultivation in England, they transformed at least three acres of arable land in Scotland into sheepruns and eventually into mere grounds for deer-hunting.

We are concerned here only with Herr Dühring's assertion that the bringing into cultivation of extensive tracts of land, and therefore of practically the whole area now cultivated, "never and nowhere" took place except through the agency of big landed proprietors and their serfs – an assertion which, as we have seen, "presupposes" a really unprecedented ignorance of history. It is not necessary, therefore, for us to examine here to what extent areas which were already made entirely or mainly cultivable were cultivated at different periods by slaves (as in the heyday of Greece) or serfs (as in the manors of the Middle Ages), or what the social function of the large landowners was at various periods.

After Herr Dühring has shown us this masterpiece of the imagination, in which we do not know whether the conjuring trick of deduction or the falsification of history is more to be admired, he crows:

"It goes without saying that all other types of distributed wealth *must be explained historically in a similar way!*"

Which of course saves him the trouble of wasting a single word more on the origin of capital for example.

If, with his domination of man by man as a prior condition for the domination of nature by man, Herr Dühring only wanted to state in a general way that the whole of our present economic order, the level of development now attained by agriculture and industry, is the result of a social history which evolved in class antagonisms, in relationships of domination and subjection, he is saying something which has become a commonplace ever since *The Communist Manifesto*. But the question at issue is how we are to explain the origin of classes and relations based on domination, and if Herr Dühring's only answer is always the single word "force", we are left exactly where we were at the start. The mere fact that the ruled and exploited have at all times been far more numerous than the rulers and the exploiters, and that therefore the real force has reposed in the hands of the former, is enough to demonstrate the absurdity of the whole force theory. The relations of domination and subjection have therefore still to be explained.

They arose in two ways.

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As men originally made their exit from the animal world – in the narrower sense – so they made their entry into history: still half animal, brutish, still impotent in face of the forces of nature, still ignorant of their own; and consequently as poor as the animals and hardly more productive than they. There prevailed a certain equality in the conditions of existence, and also a kind of equality of social position for the heads of families – at least an absence of social classes – which continued among the primitive agricultural communities of the civilized peoples of a later period. In each such community there were from the beginning certain common interests the safeguarding of which had to be handed over to individuals, true, under the control of the community as a whole: adjudication of disputes; repression of encroachments by individuals beyond their rights; control of water supplies, especially in hot countries; and finally, when conditions were still very primitive, religious functions. Such offices are found in native communities in every period – thus in the oldest German Marks and even today in India. It goes without saying that they are endowed with a certain measure of authority and constitute the beginnings of state power. The productive forces gradually increase; the greater density of the population creates common interests at one point and conflicting interests at another between the separate communities, whose grouping into larger units again brings about a new division of labour, the setting up of organs to defend common interests and guard against conflicting interests. These organs, which as representatives of the common interests of the whole group, already occupy a special position in relation to each individual community – in certain circumstances even one of opposition – soon make themselves still more independent, partly through heredity of functions, which comes about almost as a matter of course in a world where everything occurs spontaneously, and partly through their growing indispensability with the increase in conflicts with other groups. It is not necessary for us to examine here how this independence of social functions as against society increased with time until it developed into domination over society; how, where conditions were favourable, the original servant gradually changed into the master; how this master emerged as an Oriental despot or satrap, the dynast of a Greek tribe, the chieftain of a Celtic clan, and so on, according to the conditions; how far he finally made use of force in the course of this transformation; and how the individual rulers ultimately united into a ruling class. Here we are only concerned with establishing the fact that the exercise of a social function was everywhere the basis of political

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domination; and further that political domination has existed for any length of time only when it discharged this, its social, function. However many the despotisms which rose and fell in Persia and India, each was fully aware that it was above all the general entrepreneur for the maintenance of irrigation throughout the river valleys, without which no agriculture was possible. It was reserved for the enlightened English to lose sight of this in India; they let the irrigation canals and sluices fall into decay, and are now at last discovering as a result of the regularly recurring famines that they have neglected the one activity which might have made their rule in India at least as legitimate as that of their predecessors.

But side by side with this formation of classes another was taking place. At a certain level of well-being, the natural division of labour within the family cultivating the soil made possible the introduction of one or more strangers as units of labour-power. This was especially the case in countries where the old common ownership of the land had already disintegrated or at least the former joint cultivation had given place to the separate cultivation of plots by the respective families. Production had developed so far that human labour-power could now produce more than was necessary for its maintenance; the means of maintaining additional units of labour-power were present; likewise the means of employing them; labour-power acquired a *value*. But the community itself and the association to which it belonged yielded no available, superfluous labour-power. On the other hand, the latter was furnished by war, and war was as old as the coexistence of several groups of juxtaposed communities. Hitherto they had not known what to do with prisoners of war and had therefore simply killed them, at a still earlier period, eaten them. But at the stage of the "economic order" which had now been attained the prisoners acquired a value; they were therefore allowed to live and their labour was made use of. Thus, instead of dominating the economic situation, force was on the contrary pressed into the service of the economic situation. *Slavery* had been invented. It soon became the dominant form of production among all peoples who were developing beyond the old community, but in the end it also became one of the chief causes of their decline. It was slavery that first made possible the division of labour between agriculture and industry on a larger scale, and with it the glory of the ancient world, Hellenism. Without slavery, no Greek state, no Greek art and science; without slavery, no Roman Empire. But without the basis laid by Hellenism and the Roman Empire, no modern Europe either. We should never forget that our whole eco-

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conomic, political and intellectual development presupposes a state of things in which slavery was as necessary as it was universally recognized. In this sense we are entitled to say: Without the slavery of antiquity, no modern socialism.

It is very easy to inveigh against slavery and the like in general terms and pour out the vials of one's lofty moral wrath on such infamies. Unfortunately all this conveys is merely what everyone knows, namely, that these institutions of antiquity are no longer in accord with our present conditions and our sentiments, which these conditions determine. But it does not tell us one word as to how these institutions arose, why they existed, and what role they have played in history. When we examine these questions, we are compelled to say – however contradictory and heretical it may sound – that the introduction of slavery under the then prevailing conditions was a great step forward. For it is an established fact that man sprang from the beasts and consequently had to use barbaric and almost bestial means in his efforts to extricate himself from barbarism. Where the ancient communes have continued to exist, they have for thousands of years formed the basis of the crudest form of state, Oriental despotism, from India to Russia. It was only where these communities dissolved that the peoples made further progress of themselves, and their next economic advance consisted in the increase and development of production by means of slave labour. It is clear that so long as human labour was still so little productive that it provided but a small surplus over and above the necessary means of subsistence, the increase in the productive forces, the extension of trade, the development of the state and of law, the founding of art and science were possible only by means of an increased division of labour, the necessary basis for which was the great division of labour between the masses providing simple manual labour and the few privileged persons directing labour, conducting trade and affairs of state, and, later on, occupying themselves with art and science. The simplest and most natural form of this division of labour was actually slavery. Given the historical antecedents of the ancient world, and particularly of Greece, the advance to a society based on class antagonisms could only be accomplished in the form of slavery. This was an advance even for the slaves; the prisoners of war, from whom the mass of the slaves was recruited, now at least saved their lives, instead of being killed as they had been before, or even roasted, as at a still earlier period.

We may add at this point that all historical antagonisms between exploiting and exploited, ruling and oppressed classes to this

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very day find their explanation in this same relatively undeveloped productivity of human labour. So long as the effective working population were so much occupied with their necessary labour that they had no time left for looking after the common affairs of society – the direction of labour, affairs of state, legal matters, art, science, etc. – the concomitant existence of a special class freed from actual labour to manage these affairs was always necessary; by this means it never failed to saddle the working masses with a greater and greater burden of labour to its own advantage. Only the immense increase of the productive forces attained by large-scale industry has made it possible to distribute labour among all members of society without exception, and thus to limit the labour-time of each individual member to such an extent that all have enough free time left to take part in the general affairs of society, whether theoretical or practical. It is only now, therefore, that every ruling and exploiting class has become superfluous and indeed a hindrance to social development, and it is only now, too, that it will be inexorably abolished, however much it may be in possession of “direct force”.

When, therefore, Herr Dühring turns up his nose at Hellenism because it was founded on slavery, he might with equal justice reproach the Greeks for having had no steam-engines or electric telegraphs. And when he asserts that our modern wage bondage can only be explained as a somewhat transformed and mitigated heritage of slavery and not by its own nature (that is, by the economic laws of modern society), either this means only that both wage-labour and slavery are forms of bondage and class domination, as every child knows, or it is false. For we might as well say that wage-labour can only be explained as a mitigated form of cannibalism, which, it is now universally established, was the primitive form of using defeated enemies.

The role played in history by force as contrasted with economic development is therefore clear. Firstly, all political power is originally based on an economic and social function, and increases in proportion as the members of society become transformed into private producers through the dissolution of the primitive community, and thus become more and more alienated from the administrators of the common functions of society. Secondly, after the political force has made itself independent as against society and has transformed itself from its servant into its master, it can work in two different directions. Either it works in the sense and in the direction of normal economic development. In this case no conflict arises between them, and economic development is accelerated. Or it works

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against economic development, in which case, with but few exceptions, force succumbs to it. These few exceptions are isolated cases of conquest, in which the more barbarian conquerors exterminated or drove out the population of a country and laid waste or allowed to go to ruin productive forces they did not know how to use. This was what the Christians in Moorish Spain did with the major part of the irrigation works on which the Moors' highly developed agriculture and horticulture depended. Of course, every conquest by a more barbarian people disturbs economic development and extensively destroys productive forces. But in the immense majority of cases where the conquest is permanent, the more barbarian conqueror has to adapt himself to the higher "economic order" as it emerges from the conquest; he is assimilated by the vanquished and in most cases he has even to adopt their language. But where – apart from cases of conquest – the internal state power of a country becomes antagonistic to its economic development, as occurred at a certain stage with almost every political power in the past, the contest always ended with the downfall of the political power. Inexorably and without exception economic development has forced its way through – we have already mentioned the latest and most striking example of this, the great French Revolution. If, following Herr Dühring's theory, the economic situation and with it the economic structure of a given country were dependent simply on political force, it is absolutely impossible to understand why Frederick William IV after 1848 could not succeed, in spite of his "magnificent army", in grafting the mediaeval guilds and other romantic oddities on to the railways, the steam-engines and the large-scale industry which was just then developing in his country; or why the tsar of Russia, who is certainly still more powerful, is not only unable to pay his debts, but cannot even maintain his "force" without continually borrowing from the "economic order" of Western Europe.

For Herr Dühring force is the absolute evil; for him the first act of force is the original sin; his whole exposition is a jeremiad on the contamination of all subsequent history consummated by this original sin, a jeremiad on the shameful perversion of all natural and social laws by this diabolical power, force. That force, however, plays yet another role in history, a revolutionary role; that, in the words of Marx, it is the midwife of every old society pregnant with a new one,* that it is the instrument by means of which social

* *Capital*, Vol. I, p. 751. – *Ed.*

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movement forces its way through and shatters the dead, fossilized political forms – of this there is not a word in Herr Dühring. It is only with sighs and groans that he admits the possibility that force will perhaps be necessary for the overthrow of the economy based on exploitation – alas! because all use of force, forsooth, demoralizes the person who uses it. And this in spite of the immense moral and spiritual advance which has been the result of every victorious revolution! And this too in Germany, where a violent collision – which may after all be forced on the people – would at least have the advantage of wiping out the servility which has penetrated the national consciousness as a result of the humiliation of the Thirty Years' War. It is this preachers' mentality, dull, insipid and impotent, that claims the right to impose itself on the most revolutionary party history has known!

V

THEORY OF VALUE

It is now about a hundred years since the publication in Leipzig of a book which had run through over thirty editions by the beginning of the nineteenth century; it was circulated and distributed in town and country by the authorities, by preachers and philanthropists of all kinds, and was generally prescribed as a reader in the elementary schools. This book was Rochow's *Children's Friend*. Its purpose was to teach the youthful offspring of the peasants and artisans their vocation in life and their duties to their social and political superiors, and likewise to inspire in them a beneficent contentment with their lot on earth, with black bread and potatoes, corvée labour, low wages, paternal thrashings and other such delights, and all by means of the system of enlightenment which was then in vogue. To this end the youth of the towns and of the countryside was admonished how wisely nature had ordained that man must win his livelihood and his pleasures by labour, and how happy therefore the peasant or artisan should feel that it was granted to him to season his meal with bitter labour, instead of suffering the pangs of indigestion or constipation and having to gulp down the choicest tidbits with repugnance, like the rich glutton. These same commonplaces, which old Rochow thought good enough for the peasant youth of the Electorate of Saxony of his time, are served up to us by Herr Dühring on page 14 and the following pages of his *Course* as

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the “absolutely fundamental” teaching of the most up-to-date political economy.

“Human wants as such have their natural laws, and their expansion is confined within limits which can be transgressed only temporarily by unnatural acts, until these acts result in nausea, boredom with life, decrepitude, social mutilation and finally salutary annihilation.... A game consisting purely of pleasures without any further serious aim soon makes one *blasé*, or, what amounts to the same thing, exhausts all capacity to feel. Real labour, in some form or other, is therefore the natural social law of healthy beings.... If instincts and wants were not provided with counterbalances, they would hardly bring us even an infantile existence, let alone a historically enhanced development of life. If they were satisfied fully and painlessly, they would soon exhaust themselves, leaving an empty existence behind them in the form of irksome intervals lasting until their recurrence.... In every respect, therefore, the fact that the functioning of the instincts and passions depends on victory over an economic obstacle is a salutary basic law of both the external arrangement of nature and the inner constitution of man” – and so on, and so forth.

It can be seen that the most inane inanities of the worthy Rochow are celebrating their centenary in Herr Dühring, and, moreover, as “the deeper foundation” of the one and only really critical and scientific “socialitarian system”.

With the ground thus laid, Herr Dühring can proceed to build. Applying the mathematical method, he first gives us a series of definitions in accordance with old Euclid’s procedure. This is all the more convenient because it immediately enables him to contrive his definitions in such a way that what is to be proved with their help is already partially contained in them. Thus we learn at the outset that

the governing concept in all prior political economy has been wealth and that wealth, as it has really been understood in world history hitherto and as it has developed its sway, is “economic power over men and things”.

This is doubly wrong. In the first place the wealth of the tribal and village communities of antiquity was in no sense a domination over men. Secondly, even in societies moving in class antagonisms, wealth, in so far as it includes domination over men, is preponderantly and almost exclusively a domination over men exercised *by virtue of*, and *through the agency of*, the domination over things. From the very early period when the capture of slaves and their exploitation

became separate branches of business, the exploiters of slave labour had to buy the slaves, acquiring domination over men only through their prior domination over things, over the slave's purchase price, means of subsistence and instruments of labour. Throughout the Middle Ages large landed property was the precondition through which the feudal nobility obtained peasants paying dues and performing *corvée*. Nowadays even a six-year-old child can see that wealth dominates men exclusively by means of the things over which it disposes.

But why must Herr Dühring concoct this false definition of wealth, and why must he sever the actual connection which has existed in all class societies up to now? In order to drag wealth from the sphere of economics into that of morals. Domination over things is quite all right, but domination over men is an evil; and as Herr Dühring has forbidden himself to explain domination over men by domination over things, he can once again do an audacious trick and explain domination over men offhand by his beloved force. Wealth, as domination over men, is "robbery" – so we return to a corrupted version of Proudhon's ancient formula, "Property is theft."

Thus we have now fortunately brought wealth under the two essential aspects of production and distribution: wealth as domination over things – production wealth, the good side; wealth as domination over men – distribution wealth up to the present day, the bad side, away with it! Applied to present-day conditions, this means: the capitalist mode of production is quite all right and may remain, but the capitalist mode of distribution is no good and must be abolished. Such is the nonsense which comes of writing on economics without so much as having grasped the connection between production and distribution.

After wealth, value is defined as follows:

"Value is the worth which economic things and services have in commerce." This worth corresponds to "the price or any other equivalent name, for example, wages".

In other words, value is price. Or rather, in order not to do Herr Dühring an injustice and give the absurdity of his definition as far as possible in his own words: value are prices. For he says on page 19: "value, and the prices expressing it in money", thus himself stating that the same value has very different prices and consequently also just as many different values. If Hegel had not died long ago, he would hang himself; with all his theologizing he could not have thought up this value which has as many different values as it has prices. Once again, it needs someone with Herr Dühring's brashness

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to inaugurate a new and deeper foundation for economics with the declaration that there is no difference between price and value, except that one is expressed in money and the other is not.

But we still don't know what value is, and still less by what it is determined. Herr Dühring must therefore come across with further explanations.

“Speaking quite generally, the basic law of comparison and valuation, on which value and the prices expressing it in money depend, belongs in the first place to the sphere of pure production, apart from distribution, which introduces only a second element into the concept of value. The greater or lesser obstacles which the variety of natural conditions places in the way of efforts directed towards the procurement of things, necessitating a greater or lesser expenditure of economic energy, also determine... the greater or lesser value,” and this is appraised according to “the resistance offered by nature and circumstances to the procuring of things.... The extent to which we invested our own energy in them” (things) “is the immediate determining cause of the existence of value in general and of a particular magnitude of it”.

So far as this has any meaning, it is: The value of a product of labour is determined by the labour-time necessary for its production; and we knew that long ago, even without Herr Dühring. Instead of stating the fact simply, he has to twist it into an oracular saying. It is simply wrong to say that the extent to which anyone invests his energies in anything (to adhere to the bombastic style) is the immediate determining cause of value and of the magnitude of value. In the first place, it depends on what thing the energy is put into, and secondly, on how the energy is put into it. If someone makes a thing which has no use-value for other people, all his energy produces not an atom of value; and if he is stiff-necked enough to produce by hand an object which a machine produces twenty times more cheaply, nineteen-twentieths of the energy he put into it produces neither value in general nor any particular magnitude of value.

Moreover, it is a complete distortion to transform productive labour, which creates positive products, into a merely negative overcoming of resistance. In order to get a shirt we should then have to set about it somewhat as follows. Firstly we overcome the resistance of the cotton-seed to being sown and to growing, then the resistance of the ripe cotton to being picked and packed and transported, then its resistance to being unpacked and carded and spun, next the resistance of the yarn to being woven, then the resistance of

the cloth to being bleached and sewn, and finally the resistance of the completed shirt to being put on.

Why all this childish perversion and perversity? In order to pass by means of “resistance” from the “production value”, the true but hitherto only ideal value, to the “distribution value”, the value, falsified by force, which alone was acknowledged in past history:

“In addition to the resistance offered by nature... there is yet another, a purely social obstacle.... An obstructive power steps in between man and nature, and this power is once again man. Man, conceived as alone and isolated, is free in the face of nature.... The situation is different as soon as we think of a second man who, sword in hand, holds the approaches to nature and its resources and demands a price, in whatever form, for allowing access. This second man... , so to speak, taxes the other and is thus the reason why the value of the object striven for turns out to be greater than it would be but for this political and social obstacle to supply or production.... The particular forms of this artificially enhanced worth of things are extremely manifold, and it naturally has its concomitant counterpart in a corresponding forcing down of the worth of labour.... It is therefore an illusion to attempt to regard value in advance as an equivalent in the proper sense of this term, that is, as something which is of equal worth, or as a relation of exchange arising from the principle that service and counter-service are equal.... On the contrary, the criterion of a correct theory of value will be that the most general cause of valuation conceived in the theory does not coincide with the special form of worth which rests on compulsory distribution. This form varies with the social system, while economic value proper can only be a production value measured in relation to nature and consequently will only change with changes in obstacles to production of a purely natural and technical kind.”

According to Herr Dühring, the value which a thing has in practice therefore consists of two parts, first, the labour contained in it, and, secondly, the tax surcharge imposed “sword in hand”. In other words, the value in force today is a monopoly price. Now if all commodities have such a monopoly price in accordance with this theory of value, only two alternatives are possible. Either each individual loses again as a buyer what he has gained as a seller; the prices have changed nominally, but in reality – in their reciprocal relationship – have remained the same; everything remains as before, and the far-famed distribution value is a sheer illusion.

Or, on the other hand, the alleged tax surcharges represent a real sum of values, namely, that produced by the labouring, value-

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producing class but appropriated by the monopolist class, and then this sum of values consists merely of unpaid labour; in this event, in spite of the man with the sword in his hand, in spite of the alleged tax surcharges and the asserted distribution value, we arrive once again – at the Marxian theory of *surplus-value*.

But let us look at some examples of this famous “distribution value”. On page 135 and the following pages we find:

“Price formation as a result of individual competition must also be regarded as a form of economic distribution and of the mutual imposition of tribute.... If the supply of any necessary commodity is suddenly and significantly reduced, this gives the seller a disproportionate power to exploit;... how colossal the increase in prices may be is shown particularly by those abnormal situations in which the supply of necessities is cut off for any length of time”, and so on. Moreover, even in the normal course of things virtual monopolies exist which permit arbitrary price increases, as for example the railways, the companies supplying towns with water and gas, etc.

It has long been known that such opportunities for monopolistic exploitation occur. But that the monopoly prices they produce are not to rank as exceptions and special cases, but precisely as classical examples of the determination of values in operation today – this is new. How are the prices of necessities determined? Herr Dühring replies: Go into a beleaguered city from which supplies have been cut off, and ask for yourself! How does competition affect the determination of market prices? Ask the monopoly, it will tell you all about it!

Besides, even in the case of these monopolies, the man with the sword in his hand who is supposed to stand behind them is not to be found. On the contrary. If the man with the sword, the commandant, does his duty in cities under siege, as a rule he very soon puts an end to the monopoly and requisitions the monopolized stocks in order to distribute them equally. Anyhow, when the men with the sword have tried to fabricate a “distribution value”, they have reaped nothing but bad business and financial loss. The Dutch brought both their monopoly and their trade to ruin with their monopolization of the East Indian trade. The two strongest governments which ever existed, the North American revolutionary government and the French National Convention, ventured to fix maximum prices, and they failed miserably. For years now, the Russian government has been trying to raise the exchange rate for Russian paper money – which it is lowering in Russia by the constant emis-

sion of irredeemable banknotes – by the equally constant buying up in London of bills of exchange on Russia. In the last few years it has had to pay almost sixty million rubles for this pleasure, and the ruble now stands at under two marks instead of over three. If the sword has the magic economic power ascribed to it by Herr Dühring, why is it that no government has succeeded in permanently compelling bad money to have the “distribution value” of good money, or *assignats* to have the “distribution value” of gold? And where is the sword which is in command of the world market?

There is said to be yet another principal form in which distribution value facilitates the appropriation of other people’s services without counter-services, namely, rent of possession, that is to say, ground-rent and the earnings of capital. For the moment we merely record this, to enable us to state that this is all that we learn of this famous “distribution value”. – All? No, not quite. Listen to this:

“In spite of the twofold standpoint which is manifested in the recognition of a production value and a distribution value, there is *something in common* always underlying these, *the thing of which all values consist* and by which they are therefore measured. The immediate, natural measure is the expenditure of energy, and the simplest unit is human energy in the crudest sense of the term. This latter can be reduced to the existence-time whose *self-maintenance* in turn represents the overcoming of a certain sum of difficulties in nutrition and life. Distribution, or appropriation, value is purely and exclusively present only where the power to dispose of unproduced things, or, to use a commoner expression, these things themselves, are exchanged for services or things of real production value. The homogeneous element, which is indicated and represented in every expression of value and therefore also in the component parts of value appropriated through distribution without counter-service, consists in the expenditure of human energy, which... finds embodiment... in each commodity.”

Now what should we say to this? If all commodity values are measured by the expenditure of human energy embodied in the commodities, what becomes of the distribution value, the price surcharge, the tax? True, Herr Dühring tells us that even unproduced things – things which consequently cannot have a real value – can be given a distribution value and exchanged against things which have been produced and possess value. But he tells us at the same time that *all values* – consequently also pure and exclusive distribution values – consist in the expenditure of energy embodied in them. Unfortunately we are not told how an expenditure of energy can be

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embodied in an unproduced thing. In any case what finally seems clear from all this medley of values is that once again distribution value, the price surcharge on commodities extorted as a result of social position, the tax levied by virtue of the sword, makes no sense. Aren't the values of commodities determined solely by the expenditure of human energy, *vulgo* labour, which finds embodiment in them? Therefore, if we leave out ground-rent and a few monopoly prices, doesn't Herr Dühring say the same thing, only in a more slipshod and confused way, as the much-decried Ricardian-Marxian theory of value said far more clearly and precisely long ago?

He says so, and in the same breath he says the opposite. Taking Ricardo's investigations as his starting-point, Marx says: The value of commodities is determined by the socially necessary general human labour embodied in them, and this in turn is measured by its duration. Labour is the measure of all values, but has no value itself. After also putting forward labour as the measure of value but in his own sloppy way, Herr Dühring continues:

This "can be reduced to the existence-time whose self-maintenance in turn represents the overcoming of a certain sum of difficulties in nutrition and life".

Let us ignore the confusion, arising purely from his craving for originality, of labour-time, which is the only thing that matters here, with existence-time, which has never yet created or measured values. Let us also ignore the false "socialitarian" pretence which the "self-maintenance" of this existence-time is intended to introduce; so long as the world has existed and so long as it continues to exist, every individual must maintain himself in the sense that he *himself* consumes his means of subsistence. Let us assume that Herr Dühring expressed himself in precise economic terms; then the sentence quoted either means nothing at all or means the following: the value of a commodity is determined by the labour-time embodied in it, and the value of this labour-time by the means of subsistence necessary for the maintenance of the worker for this time. For present-day society, this means the value of a commodity is determined by the *wages* contained in it.

This finally brings us to what Herr Dühring is really trying to say. The value of a commodity is determined, in the phraseology of vulgar economics, by the cost of production,

as against which Carey “brought out the truth that it is not the cost of production, but the cost of reproduction that determines value” (*Critical History*, p. 401).

We shall see later what there is to this cost of production or reproduction; at the moment we only note that, as is well known, it consists of wages and profit on capital. Wages represent the “expenditure of energy” embodied in commodities, the production value. Profit represents the tax or price surcharge extorted by the capitalist by virtue of his monopoly, by the sword in his hand – the distribution value. The whole contradictory confusion of the Dühringian theory of value is thus ultimately resolved in the most beautiful and harmonious clarity.

The determination of the value of commodities by wages, which in Adam Smith still appeared frequently side by side with its determination by labour-time, has been banned from scientific political economy since Ricardo and nowadays survives only in vulgar economics. It is precisely the shallowest sycophants of the existing capitalist order of society who preach the determination of value by wages, and who concomitantly describe the profit of the capitalist as also a higher sort of wages, as the wages of abstinence (the reward to the capitalist for not playing ducks and drakes with his capital), as the premium on risk, as the wages of management, etc. Herr Dühring differs from them only in declaring that profit is robbery. In other words, Herr Dühring bases his socialism directly on the doctrines of the worst kind of vulgar economics. And his socialism is worth just as much as this vulgar economics. The two stand and fall together.

After all, it is clear that what a worker produces and what he costs are just as much different things as what a machine produces and what it costs. The value created by a worker in a twelve-hour working-day has absolutely nothing in common with the value of the means of subsistence he consumes in this working-day and the accompanying period of rest. In these means of subsistence there may be embodied three, four or seven hours of labour-time, according to the stage of development reached by the productivity of labour. If we assume that seven hours of labour were necessary for their production, then the theory of value of vulgar economics accepted by Herr Dühring says that the product of twelve hours of labour has the value of the product of seven hours of labour, that twelve hours of labour are equal to seven hours of labour, or that $12 = 7$. To put it even more plainly: an agricultural labourer, under

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whatever social relations, annually produces a certain quantity of grain, say sixty bushels of wheat. During this time he consumes a sum of values amounting to forty-five bushels of wheat. Then the sixty bushels of wheat have the same value as the forty-five bushels, and that in the same market and with other conditions remaining absolutely identical; in other words, sixty = forty-five. And this styles itself political economy!

The whole development of human society beyond the stage of brute savagery begins from the day when the labour of the family created more products than were necessary for its subsistence, from the day when a portion of labour could be devoted to the production no longer of the mere means of subsistence, but of means of production. A surplus of the product of labour over and above the costs of subsistence of the labour, and the formation and expansion of a social production and reserve fund out of this surplus, these were and these are the basis of all social, political and intellectual progress. Historically up to now, this fund has been the possession of a privileged class, on which, along with this possession, political supremacy and intellectual leadership also devolved. The impending social revolution will for the first time make this social production and reserve fund – that is, the total mass of raw materials, instruments of production and means of subsistence – a real social fund by taking its disposal away from that privileged class and transferring it to the whole of society as its common property.

It is one of two alternatives. Either the value of commodities is determined by the costs of subsistence of the labour necessary for their production, that is, in present-day society, by wages. In this case each worker receives *in his wages the value of the product of his labour*, in this case the exploitation of the wage-earning class by the capitalist class is an impossibility. Let us assume that a worker's costs of subsistence in a given society can be expressed by the sum of three shillings. Then, according to the above-cited theory of the vulgar economists, the product of a day's labour has a value of three shillings. Let us now assume that the capitalist who employs this worker adds a profit to this product, a tribute of one shilling, and sells it for four shillings. The other capitalists do the same. But from that moment the worker can no longer cover his daily needs with three shillings, but likewise requires four shillings for them. As all other conditions are assumed to have remained unchanged, the wages expressed in means of subsistence must remain the same, while the wages expressed in money must rise, namely, from three shillings to four shillings a day. What the capitalists take from the

working class in the form of profit they must give back to it in the form of wages. We are just where we were at the beginning: if wages determine value, no exploitation of the worker by the capitalist is possible. But the formation of a surplus of products is also impossible, for according to our assumption the workers consume just as much value as they produce. Moreover, as the capitalists produce no value, it is impossible to see how they are even to live. Yet if such a surplus of production over consumption, such a production and reserve fund, nevertheless exists, and in the hands of the capitalists at that, no other explanation remains possible but that the workers consume for their own subsistence merely the value of the commodities, and have relinquished the commodities themselves to the capitalist for further use.

Or, on the other hand, if this production and reserve fund does in fact exist in the hands of the capitalist class, if it has in fact arisen through the accumulation of profit (for the moment we leave ground-rent out of account), then it necessarily consists of the accumulated surplus of the product of labour handed over to the capitalist class by the working class, over and above the sum of wages paid to the working class by the capitalist class. In this case, however, value is determined not by wages, but by the quantity of labour; in this case the working class hands over to the capitalist class in the product of labour a greater quantity of value than it receives from it in the payment of wages, and in this case the profit on capital, like all other forms of appropriation of the unpaid labour product of others, is explained as a simple component part of this surplus-value discovered by Marx.

Incidentally, in the whole *Course of Political Economy* there is no mention of that great and epoch-making discovery with which Ricardo opens his most important work:

“The value of a commodity... depends on the relative quantity of labour which is necessary for its production, and not on the greater or lesser compensation which is paid for that labour.”⁶⁷

In the *Critical History* it is dismissed with the oracular phrase:

“It is not considered” (by Ricardo) “that the greater or lesser proportion in which wages can be an allotment of necessities (!) must also involve... a heterogeneous configuration of the value relationships!”

A phrase into which the reader can read what he pleases, and is on the safest ground if he reads into it nothing at all.

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Now let the reader select for himself, from the five sorts of value served up to us by Herr Dühring, the one he likes best: the production value, which comes from nature; or the distribution value, which man's wickedness has created and which is distinguished by the fact that it is measured by the expenditure of energy which is not contained in it; or thirdly, the value which is measured by labour-time; or fourthly, the value which is measured by the cost of reproduction; or lastly, the value which is measured by wages. The selection is wide, the confusion complete, and the only thing left for us to do is to exclaim with Herr Dühring:

"The theory of value is the touchstone of the soundness of economic systems!"

VI

SIMPLE AND COMPOUND LABOUR

Herr Dühring has discovered a very gross schoolboy howler in political economy in Marx which at the same time contains a socialist heresy dangerous to society.

Marx's theory of value is "nothing but the ordinary... theory that labour is the cause of all values and labour-time is their measure. But the question of how the differential value of so-called skilled labour is to be conceived is left in complete confusion.... It is true that in our theory, too, only the labour-time expended can be the measure of the natural cost of production and therefore of the absolute value of economic things; but here the labour-time of each individual must be considered absolutely equal to start with, and it is only necessary to be on guard where the separate labour-time of the individual in more skilled production receives a contribution from the labour-time of other persons... for example, in the tool used. Therefore the position is not, as in Herr Marx's nebulous conception, that the labour-time of one person is in itself more valuable than that of another, because more average labour-time is condensed as it were within it, but that all labour-time is in principle and without exception perfectly equivalent, and there is therefore no need to take an average first; and in regard to the work done by a person, as also in regard to every finished product, we only have to be on guard about how much of the labour-time of other persons may be concealed in what appears to be only his own labour-time. Whether it is a hand tool for production, or the hand or even the head, which could not have acquired its special characteristics and capacity for work

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without the labour-time of others, is not of the slightest importance in the strict application of the theory. In his lucubrations on value, however, Herr Marx never rids himself of the ghost of skilled labour time lurking in the background. He was unable to effect a thoroughgoing change here because he was hampered by the traditional mode of thought of the educated classes, to whom it necessarily appears monstrous to recognize the labour-time of a porter and that of an architect as perfectly equivalent from the economic standpoint.”

The passage in Marx which calls forth this “mighty wrath” on Herr Dühring’s part is very brief. Marx is examining what it is that determines the value of *commodities* and gives the answer, the human labour embodied in them. This, he continues, “is the expenditure of simple labour-power which on an average exists, apart from any special development, in the physical organism of every ordinary individual.... More complex labour counts only as simple labour raised to a higher power, or rather as multiplied simple labour, so that a smaller quantity of more complex is equal to a greater quantity of simple labour. Experience shows that this reduction is constantly being made. A commodity may be the product of the most complex labour, but its value equates it to the product of simple labour and consequently only represents a definite quantity of simple labour. The different proportions in which different sorts of labour are reduced to simple labour as their unit of measurement are established by a social process that goes on behind the backs of the producers, and, consequently, appear to them to be fixed by custom.”*

First of all, Marx is here dealing only with the determination of the value of *commodities*, i.e., of objects which, within a society composed of private producers, are produced and exchanged against each other by these private producers for their private account. In this passage, therefore, there is no question whatever of “absolute value” – whatever regions it may haunt – but of the value which is current in a definite form of society. This value, in this definite historical setting, is shown as created and measured by the human labour embodied in the individual commodities, and this human labour is shown further as the expenditure of simple labour-power. But not all labour is a mere expenditure of simple human labour-power; very many sorts of labour involve the use of capabilities or knowledge acquired with the expenditure of greater or lesser effort,

* *Capital*, Vol. I, p. 44, translation drastically revised. – *Ed.*

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time and money. Do these kinds of compound labour produce, in the same interval of time, the same commodity values as simple labour, the expenditure of pure and simple labour-power? Obviously not. The product of one hour of compound labour is a commodity of a higher value – double or treble – in comparison with the product of one hour of simple labour. The value of the products of compound labour is expressed in definite quantities of simple labour through this comparison; but this reduction of compound labour is established by a social process which goes on behind the backs of the producers, by a process which can only be stated at this point in the development of the theory of value, but not as yet explained.

It is this simple fact, taking place daily before our eyes in present-day capitalist society, which is here stated by Marx. This fact is so indisputable that even Herr Dühring does not venture to dispute it either in his *Course* or in his history of economics; and the Marxian presentation is so simple and lucid that no one but Herr Dühring “is left in complete confusion” by it. Because of his complete confusion he mistakes the value of commodities, with the study of which Marx was alone occupied in the first instance, for “the natural cost of production”, which makes the confusion still worse confounded, and even for “absolute value”, which to our knowledge has nowhere had currency in political economy up to now. But whatever Herr Dühring may understand by the natural cost of production and whichever of his five kinds of value may have the honour to represent absolute value, this much at least is sure: Marx is discussing none of these things, but only the value of commodities, and in the whole section of *Capital* dealing with value there is not the slightest indication of whether or to what extent Marx considers this theory of the value of commodities also applicable to other forms of society.

“Therefore the position is not,” Herr Dühring proceeds, “as in Herr Marx’s nebulous conception, that the labour-time of one person is in itself more valuable than that of another, because more average labour-time is condensed as it were within it, but that all labour-time is in principle and without exception perfectly equivalent, and there is therefore no need to take an average first.”

It is lucky for Herr Dühring that fate did not make him a manufacturer, thus saving him from fixing the value of his commodities on the basis of this new rule and so running infallibly into the arms of bankruptcy. But say, are we still in the society of manufacturers here? No, far from it. With his natural cost of production and absolute value Herr Dühring has made us take a leap, a veritable *salto*

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mortale, out of the present evil world of exploiters into his own economic commune of the future, into the pure heavenly air of equality and justice, and so we must now take a glance, even if prematurely, at this new world.

It is true that according to Herr Dühring's theory only the labour-time expended can measure the value of economic things even in the economic commune; but here the labour-time of each individual must be considered absolutely equal to start with, all labour-time is in principle and without exception absolutely equivalent, without any need to take an average first. Now put this radical equalitarian socialism against Marx's nebulous conception that one person's labour-time is in itself more valuable than another's because more average labour-time is condensed within it, a conception which held Marx captive by reason of the traditional mode of thought of the educated classes, to whom it necessarily appears monstrous that the labour-time of a porter and that of an architect should be recognized as perfectly equivalent from the economic standpoint!

Unfortunately Marx put a short footnote to the passage in *Capital* cited above: "The reader must note that we are not speaking here of the *wages* or value that the labourer *gets* for a given labour-time, but of the *value of the commodity* in which that labour-time *is materialized*."* Marx, who seems here to have had a presentiment about his Dühring, therefore safeguards himself against an application of his above statement to the wages which are paid in existing society for compound labour. If Herr Dühring, not content with doing this all the same, presents these statements as the principles on which Marx would like to see the distribution of necessities regulated in a socialistically organized society, he is guilty of a shameless imposture, the like of which is only to be found in the gutter press.

But let us look a little more closely at the doctrine of equivalence. All labour-time, the porter's and the architect's, is perfectly equivalent. So labour-time, and therefore labour itself, has a value. But labour is the creator of all values. It alone gives the products found in nature value in the economic sense. Value itself is nothing other than the expression of the socially necessary human labour materialized in an object. Labour *can* therefore have no value. One might as well speak of the value of value, or try to determine the weight, not of a heavy body, but of heaviness itself, as speak of the

* *Ibid.*, p. 44, second footnote, Engels' italics. – *Ed.*

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value of labour and try to determine it. Herr Dühring dismisses people like Owen, Saint-Simon and Fourier by calling them social alchemists. By his logic-chopping over the value of labour-time, that is, of labour, he shows that he ranks far beneath the genuine alchemists. Now let the reader fathom Herr Dühring's brazenness in imputing to Marx the assertion that the labour-time of one person is in itself more valuable than that of another, that labour-time, and therefore labour, has a value – to Marx, who first demonstrated that labour *can* have no value, and why it cannot!

The realization that labour has no value and can have none is of great importance for socialism, which wants to emancipate human labour-power from its status as a *commodity*. With this realization all attempts – inherited by Herr Dühring from primitive working-class socialism – to regulate the future distribution of necessities as a kind of higher wage fall to the ground. From it there follows the further realization that in so far as it is governed by purely economic considerations, distribution will be regulated by the interests of production, and that production is most encouraged by a mode of distribution which allows *all* members of society to develop, maintain and exercise their capacities as all-sidedly as possible. It is true that it must seem monstrous to the mode of thought of the educated classes Herr Dühring has inherited that in time to come there will no longer be any professional porters or architects, and that the man who gives instructions as an architect for half an hour will also act as a porter for a period, until his activity as an architect is once again required. A fine sort of socialism that would be – perpetuating professional porters!

If the equivalence of labour-time means that each worker produces equal values in equal periods of time without there being any need to take an average first, then this is obviously wrong. If we take two workers, even in the same branch of industry, the value they produce in one hour of labour-time will always vary with the intensity of their labour and their skill; not even an economic commune, at any rate on our planet, can remedy this evil, which in any case is only an evil for people like Dühring. What then remains of the perfect equivalence of any and all labour? Nothing but the purely braggart phrase, which has no other economic foundation than Herr Dühring's incapacity to distinguish between the determination of value by labour and the determination of value by wages – nothing but the ukase, the basic law of the new economic commune, equal wages for equal labour-time! Indeed, the old French com-

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munist workers and Weitling had much better reasons for their equality of wages.

How then are we to solve the whole important question of the higher wages paid for compound labour? In a society of private producers, private individuals or their families defray the costs of teaching the trained worker; hence the higher price paid for trained labour-power accrues first of all to private individuals; the clever slave is sold for a higher price, and the clever wage-earner is paid higher wages. In a socialistically organized society, these costs are defrayed by society, and the fruits, the greater values produced by compound labour, therefore belong to it. The worker himself has no extra claim. Which incidentally also yields the moral that the popular demand of the workers for “the full proceeds of labour” often has its snags.⁶⁸

VII

CAPITAL AND SURPLUS-VALUE

“To begin with, Herr Marx does not hold the accepted economic view of capital, according to which it is a produced means of production, but tries to advance a more special, dialectical-historical idea toying with metamorphoses of concepts and history. According to him, capital is born of money; it forms a historical phase opening with the sixteenth century, that is, with the assumed beginnings of a world market in that period. It is obvious that the acuteness of economic analysis is lost in such a conceptual interpretation. In such barren conceptions, which are represented as half historical and half logical, but which in fact are only bastards of historical and logical fantasy, the faculty of discernment perishes together with all honesty in the use of concepts.”

—

and so he blusters along for a whole page....

Marx’s definition of the concept of capital can only cause confusion in rigorous economic theory... frivolities which are palmed off as profound logical truths... the fragility of the foundations” — and so forth.

So according to Marx, we are told, capital was born of money at the beginning of the sixteenth century. This is like saying that fully three thousand years ago metallic money was born of cattle, because once upon a time cattle, among other things, functioned as money. Only Herr Dühring is capable of such a crude and inept way

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of expressing himself. It is as the final form that money appears in Marx's analysis of the economic forms within which the process of the circulation of commodities develops. "This final product of the circulation of commodities is the *first form* in which capital *appears*. As a matter of history, capital, as opposed to landed property, invariably takes the form at first of money; it appears as moneyed wealth, as merchant's capital and usurer's capital.... We can see it daily under our very eyes. All new capital, to commence with, comes on the stage, that is, on the market, whether of commodities, labour, or money, even in our days, in the shape of money that by a definite process has to be transformed into capital."*

Here once again Marx is stating a fact. Unable to dispute it, Herr Dühring distorts it: Capital is born of money!

Marx then investigates the processes by which money is transformed into capital, and first finds that the form in which money circulates as capital is the inversion of the form in which it circulates as the universal equivalent of commodities. The simple owner of commodities sells in order to buy; he sells what he does not need, and buys what he does need with the money acquired. The incipient capitalist starts by buying what he does not need himself; he buys in order to sell, and to sell at a higher price, in order to get back the value of the money originally thrown into the purchase, augmented by an increment in money, and this increment Marx calls *surplus-value*.

Where does this surplus-value come from? It can come neither from the buyer buying the commodities under their value, nor from the seller selling them above their value. For in both cases the gains and the losses of each individual cancel each other out, as each individual is in turn buyer and seller. Nor can it arise from cheating, since cheating can doubtless enrich one person at the expense of another but cannot increase the total sum possessed by both and therefore cannot increase the sum of the values in circulation. "The capitalist class, as a whole, in any country, cannot over-reach themselves."†

Yet we find that in each country the capitalist class as a whole is constantly enriching itself before our eyes by selling dearer than it had bought, by appropriating to itself surplus-value. We are therefore just where we were at the start: where does this surplus-value

* *Capital*, Vol. I, p. 146, translation revised, Engels' italics. — *Ed.*

† *Ibid.*, p. 163. — *Ed.*

come from? This problem must be solved, and solved in a *purely economic* way, excluding all cheating and the intervention of any force – the problem being, how is it possible constantly to sell dearer than one has bought, yet on the assumption that equal values are constantly exchanged for equal values?

The solution of this problem was the most epoch-making contribution in Marx's works. It spread the clear light of day over economic domains in which socialists no less than bourgeois economists previously groped in utter darkness. Scientific socialism dates from it, centres around it.

This solution is as follows. The increase in value of the money that is to be converted into capital cannot take place in this *money* or originate in the *purchase*, as here this money does no more than realize the price of the commodity and this price is not different from its value, since we assumed that equal values are exchanged. But for the same reason, the increase in value cannot originate in the *sale* of the commodity. The change must, therefore, take place in the *commodity* which is bought, not however in its value, as it is bought and sold at its value, but in its *use-value* as such, that is, the change of value must originate in the consumption of the commodity. "In order to be able to extract value from the consumption of a commodity, our friend, Moneybags, must be so lucky as to find... in the market a commodity whose use-value possesses the peculiar property of being a source of value, whose actual consumption, therefore, is itself an embodiment of labour, and, consequently, a *creation of value*. The possessor of money does find on the market such a specific commodity in capacity for labour or *labour-power*.* Though, as we saw, labour as such can have no value, this is by no means the case with *labour-power*. This acquires a value from the moment that it becomes a *commodity*, which it actually is today, and this value is determined "as in the case of every other commodity, by the labour-time necessary for the production, and consequently also the reproduction, of this specific article";† that is to say, by the labour-time necessary for the production of the means of subsistence which the worker requires for maintaining himself in a fit state to work and for perpetuating his race. Let us assume that these means of subsistence represent six hours of labour-time a day. Our incipient capitalist, who buys labour-power to carry on his business,

* *Ibid.*, p. 167, Engels' italics. – *Ed.*

† *Ibid.*, pp. 170-71. – *Ed.*

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i.e., hires a worker, consequently pays this worker the full value of his day's labour-power if he pays him a sum of money which likewise represents six hours of labour. Now as soon as the worker has worked six hours in the employment of the incipient capitalist, he has fully reimbursed the latter for his outlay, for the value of the day's labour-power paid for. But with this the money would not have been converted into capital, it would not have produced any surplus-value. For this reason the buyer of labour-power has quite a different view of the nature of the transaction he has carried out. The fact that only six hours' labour is necessary to keep the worker alive for twenty-four hours in no way prevents him from working twelve hours out of the twenty-four. The value of the labour-power and the value which that labour-power creates in the labour process are two different magnitudes. Moneybags has paid the value of a day's labour-power; therefore its use for the day, the whole day's labour, belongs to him. If the value which its use during one day *creates* is double its own value for the day, this is a stroke of particular good fortune for the buyer, but, according to the laws of the exchange of commodities, no injustice at all to the seller. On our assumption, therefore, the worker each day *costs* Moneybags the value of the product of six hours' labour, but he *hands over* to him each day the value of the product of twelve hours' labour. Difference in Moneybags' favour – six hours of unpaid surplus-labour, a surplus-product which is not paid for and in which six hours' labour is embodied. The trick has been performed. Surplus-value has been produced, money has been converted into capital.

In thus showing how surplus-value arises and how alone surplus-value can arise under the domination of the laws regulating the exchange of commodities, Marx laid bare the mechanism of the existing capitalist mode of production and of the mode of appropriation based on it, and revealed the core around which the whole existing social order has crystallized.

However, this creation of capital has one essential prerequisite: "For the conversion of money into capital the owner of money must meet in the market with the *free labourer*, free in the double sense, that as a free man he disposes of his labour-power as his own commodity, and that on the other hand he has no other commodity for sale, has no ties and is free of everything necessary for the realization of his labour-power."* But this relation between the owners of

* *Ibid.*, p. 169, translation revised, Engels' italics. – Ed.

money or of commodities, on the one hand, and those who possess nothing beyond their own labour-power, on the other, is not a relation arising from natural history, nor is it one common to all historical periods: "It is itself clearly the result of a past historical development, the product... of the extinction of a whole series of older forms of social production."* In fact, we first encounter this free worker on a mass scale in history at the end of the fifteenth and the beginning of the sixteenth century, as a result of the dissolution of the feudal mode of production. With this, however, and with the creation of world trade and the world market dating from the same epoch, the basis was laid on which the mass of the existing movable wealth was of necessity increasingly converted into capital, and the capitalist mode of production, which is directed towards the production of surplus-value, of necessity increasingly became the exclusively prevailing one.

Up to this point, we have been following the "barren conceptions" of Marx, these "bastards of historical and logical fantasy" in which "the faculty of discernment perishes together with all honesty in the use of concepts". Let us contrast these "frivolities" with the "profound logical truths" and the "definitive and most rigorously scientific treatment in the sense of the exact disciplines", such as Herr Dühring offers us.

So Marx "does not hold the accepted economic view of capital, according to which it is a produced means of production"; on the contrary, he says that a sum of values is converted into capital only when it *creates value* by forming surplus-value. And what does Herr Dühring say?

"Capital is a basis of means of economic power for the continuation of production and for *the formation of shares in the fruits of the general labour-power.*"

However oracularly and awkwardly this too is expressed, this much at least is certain: the basis of means of economic power may continue production to eternity, but in Herr Dühring's own words it will not become capital so long as it does not form "shares in the fruits of the general labour-power", that is to say, form surplus-value or at least surplus-product. Therefore not only does Herr Dühring himself commit the sin of not holding the accepted economic view of capital, a sin with which he charges Marx, but he

* *Ibid.* – *Ed.*

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also commits a clumsy plagiarism of Marx, “badly concealed” by high-sounding phrases.

This is further developed on page 262:

“Capital in the social sense” (and Herr Dühring still has to discover any capital in a sense which is not social) “is in fact specifically different from the mere means of production; for while the latter have only a technical character and are necessary under all conditions, the former is distinguished by its social power of appropriation and the formation of shares. It is true that social capital is to a great extent nothing but the technical means of production *in their social function*; but it is precisely this function which... must disappear.”

When we reflect that it was precisely Marx who first stressed the “social function” by virtue of which alone a sum of values becomes capital, it will certainly “be immediately clear to every attentive investigator of the subject that Marx’s definition of the concept of capital can only cause confusion” – not, however, as Herr Dühring thinks, in rigorous economic theory but, as is evident, solely and simply in the head of this very Herr Dühring, who in the *Critical History* has already forgotten how much nourishment he drew from the said concept of capital in his *Course*.

However, Herr Dühring is not content with borrowing from Marx the latter’s definition of capital, though in a “purified” form. He is also obliged to follow Marx in the “toying with metamorphoses of concepts and history”, and this in spite of his own better knowledge that nothing could come of it but “barren conceptions”, “frivolities”, “fragility of the foundations”, and so forth. Where does this “social function” of capital come from which enables it to appropriate the fruits of others’ labour, and which alone distinguishes it from mere means of production? Herr Dühring says that

it does not depend “on the nature of the means of production and their technical indispensability”.

It therefore arose historically, and on page 262 Herr Dühring only tells us again what we have heard ten times before when he explains its origin by means of the old familiar adventures of the two men, one of whom at the dawn of history converted his means of production into capital by the use of violence against the other. But not content with ascribing a historical beginning to the social function through which alone a sum of values becomes capital, Herr Dühring prophesies that it will also have a historical end. It is “precisely this that must disappear”. In ordinary parlance it is customary

to call a phenomenon which arose historically and again disappears historically "a historical phase". Capital, therefore, is a historical phase not only in Marx but also in Herr Dühring, and we are consequently forced to the conclusion that we are among Jesuits here. When two people do the same thing, then it is not the same thing. When Marx says that capital is a historical phase, that is a barren conception, a bastard of historical and logical fantasy, in which the faculty of discernment perishes, together with all honesty in the use of concepts. When Herr Dühring likewise presents capital as a historical phase, that is proof of the acuteness of his economic analysis and of his definitive and most vigorously scientific treatment in the sense of the exact disciplines.

What is it then that distinguishes the Dühringian conception of capital from the Marxian?

"Capital," says Marx, "has not invented surplus-labour. Wherever a part of society possesses the monopoly of the means of production, the labourer, free or not free, must add to the working-time necessary for his own maintenance an extra working-time in order to produce the means of subsistence for the owners of the means of production."* Surplus-labour, labour over and above the time required for the worker's own maintenance, and appropriation by others of the product of this surplus-labour, the exploitation of labour, is therefore common to all forms of society up to now, in so far as they have moved in class antagonisms. But it is only when the product of this surplus-labour assumes the form of surplus-value, when the owner of the means of production finds himself facing the free worker – free from social fetters and free from possessions of his own – as an object of exploitation and exploits him for the purpose of the production of *commodities*, it is only then, according to Marx, that the means of production take on the specific character of capital. This first took place on a large scale at the end of the fifteenth and the beginning of the sixteenth century.

On the contrary, Herr Dühring declares that *every* sum of means of production which "forms shares in the fruits of the general labour-power", that is, yields surplus-labour in any form, is capital. In other words, Herr Dühring annexes the surplus-labour discovered by Marx in order to kill for him the momentarily inconvenient surplus-value, likewise discovered by Marx. According to Herr Dühring, therefore, not only the movable and immovable wealth of

* *Ibid.*, p. 235. – *Ed.*

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the Corinthian and Athenian citizens, who ran their economy with slaves, but also that of the large Roman landowners of the time of the empire and equally the wealth of the feudal barons of the Middle Ages, in so far as it in any way served production – all this without distinction is capital.

So Herr Dühring himself does not hold “the accepted view of capital, according to which it is a produced means of production”, but rather a diametrically opposite one, a view which includes in capital even unproduced means of production, namely, the earth and its natural resources. But the idea that capital is simply “produced means of production” is once again the accepted view only in vulgar economics. Outside of this vulgar economics so dear to Herr Dühring, the “produced means of production” or any sum of values whatever becomes capital only by yielding profit or interest, i.e., by appropriating the surplus-product of unpaid labour in the form of surplus-value, and that, moreover, in these two definite subforms of surplus-value. It is of no importance whatever that the whole of bourgeois economics is still chained to the idea that the characteristic of yielding profit or interest is inherent in every sum of values which is employed under normal conditions in production or exchange. In classical political economy, capital and profit, or capital and interest, are just as inseparable, stand in the same reciprocal relationship, as cause and effect, father and son, yesterday and to-day. But the word “capital” in its modern economic meaning is first met with at the time when the thing itself makes its appearance, when movable wealth increasingly acquires the function of capital by exploiting the surplus-labour of free workers for the production of commodities; and in fact it was introduced by the first nation of capitalists in history, the Italians of the fifteenth and sixteenth centuries. If Marx was the first to make a fundamental analysis of the mode of appropriation characteristic of modern capital; if he brought the concept of capital into harmony with the historical facts from which, in the last analysis, it had been abstracted, and to which it owed its existence; if Marx thus cleared this economic concept of those obscure and fluctuating ideas which still clung to it even in classical bourgeois political economy and among socialists up to now – then it was Marx who applied that “definitive and most rigorously scientific treatment” which Herr Dühring is so constantly talking about and which we so painfully miss in his works.

In actual fact, Herr Dühring’s treatment is quite different. He is not content with first inveighing against the presentation of capital as a historical phase by calling it a “bastard of historical and logical

fantasy” and then himself presenting it as a historical phase. He also roundly declares that *all* means of economic power, *all* means of production which appropriate “shares in the fruits of the general labour-power” – and therefore also landed property in all class societies – are capital; which, however, does not in the least prevent him in his further progress from separating landed property and ground-rent from capital and profit quite in the traditional manner, and designating as capital only those means of production which yield profit or interest, as he does at considerable length on page 156 ff. of his *Course*. Herr Dühring might just as well first include horses, oxen, asses and dogs under the term “locomotive” on the ground that these, too, can be used as means of transport, and reproach modern engineers with limiting the term locomotive to the modern steam-engine and thus setting it up as a historical phase, using barren conceptions, bastards of historical and logical fantasy and so forth; and then finally declare that horses, asses, oxen and dogs are nevertheless excluded from the designation locomotive, and that it is applicable only to the steam-engine.

So once more we are compelled to say that it is precisely the Dühringian conception of capital in which all acuteness of economic analysis is lost and the faculty of discernment perishes, together with all honesty in the use of concepts; and that the barren conceptions, the confusion, the frivolities palmed off as profound logical truths and the fragility of the foundations are to be found aplenty in Herr Dühring’s own work.

But all that is of no consequence. For Herr Dühring’s is the glory of having discovered the axis on which all economics, all politics and jurisprudence, in a word, all past history, has revolved. Here it is:

“Force and labour are the two principal factors which come into play in the formation of social ties.”

This one sentence contains the complete constitution of the economic world up to the present day. It is extremely short, and runs:

Article One: Labour produces.

Article Two: Force distributes.

“In plain human language”, this sums up the whole of Herr Dühring’s economic wisdom.

VIII
CAPITAL AND SURPLUS-VALUE
(Concluded)

“In Herr Marx’s view, wages represent only the payment of that labour-time during which the worker is actually working to make his own existence possible. But only a small number of hours suffices for this; all the rest of the working-day, which is often prolonged, yields a surplus in which there is contained what our author calls ‘surplus-value’, or, expressed in everyday language, the earnings of capital. If we disregard the labour-time which is already contained in the instruments of labour and in the pertinent raw material at each stage of production, this surplus part of the working-day is the capitalist entrepreneur’s share. The prolongation of the working-day is consequently a pure gain by extortion for the benefit of the capitalist.”

According to Herr Dühring, therefore, Marx’s surplus-value would be nothing more than what is known in everyday language, as the earnings of capital, or profit. Let us see and hear Marx himself. On page 195 of *Capital*, surplus-value is explained in the following words placed in brackets after it: “interest, profit, rent”.^{*} On page 210, Marx gives an example in which a total surplus-value of £3.11.0. appears in the different forms in which it is distributed: tithes, rates and taxes, 21s.; rent 28s.; farmer’s profit and interest, 22s.; together making a total surplus-value of £3.11.0.[†] On page 542,[‡] Marx points out as one of Ricardo’s main shortcomings that “he has not... represented surplus-value in its pure form, i.e., independently of its particular forms, such as profit, ground-rent, etc.”, and that he therefore lumps together the laws of the rate of surplus-value and the laws of the rate of profit; against this Marx announces: “I shall show in Book III that the same rate of surplus-value may be expressed in the most varied rates of profit, and that various rates of surplus-value may, under given conditions, express themselves in the same rate of profit.” On page 587[§] we find: “The capitalist who

^{*} *Capital*, English ed., Vol. I, p. 206, first footnote. – *Ed.*

[†] *Ibid.*, p. 220. – *Ed.*

[‡] *Ibid.*, p. 524; see footnote, p. 129 above., – *Ed.*

[§] *Ibid.*, p. 564, translation revised. – *Ed.*

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produces surplus-value – i.e., who extracts unpaid labour directly from the labourers, and fixes it in commodities, is, indeed, the first appropriator, but by no means the ultimate owner, of this surplus-value. He has subsequently to share it with capitalists, with land-owners, etc., who fulfil other functions in the complex of social production. Surplus-value, therefore, splits up into various parts. Its fragments fall to various categories of persons, and take various forms, independent the one of the other, such as profit, interest, merchants' profit, ground-rent, etc. It is only in Book III that we can take in hand these changed forms of surplus-value." And there are many other similar passages.

It is impossible to express oneself more clearly. On each occasion Marx calls attention to the fact that his surplus-value must not be confounded with profit or the earnings of capital; that this latter is rather a subform and frequently even only a fraction of surplus-value. If nevertheless Herr Dühring asserts that Marxian surplus-value, "expressed in everyday language, is the earnings of capital", and if it is well established that the whole of Marx's book turns on surplus-value, there are only two possibilities. Either Herr Dühring does not know any better, in which case it is an unparalleled act of impudence to decry a book of whose main content he is ignorant. Or he knows better, in which case he has perpetrated a deliberate falsification.

To proceed:

"The venomous hatred which Herr Marx bestows on this conception of the business of extortion is only too understandable. But even mightier wrath and even fuller recognition of the exploitative character of the economic form based on wage-labour is possible without accepting the theoretical position expressed in Marx's doctrine of surplus-value."

The well-meant but erroneous theoretical position taken up by Marx provokes him to a venomous hatred of the business of extortion; in consequence of his false "theoretical position" the emotion, in itself ethical, receives an unethical expression, manifesting itself in ignoble hatred and low venomousness, while Herr Dühring's definitive and most rigorously scientific treatment expresses itself in ethical emotion of a correspondingly noble nature, in wrath which besides being ethically superior even in form is quantitatively superior in venomous hatred, is altogether a mightier wrath. While Herr Dühring is gleefully admiring himself in this way, let us see where this mightier wrath stems from.

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We read on:

“Now the question arises how the competing entrepreneurs are able constantly to realize the full product of labour, including the surplus-product, at a price so far above the natural cost of production as is indicated by the ratio, already mentioned, of the surplus labour-hours. No answer to this is to be found in Marx’s doctrine, and for the simple reason that there could be no place in it for even raising the question. The luxury character of production based on hired labour is not seriously dealt with at all, and the social constitution with its bloodsucking opportunities is in no way recognized as the ultimate basis of white slavery. On the contrary, political and social matters are always to be explained by the economic.”

Now we have seen from the above passages that Marx in no way asserts that the industrial capitalist, who first appropriates the surplus-product, sells it on the average at its full value in all circumstances, as is here assumed by Herr Dühring. Marx says explicitly that merchants’ profit also forms a part of surplus-value, and on the assumptions made this is possible only when the manufacturer sells his product to the merchant *below* its value, and thus relinquishes a part of the booty to him. Clearly there could be no place in Marx for even raising the question in the way it is put here. Put in a rational way, the question is, how is surplus-value transformed into its sub-forms, profit, interest, merchants’ profit, ground-rent, and so forth? And in fact Marx promises to solve this problem in the third book. But if Herr Dühring cannot wait until the second volume of *Capital* appears, he should in the meantime look the first volume over a little more closely.⁶⁹ In addition to the passages already quoted, he would see, for example on page 323,* that according to Marx the immanent laws of capitalist production assert themselves in the external movements of masses of capital as coercive laws of competition, and in this form are brought home to the consciousness of the individual capitalist as the driving motives of his operations; that therefore a scientific analysis of competition is only possible when the inner nature of capital is understood, just as the apparent motions of the heavenly bodies are not intelligible to any but him who is acquainted with their real motions, which are not directly perceptible by the senses; and then Marx gives an example to show how in a definite case, a definite law, the law of value, manifests itself and

* *Ibid.*, p. 316. – Ed.

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exercises its motive force in competition. Herr Dühring might see from this alone that competition plays a leading part in the distribution of surplus-value, and with some reflection the indications given in the first volume are in fact enough to make clear the transformation of surplus-value into its subforms, at least in its main features.

But competition is precisely the absolute obstacle to Herr Dühring's understanding of the process. He cannot comprehend how the competing entrepreneurs are able constantly to realize the full product of labour, including the surplus-product, at prices so far above the natural costs of production. Here again we find his usual "rigour" of expression, which in fact is simply slovenliness. *In Marx*, the surplus-product as such has *absolutely no cost of production* ; it is the part of the product which *costs* the capitalist *nothing*. If therefore the competing entrepreneurs desired to realize the surplus-product at its natural costs of production, they would have *to give it away*. But don't let us waste time on such "micrological details". Don't the competing entrepreneurs realize the product of labour above its natural costs of production every day? According to Herr Dühring, the natural costs of production consist

"in the expenditure of labour or energy, and this in turn, can in the last analysis be measured by the expenditure of food";

that is, in present-day society, these costs consist in the outlays actually expended on raw materials, instruments of labour, and wages, as distinguished from the "tax", the profit, the surcharge levied sword in hand. Now everyone knows that in the society in which we live the competing entrepreneurs do *not* realize their commodities at the natural costs of production, but that they add on – and as a rule also receive – the so-called surcharge, the profit. The question Herr Dühring thinks he has only to raise to blow down the whole Marxian structure, as Joshua blew down the walls of Jericho of yore, this same question also exists for Herr Dühring's economic theory. Let us see how he answers it.

"Capital ownership," he says, "has no practical meaning and cannot be realized, unless indirect force against human material is simultaneously included in it. The product of this force is the earnings of capital, and the magnitude of the latter will therefore depend on the range and intensity of this exercise of domination.... Earnings of capital are a political and social institution which operates more powerfully than competition. In this connection the capitalists act as a social estate, and

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each one maintains his position. A certain measure of earnings of capital is a necessity in this kind of economy, once it is dominant.”

Unfortunately we still don't know how the competing entrepreneurs can constantly realize the product of labour above the natural costs of production. It cannot be that Herr Dühring thinks so little of his public as to fob it off with the phrase that earnings of capital are above competition, just as the King of Prussia used to be above the law. We know the manoeuvres by which the King of Prussia attained his position above the law; it is precisely the manoeuvres by which the earnings of capital succeed in being more powerful than competition that Herr Dühring should explain to us, but it is precisely that which he obstinately refuses to do. Moreover, it is of no avail if in this connection the entrepreneurs, as he tells us, act as an estate, and each one of them maintains his position. We surely cannot be expected to take his word for it that a number of people need only act as an estate for each one of them to maintain his position. Everyone knows that the guildsmen of the Middle Ages and the French nobles in 1789 acted very definitely as estates and perished nevertheless. The Prussian army at Jena also acted as an estate, but instead of maintaining its position it had to take to its heels and afterwards even to capitulate in sections. Just as little can we be satisfied with the assurance that a certain measure of earnings of capital is a necessity in this kind of economy, once it is dominant; for the point to be proved is precisely *why* this is so. We do not get a step nearer the goal when Herr Dühring informs us:

“The domination of capital arose in conjunction with the domination of land. Part of the agricultural serfs were transformed into craftsmen in the towns, and ultimately into factory material. After ground-rent, earnings of capital developed as a second form of rent of possession.”

Even if we ignore the historical perversity of this assertion, it still remains a mere assertion and is restricted to repeatedly affirming precisely what should be explained and proved. We can therefore come to no other conclusion than that Herr Dühring is incapable of answering his own question: how can the competing entrepreneurs constantly realize the product of labour above the natural costs of production? That is to say, he is incapable of explaining the genesis of profit. He can only bluntly decree: earnings of capital shall be the product of *force*, which, true enough, is wholly in accordance with Article Two of the Dühringian social constitution:

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force distributes. This is certainly expressed very nicely; but now “the question arises”, force distributes – what? Surely there must be something to distribute, or with the best will in the world even the most omnipotent force can distribute nothing. The earnings pocketed by the competing entrepreneurs are something very tangible and solid. Force can *take* them, but cannot *produce* them. If Herr Dühring obstinately refuses to explain to us *how* force takes the earnings of entrepreneurs, he is as silent as the grave in answer to the question of *where* force takes them from. Where there is nothing, the king, like any other force, loses his rights. Out of nothing comes, and certainly not profit. If ownership of capital has no practical meaning and cannot be realized unless indirect force against human material is simultaneously included in it, then once again the question arises, first, how capital-wealth got this force, a question which is in no way settled by the couple of historical assertions cited above; second, how this force is transformed into the realization of capital, into profit; and third, where it takes this profit from.

However we approach Dühringian economics, we do not get one step further. For every obnoxious phenomenon, profit, ground-rent, starvation wages, the enslavement of the workers, it has only one word of explanation, force, and ever again force, and Herr Dühring’s “mightier wrath” finally resolves itself into wrath against force. We have seen, first, that this appeal to force is a lame subterfuge, a relegation of the problem from the economic to the political sphere, which is unable to explain a single economic fact; and second, that it leaves unexplained the origin of force itself, and very prudently so, for otherwise it would have to come to the conclusion that all social power and all political force have their source in economic preconditions, in the mode of production and exchange historically given for each society.

But let us see whether we cannot wrest some further disclosures about profit from the remorseless builder of the “deeper foundations” of economics. Perhaps we shall succeed by taking up his treatment of wages. On page 158 we find:

“Wages are the remuneration for the subsistence of labour-power, and first come into consideration only as a basis for ground-rent and earnings of capital. In order to become quite clear about the relationships obtaining in this field, one must conceive first ground-rent and later also earnings of capital, historically, without wages, that is to say, on the basis of slavery or serfdom.... Whether it is a slave or a serf, or a wage-worker who has to be maintained only gives rise to a difference

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in the mode of charging the costs of production. *In every case the net product obtained by the utilization of labour-power constitutes the master's income....* It can therefore be seen that... in particular the chief antithesis, by virtue of which there exists some kind of *rent of possession* on the one hand and propertyless hired labour on the other, is not to be found exclusively in one of its members, but always in both at the same time."

But as we learn on page 188, rent of possession is a phrase which covers both ground-rent and earnings of capital. Further, we find on page 174:

"The characteristic feature of earnings of capital is *appropriation of the most important part of the product of labour-power*. They cannot be conceived except as the correlative of some form of directly or indirectly subjected labour."

And on page 183:

Wages "are in all circumstances nothing more than the remuneration by means of which the worker's subsistence and possibility of propagation must generally be assured".

Finally, on page 195:

"What goes to rent of possession must be lost to wages, and vice versa, what reaches labour out of the general productive capacity (!) must be taken from the revenues of possession."

Herr Dühring leads us from one surprise to another. In his theory of value and the following chapters up to and including the theory of competition, that is, from pages 1 to 155, the prices of commodities or values were divided first, into natural costs of production or production value, i.e., the out lays on raw materials, instruments of labour and wages; and second, into the surcharge or distribution value, the tribute levied sword in hand for the benefit of the monopolist class – a surcharge which, as we have seen, could not in reality make any change in the distribution of wealth, for what it took with one hand it would have to give back with the other, and which, besides, in so far as Herr Dühring enlightens us as to its origin and content, came into existence out of nothing and so consisted of nothing. In the two succeeding chapters, which deal with the kinds of revenue, that is, from pages 156 to 217, there is no further mention of the surcharge. Instead, the value of every product of labour, that is, of every commodity, is now divided into the two

following portions: first, the costs of production, in which the wages paid are included; and second the “*net product* obtained by the utilization of labour-power”, which constitutes the master’s income. This net product has a very well-known physiognomy, which no tattooing or feat of whitewashing can conceal. “In order to become quite clear about the relationships obtaining in this field,” let the reader imagine the passages just cited from Herr Dühring printed opposite the passages previously cited from Marx on surplus-labour, surplus-product and surplus-value, and he will find that in his own style Herr Dühring is here *directly copying* from *Capital*.

Surplus-labour in whatever form, whether it be slavery, serfdom or wage-labour, is recognized by Herr Dühring as the source of the revenues of all ruling classes up to now: this is taken from the much-quoted passage in *Capital*, page 227: * Capital has not invented surplus-labour, and so on.

And what is the “net product” constituting “the master’s income” but the surplus of the product of labour over and above the wages, which, despite their quite superfluous disguise as a remuneration, must generally assure the worker’s subsistence and possibility of propagation even with Herr Dühring? How can the “appropriation of the most important part of the product of labour-power” be carried out unless, as Marx shows, the capitalist extorts from the worker more labour than is necessary for the reproduction of the means of subsistence the latter consumes, that is, unless the capitalist makes the worker work a longer time than is necessary for the replacement of the value of the wages paid the worker? Thus the prolongation of the working-day beyond the time necessary for the reproduction of the worker’s means of subsistence, Marx’s surplus-labour – this, and nothing but this, is concealed behind Herr Dühring’s “utilization of labour-power”; and his “net product” falling to the master – how can it manifest itself otherwise than in the Marxian surplus product and surplus-value? And what, apart from its inexact formulation, is there to distinguish the Dühringian rent of possession from the Marxian surplus-value? For the rest, Herr Dühring has taken the name “rent of possession” (“*Besitzrente*”) from Rodbertus, who included both ground-rent and the rent of capital, or earnings of capital, under the one term *rent*, so that Herr

* *Ibid.*, p. 235. – *Ed.*

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Dürring had only to add “possession” to it.* So that no doubt may be left about his plagiarism, Herr Dürring sums up in his own way the laws of the changes of magnitude in the price of labour-power and in surplus-value which are developed by Marx in Chapter XV (*Capital*, page 539 ff.)† and does so in such a manner that what falls to the rent of possession must be lost to wages, and vice versa; he thus reduces the particular Marxian laws, which are so rich in content, to a tautology without content, for it is self-evident that one part of a given magnitude falling into two parts cannot increase unless the other decreases. So Herr Dürring has succeeded in appropriating Marx’s ideas in such a way that the “definitive and most rigorously scientific treatment in the sense of the exact disciplines”, which is unquestionably present in Marx’s exposition, is totally lost.

Therefore, we cannot avoid the conclusion that the astonishing uproar Herr Dürring raises in the *Critical History* over *Capital*, and in particular the dust he kicks up over the famous question which arises with surplus-value (and which he had better have left unasked, since he cannot answer it himself) – that all this is only a military ruse, a sly manoeuvre to cover up the gross plagiarism of Marx perpetrated in the *Course*. In fact Herr Dürring had every reason for warning his readers not to occupy themselves with “the tangled skein which Herr Marx calls *Capital*“, with the bastards of historical and logical fantasy, the confused and nebulous Hegelian notions and jugglery, etc. This faithful Eckart had himself stealthily brought the Venus against whom he warns the German youth from the Marxian preserves to safety for his own use.⁷⁰ We congratulate him on this net product obtained by the utilization of Marx’s labour-power, and on the peculiar light thrown by his annexation of Marxian surplus-value under the name of rent of possession on the motives for his false and obstinate – because repeated in two editions – assertion that by the term surplus-value Marx meant only profit or earnings of capital.

So we have to portray Herr Dürring’s achievements in his own words somewhat as follows:

* And not even this. Rodbertus says (*Social Letters*, Letter 2, page 59): “Rent, according to this” (his) “theory, is all income obtained without personal labour, solely *on the ground of possession*.” [*Note and italics by Engels*.]

† *Capital*, Vol. I, p. 519 ff. – Ed.

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“In Herr” Dühring’s “view wages represent only the payment of that labour-time during which the worker is actually working to make his own existence possible. But for this only a few hours are required; all the rest of the working-day, which is often prolonged, yields a surplus in which what our author calls” rent of possession... “is contained. If we disregard the labour-time which at each stage of production is already contained in the instruments of labour and in the pertinent raw material, this surplus part of the working-day is the capitalist entrepreneur’s share. The prolongation of the working-day is consequently sheer extortionate profit for the benefit of the capitalist. The venomous hatred Herr” Dühring “bestows on this conception of the business of exploitation is only too understandable....”

But what is less understandable is how he will now return to his “mightier wrath”.

IX

NATURAL LAWS OF ECONOMICS. GROUND-RENT

With the best will in the world, we have so far been unable to discover how Herr Dühring can

“come forward with the claim to a new *system* which is not merely adequate for the epoch but *authoritative for the epoch*”

in the domain of economics.

But what we have not been able to discern in his theory of force, of value and of capital, may perhaps become as clear as daylight to us when we consider the “natural laws of economics” advanced by Herr Dühring. For, as he puts it with his usual originality and trenchancy,

“the triumph of the higher scientific method consists in passing beyond the mere description and classification of apparently static material and attaining living insights which illuminate production. Knowledge of laws is therefore the most perfect knowledge, for it shows us how one process is conditioned by another.”

The very first natural law of all economics has been specially discovered by Herr Dühring.

Adam Smith, “curiously enough, not only did not bring out the leading part played by the most important factor in all economic development, but also completely omitted its distinctive formulation, and

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thus unintentionally reduced to a subordinate role the power which placed its stamp on the development of modern Europe". This "fundamental law to which the leading role must be assigned is that of the technical equipment, one might even say armament, of man's natural economic energy".

This "fundamental law" discovered by Herr Dühring reads as follows:

Law No. 1. "The productivity of economic instruments, natural resources and human energy is increased by *inventions* and *discoveries*. "

We are amazed. Herr Dühring treats us as Molière's newly created nobleman is treated by the wag who announces the news to him that all through his life he has been speaking prose without knowing it. We knew long ago that in many cases the productive power of labour is increased by inventions and discoveries (but in very many cases it is not, as is proved by the mass of waste-paper in the archives of every patent office in the world); but we owe to Herr Dühring the enlightening information that this hoary banality is the fundamental law of all economics. If "the triumph of the higher scientific method" in economics, as in philosophy, consists only in giving a high-sounding name to the first commonplace that comes to one's mind and trumpeting it forth as a natural or even a fundamental law, then it becomes possible for anybody, even for the editors of the Berlin *Volkszeitung*, to "lay deeper foundations" and to revolutionize science. We should then "in all rigour" be forced to apply to Herr Dühring himself Herr Dühring's judgement on Plato:

"If however that is supposed to be economic wisdom, then the author of 'The Critical Foundations'⁷¹ shares it with every person who ever had occasion to conceive an idea" – or even only to babble – "about anything that was obvious on the face of it."

If, for example, we say animals eat, in our innocence we are blithely saying something of great import; for we only have to say that eating is the fundamental law of all animal life, and we have revolutionized the whole of zoology.

Law No. 2. Division of Labour: "The separation of trades and the dissection of activities raises the productivity of labour."

In so far as this is true, it has likewise been a commonplace since Adam Smith. How far it is true will be shown in Part III.

Law No. 3. "*Distance and transport* are the chief causes which hinder or facilitate the co-operation of the productive forces."

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Law No. 4. "The industrial state has an incomparably greater population capacity than the agricultural state."

Law No. 5. "In economics nothing takes place without a material interest."

These are the "natural laws" on which Herr Dühring founds his new economics. He remains faithful to his method which we have already described in philosophy. In economics too a few self-evident statements of the most distressing banality – quite often very ineptly expressed to boot – form the axioms which need no proof, the fundamental principles, the natural laws. Under the pretext of developing the content

of these laws, which have no content, he seizes the opportunity to pour out a wordy stream of economic twaddle on the various themes whose *titles* occur in these so-called laws – inventions, division of labour, means of transport, population, interests, competition, and so forth – a verbal outpouring whose flat commonplaces are seasoned only with oracular grandiloquence, and here and there with inept formulations or pretentious hair-splitting over all kinds of casuistical subtleties. Then finally we reach ground-rent, earnings of capital and wages, and as we have previously dealt only with the two latter forms of appropriation, in conclusion we shall now make a brief examination of the Dühringian conception of ground-rent.

We shall not consider those points which Herr Dühring has merely copied from his predecessor Carey; we are not concerned with Carey, nor with defending Ricardo's views on ground-rent against Carey's distortions and stupidities. We are only concerned with Herr Dühring, who defines ground rent as "that income which the proprietor *as such* draws from the land".

The economic concept of ground-rent Herr Dühring is to explain is straightway transferred by him into the juridical sphere, so that we are no wiser than before. Whether he likes it or not, our builder of deeper foundations must therefore condescend to give some further explanation. He compares the lease of a farm to a tenant with the loan of capital to an entrepreneur, but soon finds that this comparison like so many others is lame.

For, he says, "if one wanted to press the analogy further, the earnings left to the tenant after payment of ground-rent must correspond to the balance of earnings of capital left with the entrepreneur who puts the capital to use after he has paid interest. *But it is not customary* to regard tenants' earnings as the main income and ground-rent as a balance.... A proof of this difference of conception is the *fact* that in the

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theory of ground-rent the case in which the land is worked by the owner is not separately treated, and no special emphasis is laid on the difference between the amount of rent in the case of a lease and where the owner produces the rent himself. *At any rate no one has found it necessary* to conceive the rent resulting from owner-cultivated land as divided in such a way that one portion represents as it were the interest on the landed property and the other the surplus earnings of enterprise. Apart from the tenant's own capital which he brings into the business, it would *seem* that his specific *earnings are mostly regarded* as a kind of wages. It is however *hazardous* to assert anything on this subject, as the question has never been raised with this precision. Wherever we are dealing with fairly large farms, it can easily be seen that it will not do to treat what are specifically the farmer's earnings as wages. For these earnings are themselves based on the contradiction with the rural labour-power through whose exploitation that form of income is alone made possible. It is clearly *a part of the rent* which remains in the hands of the tenant and by which the *full rent*, that the owner operating himself would obtain, is reduced."

The theory of ground-rent is a part of political economy which is specifically English, and necessarily so, because it was only in England that there existed a mode of production under which rent had in fact been separated from profit and interest. In England, as is well known, large landed estates and large-scale agriculture predominate. The landlords lease their lands in large, often very large, farms, to tenant-farmers who possess sufficient capital to operate them and who, unlike our peasants, do not work themselves but employ the labour of farm servants and day-labourers on the lines of full-fledged capitalist entrepreneurs. Here, therefore, we have the three classes of bourgeois society and the form of income peculiar to each: the landlord, drawing ground-rent; the capitalist, drawing profit; and the labourer, drawing wages. It has never occurred to any English economist to regard the farmer's earnings as a kind of wages, as *seems* to Herr Dühring to be the case; even less could it be *hazardous* for such an economist to assert that the farmer's profit is what it indisputably, obviously and tangibly is, namely, profit on capital. It is perfectly ridiculous to say that the question of what the farmer's earnings actually are has never been raised in this definite form. In England there has been no need so much as to raise this question, both question and answer having long been present in the facts themselves, and since Adam Smith there has never been any doubt about them.

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The case of owner-cultivation, as Herr Dühring calls it – or rather, the operation of farms by bailiffs for the landowner's account, as is usually the case in Germany – does not alter the matter. If the landowner also provides the capital and has the farm run for his own account, he pockets the profit on capital in addition to the ground-rent, which is self-evident and cannot be otherwise with the existing mode of production. If Herr Dühring asserts that up to now no one has found it necessary to conceive the rent (he should say revenue) resulting from owner-cultivation as divided into parts, this is simply untrue, and at best only proves his own ignorance once again. For example:

“The revenue derived from labour is called wages. That derived from stock, by the person who manages or employs it, is called profit.... The revenue which proceeds altogether from land is called rent and belongs to the landlord.... When those three different sorts of revenue belong to different persons, they are readily distinguished; but when they belong to the same, they are sometimes confounded with one another, at least in common language. A gentleman *who farms* a part of his own estate, after paying the expense of cultivation, *should gain both the rent of the landlord and the profit of the farmer*. He is apt to denominate, however, his whole gain, profit, and thus confounds rent with profit, at least in common language. The greater part of our North American and West Indian planters are in this situation. They farm, the greater part of them, their own estates, and accordingly we seldom hear of the rent of a plantation, but frequently of its profit.... A gardener who cultivates his own garden with his own hands unites in his own person the three different characters of landlord, farmer, and labourer. His produce, therefore, should pay him the rent of the first, the profit of the second, and the wages of the third. The whole, however, is commonly considered as the earnings of his labour. Both rent and profit are, in this case, confounded with wages.”

This passage is from the sixth chapter of Book I of *Adam Smith*.⁷² The case of owner-cultivation was thus investigated a hundred years ago, and the doubts and uncertainties which so worry Herr Dühring in this connection are merely due to his own ignorance.

He finally escapes from his quandary by an audacious trick.

The farmer's earnings depend on the exploitation of “the rural labour-power” and are therefore obviously a “part of the rent”, by which

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the “full rent”, which should really flow into the landlord’s pocket, is “reduced”.

From this we learn two things. Firstly, that the farmer “reduces” the landlord’s rent, so that, according to Herr Dühring, it is not the farmer who pays rent to the landlord, as was considered to be the case hitherto, but the *landlord who pays rent to the farmer* – certainly a “fundamentally original view”. Secondly, we learn at last what Herr Dühring thinks ground-rent is, namely, the whole surplus-product obtained in farming by the exploitation of rural labour. But as this surplus-product has been divided into ground-rent and profit on capital in all political economy hitherto – save perhaps by a few vulgar economists – we are compelled to note that Herr Dühring “does not hold the accepted view” of ground-rent either.

According to Herr Dühring, therefore, the only difference between ground-rent and earnings of capital is that the former is obtained in agriculture and the latter in industry or trade. It was inevitable that Herr Dühring should arrive at this uncritical and confused view. We saw that his starting-point was the “truly historical conception” that domination over the land could be based only on domination over man. Therefore, as soon as land is cultivated by means of any form of subjugated labour, a surplus arises for the landlord, and it is precisely this surplus which is the rent, just as in industry the surplus of the labour product over and above the earnings of labour constitutes the earnings of capital.

“Thus it is clear that ground-rent exists on a considerable scale wherever and whenever agriculture is carried on by means of any form of the subjection of labour.”

In this presentation of rent as the whole surplus-product obtained in agriculture, Herr Dühring is running slap into both the English farmer’s profit and the division of that surplus-product into ground-rent and farmer’s profit, a division borrowed from English farming and recognized in all classical political economy, and hence slap into the *pure*, precise conception of rent. What does Herr Dühring do? He pretends that he does not have the slightest inkling of the division of the surplus-product of agriculture into farmer’s profit and ground-rent, and therefore of the whole theory of rent of classical political economy; that the question of what farmer’s profit really is has never yet been raised “with this precision” in the whole of political economy; and that he is dealing with an entirely unexplored subject about which there is no knowledge but only illusion

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and uncertainty. And he flees from this annoying England – where, without the intervention of any theoretical school, the surplus-product of agriculture is so remorselessly divided into its elements, ground rent and profit on capital – to his well-beloved jurisdiction of the Prussian *Landrecht*, where owner-cultivation is in full patriarchal bloom, where “the landlord understands by rent the income from his estates” and the Junkers’ views on rent; still claim to be authoritative for science, where, therefore, Herr Dühring can still hope to slip through with his confused ideas on rent and profit and even to find credence for his latest discovery that ground-rent is paid not by the farmer to the landlord but by the landlord to the farmer.

X

FROM THE *CRITICAL HISTORY*

Finally, let us take a glance at the *Critical History of Political Economy*, at “that enterprise” of Herr Dühring’s which, as he says, “is wholly without precedent”. Perhaps here at last we shall find the definitive and most rigorously scientific treatment he has so often promised us.

Herr Dühring makes a big fuss over his discovery that “economic science” is “an enormously modern phenomenon” (p. 12).

In fact, Marx says in *Capital*, “Political economy... as an independent science, first sprang into being during the period of manufacture”, and in *A Contribution to the Critique of Political Economy*, page 29, describes “classical political economy” as “beginning with William Petty in Britain and Boisguillebert in France, and ending with Ricardo in Britain and Sismondi in France”. * Herr Dühring follows the path thus prescribed for him, except that in his view the higher economics begins only with the wretched abortions brought into existence by bourgeois science after the close of its classical period. On the other hand, he is fully justified in triumphantly proclaiming at the end of his introduction:

“But if this enterprise is entirely without precedent in its outer observable characteristics and in the more novel half of its content, it is

* *Capital*, Vol. I, p. 364, and *A Contribution to the Critique of Political Economy*, Lawrence and Wishart, London, 1971, p. 52. – Ed.

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even more peculiarly mine in its inner critical points of view and its general standpoint” (p. 9).

Actually, as far as both its outer and inner features are concerned, he could have announced his “enterprise” (the industrial term is well chosen) as *The Ego and His Own*.⁴³

Since political economy, as it made its appearance in history, is in fact nothing but the scientific insight into the economics of the period of capitalist production, principles and theorems relating to it can be found, for example, in the writers of ancient Greek society, only in so far as certain phenomena – commodity production, trade, money, interest-bearing capital, etc. – are common to both societies. In so far as the Greeks make occasional excursions into this sphere, they show the same genius and originality as in all others. Historically, therefore, their views form the theoretical starting-points of the modern science. Let us now listen to the world-historic Herr Dühring.

“Strictly speaking (!), we have absolutely nothing positive to report from antiquity concerning scientific economic theory, and the totally unscientific Middle Ages give still less occasion for this” (for this – for reporting *nothing*!). “But as the fashion of vaingloriously displaying a semblance of erudition... has defaced the true character of modern science, notice must be taken of at least a few examples.”

Herr Dühring then produces examples of a critique which is in truth free from even the “semblance of erudition”.

Aristotle’s thesis runs:

“Of everything which we possess there are two uses:... The one is the proper, and the other is the improper or secondary use of it. For example, a shoe is used for wear, and is used for exchange; both are uses of the shoe. He who gives a shoe in exchange for money or food to him who wants one, does indeed use the shoe as a shoe, but this is not its proper or primary purpose, for a shoe is not made to be an object of barter.”⁷³

This thesis is “not only expressed very trivially and pedantically” according to Herr Dühring. But, moreover, those who see in it a “distinction between use-value and exchange-value” fall prey to a freakish mood in which they forget that nothing has been left of use-value and exchange-value “in the most recent period” and “in the framework of the most advanced system”, which of course is Herr Dühring’s own.

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“In Plato’s writings on the state, people... claim to have found the *modern* chapter on the economic division of labour.”*

This no doubt refers to the passage in *Capital*, Ch. XII, 5 (p. 369 of the third edition),[†] where the views of classical antiquity on the division of labour are on the contrary shown to have been “in most striking contrast” with the modern view. Herr Dühring has nothing but sneers for Plato’s presentation – for his time full of genius – of the division of labour as the natural basis of the city (which for the Greeks was identical with the state);⁷⁴ and this on the ground that he did not mention – though the Greek Xenophon did, Herr Dühring –

the “limit set by the actual extent of the market to the further ramification of professions and the technical dissection of special operations – only the conception of this limit constitutes the knowledge thanks to which this idea, which is otherwise hardly fit to be called scientific, becomes a major economic truth”.

It was actually “Professor” Roscher, of whom Herr Dühring is so contemptuous, who set up this “limit” at which the idea of the division of labour is supposed first to become “scientific”, and who therefore explicitly pointed to Adam Smith as the discoverer of the law of the division of labour. In a society in which commodity production is the dominant form of production, “the market” – to adopt Herr Dühring’s style for once – was a “limit” very well known to “business people”. But more than “the knowledge and instinct of routine” is needed to realize that it was not the market that created the capitalist division of labour, but that, on the contrary, it was the dissolution of former social connections and the resulting division of labour that created the market (see *Capital*, Vol. I, Ch. XXIV, 5: “Creation of the Home Market for Industrial Capital”).[‡]

“The role of money has at all times provided the first and main stimulus to economic (!) ideas. But what did an Aristotle know of this role? No more, clearly, than was contained in the idea that exchange through the medium of money had followed primitive exchange by barter.”

* All italics in quotations from Dühring and other authors in this chapter are Marx’s. – *Ed.*

[†] *Capital*, English ed., Vol. I, p. 365. – *Ed.*

[‡] *Ibid.*, p. 471. – *Ed.*

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But when “an” Aristotle presumes to discover the two different *forms of the circulation* of money, the one in which it operates as a mere medium of circulation, and the other in which it operates as money-capital, according to Herr Dühring he is “only expressing a moral antipathy”.⁷⁵

When “an” Aristotle carries his audacity so far as to attempt an analysis of money in its “role” *as a measure of value* and indeed correctly poses this problem which is so decisive for the theory of money, “a” Dühring prefers to say nothing (and for good private reasons) about such impermissible temerity.⁷⁶

The net result is that Greek antiquity, as mirrored in the “notice taken” by Dühring, in fact possessed “only quite ordinary ideas” (p. 25), if such “*niaiserie*”^{*} (p. 19) has anything whatever in common with ideas, whether ordinary or extraordinary.

It would be better to read Herr Dühring’s chapter on mercantilism in the “original”, that is, in F. List’s *National System*, Chapter 29: “The Industrial System, Incorrectly Called the Mercantile System by the School”. The great care with which here too Herr Dühring manages to avoid any “semblance of erudition” is shown by the following passage, among others:

List, Chapter 28: “The Italian Political Economists”, says:

“Italy has been the forerunner of all modern nations, in the theory as well as in the practice of Political Economy,”

and then he cites, as

“the earliest work written specially on Political Economy in Italy, that of Antonio Serra of Naples (in 1613), on the means of providing ‘the Kingdoms’ with an abundance of gold and silver”.⁷⁷

Herr Dühring confidently accepts this and is therefore able to regard Serra’s *Breve trattato*

“as a kind of inscription at the entrance to the more recent prehistory of economics”.

His treatment of the *Breve trattato* is in fact limited to this “piece of literary buffoonery”. Unfortunately, the actual facts of the case were different; in 1609, that is, four years before the *Breve trattato*, Thomas Mun’s *A Discourse of Trade, etc.*, had appeared.⁷⁸ The particular significance of this book was that, already in its first

* “Nonsense”. – Ed.

edition, it was directed against the original *monetary system* which was then still defended in England as the practice of the state, and that hence it represented the conscious *self-separation* of the mercantile system from the system which gave it birth. Even in its original form the book went through several editions and exercised a direct influence on legislation. In the edition of 1664 (*England's Treasure, etc.*), which had been completely rewritten by the author and was published after his death, it remained the mercantilist gospel for another hundred years. If therefore mercantilism has an epoch-making work "as a kind of inscription at the entrance", it is this book, and for this very reason it simply does not exist for Herr Dühring's "history which most carefully observes distinctions of rank".

Of *Petty*, the founder of modern political economy, Herr Dühring tells us that

there was "a fair measure of superficiality in his way of thinking" and that he had "no sense of the intrinsic and nicer distinctions between concepts", while he possessed "a versatility which knows a great deal but skips lightly from one thing to another without taking root in any idea of a more profound character";... that he "proceeds very crudely in economic matters", and that he "achieves *naïvetés* whose contrasts... may at times well amuse a more serious thinker".

What inestimable condescension for the "more serious thinker" Herr Dühring to deign to take any notice at all of "a Petty"! And how he takes notice of him!

Petty's thesis on

"labour and even labour-time as a measure of value, of which imperfect vestiges can be found in his writings",

are totally ignored apart from this sentence. Imperfect vestiges forsooth! In his *Treatise on Taxes and Contributions* (first edition, 1662), Petty gives a perfectly clear and correct analysis of the magnitude of value of commodities.⁷⁹ In illustrating this magnitude at the outset by the equal value of precious metals and corn which cost the same quantity of labour, he says the first and last "theoretical" word on the value of the precious metals. But he also lays it down in a precise and general way that the values of commodities are measured by *equal labour*. He applies his discovery to the solution of various problems, some of which are very complicated, and he draws important conclusions from the fundamental proposition on

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various occasions and in various works, even where he does not repeat it. In his very first work he says:

“This” (estimation by equal labour), “I say, *to be the foundation of equalizing and balancing of values* ; yet in the superstructures and practices hereupon, I confess there is much variety, and intricacy.”

Petty is thus equally conscious of the importance of his discovery and of the difficulty of using it in detail. He therefore tries to find another way for certain purposes of detail.

“A natural par” should therefore be found between land and labour so that value may be expressed at will “by either of them alone as well or better than by both”.

Even this error is an error of genius.

Herr Dühring makes this sharply conceived observation on Petty’s theory of value:

“Had his own thought been sharper, it would be quite impossible to find vestiges of a contrary view in other passages to which we have previously referred”;

that is to say, to which no “previous” reference has been made except that the “vestiges” are “imperfect”. This is very characteristic of Herr Dühring’s method – to allude to something “previously” in a meaningless phrase, in order “subsequently” to make the reader believe that he has “previously” been made acquainted with the main point, which in fact the said author has slid over both previously and subsequently.

Now in Adam Smith there are not only “vestiges” of “contrary views” on the concept of value, not only two but even three, and strictly speaking even four, sharply contrary opinions on value, running quite cheerfully side by side and together.⁸⁰ But what is natural in a writer who is the founder of political economy and is necessarily feeling his way, experimenting, and struggling with a chaos of ideas which are only just taking shape, may seem strange in a writer who is surveying and summarizing more than a century and a half of investigation, the results of which have already passed in part from books into the general consciousness. To pass from the sublime to the ridiculous, Herr Dühring himself gives us, as we have seen, five different kinds of value to choose from at will, and with them, an equal number of contrary views. Of course, “had his own thought been sharper”, he would not have had to expend so much

effort in trying to throw his readers back from Petty's perfectly clear conception of value into the uttermost confusion.

Petty's *Quantulumcunque* Concerning Money* is a smoothly finished work which is cast in a single block; it was published in 1682, ten years after his *Anatomy of Ireland* (this "first" appeared in 1672, not in 1691 as stated by Herr Dühring, who takes it second-hand from "the most current text book compilations").⁸¹ The last vestiges of mercantilist views to be found in his other writings have completely disappeared here. In content and form it is a little masterpiece, and for this very reason Herr Dühring does not so much as mention its title. It is quite appropriate that, confronted with the most brilliant and original of economic pioneers, our vainglorious and pedantic mediocrity should only snarl his displeasure and take offence at the fact that the flashes of theoretical insight do not proudly parade about in rank and file as ready-made "axioms", but leap sporadically to the surface from the depths of "crude" practical material such as taxes.

Herr Dühring treats Petty's founding of "*Political Arithmetic*", commonly called statistics, in the same way as his specifically economic work. He maliciously shrugs his shoulders at the odd methods used by Petty. Considering the grotesque methods still employed in this field a century later even by Lavoisier⁸² and the great distance separating even contemporary statistics from the goal which Petty assigned them in such bold strokes, such self-satisfied priggishness two centuries *post festum*[†] stands out in all its undisguised stupidity.

Petty's most important ideas, which get such scant attention in Herr Dühring's "enterprise", are in the latter's view nothing but disconnected brainwaves, chance thoughts and incidental comments, to which a significance they totally lack intrinsically is for the first time attached in our day by citing excerpts torn from their context, and which therefore play a part not in the real history of political economy, but only in modern books below the standard of Herr Dühring's deep-rooted criticism and "treatment of history in the grand manner". In his "enterprise" he seems to have had in view a circle of blindly faithful readers who would never make so bold as to ask for proof of an assertion. We shall return to this point soon

* A Few Words... – *Ed.*

† After the event. – *Ed.*

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(when dealing with Locke and North), but must first take a fleeting glance at Boisguillebert and Law.

With regard to the former, we must underline the sole find made by Herr Dühring: he has discovered a previously ignored connection between Boisguillebert and Law. Boisguillebert asserts that the precious metals could be replaced by credit money (*un morceau de papier*)* in the normal monetary functions they fulfil in commodity circulation.⁸³ Law on the other hand imagines that any “increase” whatever in the number of these “pieces of paper” increases the wealth of a nation. Herr Dühring draws from this the conclusion that Boisguillebert’s “turn of thought already harboured a new turn in mercantilism” – in other words, already included Law. This is made crystal clear in the following:

“All that was necessary was to assign to the ‘simple pieces of paper’ the same role that the precious metals *should* have played, and a metamorphosis of mercantilism was thus immediately accomplished.”

The metamorphosis of my uncle into my aunt can be immediately accomplished in the same way. True, Herr Dühring adds appeasingly: “Of course Boisguillebert had no such intention.”

But how, in the devil’s name, could he intend to replace his own rationalist conception of the money function of the precious metals by the superstitious conception of the mercantilists merely because he held that the precious metals can be replaced in this role by paper money?

Yet Herr Dühring continues in his serio-comic style:

“Nevertheless it may be conceded that here and there our author succeeded in making a really apt remark” (p. 83).

In reference to Law, Herr Dühring only succeeds in making this “really apt remark”:

“Law too was obviously never able completely to eradicate the above named basis” (namely, “the basis of the precious metals”), “but he pushed the note issue to its extreme limit, that is to say, to the collapse of the system” (p. 94).

In reality, however, these paper butterflies, mere money tokens, were intended to flutter about among the public, not in order to

* A piece of paper. – *Ed.*

“eradicate” the basis of the precious metals, but to entice them from the pockets of the public into the depleted treasuries of the state.⁸⁴

To return to Petty and the inconspicuous role in the history of economics assigned him by Herr Dühring. Let us first listen to what we are told about Petty’s immediate successors, Locke and North. Locke’s *Considerations on Lowering the of Interest and Raising of Money*, and North’s *Discourses upon Trade*, appeared in the same year, 1691.⁸⁵

“What he” (Locke) “wrote on interest and money does not go beyond the framework of the reflections which were current under the dominion of mercantilism in connection with the events of political life” (p. 64).

To the reader of this “report” it should now be patently clear why Locke’s *Lowering of Interest* had such an important influence, in more than one direction, on political economy in France and Italy during the latter half of the eighteenth century.

“Many businessmen thought the same” (as Locke) “on free play for the rate of interest, and the developing situation also produced the tendency to regard restrictions on interest as ineffective. At a period when a Dudley North could write his *Discourses upon Trade* in the direction of free trade, a great deal must already have been in the air, as it were, which made the theoretical opposition to restrictions on interest rates seem something, not at all extraordinary” (p. 64).

So Locke had only to regurgitate the ideas of this or that contemporary “businessman”, or to breathe in much of what was “in the air, as it were”, to be able to theorize on free play for the rate of interest without saying anything “extraordinary”! In fact, as early as 1662 Petty in his *Treatise on Taxes and Contributions* had contrasted interest, as “rent of money which we call usury”, with “rent of land and houses”, and lectured the landlords, who wished to keep down by legislation not of course the rent of land but the rent of money, on “the vanity and fruitlessness of making civil positive law against the law of nature”.⁸⁶ In his *Quantulumcunque* (1682) he therefore declared that the legal regulation of the rate of interest was as stupid as the regulation of the export of precious metals or of the exchange rate. In the same work he made definitive statements on the “raising of money” (for example, the attempt to call sixpence a shilling by doubling the number of shillings coined from one ounce of silver).

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With regard to this last point, Locke and North did little more than copy him. With regard to interest, however, Locke followed Petty's parallel between interest on money and rent of land, while North goes further and opposes interest as "rent of stock" to rent of land and the stocklords to the landlords. While free play for the rate of interest as demanded by Petty is accepted by Locke only with reservations, North accepts it unconditionally.

Herr Dühring, himself still a bitter mercantilist in the "subtler" sense, surpasses himself when he dismisses Dudley North's *Discourses upon Trade* with the comment that they were written "in the direction of free trade". It is like saying of Harvey that he wrote "in the direction" of the circulation of the blood. Apart from its other merits, North's work is a classical exposition, driven home with relentless logic, of the doctrine of free trade, whether in foreign or in internal commerce – certainly "something extraordinary" in the year 1691!

For the rest, Herr Dühring informs us that

North was a "merchant" and a bad type into the bargain, also that his work "met with no approval".

Indeed! How could a book of this sort have met with "approval" among the mob setting the tone at the time of the final triumph of protectionism in England? But this did not hinder its immediate effect on theory, as can be seen from a whole series of economic works published in England shortly after, some of them even in the seventeenth century.

Locke and North gave us proof of how the first bold strokes which Petty made in almost every sphere of political economy were taken up one by one and elaborated by his English successors. The traces of this process during the period 1691 to 1752 are obvious to the most superficial observer from the fact that all the more important economic writings of that time start from Petty, either positively or negatively. This period, which abounded in original thinkers, is therefore the most important for the investigation of the gradual genesis of political economy. The "treatment of history in the grand manner", which chalks up against Marx the unpardonable sin of making so much fuss over Petty and the writers of that period in *Capital*, simply strikes them right out of history. From Locke, North, Boisguillebert and Law it jumps straight to the Physiocrats, and then, at the entrance to the real temple of political economy, there appears – David Hume. With Herr Dühring's permission, we restore the chronological order, with Hume before the Physiocrats.

Hume's economic *Essays* appeared in 1752.⁸⁷ In the related essays, "Of Money", "Of the Balance of Trade", "Of Commerce", Hume follows Jacob Vanderlint's *Money Answers All Things*, London, 1734, step by step, often even down to its idiosyncrasies. However unknown this Vanderlint may have remained to Herr Dühring, references to him can be found in English economic works as late as the end of the eighteenth century, that is to say, in the period after Adam Smith.

Like Vanderlint, Hume treated money as a mere token of value; he copied Vanderlint almost word for word (this is important, as he might have taken the token of value theory from many other sources) on why the balance of trade cannot be permanently either favourable or unfavourable to a country; like Vanderlint, he teaches the equilibrium of balances, which is brought about naturally, in accordance with the different economic situations in the individual countries; like Vanderlint, he preaches free trade, but less boldly and consistently; like Vanderlint, though more superficially, he emphasizes wants as the motive forces of production; he follows Vanderlint in the influence on commodity prices which he wrongly ascribes to bank money and government securities in general; like Vanderlint, he rejects credit money; like Vanderlint, he makes commodity prices dependent on the price of labour, that is, on wages; he even copies Vanderlint's whimsical idea that the accumulation of treasure keeps commodity prices down, etc., etc.

At a much earlier point Herr Dühring had spoken in oracular undertones about how others had misunderstood Hume's theory of money, with a particularly menacing reference to Marx, who in *Capital* had, moreover, subversively pointed to Hume's secret connections with Vanderlint and J. Massie,* who will be mentioned later.

As for this misunderstanding, the facts are as follows. With the best will in the world – though in his own luminous way – Herr Dühring can only repeat his predecessors' errors concerning Hume's actual theory of money, according to which money is a mere token of value, and therefore, other things being equal, commodity prices rise in proportion to the increase in the volume of money in circulation and fall in proportion to its decrease. But after propounding the above theory, Hume himself raises the objection

* See Marx, *Capital*, Vol. I. p. 124, first footnote, and p. 514, third footnote. – Ed.

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(as Montesquieu, starting from the same premises, had done previously) that

nevertheless “it is certain” that since the discovery of the mines in America “industry has increased in all the nations of Europe, except in the possessors of those mines”, and that this “may justly be ascribed, amongst other reasons, to the increase of gold and silver”.

His explanation of this phenomenon is that

“though the high price of commodities be a necessary consequence of the increase of gold and silver, yet it follows not immediately upon that increase; but some time is required before the money circulates through the whole state and makes its effect be felt on all ranks of people”. In this interval it has a beneficial effect on industry and trade.

At the end of this analysis Hume also tells us why this is so, although much more one-sidedly than many of his predecessors and contemporaries:

“It is easy to trace the money in its progress through the whole commonwealth; where we shall find, that it must first quicken the diligence of every individual before it *increases the price of labour*.”⁸⁸

In other words, Hume is here describing the effect of a revolution in the value of the precious metals, namely, a depreciation, or, which is the same thing, a revolution in *the measure of value* of the precious metals. He correctly ascertains that, in the gradual process of readjustment in the prices of commodities, this depreciation “increases the price of labour” – in ordinary language, wages – only in the last instance; that is to say, it increases the profit made by merchants and manufacturers at the cost of the worker (which he nevertheless thinks is quite in order) and thus “quickens diligence”. But he does not ask himself the real scientific question, namely, whether and in what way an increase in the supply of the precious metals, their value remaining the same, affects the prices of commodities; and he lumps together *every* “increase of the precious metals” with their depreciation. Hume therefore does precisely what Marx says he does (*A Contribution to the Critique of Political Economy*, p. 173).^{*} We shall come back once more to this point in passing, but we must first turn to Hume’s essay “On Interest”.

^{*} English ed., Lawrence and Wishart, p. 160 ff. – Ed.

Hume's arguments, expressly directed against Locke, that the rate of interest is not regulated by the amount of money available but by the rate of profit, and his other explanations of the causes determining the high or low level of the rate of interest, are all to be found, much more exactly though less brilliantly stated, in *An Essay on the Governing Causes of the Natural Rate of Interest, wherein the sentiments of Sir W. Petty and Mr. Locke, on that head, are considered*. This work appeared in 1750, two years before Hume's essay; its author was J. Massie, a writer active in various fields who had a wide public, as can be seen from contemporary English literature. Adam Smith's discussion of the rate of interest is closer to Massie than to Hume. Neither Massie nor Hume knows or says anything regarding the nature of "profit", which plays a role with both.

"In general," Herr Dühring sermonizes us, "the estimate of most of Hume's commentators has been very prejudiced, and ideas have been attributed to him which he never entertained in the least."

Herr Dühring himself gives us more than one striking example of this "procedure".

For example, Hume's essay on interest begins as follows:

"Nothing is esteemed a more certain sign of the flourishing condition of any nation than the lowness of interest: and with reason; though I believe the cause is somewhat different from what is commonly apprehended."⁸⁹

Thus in the very first sentence Hume cites the view that the lowness of interest is the surest indication of the flourishing condition of a nation as a commonplace which had already become trivial in his day. Actually, this "idea" had had fully a hundred years, since Child, to become generally current. But we are told:

"Among the views" (of Hume) "on the rate of interest *we must mainly stress the idea* that it is the true barometer of conditions" (which?) "and that its lowness is an almost infallible sign of the prosperity of a nation" (p. 130).

Who is the "prejudiced" and predisposed "commentator" who says this? None other than Herr Dühring.

It arouses the naive astonishment of our critical historian that Hume, in connection with some felicitous idea or other, "does not even claim to have originated it". This would not have happened to Herr Dühring.

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We have seen how Hume confuses every increase in the precious metals with such an increase as is accompanied by a depreciation, a revolution in their own value, hence, in the measure of value of commodities. This confusion was inevitable in Hume because he had not the slightest insight into the function of the precious metals as *the measure of value*. It was impossible for him to have it because he had absolutely no knowledge of value itself. The very word is to be found perhaps only once in his essays, in the passage where, in attempting to correct Locke's erroneous notion that the precious metals had "only an imaginary value", he makes matters even worse by saying that they had "chiefly a fictitious value".⁹⁰

In this he is much inferior not only to Petty but to many of his English contemporaries. He shows the same "backwardness" in still proclaiming the old-fashioned notion that the "*merchant*" is the mainspring of production, which Petty had long passed beyond. As for Herr Dühring's assurance that in his essays Hume was concerned with the "chief economic relationships", if the reader only compares Cantillon's work quoted by Adam Smith (which appeared the same year as Hume's essays, 1752, but many years after its author's death), he will be surprised at the narrow field covered by Hume's economic writings.⁹¹ As we have said, despite the letters-patent issued to him by Herr Dühring, Hume remains a respectable figure in the field of political economy too, but here he is anything but an original investigator, and even less an epoch-making one. The influence of his economic essays on the educated circles of his day was due not merely to his excellent presentation, but much more to the fact that they were a progressive and optimistic glorification of the thriving industry and trade of the time – in other words, of the capitalist society which was then rapidly rising in England, and whose "applause" they were therefore bound to gain. Let one instance suffice here. Everyone knows the passionate fight the masses of the English people were waging, precisely in Hume's day, against the system of indirect taxes methodically exploited by the notorious Sir Robert Walpole for the relief of the landlords and of the rich in general. Without mentioning his name, Hume polemicalizes against his ever-present authority Vanderlint, the stoutest opponent of indirect taxation and the most determined advocate of a land tax, in his essay "Of Taxes" as follows:

"They" (taxes on consumption) "must be very heavy taxes, indeed, and very injudiciously levied, which the artisan will not, of himself, be

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enabled to pay, by superior industry and frugality, *without raising the price of his labour.*"⁹²

It is almost as if Robert Walpole himself were speaking, especially if we add the passage in the essay on "Public Credit" in which Hume says with reference to the difficulty of taxing the state's creditors:

"The diminution of their revenue... would not be *disguised* under the appearance of a branch of excise or customs."⁹³

As might have been expected of a Scotchman, Hume's admiration of bourgeois acquisitiveness was in no way purely platonic. A poor devil by origin, he worked himself up to a very weighty annual income of £1,000; which Herr Dühring (as he is not dealing with Petty here) tactfully expresses in this way:

"On the basis of very slight means, he succeeded by good *domestic economy* in reaching the position of not having to write to please anyone."

Herr Dühring says further:

"He had never made the slightest concession to the influence of parties, princes or universities."

There is no evidence that Hume ever entered into a literary partnership with a "Wagener",⁹⁴ but it is well known that he was an indefatigable partisan of the Whig oligarchy, which thought highly of "*Church and state*", and that in reward for these services he was given first a secretaryship in the Embassy in Paris and subsequently the incomparably more important and better-paid post of an Under-Secretary of State.

"In politics Hume was and always remains conservative and strongly monarchist in his views. For this reason he was never so bitterly denounced for heresy as was Gibbon by the supporters of the established church,"

says old Schlosser.⁹⁵

"This selfish Hume", "this lying historian" reproaches the English monks with being fat, having neither wife nor family and living by begging, "but he himself never had family or a wife and... was a great, fat fellow, fed, in considerable part, out of public money, without having merited it by any real public services," says the "rude" plebeian

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Cobbett.⁹⁶ Hume was “in essential respects greatly superior to a Kant in the *practical* management of life”,

says Herr Dühring.

But why is Hume given such an exaggerated position in the *Critical History* ? Simply because this “serious and subtle thinker” has the honour of enacting the Dühring of the eighteenth century. Hume serves as proof that

“the creation of this whole branch of science” (economics) “is the achievement of a more enlightened philosophy”,

and similarly Hume as a precursor is the best guarantee that this whole branch of science will find its immediately foreseeable close in that phenomenal man who has transformed the merely “more enlightened” philosophy into the absolutely luminous philosophy of reality, and with whom, just as with Hume, and what is

“unprecedented on German soil... the cultivation of philosophy in the narrow sense of the word is combined with scientific endeavours in economics”.

Accordingly we find Hume, who in any case is respectable as an economist, inflated into an economic star of the first magnitude, whose importance could hitherto be denied only by the same envy which has hitherto so obstinately hushed up Herr Dühring’s achievements, which are “authoritative for the epoch”.

* * *

The Physiocratic school, as everyone knows, left us a riddle in the form of *Quesnay’s Tableau Economique* on which all critics and historians of political economy have so far broken their teeth in vain.⁹⁷ This *Tableau*, which was intended to bring out clearly the Physiocrats’ conception of the production and circulation of a country’s total wealth, has remained pretty obscure for succeeding economists. Here too Herr Dühring will at last give us light.

What this “economic image of the relations of production and distribution means in Quesnay himself”, he says, can only be explained if one has “*first carefully examined* the leading ideas which are peculiar to him”. All the more so because hitherto these have only been set forth with “wavering indefiniteness”, and their “essential features cannot be recognized” even in Adam Smith.

Herr Dühring will now once and for all put an end to this traditional “superficial reporting”. He then proceeds to fool the reader through five whole pages, five pages in which all kinds of pretentious phrases, constant repetitions and calculated confusion are designed to conceal the awkward fact that Herr Dühring has hardly as much to tell us about Quesnay’s “leading ideas” as “the most current textbook compilations” against which he tirelessly warns us.

It is “one of the most dubious aspects” of this introduction that here too the *Tableau*, which so far has only been mentioned by name, is just casually snuffled at and then gets lost in all sorts of “reflections”, such as, for example, “the difference between input and output”. Though the latter, “it is true, is not to be found complete in Quesnay’s idea”, Herr Dühring on the other hand will give us a dazzling example of it as soon as he passes from his lengthy introductory “input” to his remarkably short-winded “output”, that is to say, to his elucidation of the *Tableau* itself. We shall now give all, but *literally all*, he feels it right to tell us of Quesnay’s *Tableau*.

In his “input” Herr Dühring says:

“It seemed self-evident to him” (Quesnay) “that the revenue” (Herr Dühring had just spoken of the net product) “must be thought of and treated as a *money value*.... He tied his deliberations (!) immediately with the *money values* which he assumed as the results of the sales of all agricultural products when they first change hands. In this way (!) he operates with several milliards” (that is, of money values) “in the columns of his *Tableau*. “

We have therefore learnt three times over that, in his *Tableau*, Quesnay operates with the “money values” of “agricultural products”, including the money values of the “net product” or “net revenue”. Further on in the text we find:

“Had Quesnay considered things from a really natural standpoint, and had he rid himself not only of regard for the precious metals and the quantity of money but also of regard for money values.... But as it is he calculates solely with *sums of values* and imagined (!) the net product in advance as a *money value*. “

So for the fourth and fifth time, there are only money values in the *Tableau*!

“He” (Quesnay) “obtained it” (the net product) “by deducting the expenses and *thinking* (!) principally” (not traditional, but for that mat-

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ter all the more superficial, reporting) “of that value which would accrue to the landlord as rent.”

We have still not advanced a step; but now it is coming:

“On the other hand, *however, now also* “ – this “however, now also” is a gem! – “the net product enters into circulation as a natural object, and in this way becomes an element which should serve... to maintain the class which is described as sterile. Here we can *immediately* (!) see the confusion arising from the fact that in one case it is the money value, and in the other the thing itself, which determines the course of thought.”

In general, it seems, *all* circulation of commodities suffers from the “confusion” that commodities enter into circulation simultaneously as “natural objects” and as “money values”. But we are still moving in a circle about “money values”, for “Quesnay is anxious to avoid a double booking of the economic revenue”.

With Herr Dühring’s permission: in Quesnay’s *Analysis* the various kinds of products figure as “natural objects” at the foot of the *Tableau*, and their money values are given up above in the *Tableau* itself. Subsequently Quesnay even made his assistant, the Abbe Baudeau, include the natural objects in the *Tableau* itself, *beside* their money values.

After all this “input”, we at last get the “output”. Listen and marvel at these words:

“Nevertheless, the inconsistency” (referring to the role assigned by Quesnay to the landlords) “*at once* becomes clear as soon as we enquire *what becomes of the net product which has been appropriated as rent in the course of economic circulation*. Here the Physiocrats and the *Tableau Economique* could offer nothing but confusion and arbitrariness culminating in mysticism.”

All’s well that ends well. So Herr Dühring does not know “what becomes of the net product, which has been appropriated as rent in the course of economic circulation” (as represented in the *Tableau*). To him, the *Tableau* is the “squaring of the circle”. By his own confession, he does not understand the ABC of Physiocracy. After all the beating about the bush, the threshing of straw, the jumping hither and thither, the harlequinades, episodes, diversions, repetitions and stupefying mix-ups whose sole purpose was to prepare us for the imposing revelation, “what the *Tableau* means in

Quesnay himself" – after all this we finally get Herr Dühring's shamefaced confession that *he himself does not know*.

Once he has shaken off this painful secret, this Horatian "black care" which sat hunched on his back during his ride through the land of the Physiocrats, our "serious and subtle thinker" blows another merry blast on his trumpet:

"The lines which Quesnay draws to and fro" (in all there are just five of them!) "in his otherwise pretty simple (!) *Tableau*, and which are meant to represent the circulation of the net product", make one wonder whether "these whimsical combinations of columns" may not be based on some mathematical fantasy; they are reminiscent of Quesnay's attempts to square the circle – and so forth.

Since, by his own admission, Herr Dühring was unable to understand these lines in spite of their simplicity, he had to follow his favourite procedure of *casting suspicion* on them. And now he can confidently deliver the *coup de grâce* to the vexatious *Tableau*: "We have considered the net product in this its *most dubious aspect*," etc. So the forced confession that he does not understand the first thing about the *Tableau Economique* and the "role" played by the net product which figures in it – that is what Herr Dühring calls "the most dubious aspect of the net product"! What grim humour!

But in order that our readers may not remain in the same state of cruel ignorance about Quesnay's *Tableau* as that in which those who receive their economic wisdom "first hand" from Herr Dühring necessarily find themselves, here is a brief explanation.⁹⁸

As is known, the Physiocrats divide society into three classes: (1) The productive class, i.e., the class which is actually engaged in agriculture – tenant-farmers and agricultural labourers; they are called productive, because their labour yields a surplus – rent. (2) The class which appropriates this surplus, including the landowners and their retainers, the prince and in general all officials paid by the state, and finally also the Church in its special character as appropriator of tithes. For the sake of brevity, in what follows we call the first class simply "farmers", and the second class "landlords". (3) The industrial or sterile class, sterile because, in the view of the Physiocrats, it adds to the raw materials delivered to it by the productive class only as much value as it consumes in means of subsistence supplied to it by that same class. Quesnay's *Tableau* was intended to portray how the total annual product of a country (in fact, France) circulates among these three classes and serves annual reproduction.

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The first premise of the *Tableau* is that the farming system and with it large-scale agriculture as understood in Quesnay's time, had been generally introduced, Normandy, Picardy, Ile de France and a few other French provinces serving as prototypes. The farmer therefore appears as the real leader in agriculture, representing the whole productive (agricultural) class in the *Tableau* and paying the landlord a rent in money. An invested capital or inventory of ten milliard *livres* is assigned to the farmers as a whole; of this sum, one-fifth, or two milliards, is the working capital which has to be replaced every year – this figure too was estimated on the basis of the best-managed farms in the above provinces.

Further premises: (1) that for the sake of simplicity constant prices and simple reproduction prevail; (2) that all circulation which takes place solely within one class is excluded, and that only circulation between class and class is taken into account; (3) that all purchases and sales taking place between class and class in the course of the working year are combined in a single total sum. Lastly, it must be borne in mind that in Quesnay's time the home industry of the peasant family itself provided by far the greater portion of its needs other than food in France, as more or less in all Europe, and that it is therefore taken for granted here as accessory to agriculture.

The starting-point of the *Tableau* is the total harvest, the gross product of the annual yield of the soil, which is consequently placed as the first item, or the "total reproduction" of the country, in this case France. The total value of this gross product is estimated on the basis of the average prices of agricultural products among the trading nations. It comes to five milliard *livres*, a sum which roughly expresses the money value of the gross agricultural production of France based on such statistical estimates as were then possible. This and nothing else is the reason why Quesnay in his *Tableau* "operates with several milliards", to be precise, with five milliards, and not with five *livres tournois*.⁹⁹

The whole gross product, five milliards in value, is therefore in the hands of the productive class, that is, in the first place of the farmers, who have produced it by advancing an annual working capital of two milliards, which corresponds to an invested capital of ten milliards. The agricultural products – foodstuffs, raw materials, etc. – which are required for the replacement of the working capital, including therefore the maintenance of all persons directly engaged

in agriculture, are taken *in natura** from the total harvest and expended for the purpose of new agricultural production. Since, as we have seen, constant prices and simple reproduction on a given scale are assumed, the money value of the portion which is thus taken from the gross product is equal to two milliard *livres*. This portion, therefore, does not enter into general circulation. For, as we have noted, circulation which takes place merely *within* a particular class, and not between one class and another, is excluded from the *Tableau*.

After the replacement of the working capital out of the gross product there remains a surplus of three milliards, of which two milliards are in foodstuffs and one in raw materials. But the rent which the farmers have to pay the landlords is only two-thirds of this sum, equal to two milliards. It will soon be seen why it is only these two milliards which figure under the heading of “net product” or “net income”.

But *before* the movement described in the *Tableau* begins, there is also the whole *pécule*,† two milliards in cash, in the hands of the farmers, in addition to the “total reproduction” of agriculture amounting to five milliards in value, of which three milliards enter into general circulation. This comes about in the following way.

As the total harvest is the starting-point of the *Tableau*, it likewise forms the closing point of an economic year, for example, of the year 1758, after which a new economic year begins. During the course of this new year, 1759, the portion of the gross product destined to enter into circulation is distributed among the two other classes through the medium of a number of individual payments – purchases and sales. But these successive and splintered movements stretching over a whole year are combined – as was in any case unavoidable in the *Tableau* – into a few characteristic transactions each of which embraces a whole year’s operations in one stroke. This, then, is how the money paid by the farmer class to the landlords as rent for the year 1757, amounting to two milliards, flows back to it at the close of 1758 (the *Tableau* itself will show how this comes about), so that the farmer class can again throw this sum into circulation in 1759. But since, as Quesnay observes, this sum is much larger than is actually required for the total circulation of the country (France), in which payments are constantly being repeated

* In kind. – Ed.

† Hoard. – Ed.

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piecemeal, the two milliard *livres* in the hands of the farmers represent the total money in circulation in the nation.

The class of landlords drawing rent first appears in the role of receivers of payments, which incidentally is the case even today. On Quesnay's assumption the landlords proper receive only four-sevenths of the two milliards of rent, two-sevenths go to the government and one-seventh to the receivers of tithes. In Quesnay's day the Church was the biggest landlord in France and in addition received tithes on all other landed property.

The working capital (*avances annuelles*) expended by the "sterile" class in the course of a whole year consists of raw materials to the value of one milliard – only raw materials, because tools, machinery, etc., are included among the products of that class itself. But the many different roles played by such products in the industrial enterprises of this class do not concern the *Tableau* any more than the circulation of commodities and money which takes place exclusively within this sphere. The wages for the labour by which the sterile class transforms the raw materials into manufactured goods is equal to the value of the means of subsistence which it receives in part directly from the productive class, and in part indirectly, through the landlords. Although it is itself divided into capitalists and wage-workers, according to Quesnay's basic conception it forms an integral class which is in the pay of the productive class and of the landlords. The total industrial production, and consequently also its total circulation, which is distributed over the year following the harvest, is likewise combined into a single whole. It is therefore assumed that the annual commodity production of the sterile class is entirely in its hands at the beginning of the movement set out in the *Tableau*, and consequently that its whole working capital, consisting of raw materials to the value of one milliard, has been converted into goods to the value of two milliards, one-half of which represents the price of the means of subsistence consumed during this transformation. An objection might be raised here. Surely the sterile class also consumes industrial products for its own domestic needs; where are these shown, if its own total product passes through circulation to the other classes? This is the answer we are given: the sterile class not only consumes a portion of its own commodities itself, but in addition strives to retain as much of the rest as possible. It therefore sells the commodities thrown by it into circulation above their real value, and it must do so, as we have evaluated these commodities at the total value of their production. This, however, does not affect the figures of the *Tableau*, for the

two other classes receive manufactured goods only to the value of their total production.

So now we know the economic position of the three different classes at the beginning of the movement set out in the *Tableau*.

After its working capital has been replaced in kind, the productive class still has three milliards of the gross product of agriculture and two milliards in money. The landlord class first appears only with its rent claim of two milliards on the productive class. The sterile class disposes of two milliards in manufactured goods. Circulation passing between only two of these three classes is called imperfect by the Physiocrats, circulation which takes place between all three classes is called perfect.

Now for the economic *Tableau* itself.

First (imperfect) Circulation : The farmers pay the landlords the rent due to them with two milliards of money, without receiving anything in return. With one of these two milliards the landlords buy means of subsistence from the farmers, to whom one half of the money expended by them in the payment of rent thus returns.

In his *Analyse du Tableau Economique* Quesnay does not make further mention of the state, which receives two sevenths, or of the Church, which receives one-seventh, of the ground-rent, as their social roles are generally known. In regard to the landlord class proper, however, he says that its expenditure (in which that of all its retainers is included) is unfruitful expenditure at least as regards the great bulk of it, with the exception of that small portion which is used "for the maintenance and improvement of their lands and the raising of their standard of cultivation". But by "natural law" their proper function consists precisely in "the provision of good management and expenditures for the maintenance of their patrimony", or, as is explained further on, in making the *avances foncières*, that is, outlays for the preparation of the soil and for the provision of all equipment needed by the farms, which enable the farmer to devote his whole capital exclusively to the business of actual cultivation.

Second (perfect) Circulation : With the second milliard of money still remaining in their hands, the landlords purchase manufactured goods from the sterile class, and the latter, with the money thus obtained, purchases from the farmers means of subsistence for the same sum.

Third (imperfect) Circulation: The farmers buy from the sterile class, with one milliard of money, a corresponding amount of manufactured goods; a large part of these goods consists of agricultural implements and other means of production required in agriculture.

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The sterile class returns the same money to the farmers, buying raw materials with it to the value of one milliard to replace its own working capital. Thus the two milliards expended by the farmers in payment of rent have flowed back to them, and the movement is closed. So this is the solution of the great riddle,

“What becomes of the net product which has been appropriated as rent in the course of economic circulation?”

We saw above that at the starting-point of the process there was a surplus of three milliards in the hands of the productive class. Of these, only two were paid as net product in the form of rent to the landlords. The third milliard of the surplus constitutes the interest on the total invested capital of the farmers, that is, ten per cent on ten milliards. They do not receive this interest – this should be carefully noted – from circulation; it exists *in natura* in their hands, and they realize it only in circulation, by thus converting it into manufactured goods of equal value.

If it were not for this interest, the farmer – the chief agent in agriculture – would not advance the capital for investment in it. Already from this standpoint, the appropriation by the farmer of that portion of the agricultural *surplus revenue* which represents interest is, according to the Physiocrats, as necessary a condition of reproduction as the farmer class itself, and hence this element cannot be put in the category of the national “net product” or “net income”; for the latter is characterized precisely by the fact that it is consumable without any regard to the immediate needs of national reproduction. But according to Quesnay, this fund of one milliard serves for the most part to cover the repairs which become necessary in the course of the year and the partial renewals of invested capital; further, as a reserve fund against accidents; and lastly, where possible, for the enlargement of the invested and working capital as well as for the improvement of the soil and the extension of cultivation.

The whole process is certainly “pretty simple”. There enter into circulation: from the farmers, two milliards in money for the payment of rent, and three milliards in products, of which two-thirds are means of subsistence and one-third raw materials; from the sterile class, two milliards in manufactured goods. Of the means of subsistence amounting to two milliards, one half is consumed by the landlords and their retainers, the other half by the sterile class in payment for its labour. The raw materials to the value of one milliard replace the working capital of this latter class. Of the manufactured goods in circulation, amounting to two milliards, one half

goes to the landlords and the other to the farmers, for whom it is only a converted form of the interest on their invested capital accruing at first hand from agricultural reproduction. But the money thrown into circulation by the farmer in payment of rent flows back to him through the sale of his products, and thus the same process can take place afresh in the next economic year.

And now we must admire Herr Dühring's "truly critical" exposition, which is so infinitely superior to the "traditional superficial reporting". After mysteriously pointing out to us five times in succession how hazardous it was for Quesnay to operate in the *Tableau* with mere money values – which moreover turned out to be untrue – he asks:

"What becomes of the net product which has been appropriated as rent in the course of economic circulation?" and he finally reaches the conclusion that "the economic *Tableau* could offer nothing but confusion and arbitrariness culminating in mysticism".

We have seen that the *Tableau* – this description of the annual process of reproduction through the medium of circulation which was as simple as for its time it was inspired – gives a very exact answer to the question of what becomes of this net product in the course of economic circulation. Thus once again it is with Herr Dühring and Herr Dühring alone that the "mysticism" and the "confusion and arbitrariness" remain as "the most dubious aspect" and the sole "net product" of his study of Physiocracy.

Herr Dühring is just as familiar with the historical influence of the Physiocrats as with their theories.

"With Turgot," he teaches us, "Physiocracy in France came to an end both in practice and in theory."

That Mirabeau, however, was essentially a Physiocrat in his economic views; that he was the leading economic authority in the Constituent Assembly of 1789; that in its economic reforms this Assembly translated a substantial portion of the Physiocrats' principles from theory into practice, and in particular laid a heavy tax on ground-rent, the net product appropriated by the landlords "without any equivalent in return" – all this does not exist for "a" Dühring.

Just as the bold stroke drawn through the years 1691 to 1752 removed all of Hume's predecessors, so another stroke obliterated Sir James Steuart, who came between Hume and Adam Smith. There is not a syllable in Herr Dühring's "enterprise" on Steuart's great work, which, apart from its historical importance, permanently

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enriched the domain of political economy.¹⁰⁰ But, instead, Herr Dühring applies the most abusive epithet in his vocabulary to him and says that he was “a *professor*” in Adam Smith’s time. Unfortunately this insinuation is a pure invention. As a matter of fact, Steuart was a large landowner in Scotland who was banished from Great Britain for alleged complicity in the Stuart plot and who made himself familiar with economic conditions in various countries through long residence and his journeys on the Continent.

In a word, according to the *Critical History* the sole value of all earlier economists is to serve either as “pegs” for Herr Dühring’s “authoritative” and deeper foundations, or still more, because of their badness, as a foil to him. Nevertheless, there are also a few heroes of political economy who represent not only the “pegs” of “the deeper foundations”, but the “principles” out of which these “foundations” are not “developed” but actually “composed”, as prescribed in the natural philosophy – for example, the “eminent and incomparable” *List*, who puffed up the “more subtle” mercantilistic teachings of a Ferrier and others into “mightier” words for the benefit of German manufacturers; then *Carey* who reveals the true essence of his wisdom in the following sentence:

“Mr. Ricardo’s system is one of discords... its whole tends to the production of hostility among classes.... His book is the true manual of the demagogue, who seeks power by means of agrarianism, war, and plunder”;¹⁰¹

and, at long last, the Confucius* of the London City, *MacLeod*.

So people who want to study the history of political economy in the present and the immediately foreseeable future will continue to be on much safer ground if they familiarize themselves with the “watery products”, “commonplaces” and “pauper’s broth” of “the most current textbook compilations”, rather than rely on Herr Dühring’s “treatment of history in the grand manner”.

* * *

What, then, is the final result of our analysis of Dühring’s “very own system” of political economy? Nothing, except the fact that with all the big words and the still bigger promises, we are left in the dark just as much as in the *Philosophy*. His theory of value, this

* The German edition of *Anti-Dühring* has the pun Confucius instead of Confucius, as in Marx’s manuscript of Chapter X. – Ed.

“touchstone of the worth of economic systems”, amounts to this: that by value Herr Dühring understands five totally different and flagrantly self-contradictory things, and, therefore, at best, he himself does not know what he wants. The “natural laws of all economics”, ushered in with such pomp, prove to be merely the worst kind of universally familiar platitudes, and often even these are wrongly grasped. The sole explanation of economic facts his very own system can give us is that they are the result of “force”, a formula with which the philistine of all nations has consoled himself for thousands of years for every hardship befalling him, and which leaves us just where we were. But instead of investigating the origin and effects of this force, Herr Dühring expects us gratefully to content ourselves with the mere word “force” as the last final cause and ultimate explanation of all economic phenomena. Compelled to give further elucidations of the capitalist exploitation of labour, he first represents it in general as based on taxes and price surcharges, thus completely appropriating the Proudhonian “prior deduction” (*prélèvement*), and he then proceeds to explain this exploitation in particular by means of Marx’s theory of surplus-labour, surplus-product and surplus-value. In this way he manages to bring about a happy reconciliation of two totally contradictory outlooks by copying down both without taking his breath. And just as in philosophy he could not find words hard enough for the very Hegel whom he so constantly exploited and at the same time diluted, so in the *Critical History* the most baseless calumny of Marx only serves to conceal the fact that everything in the *Course* about capital and labour which makes any sense at all is likewise a diluted plagiarism of Marx. His ignorance, that in the *Course* puts the “large landed proprietor” at the beginning of the history of civilized peoples and is oblivious of the common ownership of land in tribal and village communities which is the real starting-point of all history – this ignorance, which is nowadays almost inconceivable, is well-nigh surpassed by that of the *Critical History*, which immoderately glories in “the universal breadth of its historical survey”, and of which we have given only a few deterrent examples. In a word: first the colossal “input” of self-praise, of charlatan blasts on his own trumpet, of promises each surpassing the other; and then the “output” – exactly nil.

PART III

SOCIALISM

I

HISTORICAL

We saw in the Introduction* how the French philosophers of the eighteenth century, the forerunners of the Revolution, appealed to reason as the sole judge of everything in existence. A rational state, a rational society, were to be founded; everything running counter to eternal reason was to be remorselessly done away with. We saw also that this eternal reason was in reality nothing but the idealized understanding of the middle burgher, who was just then evolving into the bourgeois. But when the French Revolution had realized this rational society and state, the new order of things, however rational as compared with earlier conditions, proved to be by no means absolutely rational. The state based upon reason completely collapsed. Rousseau's Social Contract had found its realization in the Reign of Terror, from which the bourgeoisie, after losing faith in its own political capacity, had taken refuge first in the corruption of the Directorate and finally under the wing of the Napoleonic despotism. The promised eternal peace was turned into an endless war of conquest. The society based on reason had fared no better. Instead of dissolving into general prosperity, the antagonism between rich and poor had become sharpened by the elimination of the guild and other privileges, which had bridged it over, and of the charitable institutions of the Church, which had mitigated it. [As far as the small capitalists and small peasants were concerned, the "freedom of property" from feudal fetters, which had now become a reality, proved to be the freedom to sell their small property, which was being crushed under the overpowering competition of big capital and big landed property, to these very lords, so that freedom of property turned into "freedom *from* property" for the small capitalists and peasant proprietors.] The rapid growth of industry on a capitalist basis raised the poverty and misery of the working masses to

* See Philosophy I. [*Note by Engels.*] What originally was Chapter I of "Philosophy" was later placed by Engels under the heading, "General", in the "Introduction". For the passage referred to, see pp. 14-15 above.
— Ed.

a condition of existence of society. [Cash payment increasingly became, in Carlyle's phrase, the sole social nexus.] The number of crimes increased from year to year. Though not eradicated, the feudal vices which had previously been flaunted in broad daylight were now at any rate thrust into the background. In their stead, the bourgeois vices, hitherto nursed in secret, began to blossom all the more luxuriantly. Trade developed more and more into swindling. The "fraternity" of the revolutionary slogan was realized in the chicanery and envy of the battle of competition. Oppression by force was replaced by corruption, the sword as the prime social lever by money. "The right of the first night" passed from the feudal lords to the bourgeois manufacturers. Prostitution assumed hitherto unheard of proportions. Marriage itself remained as before the legally recognized form, the official cloak of prostitution, and, moreover, was copiously supplemented by adultery.

In short, the social and political institutions born of the "triumph of reason" were bitterly disappointing caricatures of the splendid promises of the philosophers of the Enlightenment. All that was wanting was the men to formulate this disappointment, and they came with the turn of the century. Saint-Simon's *Letters from Geneva* appeared in 1802; Fourier's first book appeared in 1808, although the groundwork of his theory dated from 1799; Robert Owen took over the direction of New Lanark on January 1, 1800.¹⁰²

At this time, however, the capitalist mode of production, and with it the antagonism between the bourgeoisie and the proletariat, was still very undeveloped. Large-scale industry, which had only just arisen in England, was still unknown in France. But, on the one hand, large-scale industry promotes the conflicts which make a revolution in the mode of production [and the abolition of its capitalist character] absolutely necessary – conflicts not only between the classes begotten of it, but also between precisely the productive forces and the forms of exchange created by it. On the other hand, it is in these gigantic productive forces themselves that it promotes the means of resolving these conflicts. If, therefore, the conflicts arising from the new social order were only just beginning to take shape around 1800, this is even truer for the means of resolving them. During the Reign of Terror, the propertyless masses of Paris were able to gain the mastery for a moment [, and thus to lead the bourgeois revolution to victory *against* the bourgeoisie itself]. But in doing so they only proved how impossible [it] was [for] their domination [to last] under the conditions then obtaining. The proletariat, which was only just separating itself from these propertyless masses

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as the nucleus of a new class and was as yet quite incapable of independent political action, appeared as an oppressed, suffering estate, to which, in its incapacity to help itself, help could, at best, be brought in from without, from above down.

This historical situation also dominated the founders of socialism. Their immature theories corresponded to the immature state of capitalist production and the immature class situation. The solution of the social problems which as yet lay hidden in undeveloped economic relations was to spring from the human brain. Society presented nothing but abuses; to remove them was the task of reflective reason. It was a question of inventing a new and more perfect social order and of imposing it on society from without, by propaganda and wherever possible by the example of model experiments. These new social systems were foredoomed to be Utopias; the more they were worked out in detail, the more inevitably they became lost in pure fantasy.

Having established this, we shall not dwell a moment longer on this aspect, now belonging wholly to the past. We can leave it to the literary small fry *à la* Dühring to quibble solemnly over these fantasies, which today only make us smile, and to crow over the superiority of their own sober reasoning over such "insanity". For ourselves, we delight in the inspired thoughts and germs of thought that everywhere break out through their fantastic covering and to which these philistines are blind.

[Saint-Simon was a son of the great French Revolution, at the outbreak of which he was not yet thirty. The Revolution was the victory of the third estate, i.e., of the great masses of the nation, who were *active* in production and in trade, over the thus far privileged *idle* estates, the nobility and the clergy. But the victory of the third estate soon revealed itself as exclusively the victory of a small part of this estate, as the conquest of political power by its socially privileged stratum, i.e., the propertied bourgeoisie. To be sure, the bourgeoisie had already developed rapidly during the Revolution, partly by speculation in the lands of the nobility and of the Church which had been confiscated and then *sold*, and partly by frauds on the nation by means of army contracts. It was precisely the domination of these swindlers that brought France and the Revolution to the verge of ruin under the Directorate, and thus gave Napoleon the pretext for his *coup d'état*.

Hence in Saint-Simon's mind the antagonism between the third estate and the privileged estates took the form of an antagonism between "workers" and "idlers". The idlers were not merely the old

privileged persons, but also all who lived on their incomes without taking any part in production or distribution. The “workers” were not only the wage workers, but also the manufacturers, the merchants, the bankers. That the idlers had lost the capacity for intellectual leadership and political supremacy had been proved and finally settled by the Revolution. That the non-possessing classes lacked this capacity seemed to Saint-Simon proved by the experiences of the Reign of Terror. Who then was to lead and command? According to Saint-Simon, science and industry, both united by a new religious bond destined to restore that unity of religious ideas which had been broken since the Reformation – a necessarily mystical and rigidly hierarchical “new Christianity”. But science was the scholars; and industry was, in the first place, the active bourgeois, manufacturers, merchants, bankers. Of course, these bourgeois were to transform themselves into public officials, into trustees of society, of a sort; but they were still to hold a commanding and even economically privileged position *vis-à-vis* the workers. 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 when large-scale industry and with it the chasm between bourgeoisie and proletariat were only just coming into existence in France. But what Saint-Simon especially lays stress on is this: what interests him first and above all other things is the lot of “the largest and poorest class” (*la classe la plus nombreuse et la plus pauvre*).]

In his *Letters from Geneva*, Saint-Simon already laid down the principle that “all men ought to work”. In the same work he also recognized that the Reign of Terror was the reign of the propertyless masses.

“See,” he calls out to them, “what happened in France at the time when your comrades held sway there; they brought about a famine.”¹⁰³

But to recognize the French Revolution as a class struggle [and not simply as one between nobility and bourgeoisie, but] between nobility, bourgeoisie, and those without any property,* was, in the year 1802, a discovery of the greatest genius. In 1816 he declared that politics was the science of production and foretold the complete absorption of politics by economics.¹⁰⁴ Although the knowledge that

* In *Socialism: Utopian and Scientific*, “and those without any property” is italicized. – Ed.

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economic conditions are the basis of political institutions appears here only in embryo, what is already very plainly expressed is the transition from political rule over men to the administration of things and the guidance of the processes of production – that is to say, the abolition of the state,* about which there has recently been so much noise. Saint-Simon showed the same superiority over his contemporaries, when in 1814, immediately after the entry of the allies into Paris, and again in 1815, during the Hundred Days' War, he proclaimed the alliance of France with England, and then of both these countries with Germany, as the only guarantee for the prosperous development and peace of Europe.¹⁰⁵ To preach an alliance with the victors of Waterloo to the French in 1815 undoubtedly required somewhat more courage than to declare a war of tittle-tattle on German professors.[†]¹⁰⁶

If in Saint-Simon we find a masterly breadth of view, by virtue of which almost all the ideas of later socialists that are not strictly economic are found in him in embryo, we find in Fourier a criticism of the existing conditions of society which, while genuinely French and witty, is none the less penetrating. Fourier takes the bourgeoisie, their inspired prophets before the Revolution and their mercenary sycophants after it, at their own word. He mercilessly lays bare the material and moral misery of the bourgeois world. He confronts it with the [earlier] philosophers' dazzling promises of a society ruled solely by reason, of a civilization yielding universal happiness, of an illimitable human perfectibility, as well as with the rose-coloured phraseology of the bourgeois ideologists of his time. He shows how everywhere the most pitiful reality corresponds with the most high-sounding phrases, and he overwhelms this hopeless fiasco of phrases with his mordant sarcasm.

Fourier is not only a critic; his eternal sprightliness makes him a satirist, and assuredly one of the greatest satirists of all time. He depicts with equal virtuosity and wit the swindling speculation that blossomed out on the downfall of the Revolution and the universal shopkeeping spirit of the French commerce of the time. Still more masterly is his criticism of the bourgeois form of the relations be-

* In *Socialism: Utopian and Scientific*, "abolition of the state" is in quotes. – Ed.

† In *Socialism: Utopian and Scientific* this passage reads: "To preach an alliance with the victors of Waterloo to the French in 1815 required as much courage as historical foresight." – Ed.

tween the sexes and of the position of woman in bourgeois society. He was the first to declare that in any given society the degree of woman's emancipation is the natural measure of the general emancipation.¹⁰⁷

But it is in his conception of the history of society that Fourier appears at his greatest. He divides its whole course thus far into four stages of development, savagery, the patriarchy, barbarism, and civilization, the last coinciding with what is now called bourgeois society [– i.e., with the social order that came in with the sixteenth century].¹⁰⁸ He proves

“that the civilized order gives every vice practised by barbarism in a simple fashion a complex, ambiguous, equivocal, hypocritical form”;

that civilization moves in “a vicious circle”, in contradictions which it constantly reproduces without being able to solve, so that it constantly attains the opposite of what it wants to achieve, or pretends it wants to achieve. So that, for example, “under civilization *poverty is born of abundance itself*“.¹⁰⁹

Fourier, as we see, handles dialectics with the same mastery as his contemporary Hegel. Using these same dialectics, he points out in opposition to the talk about illimitable human perfectibility that every historical era has its downward as well as upward phase, and he applies this way of looking at things to the future of the whole human race.¹¹⁰ Just as Kant introduced the idea of the ultimate destruction of the earth into natural science, Fourier introduced that of the ultimate destruction of the human race into historical thought.

Whilst in France the hurricane of the Revolution swept over the land, in England a quieter but on that account no less mighty upheaval was taking place. Steam and the new tool-making machinery were transforming manufacture into modern large-scale industry and thus revolutionizing the whole foundation of bourgeois society. The sluggish pace of development of the manufacturing period changed into a veritable period of storm and stress in production. The division of society into big capitalists and propertyless proletarians went on with ever-increasing rapidity; between these, instead of the former stable middle estate, an unstable mass of artisans and small shopkeepers, which constituted the most fluctuating section of the population, now led a precarious existence.

The new mode of production was still only at the beginning of its upward phase; it was still the normal [, regular] mode of production – the only possible one under existing conditions. Nevertheless, even then it was producing crying social abuses – the herding to-

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gether of a homeless population in the worst quarters of the large towns; the dissolution of all traditional bonds of descent, of patriarchal subordination, of the family; overwork, especially of women and children, on an appalling scale; massive demoralization of the working class, suddenly flung into altogether new conditions [from the country into the town, from agriculture into industry, from stable conditions of existence into insecure ones changing from day to day].

At this juncture a 29-year-old manufacturer came forward as a reformer – a man of almost sublime, child-like simplicity of character, and at the same time a born leader of men such as is rarely seen. Robert Owen had adopted the teaching of the materialist philosophers of the Enlightenment: that man's character is the product of his inherited constitution on the one hand, and of his environment during his lifetime, especially during his period of growth, on the other. In the Industrial Revolution most of his class saw only chaos and confusion, and the opportunity of fishing in troubled waters and getting rich quickly. He saw in it the opportunity of putting his favourite theory into practice, and so of bringing order out of chaos. He had already tried it out with success in Manchester, as the manager of a factory with 500 workers. From 1800 to 1829 he directed the great cotton-spinning mill of New Lanark in Scotland as managing partner, along the same lines but with greater freedom of action, and with a success which won him a European reputation. He transformed a population, which originally consisted of the most diverse and for the most part very demoralized elements and which gradually grew to 2,500, into a model colony, in which drunkenness, police, magistrates, lawsuits, poor law relief and any need for charity were unknown. All this simply by placing the people in conditions more worthy of human beings, and especially by having the rising generation carefully brought up. He was the inventor of infant schools, and first introduced them at New Lanark. From the age of two the children came to school, where they enjoyed themselves so much that they could scarcely be got home again. Whilst his competitors worked their people thirteen to fourteen hours a day, in New Lanark the working-day was only ten and a half hours. When a crisis in cotton stopped work for four months, his unemployed workers received their full wages all the time. Yet the business more than doubled in value, and to the last yielded large profits to its proprietors.

In spite of all this, Owen was not content. The existence he had contrived for his workers was, in his eyes, still far from being wor-

thy of human beings. "The people were slaves at my mercy." The relatively favourable conditions in which he had placed them were still far from allowing an all-round rational development of the character and of the intellect, much less the free exercise of all their faculties.

"And yet, the working part of this population of 2,500 persons was daily producing as much real wealth for society as, less than half a century before, it would have required the working part of a population of 600,000 to create. I asked myself, what became of the difference between the wealth consumed by 2,500 persons and that which would have been consumed by 600,000?"¹¹¹

The answer was clear. It had been used to pay the proprietors of the establishment 5 per cent on their invested capital and in addition a profit of over £300,000. And that which held for New Lanark held to a still greater extent for all the factories in England.

"If this new wealth had not been created by machinery,... the wars... in opposition to Napoleon and to support the aristocratic principles of society, could not have been maintained. And yet this new power was the creation of the working class."[*]

To the working class, therefore, the fruits belonged too. To Owen the newly created gigantic productive forces, which had hitherto served only to enrich individuals and to enslave the masses, offered the foundations for a reconstruction of society and were destined, as the common property of all, solely to work for the common good of all.

Owenite communism arose in this purely business way, as the outcome, so to speak, of commercial calculation. Throughout, it maintained this practical character. Thus, in 1823, Owen proposed the relief of the distress in Ireland by communist colonies, and drew up complete estimates of initial costs, yearly expenditure, and probable revenue.¹¹² Similarly, in his definitive plan for the future, the technical working out of details is managed with such practical knowledge [– plan, elevation and bird's-eye view all included –]

[* From "The Revolution in the Mind and Practice of the Human Race", a memorial addressed to all the "red Republicans, Communists and Socialists of Europe", and sent to the provisional government of France, 1848, and also "to Queen Victoria and her responsible advisers".] [*Note by Engels.*]

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that, once the Owenite method of social reform is accepted, there is little to be said against the actual arrangement of details even from a specialist's point of view.

His advance in the direction of communism was the turning-point in Owen's life. As long as he was simply a philanthropist, he was rewarded with nothing but wealth, applause, honour, and glory. He was the most popular man in Europe. Not only men of his own class, but statesmen and princes listened to him approvingly. But when he came out with his communist theories, it was quite a different story. Three great obstacles seemed to him especially to block the path to social reform, private property, religion, and marriage in its present form. He knew what confronted him if he attacked them – universal ostracism by official society and the loss of his whole social standing. But nothing of this prevented him from attacking them without fear of the consequences, and what he had foreseen came to pass. Banished from official society, with a conspiracy of silence against him in the press, and ruined by his unsuccessful communist experiments in America in which he sacrificed all his fortune, he turned directly to the working class and continued working in their midst for thirty years. Every social movement, every real advance in England on behalf of the workers is linked with Owen's name. Thus in 1819, after five years' effort, he pushed through the first law limiting the labour of women and children in factories.¹¹³ He presided over the first congress at which all the Trade Unions of England united in a single great trade union association.¹¹⁴ He introduced as transition measures to the complete communist organization of society, on the one hand, co-operative societies (both consumers' and producers'), which have since at least given practical proof that the merchant and the manufacturer are quite superfluous personages. On the other hand, he introduced labour bazaars for the exchange of the products of labour through the medium of labour-notes with the labour-hour as the unit; institutions necessarily doomed to failure, but completely anticipating the much later Proudhon exchange bank, and differing only from the latter in that they did not claim to be the panacea for all social ills, but just a first step towards a much more radical transformation of society.¹¹⁵

These are the men on whom the sovereign Herr Dühring looks down from the height of his "final and ultimate truth", with a contempt of which we have given a few examples in the "Introduc-

tion”.* In one respect at least this contempt is not without sufficient reason: for its basis is, in essence, a really frightful ignorance of the works of the three Utopians. Thus Herr Dühring says of Saint-Simon

“his basic idea was essentially correct, and apart from a few one-sided aspects, provides the guiding impulse towards real changes even today”.

But although Herr Dühring does actually seem to have had some of Saint-Simon’s works in his hands, our search through the twenty-seven relevant pages of print for Saint-Simon’s “basic idea” is just as fruitless as our earlier search for what Quesnay’s *Tableau* “meant in Quesnay himself”, and in the end we have to allow ourselves to be put off with the phrase

“that imagination and philanthropic fervour... together with the extravagant fantasy that goes with it dominated the whole of Saint-Simon’s intellectual horizon”!

As for Fourier, all Herr Dühring knows or takes into account is his fantasies of the future, painted in romantic detail. This of course “is far more important” for establishing Herr Dühring’s infinite superiority to Fourier than an examination of how the latter “*occasionally* attempts to criticize actual conditions”. Occasionally! In fact, almost every page of his works scintillates with sparkling satire and criticism aimed at the wretchedness of our vaunted civilization. It is like saying that Herr Dühring only “occasionally” declares Herr Dühring to be the greatest thinker of all time. As far as the twelve pages devoted to Robert Owen are concerned, Herr Dühring has absolutely no other source than the miserable biography of the philistine Sargant, who likewise did not know Owen’s most important works – on marriage and the communist system.¹¹⁶ Herr Dühring can therefore go the length of boldly asserting that we should not “assume any clear-cut communism” in Owen. Had Herr Dühring ever even fingered Owen’s *Book of the New Moral World*, he would most assuredly have found clearly expressed in it not only the most clear-cut communism, with equal obligation to labour and equal rights in the product – equal according to age, as Owen always adds – but also the complete elaboration of the architecture of the future communist community, with its plan, elevation and bird’s-eye view.

* See pp. 29-31 above. – Ed.

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But if one limits one's "first-hand study of the actual writings of the representatives of socialist systems of thought" to a knowledge of the titles and at most the *epigraphs* of a few of these works, as Herr Dühring does here, there is obviously nothing else left but to make such a stupid and purely fanciful assertion. Owen not only preached "clear-cut communism"; for five years (at the end of the thirties and beginning of the forties) he put it into practice in the Harmony Hall Colony in Hampshire, the clear-cut quality of whose communism left nothing to be desired.¹¹⁷ I myself was acquainted with several former members of this communist model experiment. But Sargant knew absolutely nothing of all this or of any of Owen's activities between 1836 and 1850, and so Herr Dühring's "more profound historical work", too, is left in pitch-black ignorance. Herr Dühring calls Owen "in every respect a veritable monster of importunate philanthropy". But when this same Herr Dühring starts to give us information about the contents of books whose titles and epigraphs he hardly knows, we must on no account say that he is "in every respect a veritable monster of importunate ignorance", for on *our* lips this would certainly be "abuse".

The Utopians, we saw, were Utopians because they could be nothing else at a time when capitalist production was as yet so little developed. They necessarily had to construct the elements of a new society out of their own heads, because these elements were not as yet generally apparent within the old society; for the basic plan of the new edifice they could only appeal to reason, just because they could not as yet appeal to contemporary history. But when now, almost eighty years after their time, Herr Dühring steps on to the stage and puts forward his claim to an "authoritative" system for a new social order – not one evolved out of the historically developed material at his disposal, as its necessary result – oh, no! – but constructed in his sovereign head, in his mind pregnant with ultimate truths – then he, who scents epigoni everywhere, is himself nothing but the epigone of the Utopians, the latest Utopian. He calls the great Utopians "social alchemists". That may be so. Alchemy was necessary in its epoch. But since that time large-scale industry has developed the contradictions lying dormant in the capitalist mode of production into such crying antagonisms that the approaching collapse of this mode of production is, so to speak, palpable; that the new productive forces themselves can only be maintained and further developed by the introduction of a new mode of production corresponding to their present stage of development; that the struggle between the two classes engendered by the hitherto prevailing

mode of production and constantly reproduced in ever sharper antagonism has gripped all civilized countries and is daily becoming more violent; and that this historical chain of connections, the conditions of the social transformation which it makes necessary, and the basic features of this transformation likewise determined by it have already been apprehended. And if Herr Dühring now manufactures a new utopian social order not from the economic material at his disposal but from His Highness's numskull, not only is he practising "social alchemy". Rather is he acting like a person who, after the discovery and establishment of the laws of modern chemistry, attempts to restore the old alchemy and to use atomic weights, molecular formulas, the valency of atoms, crystallography and spectral analysis for the sole purpose of discovering – the *philosopher's stone*.

II

THEORETICAL

The materialist conception of history starts from the principle that production and, next to production, the exchange of things produced, is the basis of every social order; that in every society that has appeared in history, the distribution of wealth and with it the division of society into classes or estates are dependent upon what is produced, how it is produced, and how the products are exchanged. Accordingly, the ultimate causes of all social changes and political revolutions are to be sought, not in men's brains, not in their growing insight into eternal truth and justice, but in changes in the modes of production and exchange. They are to be sought, not in the *philosophy*, but in the *economics* of each particular epoch. The growing recognition that existing social institutions are irrational and unjust, that reason has become unreason, and kindness a scourge, is only a sign that changes in the modes of production and exchange have silently been taking place with which the social order adapted to earlier economic conditions is no longer in keeping. From this it also follows that the means of eliminating the abuses that have been brought to light must also be present, in a more or less developed condition, within the changed relations of production themselves. These means are not to be *invented* out of one's brain, but *discovered* by the brain in the existing material facts of production.

Where, then, does modern socialism stand?

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It is now pretty generally conceded that the existing social order is the creation of the ruling class of today, of the bourgeoisie. The mode of production peculiar to the bourgeoisie, which since Marx has been called the capitalist mode of production, was incompatible with the local privileges and the privileges of estate as well as with the reciprocal personal ties of the feudal system. The bourgeoisie shattered the feudal system and on its ruins built the bourgeois social order, the realm of free competition, of freedom of movement, of equal rights for commodity owners and all the glories of capitalism. The capitalist mode of production could now develop freely. Since steam and the new tool making machinery transformed the older manufacture into large-scale industry, the productive forces evolved under the guidance of the bourgeoisie developed with a rapidity and on a scale unheard of before. But just as manufacture and the handicraft industries, which had experienced a further growth under its influence, had come into conflict with the feudal trammels of the guilds in their time, so large-scale industry, in its more complete development, now comes into conflict with the barriers within which the capitalistic mode of production holds it confined. The new productive forces have already outgrown the bourgeois form of using them; and this conflict between productive forces and mode of production is not a conflict engendered in men's heads, like that between original sin and divine justice, but it exists in the facts, objectively, outside us, independently of the will and even actions of the men who have brought it on. Modern socialism is nothing but the reflex in thought of this actual conflict, its ideal reflection in the minds of above all the class directly suffering under it, the working class.

Now, in what does this conflict consist?

Prior to capitalist production, i.e., in the Middle Ages, small-scale production generally prevailed, based upon the workers' private ownership of their means of production: the agriculture of the small peasant, freeman or serf, and the handicrafts in the towns. The instruments of labour – land, agricultural implements, the workshop, the hand tool – were the instruments of labour of single individuals, adapted for individual use, and, therefore, of necessity puny, dwarfish, circumscribed. But for this very reason they normally belonged to the producer himself. To concentrate these scattered, limited means of production, to enlarge them, to turn them into the powerful levers of production of the present day was precisely the historic role of the capitalist mode of production and of its upholder, the bourgeoisie. In Part IV of *Capital* Marx gives a detailed account

of how the bourgeoisie has historically accomplished this since the fifteenth century through the three phases of simple co-operation, manufacture and large-scale industry. But as is also shown there, the bourgeoisie could not transform these limited means of production into mighty productive forces without at the same time transforming them from individual means of production into *social* means of production only workable by *a collectivity of men*. The spinning wheel, the hand-loom and the blacksmith's hammer were replaced by the spinning machine, the power loom and the steam hammer, and the individual workshop by the factory commanding the co-operation of hundreds and thousands of workmen. Like the means of production, production itself changed from a series of individual operations into a series of social acts, and the products from individual into social products. The yarn, the cloth and the metal goods that now came out of the factory were the common product of many workers, through whose hands they had successively to pass before they were ready. No one person could say of them: "I made that, this is *my* product."

But where the spontaneous division of labour within society [a division of labour which arose gradually and planlessly] is the fundamental form of production, it imprints on the products the form of *commodities*, the mutual exchange, purchase and sale of which enable the individual producers to satisfy their manifold wants. This was the case in the Middle Ages. The peasant, for example, sold the artisan agricultural products and bought from him the products of his craft. The new mode of production infiltrated this society of individual producers, of commodity producers. It set up the *planned* division of labour, as it was organized in the individual factory, in the midst of the spontaneous, *planless* division of labour such as then prevailed throughout society; side by side with *individual* production, *social* production made its appearance. The products of both were sold in the same market, and, consequently, at the same prices, at least approximately. But planned organization was stronger than the spontaneous division of labour; the factories working socially produced their commodities more cheaply than the isolated small producers. Individual production succumbed in one field after another. Social production totally revolutionized the old mode of production. But this, its revolutionary, character was so little recognized that it was, on the contrary, introduced as a means of increasing and promoting commodity production. In its origin, it was directly tied up with certain already existing levers of commodity production and exchange: merchant's capital, handicrafts, wage-

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labour. Since social production itself appeared as a new form of commodity production, the old forms of appropriation characteristic of commodity production remained in full force for it too.

In commodity production as it had developed in the Middle Ages, any question concerning the identity of the owner of the product of labour just couldn't arise. The individual producer had generally produced it from his own raw material, which was often his own handiwork, with his own instruments of labour, and by his own or his family's manual labour. There was no need whatever for him to appropriate the product to begin with, it belonged to him wholly as a matter of course. His ownership of the product was therefore based *upon his own labour*. Even where outside help was used, it was generally of little importance, and often received other compensation in addition to wages; the guild apprentice and journeyman worked less for board and wages than for training to become master craftsmen themselves.

Then came the concentration of the means of production in large workshops and manufactories, their transformation into actual social means of production. But the social means of production and products were treated as if they were still the means of production and the products of individuals they had been before. Hitherto, the owner of the instruments of labour had appropriated the product, because it was normally his own product and the auxiliary labour of others was the exception. Now the owner of the instruments of labour continued to appropriate the product, although it was no longer *his* product, but exclusively the product of the *labour of others*. Thus, the products which were now turned out socially were not appropriated by those who had actually set the means of production in motion and actually turned out the products, but by the *capitalists*. The means of production and production itself have become social in essence. But they are subjected to a form of appropriation which presupposes private production by individuals, and under which, therefore, everyone owns his own product and brings it to market. The mode of production is subjected to this form of appropriation, although it removes the presupposition on which the latter rests.* *The whole conflict of today is already present in embryo in*

* There is no need to explain here that, even if the *form* of appropriation remains the same, the *character* of the appropriation is just as much revolutionized as production by the process described above. Of course two very different kinds of appropriation are involved in whether I ap-

this contradiction which gives the new mode of production its capitalist character. The more the new mode of production became dominant in all decisive fields of production and in all economically decisive countries, and the more it reduced individual production to an insignificant residue, *the more glaring did the incompatibility of social production with capitalist appropriation necessarily become.*

As we have said, the first capitalists found the form of wage-labour already in existence. But wage-labour as the exception, as a side-occupation, as an auxiliary, as a transitory phase. The agricultural labourer who occasionally went to work as a day labourer had a few acres of his own land, from which alone he could get his living in a pinch. The regulations of the guilds ensured that the journeyman of today became the master-craftsman of tomorrow. But this changed as soon as the means of production became social and were concentrated in the hands of capitalists. Both the means of production and the products of the small individual producer increasingly depreciated in value; there was nothing left for him to do but to go to the capitalist and work for wages. From being an exception and an auxiliary, wage-labour became the rule and the basic form of all production; from being a side-occupation, it now became the worker's exclusive activity. The occasional wage-worker was transformed into the wage-worker for life. Furthermore, the number of lifelong wage-workers was enormously increased by the simultaneous collapse of the feudal system, the disbanding of the feudal lords' retainers, the eviction of peasants from their homesteads, etc. The separation of the means of production concentrated in the hands of the capitalists, on the one side, from the producers now possessing nothing but their labour-power, on the other, was accomplished. *The contradiction between social production and capitalist appropriation became manifest as the antagonism between proletariat and bourgeoisie.*

We have seen that the capitalist mode of production infiltrated a society of commodity producers, individual producers, whose social

appropriate my own product or that of another person. It may be noted in passing that wage-labour, in which the whole capitalist mode of production is to be already found in embryo, is very ancient; in a sporadic, scattered form it existed for centuries alongside slave-labour. But the embryo could develop into the capitalist mode of production only when the necessary historical preconditions had been established. [Note by Engels.]

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nexus was mediated through the exchange of their products. But every society based on commodity production has the peculiarity that the producers in it have lost command over their own social relations. Each produces for himself with the means of production which happen to be at his disposal and in order to satisfy his individual needs through exchange. No one knows how much of the article he produces is coming onto the market or how much will be wanted, no one knows whether his individual product will meet a real need, whether he will cover his costs or even be able to sell it at all. Anarchy of social production prevails. But like all other forms of production commodity production has its own peculiar laws, which are inherent in and inseparable from it; and these laws assert themselves despite anarchy, in and through anarchy. They are manifested in the only persistent form of the social nexus, in exchange, and impose themselves on the individual producers as compulsory laws of competition. At first, therefore, they are unknown to these producers themselves and have to be discovered by them gradually, only through long experience. Thus they assert themselves without the producers and against the producers, as the natural laws of their form of production, working blindly. The product dominates the producers.

In mediaeval society, especially in the earlier centuries, production was essentially for the producer's own use. In the main it only satisfied the wants of the producer and his family. Where personal relations of dependence existed as in the countryside, it also contributed towards satisfying the wants of the feudal lord. No exchange was involved here, and consequently the products did not assume the character of commodities. The peasant family produced almost everything it required – utensils and clothing as well as food. It was only when it succeeded in producing a surplus beyond its own wants and the payments in kind due to the feudal lord – it was only at this stage that it also produced commodities; this surplus thrown into social exchange and offered for sale became a commodity. The town artisans, it is true, had to produce for exchange from the very beginning. But they too covered the greatest part of their own wants themselves; they had gardens and small fields; they sent their cattle out into the communal woodland, which also provided them with timber and firewood; the women spun flax, wool, etc. Production for the purpose of exchange, the production of commodities, was only just coming into being. Hence, restricted exchange, restricted market, stable mode of production, local isolation from

the outside world, and local unity within: the Mark¹¹⁸ in the countryside, the guild in the town.

But with the extension of commodity production and especially with the emergence of the capitalist mode of production, the previously dormant laws of commodity production began to operate more openly and more potently. The old bonds were loosened, the old dividing barriers were broken through, the producers were more and more transformed into independent, isolated producers of commodities. The anarchy of social production became obvious and was carried to further and further extremes. But the chief means by which the capitalist mode of production accentuated this anarchy in social production was the exact opposite of anarchy – the increasing organization of production as social production in each individual productive establishment. With this lever it put an end to the old peaceful stability. In whatever branch of industry it was introduced, it suffered no older method of operation alongside it; wherever it laid hold of a handicraft, it wiped the old handicraft out. The field of labour became a field of battle. The great geographical discoveries and the colonization which followed on them multiplied markets and hastened the transformation of handicraft into manufacture. The struggle broke out not only between the individual local producers; in turn the local struggles grew into national struggles, the commercial wars of the seventeenth and eighteenth centuries.¹¹⁹ Finally, large-scale industry and the creation of the world market have made the struggle universal and at the same time given it an unparalleled virulence. Between individual capitalists, as between whole industries and whole countries, advantages in natural or artificial conditions of production decide life or death. The vanquished are relentlessly cast aside. It is the Darwinian struggle for individual existence, transferred from nature to society with a fury raised to the nth power. The brutish state of nature appears as the peak of human development. The contradiction between social production and capitalist appropriation reproduces itself as *the antagonism between the organization of production in the individual factory and the anarchy of production in society as a whole*.

The capitalist mode of production moves in these two phenomenal forms of the contradiction immanent in it by its very origin, it relentlessly describes that “vicious circle” which Fourier had already discovered. But what Fourier in his day was as yet unable to see is that this circle is gradually narrowing, that the motion is rather in the form of a spiral and must come to an end, like the motion of the planets, by collision with the centre. It is the motive force of

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the social anarchy of production which increasingly transforms the great majority of men into proletarians, and it is the proletarian masses in their turn who will ultimately put an end to the anarchy of production. It is the motive force of the social anarchy of production which transforms the infinite perfectibility of the machine in large-scale industry into a compulsory commandment for each individual industrial capitalist to make his machinery more and more perfect, under penalty of ruin.

But the perfecting of machinery means rendering human labour superfluous. If the introduction and increase of machinery meant the displacement of millions of hand workers by a few machine workers, the improvement of machinery means the displacement of larger and larger numbers of machine workers themselves, and ultimately the creation of a mass of available wage-workers exceeding the average employment needs of capital, a complete industrial reserve army, as I called it as long ago as 1845,* an army available at times when industry is working at high pressure, to be thrown out onto the streets by the inevitable ensuing crash, a constant dead weight on the feet of the working class in its struggle for existence with capital, a regulator to keep wages down to the low level which suits the needs of capital. Thus it comes about that machinery, to use Marx's phrase, becomes the most powerful weapon in the war of capital against the working class, that the instruments of labour constantly knock the means of subsistence out of the worker's hands, that the very product of the worker is turned into an instrument for his enslavement. Thus it comes about that from the very beginning economy in the instruments of labour becomes at once the most reckless squandering of labour-power and robbery committed against the normal conditions requisite for the labour function; that machinery, the most powerful means for shortening labour-time, is converted into the most unfailing means for transforming the entire span of life of the worker and his family into disposable labour-time for the purpose of expanding the value of capital.† Thus it comes about that the overwork of some becomes the precondition for the unemployment of others and that large-scale in-

* *The Condition of the Working Class in England*, p. 109. [Note by Engels, referring to the German edition]; Marx and Engels, *On Britain*, Moscow, 1953, p. 119. — Ed.

† See Marx, *Capital*, Vol. I, pp. 435-36 and 487, and pp. 408 and 462. — Ed.

dustry, which hunts the whole world over for new consumers, confines the consumption of the masses at home to a starvation minimum and thus undermines its own internal market. "The law that always equilibrates the relative surplus population, or industrial reserve army, to the extent and energy of accumulation, this law rivets the labourer to capital more firmly than the wedges of Vulcan did Prometheus to the rock. It involves an accumulation of misery corresponding to the accumulation of capital. Accumulation of wealth at one pole is, therefore, at the same time accumulation of misery, agony of toil, slavery, ignorance, bestialization, moral degradation, at the opposite pole, i.e., on the side of the class that *produces its own product as capital*." (Marx, *Capital*, p. 671)* To expect any other distribution of the products from the capitalist mode of production is like expecting the electrodes of a battery not to decompose water, not to develop oxygen at the positive pole and hydrogen at the negative, so long as they are connected with the battery.

We have seen how the capacity for improvement of modern machinery, which is pushed to a maximum, is transformed by the anarchy of social production into a compulsory commandment for the individual industrial capitalist constantly to improve his machinery, constantly to increase its productive power. The bare factual possibility of extending his field of production is transformed into a similar compulsory commandment for him. The enormous expansive force of large-scale industry, compared to which that of gases is mere child's play, now appears to us as a *need* for qualitative and quantitative expansion that laughs at all counteracting pressure. Such counteracting pressure is formed by consumption, by sales, by markets for the products of large-scale industry. But the capacity of the market to expand, both extensively and intensively, is primarily governed by quite different laws which operate far less energetically. The expansion of the market cannot keep pace with the expansion of production. The collision becomes inevitable, and since it can yield no solution so long as it does not burst the capitalist mode of production itself, it becomes periodic. Capitalist production generates a new "vicious circle".

In fact, since 1825, when the first general crisis erupted, the whole industrial and commercial world, production and exchange among all civilized peoples and their more or less barbarian ap-

* *Ibid.*, p. 645, translation revised, Engels' italics; see footnote, p. 122 above. — Ed.

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pendages, have broken down about once every ten years. Trade comes to a standstill, markets are glutted, products lie around in piles as massive as they are unsaleable, hard cash disappears, credit vanishes, factories are idle, the working masses lack the means of subsistence because they have produced too much of them, bankruptcy follows upon bankruptcy, forced sale upon forced sale. The stagnation lasts for years and both productive forces and products are squandered and destroyed wholesale, until the accumulated masses of commodities are finally run down at a more or less considerable depreciation and until production and exchange gradually begin to move again. By degrees the pace quickens, it becomes a trot, the industrial trot passes into a gallop, and the gallop in turn passes into the unbridled onrush of a complete industrial, commercial, credit and speculative steeple chase, only to end up again, after the most breakneck jumps – in the ditch of a crash. And so on over and over again. We have now experienced it fully five times since 1825, and at this moment (1877) we are experiencing it for the sixth time. The character of these crises is so clearly marked that Fourier hit them all off when he described the first as a *crise pléthorique*, a crisis of superabundance.

In these crises, the contradiction between social production and capitalist appropriation ends in a violent explosion. The circulation of commodities is for the moment reduced to nothing; money, the means of circulation, becomes an obstacle to circulation; all the laws of commodity production and commodity circulation are turned upside down. The economic collision has reached its culminating point: *the mode of production rebels against the mode of exchange, the productive forces rebel against the mode of production, which they have outgrown.*

The fact that the social organization of production within the factory has developed to the point at which it has become incompatible with the anarchy of production in society which exists side by side with and above it – this fact is made palpable to the capitalists themselves by the forcible concentration of capitals which takes place during crises through the ruin of many big and even more small capitalists. The whole mechanism of the capitalist mode of production breaks down under the pressure of the productive forces which it itself has created. It is no longer able to transform the whole of this mass of means of production into capital; they lie idle, and for this very reason the industrial reserve army must also lie idle. Means of production, means of subsistence, available workers, all the elements of production and of general wealth are there in

abundance. But “abundance becomes the source of distress and want” (Fourier), because it is precisely abundance that prevents the conversion of the means of production and subsistence into capital. For in capitalist society the means of production cannot begin to function unless they have first been converted into capital, into means for the exploitation of human labour-power. The necessity for the means of production and subsistence to take the character of capital stands like a ghost between them and the workers. It alone prevents the coming together of the material and personal levers of production; it alone forbids the means of production to function and the workers to work and to live. Thus on the one hand the capitalist mode of production stands convicted of its own incapacity to continue the administration of these productive forces. On the other hand, these productive forces themselves press forward with increasing power towards the abolition of the contradiction, to their deliverance from their character as capital, *towards the actual recognition of their character as social productive forces.*

It is this counterpressure of the productive forces, in their mighty upgrowth, against their character as capital, this increasingly compulsive drive for the recognition of their social nature, which forces the capitalist class itself to treat them more and more as social productive forces, as far as this is at all possible within the framework of capitalist relations. The period of industrial boom with its unlimited credit inflation no less than the crash itself operating through the collapse of large capitalist establishments, drives towards that form of the socialization of larger masses of means of production which we find in the various kinds of joint-stock companies. Many of these means of production and communication are so colossal from the outset that, like the railways, they exclude all other forms of capitalist exploitation. At a certain stage of development this form, too, no longer suffices; [the large-scale producers in one and the same branch of industry in a country unite in a “trust”, an association for the purpose of regulating production. They determine the total amount to be produced, parcel it out among themselves and thus enforce the selling price fixed beforehand. Since such trusts usually go to pieces as soon as business becomes bad, for this very reason they push towards a still more concentrated socialization. The whole branch of industry is converted into one big joint-stock company, and internal competition gives place to the internal monopoly of this one company; this happened as early as 1890 with English alkali production, which, after the fusion of all

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the forty-eight large works, is now carried on by a single company, under centralized direction, with a capital of £6 million.

In the trusts, free competition changes into monopoly and the planless production of capitalist society capitulates before the planned production of the invading socialist society. Of course, this is initially still to the benefit of the capitalists. But the exploitation becomes so palpable here that it must break down. No nation would put up with production directed by trusts, with such a barefaced exploitation of the community by a small band of coupon-clippers.

In one way or another, with trusts or without,] the state, the official representative of capitalist society, is [finally] constrained to take over the direction of production.* This necessity for conversion into state property first appears in the big communication organizations: the postal service, telegraphs and railways.

* I say *is constrained to*. For it is only when the means of production or communication have *actually* outgrown direction by joint-stock companies and therefore their nationalization has become *economically* inevitable – it is only then that this nationalization, even when carried out by the state of today, represents an economic advance, the attainment of another preliminary step towards the seizure of all the productive forces by society itself. But since Bismarck became keen on nationalizing, a certain spurious socialism has recently made its appearance – here and there even degenerating into a kind of Qunkeyism – which without more ado declares *all* nationalization, even the Bismarckian kind, to be socialistic. To be sure, if the nationalization of the tobacco trade were socialistic, Napoleon and Metternich would rank among the founders of socialism. If the Belgian state, for quite ordinary political and financial reasons, constructed its own main railway lines, if Bismarck, without any economic compulsion, nationalized the main Prussian railway lines simply in order to be better able to organize and use them in face of war, in order to train the railway officials as the government's voting cattle, and especially in order to secure a new source of revenue independent of parliamentary votes, such actions were in no sense socialistic measures, whether direct or indirect, conscious or unconscious. Otherwise, the Royal Maritime Company, the Royal Porcelain Manufacture, and even the regimental tailors in the army would be socialist institutions [or even, as was seriously proposed by a sly dog in the thirties during the reign of Frederick William III, the nationalization of the – brothels]. [*Note by Engels.*]

If the crises revealed the bourgeoisie's incapacity to continue to administer the modern productive forces, the conversion of the large production and communication establishments into joint-stock companies [trusts] and state property shows that the bourgeoisie can be dispensed with for this purpose. All the social functions of the capitalist are now conducted by salaried employees. The capitalist no longer has any social activity save the pocketing of revenues, the clipping of coupons and gambling on the Stock Exchange, where the different capitalists fleece each other of their capital. Just as at first the capitalist mode of production displaced the workers, so now it is displacing the capitalists, relegating them, just as it did the workers, to the superfluous population, although not immediately to the industrial reserve army.

But neither conversion into joint-stock companies [and trusts] nor conversion into state property deprives the productive forces of their character as capital. This is obvious in the case of joint-stock companies [and trusts]. But the modern state, too, is only the organization with which bourgeois society provides itself in order to maintain the general external conditions of the capitalist mode of production against encroachments either by the workers or by individual capitalists. The modern state, whatever its form, is an essentially capitalist machine, the state of the capitalists, the ideal aggregate capitalist. The more productive forces it takes over into its possession, the more it becomes a real aggregate capitalist, the more citizens it exploits. The workers remain wage-workers, proletarians. The capitalist relationship is not abolished, rather it is pushed to the limit. But at this limit it changes into its opposite. State ownership of the productive forces is not the solution of the conflict, but it contains within itself the formal means, the handle to the solution.

This solution can only consist in actually recognizing the social nature of the modern productive forces and in therefore bringing the mode of production, appropriation and exchange into harmony with the social character of the means of production. This can only be brought about by society's openly and straightforwardly taking possession of the productive forces, which have outgrown all guidance other than that of society itself. Thus the social character of the means of production and of the products, which today reacts against the producers themselves, periodically ruptures the mode of production and exchange, and enforces itself only as a law of nature working blindly, violently and destructively, will be quite consciously asserted by the producers, and instead of being a source of disorder

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and periodic collapse will change into the most powerful lever of production itself.

The forces operating in society work exactly like the forces of nature – blindly, violently and destructively, so long as we fail to understand them and take them into account. But once we have recognized them and understood their action, their trend and their effects, it depends solely on ourselves to increasingly subject them to our will and to attain our ends through them. This is especially true of the mighty productive forces of the present day. As long as we obstinately refuse to understand their nature and their character – and the capitalist mode of production and its defenders resist such understanding with might and main – these forces operate in spite of us and against us, dominate us, as we have shown in detail. But once their nature is grasped, they can be transformed from demoniacal masters into willing servants in the hands of the producers working in association. It is the difference between the destructive force of electricity in the lightning of a thunderstorm and the tamed electricity of the telegraph and the arc light, the difference between a conflagration and fire working in the service of man. With this treatment of the present-day productive forces according to their nature, which is now at last understood, a socially planned regulation of production in accordance with the needs of the community and of each individual takes the place of the anarchy of social production. The capitalist mode of appropriation, in which the product enslaves first the producer and then the appropriator as well, will thus be replaced by the mode of appropriation of the product based on the nature of the modern means of production themselves: on the one hand, direct social appropriation as a means of maintaining and extending production, and on the other direct individual appropriation as a means of existence and enjoyment.

By increasingly transforming the great majority of the population into proletarians, the capitalist mode of production creates the force which, under penalty of its own destruction, is compelled to accomplish this revolution. By increasingly driving towards the transformation of the vast socialized means of production into state property, it itself points the way to the accomplishment of this revolution. *The proletariat seizes state power and to begin with transforms the means of production into state property.* But it thus puts an end to itself as proletariat, it thus puts an end to all class differences and class antagonisms, and thus also to the state as state. Moving in class antagonisms, society up to now had need of the state, that is, an organization of the exploiting class at each period

for the maintenance of its external conditions of production, that is, particularly for the forcible holding down of the exploited class in the conditions of oppression (slavery, villeinage or serfdom, wage-labour) given by the existing mode of production. The state was the official representative of the whole of society, its concentration in a visible body, but it was so only in so far as it was the state of that class which in its time represented the whole of society: in antiquity, the state of the slave-owning citizens, in the Middle Ages of the feudal nobility, in our time, of the bourgeoisie. When ultimately it becomes the real representative of the whole of society, it renders itself superfluous. As soon as there is no social class to be held in subjection any longer, as soon as class domination and the struggle for individual existence based on the anarchy of production existing up to now are eliminated together with the collisions and excesses arising from them, there is nothing more to repress, nothing necessitating a special repressive force, a state. The first act in which the state really comes forward as the representative of the whole of society – the taking possession of the means of production in the name of society – is at the same time its last independent act as a state. The interference of the state power in social relations becomes superfluous in one sphere after another, and then dies away of itself. The government of persons is replaced by the administration of things and the direction of the processes of production. The state is not “abolished”, *it withers away*. It is by this that one must evaluate the phrase “a free people’s state” with respect both to its temporary agitational justification and to its ultimate scientific inadequacy, and it is by this that we must also evaluate the demand of the so called anarchists that the state should be abolished overnight.¹²⁰

Since the historical emergence of the capitalist mode of production, the seizure of all the means of production by society has often been dreamed of, by individuals as well as by whole sects, more or less vaguely as an ideal of the future. But it could only become possible, it could only become a historical necessity, when the material conditions* for its realization were present. Like every other social advance, it is becoming realizable not through the acquisition of the understanding that the existence of classes is in contradiction with justice, equality, etc., not through the mere will to abolish these classes, but through certain new economic conditions. The cleavage

* *Socialism: Utopian and Scientific* has “actual conditions” instead of “material conditions”. – Ed.

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of society into an exploiting and an exploited class, a ruling and an oppressed class, was the necessary outcome of the previous low development of production. Society is necessarily divided into classes as long as the total social labour only yields a product but slightly exceeding what is necessary for the bare existence of all, as long as labour therefore claims all or almost all the time of the great majority of the members of society. Side by side with this great majority exclusively enthralled in toil, a class freed from direct productive labour is formed which manages the general business of society: the direction of labour, affairs of state, justice, science, art, and so forth. It is therefore the law of the division of labour which lies at the root of the division into classes. However, this does not mean that this division into classes was not established by violence and robbery, by deception and fraud, or that the ruling class, once in the saddle, has ever failed to strengthen its domination at the cost of the working class and to convert its direction of society into [increased] exploitation of the masses.

But if, upon this showing, division into classes has a certain historical justification, it does so only for a given period of time, for given social conditions. It was based on the insufficiency of production; it will be swept away by the full development of the modern productive forces. In fact the abolition of social classes presupposes a level of historical development at which the existence not merely of this or that particular ruling class but of any ruling class at all, and therefore of class distinction itself, has become an anachronism, is obsolete. It therefore presupposes that the development of production has reached a level at which the appropriation of the means of production and of the products, and consequently of political supremacy and of the monopoly of education and intellectual leadership by a special social class, has become not only superfluous but also a hindrance to development economically, politically and intellectually.

This point has now been reached. Its political and intellectual bankruptcy is hardly a secret any longer to the bourgeoisie itself, and its economic bankruptcy recurs regularly every ten years. In each crisis society is suffocated beneath the weight of its own productive forces and products of which it can make no use, and stands helpless in face of the absurd contradiction that the producers have nothing to consume because consumers are lacking. The expansive force of the means of production bursts asunder the bonds imposed upon them by the capitalist mode of production. Their release from these bonds is the sole prerequisite for an unbroken, ever more rap-

idly advancing development of the productive forces, and thus of a practically unlimited growth of production itself. Nor is this all. The social appropriation of the means of production puts an end not only to the current artificial restrictions on production, but also to the positive waste and devastation of productive forces and products which are now the inevitable concomitants of production and which reach their zenith in crises. Further, it sets free for the community at large a mass of means of production and products by putting an end to the senseless luxury and extravagance of the present ruling classes and their political representatives. The possibility of securing for every member of society, through social production, an existence which is not only perfectly adequate materially and which becomes daily richer, but also guarantees him the completely free development and exercise of his physical and mental faculties – this possibility is now present for the first time, but it *is present*.*

The seizure of the means of production by society eliminates commodity production and with it the domination of the product over the producer. The anarchy within social production is replaced by consciously planned organization. The struggle for individual existence comes to an end. It is only at this point that man finally separates in a certain sense from the animal kingdom and that he passes from animal conditions of existence to really human ones. The conditions of existence environing and hitherto dominating humanity now pass under the dominion and control of humanity, which now for the first time becomes the real conscious master of nature, because and in so far as it becomes master of its own social organization. The laws of man's own social activity, which have

* A few figures may give an approximate idea of the enormous expansive force of the modern means of production even under the weight of capitalism. According to Giffen's latest estimates,¹²¹ the total wealth of Great Britain and Ireland was, in round figures:

1814 £2,200,000,000

1865 £6,100,000,000

1875 £8,500,000,000

As for the squandering of means of production and products resulting from crises, the total loss to the German iron industry alone in the last crash was estimated at 455,000,000 marks [£22,750,000] at the Second German Industrial Congress (Berlin, February 21, 1878). [*Note by Engels.*]

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hitherto confronted him as extraneous laws of nature dominating him, will then be applied by man with full knowledge and hence be dominated by him. Man's own social organization, which has hitherto confronted him as a process dictated by nature and history, now becomes a process resulting from his own voluntary action. The objective extraneous forces which have hitherto dominated history now pass under the control of man himself. It is only from this point that man will himself make his own history fully consciously, it is only from this point that the social causes he sets in motion will preponderantly and ever increasingly have the effects he wills. It is humanity's leap from the realm of necessity into the realm of freedom.

[In conclusion, let us briefly sum up the course of our development:

I. *Mediaeval Society* : Small-scale individual production. Means of production adapted to individual use, hence primitive, clumsy, petty, puny in effect. Production for immediate consumption, by the producer himself or by his feudal lord. Only where a surplus of production over this consumption occurs does this surplus get offered for sale and enter into exchange: production of commodities, therefore, only in its nascent state; but it already contains within itself, in embryo, *the anarchy in social production*.

II. *Capitalist Revolution* : Transformation of industry, at first by means of simple co-operation and manufacture. Concentration of the previously scattered means of production into large workshops, and consequently their transformation from individual into social means of production, a transformation which by and large does not affect the form of exchange. The old forms of appropriation remain in force. The *capitalist* appears: in his character as owner of the means of production he also appropriates the products and turns them into commodities. Production has become a social act; exchange and with it appropriation remain individual acts, the acts of individuals: *the social product is appropriated by the individual capitalist*. Fundamental contradiction, from which there arise all the contradictions in which present-day society moves and which large-scale industry brings to light.

A) Separation of the producer from the means of production. Condemnation of the worker to wage-labour for life. *Antagonism of proletariat and bourgeoisie*.

B) Growing prominence and increasing effectiveness of the laws governing commodity production. Unbridled competitive

struggle. *Contradiction between social organization in the individual factory and social anarchy in production as a whole.*

C) On the one side, perfecting of machinery, which competition makes a compulsory commandment for each individual manufacturer, and which is equivalent to a constantly increasing displacement of workers: *industrial reserve army*. On the other, unlimited expansion of production, likewise a compulsory law of competition for every manufacturer. On both sides, unheard-of development of the productive forces, excess of supply over demand, over-production, glutting of markets, crises every ten years, vicious circle: *here, superabundance of means of production and products – there, superabundance of workers* without employment and means of existence; but these two levers of production and of social well-being are unable to co-operate, because the capitalist form of production forbids the productive forces to function and the products to circulate unless they are first turned into capital – which their very superabundance prevents. The contradiction has grown into an absurdity: *the mode of production rebels against the form of exchange*. The bourgeoisie is convicted of incapacity to manage its own social productive forces any further.

D) Partial recognition of the social character of the productive forces imposed on the capitalists themselves. Appropriation of the large production and communication organizations, first by *joint-stock companies*, later by trusts, then by the *state*. The bourgeoisie proves itself a superfluous class; all its social functions are now performed by salaried employees.

III. *Proletarian Revolution*, solution of the contradictions: the proletariat seizes the public power and by virtue of this power transforms the social means of production, which are slipping from the hands of the bourgeoisie, into public property. By this act, the proletariat frees the means of production from their previous character as capital, and gives their social character complete freedom to assert itself. Social production according to a predetermined plan now becomes possible. The development of production makes the further existence of different social classes an anachronism. In proportion as the anarchy of social production vanishes, the political authority of the state dies away. Men, at last masters of their own mode of social organization, consequently become at the same time masters of nature, masters of themselves – free.]

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To accomplish this world-emancipating act is the historical mission of the modern proletariat. To grasp the historical conditions of this act and therefore its very nature, and thus to bring the conditions and character of its own action to the consciousness of the class that is destined to act, the class that is now oppressed – this is the task of scientific socialism, the theoretical expression of the proletarian movement.

III

PRODUCTION

After all that has been said above, the reader will not be surprised to learn that the development of the principal features of socialism described in the last chapter is not at all in accordance with Herr Dühring's views. On the contrary. He must hurl them into the abyss of the damned with all the other "bastards of historical and logical fantasy", "barren conceptions", "confused and nebulous notions", etc. For him socialism is in no way a necessary product of historical development and still less of the grossly material economic conditions of today, which are solely oriented towards getting grub. He is much better off. His socialism is a final and ultimate truth;

it is "the natural system of society", whose roots are to be found in a "universal principle of justice":

and although he cannot avoid taking notice of the existing situation if only in order to remedy it, a situation which has been created by the sinful history of the past, this must be regarded rather as a misfortune for the pure principle of justice. Herr Dühring creates his socialism, like everything else, through the medium of his famous twosome. Instead of these two puppets playing the part of master and servant as in the past, they act out the drama of equal rights for a change – and, hey presto, we are all set for Dühringian socialism.

Therefore, it goes without saying that to Herr Dühring periodical industrial crises are completely devoid of the historical significance we had to ascribe to them.

For him crises are only occasional deviations from "normalcy" and at most serve to promote "the development of a more regulated order". The "common method" of explaining crises by over-production is in no wise adequate for his "more exact conception". Of course this "may be

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permissible for specific crises in particular areas". As for example, "a swamping of the book market with works suddenly released for republication and suitable for mass sale".

At any rate Herr Dühring can go to bed with the gratifying knowledge that his immortal works will never bring on any such world disaster.

But in big crises, it is not over-production, but rather "the lagging behind of popular consumption... artificially produced under-consumption... interference with the natural growth of the *needs of the people* (!), which ultimately widen the gulf between supply and demand so critically".

And he has even the good luck to find a disciple for this theory of crisis of his.

But unfortunately the under-consumption of the masses, the restriction of the consumption of the masses to what is necessary for their subsistence and reproduction, is not a new phenomenon. It has existed as long as there have been exploiting and exploited classes. Even in those periods of history when the situation of the masses was particularly favourable, as for example in England in the fifteenth century, they under-consumed. They were very far from having their own annual total product at their disposal for consumption. Therefore, while under-consumption has been a constant feature in history for thousands of years, the general stagnation of the market which breaks out in crises as the result of excessive production is a phenomenon only of the last fifty years; and so it needs all the shallowness of Herr Dühring's vulgar economics to explain the new collision not by the *new* phenomenon of over-production but by the thousands of years old phenomenon of under-consumption. It is like a mathematician attempting to explain the variation in the ratio between two quantities, one of which is constant and the other variable, not by the variation of the variable but by the constant's remaining unchanged. The under-consumption of the masses is a necessary condition of all forms of society based on exploitation, and consequently of the capitalist form too; but it is only the capitalist form of production which brings about crises. The under-consumption of the masses is therefore a precondition of crises, and plays a role in them which has long been recognized. But it tells us just as little about the cause of present-day crises as about their previous absence.

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Herr Dühring's notions of the world market are altogether curious. We saw how, like a typical German man of letters, he seeks to explain real industrial specific crises by imaginary crises on the Leipzig book market – the storm on the ocean by the storm in a tea-cup. He also imagines that present-day entrepreneurial production must

“depend for its market mainly on *the circles of the possessing classes themselves*”;

which does not prevent him, only sixteen pages later, from presenting, in the accepted way, the iron and cotton industries as the decisive modern industries – that is, precisely the two branches of production whose products are consumed only to an infinitesimally small degree within the circles of the possessing classes and are more than any other dependent on mass consumption. Wherever we turn in Herr Dühring's works, there is nothing but empty and self-contradictory chatter. But let us take an example from the cotton industry. In the relatively small town of Oldham alone – one of a dozen towns round Manchester with fifty to a hundred thousand inhabitants engaged in the cotton industry – in this town alone, in the four years 1872 to 1875, the number of spindles spinning only Number 32 yarn increased from two and a half to five million; so that in one medium-sized English town there are as many spindles spinning one single count as in the whole cotton industry of Germany, including Alsace. The expansion in the other branches and areas of the cotton industry in England and Scotland has taken place in approximately the same proportion. In view of these facts, it requires a strong dose of deep-rooted effrontery to explain the present complete stagnation in the yarn and cloth markets by the English masses' under-consumption and not by the English cotton-mill owners' over-production.*

Enough. One does not argue with people who are so ignorant of economics that they consider the Leipzig book market a market in the modern industrial sense. Let us therefore merely note that Herr Dühring has only one more piece of information for us on the subject of crises, namely, that in crises we have nothing

* The “under-consumption” explanation of crises originated with Sismondi, and it still makes some sense in him. Rodbertus took it over from Sismondi, and Herr Dühring has in turn copied it, in his usual vulgarizing fashion, from Rodbertus. [*Note by Engels.*]

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but “the ordinary interplay of overstrain and relaxation”; that over-speculation “is not only due to the planless multiplication of private enterprises”, but “the rashness of individual entrepreneurs and private imprudence must also be reckoned among the causes giving rise to oversupply”.

What, once again, is the “cause giving rise” to this rashness and private imprudence? Precisely this very planlessness of capitalist production, which is manifested in the planless multiplication of private enterprises. And it is also an act of inordinate “rashness” to mistake the translation of an economic fact into moral reproach for the discovery of a new cause.

With this we can leave the question of crises. In the previous chapter we showed that they were necessarily engendered by the capitalist mode of production, and explained their significance as crises of this mode of production itself, as means of compelling the social revolution, and it is not necessary to say another word in reply to Herr Dühring’s superficialities on this subject. Let us pass on to his positive creations, to the “natural system of society”.

This system, which is built on a “universal principle of justice” and is therefore free from all consideration of troublesome material facts, consists of a federation of economic communes among which there is

“freedom of movement and obligatory acceptance of new members on the basis of fixed laws and administrative regulations.”

The economic commune itself is above all

“a comprehensive schematism of great import in human history” which is far superior to the “erroneous half-measures”, for example, of a certain Marx. It implies “a community of persons bound together by their publicistic right to dispose of a definite area of land and a group of productive establishments for their common activity and their common participation in the product”. The public right is “a right to the object... in the sense of a *purely publicistic relation to nature* and to productive institutions”.

We leave it to the future jurists of the economic commune to cudgel their brains as to what this means; we give it up completely. All we gather is

that it is not at all the same thing as the “corporative ownership of workers’ associations”, which would not exclude mutual competition and even the exploitation of wage-labour.

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Here he drops the remark that

the conception of a “collective ownership”, such as is also found in Marx, is, “to say the least, obscure and open to question, as this conception of the future always gives the impression that it means nothing more than corporative ownership by groups of workers”.

This is one more instance of the many “scurrilous ways” of making innuendoes so customary with Herr Dühring, “for whose vulgar nature” – to use his own words – “only the vulgar word scurvy would be quite apt”; it is just as baseless a lie as Herr Dühring’s other invention that by collective ownership Marx means “ownership which is at once both individual and social”.

In any case this much seems clear. The publicistic right of an economic commune in its instruments of labour is an exclusive property right at least as against every other economic commune as well as against society and the state.

But this right is not to empower the commune “to cut itself off... from the outside world, for as between the various economic communes there is freedom of movement and obligatory acceptance of new members on the basis of fixed laws and administrative norms... like... belonging to a political organization at the present time, or participation in the economic affairs of the community”.

There will therefore be rich and poor economic communes, and the levelling out takes place through the population crowding into the rich communes and leaving the poor ones. Thus although Herr Dühring wants to eliminate competition in products between the individual communes by means of the national organization of trade, he calmly allows competition among the producers to continue. Things are removed from the sphere of competition, but men remain subject to it.

But we are still very far from clear on the question of “publicistic right”. Two pages later Herr Dühring tells us:

The trade commune “will at first cover the politico-social area whose members constitute a single legal entity and in this character have at their disposal the whole of the land, the dwellings and productive institutions”.

So after all it is not the individual commune which has the disposal, but the whole nation. The “publicistic right”, “right to the object”, “publicistic relation to nature” and so forth is therefore not merely “at least obscure and open to question”, it is in direct contra-

diction with itself. At any rate, in so far as each individual economic commune is likewise a legal entity, it is in fact "an ownership which is at once both individual and social", and this latter "nebulous hybrid" is thus once again to be met with in Herr Dühring himself.

In any case the economic commune has instruments of labour at its disposal for the purpose of production. How is this production carried on? Judging by all Herr Dühring has told us, precisely as in the past, except that the commune takes the place of the capitalists. The most we are told is that for the first time everyone will be free to choose his occupation, and that there will be equal obligation to work.

The basic form of all production hitherto has been the division of labour, on the one hand, within society, and on the other, within each separate productive establishment. How does the Dühringian "sociality" stand on this question?

The first great division of labour in society is the separation of town and country.

According to Herr Dühring, this antagonism is "inevitable in the nature of things". But "it is on the whole dubious to regard the gulf between agriculture and industry... as unbridgeable. In fact, a certain degree of constant movement between the two already exists which promises to increase considerably in the future". Already, we learn, two industries have penetrated agriculture and rural enterprise: "in the first place, distilling, and in the second, beet-sugar manufacture.... The production of spirits is already of such importance that it is more likely to be under- than over-estimated." And "if it were possible, as a result of some inventions, for a large number of industries to grow in such a way that they would be compelled to localize their operations in the countryside in direct association with the production of raw materials", this would weaken the antithesis between town and country and "provide the broadest possible basis for the development of civilization". Moreover, "a similar result might be attained in yet another way. Apart from technical requirements, social needs are increasingly coming to the fore, and if the latter become the decisive consideration in the grouping of human activities, it will no longer be possible to neglect those advantages which ensue from a close and systematic connection between occupations in the open country and the technical operations of working up raw materials."

Now it is precisely social needs which come to the fore in the economic commune; and so won't it hasten to appropriate the above advantages of the union of agriculture and industry to the fullest

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extent? Won't Herr Dühring seize the opportunity to impart to us, with the verbosity he is so fond of, his "more exact conceptions" concerning the economic commune's attitude to this question? The reader who expected this would be sadly duped. The old threadbare, embarrassed commonplaces, once again revolving in the orbit of the schnapps-distilling and the beet-sugar manufacturing jurisdiction of the Prussian *Landrecht*, are the sum total of what Herr Dühring has to say about the antithesis between town and country in the present and in the future.

Let us pass on to the division of labour in detail. Here Herr Dühring is already a little "more exact". He speaks of

"a person who has to devote himself *exclusively* to *one* kind of occupation". If the point at issue is the introduction of a new branch of production, the problem simply hinges on whether a certain number of *persons*, who are to *devote themselves to the production of one single article*, can somehow be provided with the consumption (!) they require. In the socialitarian system no branch of production would "*require many people* ", and there, too, there would be "*economic species* " of men "distinguished by their way of life".

Accordingly, within the sphere of production everything remains much the same as before. To be sure, an "erroneous division of labour" has obtained in society so far; but as to what this is and by what it is to be replaced in the economic commune, we are only told:

"With regard to the division of labour itself, we have already said above that this question can be considered settled as soon as account is taken of the various natural aptitudes and personal capabilities."

In addition to capabilities, personal inclination is taken into account:

"The attractiveness of rising to activities which call additional capabilities and training into play would depend exclusively on the inclination felt for the occupation in question and on the joy produced in the exercise of *precisely this and no other thing* " (exercise of a thing!).

This will stimulate competition within the socialitarian system, so that

"production itself will become interesting, and the dull pursuit of it, which sees in it nothing but a means of gain, will no longer put its heavy imprint on conditions".

In every society in which production has developed spontaneously – and our present society is of this type – it is not the producers who dominate the means of production, but the means of production which dominate the producers. In such a society each new lever of production is necessarily transformed into a new means for the enslavement of the producers by the means of production. This is above all true of that lever of production which, prior to the introduction of large-scale industry, was far the most powerful – the division of labour. The very first great division of labour, the separation of town and country, condemned the rural population to thousands of years of mental torpor and the townspeople each to subjection to his own individual trade. It destroyed the basis of the intellectual development of the former and of the physical development of the latter. When the peasant appropriates his land and the townsman his trade, his land appropriates the peasant and his trade the townsman to just the same extent. When labour is divided, man is also divided. All other physical and mental faculties are sacrificed to the development of one single activity. This stunting of man grows in the same measure as the division of labour, which attains its highest development in manufacture. Manufacture splits up each trade into its separate partial operations, allots each of these to an individual worker as his life calling, and thus chains him for life to a particular detail function and a particular tool. “It converts the labourer into a crippled monstrosity, by forcing his detail dexterity at the expense of a world of productive capabilities and instincts.... The individual himself is made the automatic motor of a fractional operation” (Marx)* – a motor which in many cases is perfected only by literally crippling the labourer physically and mentally. The machinery of large-scale industry degrades the worker from a machine to the mere appendage of a machine. “The lifelong speciality of handling one detail-tool now becomes the lifelong speciality of serving one detail-machine. Machinery is put to a wrong use, with the object of transforming the workman from his very childhood into a detail of a detail-machine” (Marx).† And not only the workers, but also the classes directly or indirectly exploiting the workers are enslaved by the instrument of their activity through the division of labour; the empty-minded bourgeois by his own capital and his own mania for profit, the lawyer by his ossified legal conceptions,

* *Capital*, Vol. I, p. 360. – Ed.

† *Ibid.*, p. 422, translation revised. – Ed.

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which dominate him as an independent power; the “educated classes” in general by their manifold manifestations of parochial narrow-mindedness and one-sidedness, by their own physical and mental myopia, by their mutilation as a result of an education tailored to their speciality and of their being chained for life to this speciality alone – even when this speciality is just doing nothing.

The Utopians were already perfectly clear about the effects of the division of labour, about the stunting of the worker on the one hand and of working activity itself on the other, an activity which is restricted to the lifelong, uniform, mechanical repetition of one and the same operation. The abolition of the antithesis between town and country was demanded both by Fourier and by Owen as the first prerequisite for the abolition of the old division of labour in general. Both held that the population should be scattered through the country in groups of sixteen hundred to three thousand; each group was to occupy a gigantic palace run as a communal household in the centre of its area of land. It is true that Fourier occasionally refers to towns, but they were to consist in turn of only four or five such palaces situated near each other. Both would have each member of society participating in agriculture as well as in industry; with Fourier, the latter covers handicrafts and manufacture, while Owen already assigns the main role to large-scale industry and already demands the introduction of steam-power and machinery into household work. But within agriculture as well as industry both of them demand the greatest possible variety of occupations for each individual and accordingly the training of the youth for the maximum all-round technical activity. They both consider that man should develop in a universal way through universal practical activity and that work should recover the lure and charm of which the division of labour has deprived it, in the first place through this variety and through the corresponding shortness of the “sitting” – to use Fourier’s expression¹²² – devoted to each particular kind of work. Both Fourier and Owen are far in advance of the exploiting classes’ way of thinking inherited by Herr Dühring, according to which the antithesis between town and country is inevitable in the nature of things, which is steeped in the prejudice that a number of “persons” must under all circumstances be condemned to the production of a *single* article, and which would perpetuate the different “economic species” of men distinguished by their way of life – people who take pleasure in the performance of precisely this and no other thing and so have sunk so low that they *rejoice* in their own enslavement and one-sidedness. Matched against the basic ideas of even the most

reckless fantasies of that “idiot” Fourier or against the paltriest ideas of that “crude, flabby and paltry” Owen, Herr Dühring is no more than an impudent dwarf still abjectly enslaved by the division of labour.

By making itself the master of all the means of production in order to use them in a socially planned way, society puts an end to the former enslavement of men by their own means of production. It goes without saying that society cannot free itself unless each individual is freed. The old mode of production must therefore be revolutionized from the bottom up, and above all the old division of labour must disappear. Its place must be taken by an organization of production in which, on the one hand, no individual can throw on the shoulders of others his share in productive work, this natural condition of human existence; and in which, on the other hand, productive work will become the instrument emancipating men instead of the instrument enslaving them, offering each individual the opportunity to develop all his faculties, physical and mental, in all directions and exercise them to the full, and in which, therefore, productive work will become a delight instead of a blight.

Today this is no longer a fantasy, no longer a pious wish. With the present development of the productive forces, the increase in production given by the very fact of their socialization and by the abolition of the barriers and disturbances and of the waste of products and means of production all resulting from the capitalist mode of production, will already suffice, given general participation in labour, to reduce the time needed for work to a point which will be small indeed in the light of our present conceptions.

Nor is the abolition of the old division of labour a demand only to be carried through at the expense of the productivity of labour. On the contrary. Thanks to large-scale industry, it has become a condition of production itself. “The employment of machinery does away with the necessity of consolidating this distribution after the manner of manufacture by the constant annexation of the same worker to the same function. Since the whole motion of the factory proceeds not from the workers but from the machinery, a constant change of persons can take place without an interruption of the work process.... Lastly, the quickness with which machine-work is learnt by young people does away with the necessity of bringing up a special class of workers exclusively for work with machinery.”*

* *Capital*, Vol. I, p. 421, translation revised. – Ed.

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But while the capitalist mode of employing machinery necessarily perpetuates the old division of labour with its ossified specialization, although it has become superfluous from a technical standpoint, the machinery itself rebels against this anachronism. The technical basis of large-scale industry is revolutionary. "By means of machinery, chemical processes and other methods, it is continually transforming the worker's functions and the social combinations of the work process together with the technical basis of production. Therefore, it also revolutionizes the division of labour within society and incessantly hurls masses of capital and of work-people from one branch of production to another. By its very nature, modern industry consequently necessitates change of work, fluidity of function, universal mobility on the part of the worker.... We have seen how this absolute contradiction... vents its rage... in an uninterrupted sacrificial feast at the expense of the working class, in the most reckless squandering of labour-power, and in the ravages of social anarchy. This is the negative side. But if change of work at present imposes itself as an overpowering natural law and with the blindly destructive action of such a law meeting resistance at all points, large-scale industry itself through its catastrophes raises as a question of life and death not only the recognition of change of work and consequently of the worker's maximum versatility as a general social law of production, but also the adaptation of the relations of production to the normal functioning of this law. Indeed, large-scale industry raises as a question of life and death not only the replacement of the horror of a miserable disposable population of workers, kept in reserve for the fluctuating exploitative needs of capital, by the absolute availability of human beings for the changing needs of work, but also the replacement of the detail-worker, the mere embodiment of a detail social function, by the fully developed individual, for whom different social functions are but so many modes of activity giving place to each other."*

Large-scale industry has to a considerable extent freed industrial production from restrictions of locality by teaching us to convert the movement of molecules, which is more or less universally feasible, into the movement of masses for technical purposes. Water-power was local; steam-power is free. While water-power is necessarily rural, steam-power is by no means necessarily urban. It is its capitalist mode of utilization which concentrates it preponderantly

* *Capital*, Vol. I, pp. 486-88, translation drastically revised. — Ed.

in the towns and changes factory villages into factory towns. But in doing so it at the same time undermines the conditions under which it operates. The first requirement of the steam-engine, and a main requirement of almost all branches of production in large-scale industry, is relatively clean water. But the factory town transforms all water into stinking liquid manure. However much therefore urban concentration is a basic condition of capitalist production, each individual industrial capitalist is constantly striving to get away from the large towns necessarily created by this concentration and to transfer his plant to the countryside. This process can be studied in detail in the textile industry districts of Lancashire and Yorkshire; large-scale capitalist industry is constantly bringing new large towns into being there by constant flight from the towns into the country. The situation is similar in the metal industry districts where partially different causes produce the same effects.

Once more, only the abolition of the capitalist character of modern industry can abolish this new vicious circle, this contradiction in modern industry which is constantly reproducing itself. Only a society which enables its productive forces to mesh harmoniously on the basis of one single vast plan can allow industry to be dispersed over the whole country in the way best adapted to its own development and to the maintenance and development of the other elements of production.

Accordingly, the abolition of the antithesis between town and country is not merely possible. It has become a direct necessity of industrial production itself, just as it has become a necessity of agricultural production and of public health to boot. Only the fusion of town and country can eliminate the present poisoning of air, water and land, only such fusion will change the situation of the masses now languishing in the towns, and enable their excrement to be used for the production of plants instead of for the production of disease.

Capitalist industry has already made itself relatively independent of the local limitations of production at the places of origin of its raw materials. In the main the textile industry works up imported raw materials. Spanish iron ore is worked up in England and Germany, and Spanish and South American copper ores in England. Every coal-field now supplies fuel to an industrial area beyond its own borders, an area which is widening every year. Along the whole of the European coast steam-engines are driven by English and to some extent by German and Belgian coal. Society liberated from the barriers of capitalist production can go much further still. By generating a race of producers with an all-round training who

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understand the scientific basis of the totality of industrial production and each of whom has had practical experience in a whole series of branches of production from start to finish, this society will create a new productive force which will abundantly compensate for the labour required to transport raw materials and fuel from great distances.

The abolition of the separation of town and country is therefore not utopian in so far as it is conditioned on the most equal distribution possible of large-scale industry over the whole country. It is true that civilization has bequeathed us a heritage in the form of large towns which it will take much time and trouble to eliminate. But they must and will be eliminated, however protracted a process it may be. Whatever destiny may be in store for the German Empire of the Prussian nation, Bismarck can go to his grave proudly aware that his heart's desire, the end of the large town, is sure to be fulfilled.

Now see how puerile Herr Dühring's notions are – as though society could take possession of the totality of the means of production without revolutionizing the old mode of production from the bottom up and above all without abolishing the old division of labour; as though everything would be in order once “natural aptitudes and personal capabilities are taken into account” – so that as in the past large numbers of people would remain subjected to the production of *a single* article, whole “populations” would be engaged in a single branch of production, and as in the past humanity would continue to be divided into a number of different crippled “economic species”, for there would still be “porters” and “architects”. Society is to become master of the means of production as a whole in order that each individual may remain the slave of his means of production and have only the choice of *which* means of production is to enslave him. See too how Herr Dühring considers the separation of town and country as “inevitable in the nature of things”, and can find only a tiny palliative in schnapps-distilling and beet-sugar manufacturing – two branches of industry which are specifically Prussian in their conjunction; how he makes the dispersal of industry over the country dependent on certain future discoveries and on the compelling *necessity* of associating industry directly with the extraction of raw materials, raw materials which are already used at an ever increasing distance from their place of origin! Finally Herr Dühring tries to cover his retreat by assuring us that in the long run social wants will achieve the union between agriculture

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and industry *despite* economic considerations, as if this would entail some economic sacrifice!

Certainly, it is necessary to have a somewhat wider horizon than the jurisdiction of the Prussian *Landrecht*, than the country in which the production of schnapps and beet-sugar are the key industries and commercial crises can be studied on the book market, in order to see that the revolutionary elements, which will do away with the old division of labour together with the separation of town and country and will revolutionize the whole of production, that these elements are already contained in embryo in the conditions of production of modern large-scale industry and that their development is hindered by the existing capitalist mode of production. For this it is necessary to have some knowledge of real large-scale industry in its past and in its present actual form, especially in the one country where it has its home and where alone it has attained its classical development. Then no one will think of attempting to vulgarize modern scientific socialism and to degrade it into Herr Dühring's *specifically Prussia socialism*.

IV

DISTRIBUTION

We have already seen that Dühringian economics comes down to the following proposition: the capitalist mode of *production* is quite good and can remain in existence, but the capitalist mode of *distribution* is evil and must disappear.* We now find that Herr Dühring's "socialitarian" system is nothing more than the application of this principle in fantasy. In fact, it turned out that Herr Dühring has practically nothing to take exception to in the mode of production – as such – of capitalist society, that he wants to retain the old division of labour in all its essentials, and that he consequently has hardly a word to say in regard to production within his economic commune. Production is indeed a sphere in which sturdy facts are dealt with and in which, consequently, "rational fantasy" should give but little scope to the winged soaring of its free soul, because the risk of disgrace is too great. It is quite otherwise with distribution, which in Herr Dühring's view has no connection whatever with production and is determined not by production but by a

* See p. 184 above. – Ed.

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pure act of the will – distribution is the predestined field of his “social alchemy”.

To the equal obligation to produce there corresponds the equal right to consume, exercised in an organized way in the economic commune and in the trading commune embracing a large number of economic communes. Here “labour... is exchanged for other labour on the basis of equal valuation.... Here service and counter-service represent real equality between quantities of labour.” This “equalization of human energies” applies “whether the individuals have in fact done more or less, or perhaps *even nothing at all*”, for all activities, in so far as they involve time and energy – therefore even playing bowls or going for a walk – can be regarded as labour performed. But this exchange does not take place between individuals, as the community is the owner of all means of production and consequently of all products; on the one hand, it takes place between each economic commune and its individual members and, on the other, between the various economic and trading communes themselves. “The individual economic communes in particular will replace retail trade within their own areas by completely planned sales.” Wholesale trade will be organized on the same lines: “The system of the free economic society... consequently remains a vast exchange institution whose operations are carried out on the monetary basis provided by the precious metals. It is insight into the inevitable necessity of this fundamental property which distinguishes our scheme from all those nebulous notions which cling even to the most rational forms of current socialist ideals.”

For the purpose of this exchange, the economic commune, as the first appropriator of the social products, has to determine “a uniform price for each type of article”, based on the average costs of production. “The significance which the so-called costs of production have for value and price today will be provided” (in the socialitarian system) “by the estimates of the quantity of labour to be employed. By virtue of the principle of equal rights for each individual applying in the economic sphere too, these estimates can, in the last analysis, be traced back to consideration of the number of participants; they will give the relation of prices corresponding both to the natural relations of production and to the social right of realization of value. The output of the precious metals will continue, as now, to determine the value of money.... It can be seen from this not only that the basis of the determination and the measure of value and thus the exchange relations between products are not lost in the changed constitution of society but that they are properly won for the first time,”

The famous “absolute value” is finally realized.

But on the other hand, the commune must also put its individual members in a position to buy from it the articles produced, by paying to each, in compensation for his labour, a certain sum of money, daily, weekly or monthly, but necessarily the same for all. “From the socialistic standpoint it is consequently a matter of indifference whether we say that wages must disappear, or that they must become the exclusive form of economic income.” Now equal wages and equal prices establish “quantitative, if not qualitative, equality of consumption”, and thus the “universal principle of justice” is realized in the economic sphere.

As to how the level of these wages of the future is to be determined, Herr Dühring tells us only

that here too, as in all other cases, there will be an exchange of “equal labour for equal labour”. For six hours of labour, therefore, a sum of money will be paid which also embodies in itself six hours of labour.

Nevertheless, the “universal principle of justice” must in no way be confounded with that crude equalitarianism which makes the bourgeois so indignantly oppose all communism, and especially the spontaneous communism of the workers. It is by no means so inexorable as it would like to appear.

The “equality in principle of economic rights does not exclude the *voluntary* addition of an expression of special recognition and honour to what justice requires.... Society *honours itself* by conferring distinction on the higher types of work *by a modest additional allocation* for consumption.”

And Herr Dühring is also honouring himself, when, combining the innocence of a dove with the wisdom of a serpent, he displays such touching concern for the modest additional consumption of the Dührings of the future.

This will finally do away with the capitalist mode of distribution. For

“supposing someone actually had a surplus of private means at his disposal under such conditions, he would be unable to find any use for it as capital. No individual or group would acquire it from him for production except by way of exchange or purchase, but neither would ever have occasion to pay him interest or profit.” Hence “inheritance conforming to the principle of equality” would be permissible. It cannot be dispensed with, for “a certain amount of transmission by inheritance

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will always be a necessary concomitant of the family principle." But the right of inheritance "will not be able to lead to any amassing of considerable wealth, as the building up of property... can never again aim at the creation of means of production and purely rentier existences."

Thus the economic commune is happily established. Let us now have a look at how it works.

We grant the complete realization of all Herr Dühring's hypotheses; we therefore assume that the economic commune pays each of its members, for six hours of labour a day, a sum of money, say twelve shillings, in which six hours of labour are likewise embodied. We grant further that prices exactly correspond to values, and therefore, on our assumptions, cover only the costs of raw materials, the wear and tear of machinery, the consumption of instruments of labour and the wages paid. An economic commune of a hundred working members would then produce commodities to the value of twelve hundred shillings, £60, in a day and £18,000 in a year of 300 working-days. It pays the same sum to its members, each of whom does as he likes with his share, which is twelve shillings a day or £180 a year. At the end of the year, and at the end of a hundred years, the commune is no richer than it was at the beginning. During this period it will never once be in a position to provide that modest additional allocation for Herr Dühring's consumption, unless it cuts into its stock of means of production. Accumulation has been totally forgotten. Even worse. Since accumulation is a social necessity and the retention of money provides a convenient form of accumulation, the organization of the economic commune directly requires its members to accumulate privately and consequently leads to its own destruction.

How can this cleavage in the nature of the economic commune be avoided? It might take refuge in his beloved "tax", the price surcharge, and sell its annual production for £24,000 instead of £18,000. But as all other economic communes are in the same position and must therefore act in the same way, each would have to pay just as much "tax" in its exchanges with the others as it pockets itself, and the "tribute" would thus have to fall only on its own members.

Or the economic commune might settle the matter without more ado by paying each member for his six hours of labour the product of less than six hours, say, of four hours, of labour, that is, only eight shillings instead of twelve shillings a day, but leaving the

prices of commodities at their former level. In this case it does directly and openly what it strove to do in a hidden and indirect way in the former case: it forms Marxian surplus-value to the amount of £6,000 annually by paying its members, on outright capitalist lines, less than the value of what they produce, and, moreover, by selling them at their full value commodities, which they can buy from it alone. Therefore, the economic commune can only secure a reserve fund by exposing itself as a “refined” truck system* on the broadest communist basis.

So take your choice: either the economic commune exchanges “equal labour for equal labour”, in which case it cannot accumulate a fund for the maintenance and extension of production, but only the individual members can do so; or it does form such a fund, in which case it does not exchange “equal labour for equal labour”.

Such is the content of exchange in the economic commune. What of its form? Exchange is effected through the medium of metallic money, and Herr Dühring is not a little proud of the “world-historic import” of this improvement. But in the trading between the commune and its members money *is* not money at all, it does not function as money in any way. It serves as a mere labour certificate; to use Marx’s phrase, it “is merely evidence of the individual share of the producer in the common labour, and of his right to a certain portion of the common produce destined for consumption”, and in this function it is “no more ‘money’ than a theatre pass-out check.”† It can therefore be replaced by any other token, just as in Weitling, who replaces it by a “ledger” in which the labour hours worked are entered on one side and means of subsistence taken as compensation on the other. In a word, in the trade between the economic commune and its members it functions merely as Owen’s “labour money”, that “phantom” which Herr Dühring so loftily disdains but which he himself is compelled to introduce in his economy of the future. Whether the token indicating the measure of fulfilment of the “obligation to produce” and of the “right to consume” thus acquired is a scrap of paper, a counter, or a gold coin is absolutely of no consequence for *this* purpose. For other purposes, however, this is by no means the case, as we shall see.

* The truck system in England, also well known in Germany, is that system under which the manufacturers themselves run shops and compel their workers to buy their goods there. [*Note by Engels.*]

† *Capital*, Vol. I, p. 94, footnote, translation revised. – Ed.

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If, therefore, metallic money functions not as money but as a disguised labour certificate in an economic commune's trade with its members, still less does it function as money in exchange between the different economic communes. Here metallic money is totally superfluous on Herr Dühring's assumptions. In fact, mere book-keeping would suffice, which would effect the exchange of products of equal labour for products of equal labour far more simply if it used the natural measure of labour – time, with the labour-hour as unit – than if it first converted the labour-hours into money. The exchange is in reality simple exchange in kind; all balances are easily and simply settled by drafts on other communes. But should a commune really have a deficit with other communes, all “the gold on hand in the universe”, however much it may be “money by nature”, could not save this commune from the fate of having to make good this deficit by increasing the quantity of its own labour, if it does not want to be reduced to dependence on other communes by its debt. But let the reader always bear in mind that we are in no way constructing any edifice of the future. We are merely accepting Herr Dühring's assumptions and drawing the inevitable conclusions from them.

Thus neither in exchange between the economic commune and its members nor in exchange between the different communes can gold, which is “money by nature”, get to realize this its nature. Nevertheless, Herr Dühring commands it to fulfil the function of money even in the “socialitarian” system. Hence, we must look for another field of action for its monetary function. And there is one. Herr Dühring gives everyone a right to “quantitatively equal consumption”, but he cannot compel anyone to exercise it. On the contrary, he is proud that in his world everyone can do what he likes with his money. So he cannot prevent some from setting aside a small money hoard, while others are unable to make ends meet on the wages paid them. He even makes this inevitable by explicitly recognizing the family's common property in the right of inheritance, from which there also follows the obligation of parents to maintain their children. But this makes a wide breach in quantitatively equal consumption. The bachelor lives happily like a lord on his eight or twelve shillings a day, while the widower with eight minor children subsists wretchedly on this sum. On the other hand, by accepting money in payment without any question, the commune leaves open the door to the possibility that this money may have been obtained

otherwise than by the individual's own labour. *Non olet.** The commune does not know where it comes from. But in this way all the conditions are given for metallic money, which hitherto played the role of a mere labour certificate, to exercise its real money function. The opportunity and the motive are present both to form a hoard and to run into debt. The needy individual borrows from the hoarder. The borrowed money accepted by the commune in payment for means of subsistence once more becomes what it is in present-day society, the social incarnation of human labour, the real measure of labour, the general medium of circulation. All the "laws and administrative regulations" in the world are as powerless against it as they are against the multiplication table or the chemical composition of water. And since the hoarder is in a position to extort interest from people in need, usury is restored along with metallic money functioning as money.

Up to this point we have only considered the effects of the retention of metallic money within the field of operation of the Dühring economic commune. But beyond this field the wicked outside world meanwhile carries on contentedly in the old way. On the world market gold and silver remain *world money*, the general means of purchase and payment, the absolute social embodiment of wealth. This property of the precious metals gives the individual members of the economic communes a new motive for hoarding, enrichment and usury, the motive for operating freely and independently with regard to the commune and beyond its borders, and for realizing their accumulated private wealth on the world market. The usurers are transformed into dealers in the medium of circulation, bankers, controllers of the medium of circulation and of world money, and so into controllers of production, and so into controllers of the means of production, even though these may still be nominally registered for many years as the property of the economic and trading communes. Hence the hoarders and usurers, now become bankers, are also the masters of the economic and trading communes themselves. Herr Dühring's "socialitarian" system is indeed essentially different from the "nebulous notions" of the other socialists. It has no other purpose but the re-creation of high finance, under whose control and for whose coffers it will labour valiantly – if it should ever happen to be pieced together and hold together. Its one hope of salvation would lie in the hoarders preferring to run

* It (money) does not smell.¹²³ – *Ed.*

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away from the commune as fast as possible with the aid of their world money.

Ignorance of earlier socialist thought is so widespread in Germany that an innocent youth might at this point raise the question whether, for example, Owen's labour-notes might not lead to a similar abuse. Although we are not concerned here with elaborating on the significance of these labour-notes, space should be given to the following in order to contrast Dühring's "comprehensive schematism" with Owen's "crude flabby and paltry ideas". First, such an abuse of Owen's labour-notes would require their conversion into real money, while Herr Dühring presupposes real money, though attempting to prohibit it from functioning otherwise than as mere labour certificates. While there would have to be real abuse in the former, the immanent nature of money, which is independent of human volition, asserts itself in the latter; the specific, correct use of money asserts itself in face of the misuse Herr Dühring tries to impose on it owing to his own ignorance of the nature of money. Second, with Owen the labour-notes are only a transitional form to the complete community and the free utilization of the resources of society, and incidentally at most a means designed to make communism plausible to the British public. If therefore any form of misuse should compel the Owenite society to do away with the labour-notes, it would be taking a step forward towards its goal, entering on a more perfect stage of its development. But if the Dühringian economic commune abolished money, it would be destroying its "world-historic import" in one blow, it would be putting an end to its most peculiar beauty, it would cease to be the Dühring economic commune and sink to the level of the nebulous notions, to raise it from which Herr Dühring has devoted so much of the hard labour of his rational imagination.*

What, then, is the source of all the strange errors and entanglements amid which the Dühring economic commune meanders? Simply the fog in Herr Dühring's mind which envelops the concepts of value and money, and finally drives him to attempt to discover

* It may be noted in passing that the part played by labour-notes in Owen's communist society is completely unknown to Herr Dühring. He knows these notes – from Sargant – only in so far as they figure in the Labour Exchange Bazaars, which of course were failures, attempts to pass from existing society into communist society by means of the direct exchange of labour. [*Note by Engels.*]

the value of labour. But since Herr Dühring doesn't enjoy the German monopoly on this kind of fog and in fact has plenty of competitors, we will "overcome our reluctance for a moment and unravel the knot" he has contrived to make here.

The only value known in economics is the value of commodities. What are commodities? Products made in a society of more or less separate private producers, and therefore in the first place private products. But these private products become commodities only when they are made, not for consumption by their producers, but for consumption by others, that is, for social consumption; they enter into social consumption through exchange. Therefore, the private producers stand in a social relation to each other, constitute a society. Although they are the private products of each individual, their products are therefore simultaneously, but unintentionally and as it were involuntarily, also social products. In what, then, does the social character of these private products consist? Evidently in two characteristics: first, they all satisfy some human want, they all have a use-value not only for the producers but also for others; and second, although they are products of the most varied individual labour, they are at the same time products of human labour as such, of general human labour. In so far as they have a use-value for other persons too, they can generally enter into exchange; in so far as general human labour, the simple expenditure of human labour-power, is embodied in all of them, they can be compared with each other in exchange, be said to be equal or unequal, according to the quantity of this labour embodied in each. Social conditions remaining the same, two equal private products may embody an unequal quantity of individual labour, but they always embody only an equal quantity of general human labour. An unskilled smith may make five horseshoes in the same time as a skilful smith makes ten. But society does not make the accidental lack of skill of an individual the basis of valuation; it recognizes as general human labour only labour of a normal average degree of skill at the particular time. Therefore, one of the five horseshoes made by the first smith has no more value in exchange than one of the ten made by the other in the same time. Individual labour contains general human labour only in so far as it is socially necessary.

Consequently, when I say that a commodity has a particular value, I say (1) that it is a socially useful product; (2) that it has been produced by a private individual for private account; (3) that, although it is a product of individual labour, it is at the same time and as it were unwittingly and involuntarily, also a product of social

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labour and, be it noted, of a definite quantity of this labour, established in a social way through exchange; and (4) that I express this quantity not in labour itself, in such and such a number of labour-hours, but *in another commodity*. If, therefore, I say that this clock is worth as much as that piece of cloth and each is worth fifty shillings, I say that an equal quantity of social labour is contained in the clock, the cloth and the money. I therefore assert that the social labour-time represented in them has been socially measured and found to be equal. But not directly, absolutely, as labour-time is usually measured, in labour-hours or days, etc., but in a roundabout way, through exchange, relatively. That is why I can express this definite quantity of labour-time not in labour-hours – how many remains unknown to me – but only in a roundabout way, relatively, in another commodity, which represents an equal quantity of social labour-time. The clock is worth as much as the piece of cloth.

But the production and exchange of commodities, while compelling the society based on them to take this roundabout way, likewise compel it to make the detour as short as possible. They single out from the commonalty of commodities one sovereign commodity in which the value of all other commodities can be expressed once and for all, a commodity which is recognized as the immediate incarnation of social labour and is therefore immediately and unconditionally exchangeable for all commodities – money. Money is already contained in embryo in the concept of value, it is only value developed. But since the value of commodities, as against the commodities themselves, assumes an independent existence in money, a new factor appears in the society which produces and exchanges commodities, a factor with new social functions and effects. We need only state this point at the moment, without going more closely into it.

The political economy of commodity production is by no means the only science which has to deal with factors known only relatively. In physics, too, we do not know how many separate gas molecules are contained in a given volume of gas, pressure and temperature also being given. But we do know that, so far as Boyle's Law is correct, such a given volume of any gas contains as many molecules as an equal volume of any other gas at the same pressure and temperature. We can therefore compare the molecular content of the most diverse volumes of the most diverse gases under the most diverse conditions of pressure and temperature; and if we take one litre of gas at 0° C and 760 mm. pressure as the unit, we can measure the above molecular content by this unit.

In chemistry the absolute atomic weights of the various elements are likewise unknown to us. But we know them relatively by knowing their reciprocal relations. Hence, just as commodity production and its economics obtain a relative expression for the quantities of labour contained in the various commodities – quantities unknown to it – by comparing these commodities on the basis of their relative labour content, so chemistry obtains a relative expression for the magnitude of the atomic weights unknown to it by comparing the various elements on the basis of their atomic weights and expressing the atomic weight of one element in multiples or fractions of the other (sulphur, oxygen, hydrogen). And just as commodity production elevates gold into the absolute commodity, the universal equivalent of all other commodities, the measure of all values, so chemistry elevates hydrogen into the chemical money commodity by fixing its atomic weight at 1 and reducing the atomic weights of all other elements to hydrogen, expressed in multiples of its atomic weight.

Commodity production, however, is by no means the only form of social production. In the ancient Indian communities and in the family communities of the southern Slavs, products are not transformed into commodities. The members of the community are directly associated for production, the work is distributed according to tradition and needs, and so are the products to the extent that they are destined for consumption. Since direct social production and direct distribution preclude any exchange of commodities, they also preclude the transformation of the products into commodities (at any rate within the community) and consequently into *values* as well.

From the moment society enters into possession of the means of production and uses them in direct association for production, the labour of each individual, however varied its specifically useful character, becomes social labour straight away and directly. The quantity of social labour contained in a product need not then be first established in a roundabout way; daily experience will show in a direct way how much is required on the average. Society will be able to calculate in a simple way how many hours of labour are contained in a steam-engine, a bushel of the last crop of wheat, or a hundred square yards of cloth of a specific quality. It could therefore never occur to it to go on expressing the quantities of labour put into the products, quantities which it will then know directly and absolutely, in yet a third product, in a measure which, moreover, is only relative, fluctuating and inadequate, though it was formerly

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unavoidable as an expedient, rather than express them in their natural, adequate and absolute measure, *time*. Just as little as it would occur to chemical science to go on expressing atomic weights relatively and in a roundabout way by means of the hydrogen atom, if it were able to express them absolutely in their adequate measure, namely in actual weights, in billionths or quadrillionths of a gramme. Hence, on the above assumptions, society will not assign values to products. It will not express the simple fact that the hundred square yards of cloth have required, say, a thousand hours of labour for their production in the oblique and meaningless way involved in stating that they are *worth* a thousand hours of labour. It is true that even then it will still be necessary for society to know how much labour each article of consumption requires for its production. It will have to arrange its plan of production in accordance with its means of production, which include, in particular, its labour-power. The useful effects of the various articles of consumption, compared with one another and with the quantities of labour required for their production, will in the end determine the plan. People will be able to manage everything very simply, without the intervention of the much-vaunted “value”.*

The concept of value is the most general and therefore the most comprehensive expression of the economic conditions of commodity production. Consequently, the concept of value contains the germ, not only of money, but also of all the more developed forms of the production and exchange of commodities. The very fact that value is the expression of the social labour contained in private products creates the possibility of a difference between this social labour and the individual labour contained in the same product. This difference will therefore become palpably evident to a private producer if he goes on producing in the old way with the advance of the social mode of production. The same thing happens as soon as all the private manufacturers of a particular kind of commodity pro-

* As long ago as 1844 I stated that this balancing of useful effects and expenditures of labour on making decisions concerning production was all that would be left of the politico-economic concept of value in a communist society. [See Marx, *Economic and Philosophic Manuscripts of 1844*, Appendix, “Outlines of a Critique of Political Economy” by Engels, Lawrence and Wishart, London, 1969, pp. 175-209. – Ed.] But the scientific justification for this statement, as can be seen, only became possible with Marx’s *Capital*. [Note by Engels.]

duce it in an amount exceeding social needs. The fact that the value of a commodity is expressed only in terms of another commodity and can be realized only in exchange against it involves the possibility that the exchange will not take place at all, or at least will not realize the correct value. Finally, when the specific commodity labour-power appears on the market, its value is determined, like that of any other commodity, by the labour-time socially necessary for its production. The value form of products therefore already contains in embryo the whole capitalist form of production, the antagonism between capitalists and wage-workers, the industrial reserve army and crises. Seeking to abolish the capitalist form of production by establishing "true value" is therefore tantamount to attempting to abolish catholicism by establishing the "true" Pope, or to setting up a society in which one day at last the producers exercise mastery over their products by consistently applying an economic category which is the most comprehensive expression of the enslavement of the producers by their own product.

Once the commodity-producing society has further developed the value form, which is inherent in commodities as such, to the money form, various seeds still hidden in value break through to the light of day. The first and most essential effect is the generalization of the commodity form. Money forces the commodity form even on the objects which have hitherto been produced directly for self-consumption, and drags them into exchange. As a result the commodity form and money penetrate the internal economy of communities which are directly associated for production, they break one communal tie after another and dissolve the community into a mass of private producers. At first, money replaces joint tillage of the soil by individual tillage, as can be seen in India; at a later stage it puts an end to the common ownership of the tillage area, which was still being manifested in periodical redistribution, by a definitive division (for example, in the village communities on the Moselle, and now also in the initial phase in the Russian village communes); finally, it forces the dividing-up of the remaining woodland and pasturage still owned in common. Whatever other causes arising in the development of production are contributing here, money always remains the most powerful medium for their influence on the communities. And if ever the Dühring economic commune came into existence, money would inevitably break it up with the same natural necessity, despite all "laws and administrative regulations".

We have already seen above ("Political Economy", VI) that it is self-contradictory to speak of the value of labour. Since labour pro-

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duces not only products but also value under certain social conditions, and since this value is measured by labour, the latter can no more have a separate value than weight, as such, can have a separate weight or heat a separate temperature. But it is the characteristic peculiarity of all social confusionists ruminating on "true value" to imagine that the worker does not receive the full "value" of his labour in existing society and that socialism is destined to redress this situation. Hence it is necessary in the first place to discover what the value of labour is, which is done by attempting to measure labour, not by its appropriate measure, time, but by its product. The worker should receive the "full proceeds of labour".⁶⁸ Not only the product of labour, but labour itself should be directly exchangeable for products, one hour's labour for the product of another hour's labour. But this at once gives rise to a very "serious" hitch. The *whole product* is distributed. Accumulation, the most important progressive function of society, is taken from society and put into the hands and at the arbitrary discretion of individuals. The individuals can do what they like with their "proceeds", but at best society remains as rich or poor as it was. The means of production accumulated in the past have therefore been centralized in the hands of society only in order that all means of production accumulated in the future may once again be dispersed in the hands of individuals. That is to slap one's own premises in the face and to arrive at a pure absurdity.

Fluid labour, active labour-power, is to be exchanged for the product of labour. Then labour-power is a commodity, just like the product for which it is to be exchanged. Then the value of this labour-power is in no wise determined by its product, but by the social labour embodied in it, and so is determined according to the present law of wages.

But it is precisely this which must not be, we are told. Fluid labour, labour-power, should be exchangeable for its full product. That is to say, it should be exchangeable not for its *value*, but for its *use-value*; the law of value is to apply to all other commodities, but must be repealed so far as labour-power is concerned. Such is the self-destructive confusion that lies concealed behind the "value of labour".

The "exchange of labour for labour on the principle of equal valuation", in so far as it has any meaning, that is to say, the mutual exchangeability of products of equal social labour, hence the law of value, is the fundamental law precisely of commodity production, and hence also of its highest form, capitalist production. It asserts

itself in present-day society in the only way in which economic laws can assert themselves in a society of private producers, as a blindly operating law of nature which is inherent in things and relations, which is independent of the will or actions of the producers. By elevating this law to be the basic law of his economic commune and demanding that the commune should carry it out in all consciousness, Herr Dühring makes the basic law of existing society into the basic law of his imaginary society. He wants existing society, but without its abuses. He is thus moving on the same ground as Proudhon. Like him, he wants to abolish the abuses which have arisen out of the development of commodity production into capitalist production by applying to them the basic law of commodity production, precisely to the operation of which these abuses are due. Like Proudhon, he wants to abolish the real consequences of the law of value by means of fantastic ones.

How proudly our modern Don Quixote, perched on his noble Rosinante, "the universal principle of justice", and followed by his valiant Sancho Panza, Abraham Enss,¹²⁴ rides off on his knight errantry to win Mambrino's helmet, "the value of labour", but we are afraid, very much afraid, he will bring home nothing but the old familiar barber's basin.

V

STATE, FAMILY, EDUCATION

With the two last chapters we have just about exhausted the economic content of Herr Dühring's "new socialitarian edifice". At most, it might be added that the "universal range of the historical survey" does not in the least prevent him from looking after his special interests, even apart from his well-known modest extra consumption. As the old division of labour continues to exist in the socialitarian system, the economic commune will have to reckon not only with architects and porters but also with professional men of letters, and the question will then arise how authors' rights are to be dealt with. This question is one which occupies Herr Dühring's attention more than any other. Everywhere, for example, apropos of Louis Blanc and Proudhon, the question of authors' rights gets in the reader's way, until, after an exhaustive and exhausting discussion occupying nine full pages of the *Course*, it is finally brought safely into the haven of "sociality", in the form of a mysterious "remuneration of labour" – whether with or without a modest extra

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consumption is not stated. A chapter on the position of fleas in the natural system of society would have been just as appropriate and in any case less tedious.

The *Philosophy* gives detailed prescriptions for the political set-up of the future. Here, although he was Herr Dühring's "sole important forerunner", Rousseau did not lay the foundations deeply enough; his deeper successor corrects this by completely watering down Rousseau and mixing in leavings from the Hegelian philosophy of right boiled in a pauper's broth. "The sovereignty of the individual" forms the basis of the Dühringian state of the future; it is not to be suppressed by the rule of the majority, but to find its real culmination in it. How does this work? Very simply.

"If agreements are assumed between each individual and everyone else in all directions, and if the object of these agreements is mutual aid against unjust offences – then the power required for the maintenance of right is only strengthened, and right is not deduced from the mere superior strength of the many as against the individual or of the majority as against the minority."

Such is the ease with which the living force of the hocus pocus of the philosophy of reality surmounts the most impassable obstacles, and if the reader thinks that he is still no wiser than before, Herr Dühring replies that he really must not think it is such a simple matter, for

"*the slightest error* in the conception of the role of the general will would *destroy* the sovereignty of the individual, and it is from this sovereignty alone that real rights can be deduced".

Herr Dühring treats his public as it deserves when he mocks it. He could have laid it on much thicker; the students of the philosophy of reality would not have noticed it anyhow.

Now the sovereignty of the individual consists essentially in this, that

"the individual is *subject to absolute compulsion* by the state", but this compulsion can only be justified in so far as it "really serves natural justice". For this purpose there will be "legislation and a judiciary", which, however, "must remain in the hands of the community"; there will also be a union for defence, which will find expression in "association in the army or in an executive section for internal security" –

that is to say, there will also be an army, police, and a *gendarmerie*. Herr Dühring has so often proved a good Prussian; here he proves

himself a peer of that model Prussian, who, as the late Minister von Rochow put it, "carries his gendarme in his breast". But this *gendarmerie* of the future will not be as dangerous as the police thugs of the present. Whatever the sovereign individual may suffer at their hands, he will always have *one consolation*,

"the right or wrong which befalls him according to circumstances at the hands of the free society can never be *any worse* than that which the *state of nature* would have brought with it!"

Then, after Herr Dühring has once again tripped us up on those inescapable authors' rights of his, he assures us that his world of the future will have, "it goes without saying, an absolutely free Bar available to all".

"The free society as it is conceived today" gets more and more mixed. Architects, porters, men of letters, gendarmes, and now bar-risters as well! This "sober and critical realm of thought" is exactly like the various heavenly kingdoms of the different religions, in which the believer always finds in a transfigured form the very things which have sweetened his earthly existence. And Herr Dühring is a citizen of the state where "everyone can find salvation in his own way". What more do we want?

But what we want doesn't matter. What matters is what Herr Dühring wants. He differs from Frederick II in this, that it will be definitely impossible for everyone to find salvation in his own way in the Dühringian state of the future. The constitution of this future state provides:

"In the free society there can be no religious worship: *for each* of its members has got beyond the primitive childish superstition that there are beings behind or above nature who can be propitiated by sacrifice or prayer." A "socialitarian system, rightly conceived, *has* therefore... *to abolish* all the paraphernalia of religious magic and consequently all the essential elements of religious worship".

Religion is being banned.

Now all religion is nothing but the fantastic reflection in men's minds of those external forces which dominate their daily life, a reflection in which terrestrial forces assume the form of supernatural ones. In the beginnings of history it was the forces of nature which were first so reflected, and which in the course of further development underwent the most manifold and motley personifications among the various peoples. Comparative mythology has traced back this first process, at least in the case of the Indo-European

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peoples, to its origin in the Indian Vedas, and in its progress it has been demonstrated in detail among the Indians, Persians, Greeks, Romans, Germans and, so far as material is available, also among the Celts, Lithuanians and Slavs. But side by side with the forces of nature, it is not long before social forces begin to be active, forces which confront man as equally alien and at first equally inexplicable, dominating him with the same apparent natural necessity as the very forces of nature. The fantastic figures, which at first only reflected the mysterious forces of nature, at this point acquire social attributes, become representatives of the forces of history.* At a still further stage of development, all the natural and social attributes of the numerous gods are transferred to *one* almighty god, who in turn is himself only the reflection of the abstract man. Such was the origin of monotheism, which was historically the last product of the vulgarized philosophy of the later Greeks and which found its incarnation in Jehovah, the exclusively national god of the Jews. Religion can continue to exist in this convenient, handy and universally adaptable form as the immediate, that is, the sentimental, form of men's relation to the alien, natural and social powers which dominate them, so long as men remain under the domination of these powers. However, we have repeatedly seen that in present-day bourgeois society men are dominated by the economic conditions they themselves have created and by the means of production they themselves have produced, as though by an alien power. The actual basis of the religious reflex action therefore continues to exist, and with it the religious reflection itself. Although bourgeois political economy has opened up a certain insight into the causal connection of this alien domination, this in no way changes the matter. Bourgeois economics can neither prevent crises as such, nor protect the individual capitalist from losses, bad debts and bankruptcy, nor secure the individual worker against unemployment and poverty. It is

* This subsequent dual character of the divinities is one reason for the subsequent widespread confusion of mythologies, a reason which comparative mythology has overlooked because it pays attention exclusively to their character as reflections of the forces of nature. Thus in some Germanic tribes the god of war is called Tyr (Old Nordic) or Zio (Old High German), thus corresponding to the Greek Zeus and to the Latin Jupiter for Diu-piter; in other Germanic tribes, he is called Er, Eor, and thus corresponds to the Greek Arcs and the Latin Mars. [*Note by Engels.*]

still true that man proposes and God (that is, the alien domination of the capitalist mode of production) disposes. Mere knowledge, even if it went further and deeper than that of bourgeois economic science, does not suffice to bring social forces under the domination of society. What is above all necessary for this is a social *act*. When this act has been accomplished, when society, by seizing all the means of production and using them on a planned basis, has freed itself and all its members from the bondage they are now kept in by these means of production which they themselves have produced but which confront them as an overpowering alien force; when man no longer merely proposes, but also disposes – it is only then that the last alien force which is still reflected in religion will vanish and that the religious reflection itself will also vanish with it, for the simple reason that there will be nothing left to reflect.

But Herr Dühring cannot wait until religion dies this, its natural, death. He proceeds more deep-rootedly. He out-Bismarcks Bismarck; he decrees sharper May laws not merely against catholicism, but against all religion whatsoever;¹²⁵ he incites his gendarmes of the future against religion and so helps it to obtain martyrdom and a prolonged lease on life. Wherever we turn, we find specifically Prussian socialism.

After Herr Dühring has thus happily destroyed religion,

“relying solely on himself and nature and matured in the knowledge of his collective powers, man can boldly enter on all the roads which the course of events and his own nature open to him”.

By way of a diversion let us now consider what “course of events” the man relying solely on himself can boldly enter on under Herr Dühring’s guidance.

The first course of events in which man has to rely solely on himself is being born. After that, he remains

entrusted to his mother, “the natural governess of children”, for the period of natural minority. “This period may last, as in ancient Roman law, until puberty, that is to say, until about the fourteenth year.” Only when badly brought up older boys do not pay proper respect to their mother’s authority will recourse be had to paternal assistance, and particularly to the public educational regulations, to make good this deficiency. At puberty the child becomes subject to “the natural guardianship of his father”, if there is someone having “real and uncontested paternity”; otherwise the community appoints a guardian.

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Just as Herr Dühring imagined at an earlier point that the capitalist mode of production could be replaced by the social mode without transforming production itself, so now he fancies that the modern-bourgeois family can be torn from its whole economic basis without changing its entire form. To him, this form is so immutable that he even makes “ancient Roman law”, albeit in a somewhat “improved” form, valid for the family for all time, and he can conceive a family only as a “bequeathing”, which means a possessing, unit. Here the Utopians are far in advance of Herr Dühring. They considered that the socialization of the education of the younger generation, and with it real freedom in the mutual relations between the members of a family, would directly follow from the free association of men and the transformation of private housework into a public industry. Moreover, Marx has already shown that “large-scale industry, by assigning as it does an important part in the socially organized process of production, outside the domestic sphere, to women, to young persons, and to children of both sexes, creates a new economic foundation for a higher form of the family and of the relations between the sexes” (*Capital* Vol. I, p. 515 ff.).*

“Every dreamer of social reforms,” says Herr Dühring, “naturally has ready a pedagogy corresponding to his new social life.”

Judging by this thesis, Herr Dühring is a “veritable monster” among these dreamers. The school of the future occupies his attention at least as much as his authors’ rights, and that is saying a lot. He has his curricula for school and university all ready and complete, not only for the whole “foreseeable future” but also for the transition period. But we will confine ourselves to what will be taught to the young people of both sexes in the final and ultimate socialitarian system.

The compulsory primary school will provide

“everything which by itself and in principle can have any attraction for man”, and therefore in particular “the foundations and main conclusions of all sciences touching on the understanding of the world and of life”. In the first place, therefore, it teaches mathematics, and indeed to such effect that the field of all fundamental concepts and methods from simple numeration and addition to the integral calculus is “completely encompassed”.

* *Capital*, English ed., Vol. I, pp. 489-90, translation revised. — Ed.

But this does not mean that anyone will really integrate or differentiate in this school. On the contrary. What is to be taught there will be, rather, entirely new elements of general mathematics, which contain in embryo both ordinary elementary and higher mathematics. Although Herr Dühring asserts that he already has in his mind “schematically, in their main outlines”, “the contents of the textbooks” which the school of the future will use, he has unfortunately not as yet succeeded in discovering these “elements of general mathematics”; and what he cannot achieve “can only really be expected from the free and enhanced forces of the new social order”.

But if meanwhile the grapes of the mathematics of the future are still very sour, the astronomy, mechanics and physics of the future will present all the less difficulty and

will “provide the kernel of all schooling”; while “botany and zoology, which, in spite of all theories, are mainly of a descriptive character...” will serve “rather as a light form of diversion”.

There it is, in black and white, in the *Philosophy*, page 417. Right down to the present day Herr Dühring knows no other botany and zoology than those which are mainly descriptive. The whole of organic morphology, which embraces the comparative anatomy, embryology and palaeontology of the organic world, is entirely unknown to him even by name. While wholly new biological sciences are springing up almost by the dozen behind his back, his childish mind still goes to Raff's *Natural History for Children* for “the eminently modern educative elements provided by the natural-scientific mode of thought”, and he likewise decrees this constitution of the organic world for the whole “foreseeable future”. Here, too, as is his wont, he entirely forgets chemistry.

As for the aesthetic side of education, Herr Dühring will have to fashion it all anew. The poetry of the past is worth less. Where all religion is banned, it goes without saying that the “mythological or other religious trimmings” characteristic of earlier poets cannot be tolerated in school. “Poetic mysticism”, too, “such as, for example, Goethe was so addicted to”, is to be condemned. Herr Dühring will therefore have to make up his mind to provide us by himself with those poetic masterpieces which correspond to “the higher claims of an imagination harmonized with reason” and represent the true ideal “denoting the consummation of the world”. Let him not tarry! The economic commune can only conquer the world when it strolls in at the double to the rhythm of the Alexandrine harmonized with reason.

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The adolescent citizen of the future will be little plagued by philology.

“The dead languages will be entirely discarded... but living foreign languages... will remain of secondary importance.” Only where intercourse between nations extends to the movement of the masses of the people themselves would these languages be made accessible to everyone, according to need and in an easy form. “Really educative study of language” will be provided by a kind of general grammar, and particularly by the “substance and form of one’s own language”.

The narrow national horizon of modern man is still much too cosmopolitan for Herr Dühring. He also wants to do away with the two levers which at least give the opportunity of rising above the narrow national standpoint in the world as it is today: knowledge of the ancient languages, which opens a wider common horizon at least to those people of whatever nation who have had a classical education; and knowledge of modern languages, through which alone the people of different nations can communicate with one another and acquaint themselves with what is happening beyond their own borders. On the contrary, the grammar of the mother tongue is to be thoroughly drilled in. But the “substance and form of one’s own language” become intelligible only when its origin and gradual development are traced, and this is impossible without taking into account, first, its own extinct forms, and secondly, cognate languages, both living and dead. But this brings us back to territory which has been expressly forbidden. If Herr Dühring strikes all modern historical grammar out of his curriculum, there is nothing left for his language studies but the old-fashioned technical grammar, cut to the old classical philological pattern, with all its casuistry and arbitrariness which are based on the absence of any historical foundation. His hatred of the old philology makes him elevate the very worst product of the old philology to “the central point of the really educative study of language”. It is clear that we are dealing with a linguist who has never heard a word of the whole tremendous and successful development of the historical science of language during the last sixty years, and who therefore seeks “the eminently modern educative elements” of language training, not in Bopp, Grimm and Diez, but in Heyse and Becker of blessed memory.

But all this would still fall far short of making the young citizen of the future “rely solely on himself”. For this purpose it is necessary here again to lay a deeper foundation by means of

“the assimilation of the latest philosophical principles”. “But such a deepening will not be... a gigantic task at all”, now that Herr Dühring has broken the path. In fact, “if the small rigorous body of knowledge of which the general schematics of being can boast is purged of its false scholastic excrescences, and if it is decided to admit as ubiquitously valid only the reality authenticated” by Herr Dühring, elementary philosophy, too, becomes perfectly accessible to the youth of the future. “If the *extremely simple* methods by which we helped procure a hitherto unknown scope for the concepts of infinity and their critique are recalled”, there is “no reason at all why the elements of the universal conception of space and time, which have been given so simple a form by their current deepening and sharpening, should not eventually pass into the ranks of elementary studies.... The most deep-rooted ideas” of Herr Dühring “should play no secondary role in the universal educational system of the new society”. The self-identical state of matter and the counted uncountable are on the contrary destined “not merely to put man on his own feet but also to make him realize by himself that he *has got the so-called Absolute underfoot*”.

The primary school of the future, as can be seen, is nothing but a somewhat “improved” Prussian grammar school, in which Greek and Latin are replaced by a little more pure and applied mathematics and in particular by the elements of the philosophy of reality, and in which the teaching of German is reduced to Becker, of blessed memory, that is, down to about a fourth-form level. In fact, now that we have demonstrated Herr Dühring’s rudimentary schoolboy “knowledge” in all the spheres on which he has touched, “there is no reason at all” why it, or rather what is left of it after our previous thorough “purging”, should not “eventually pass into the ranks of elementary studies” bag and baggage, since indeed it has never left these ranks. True, Herr Dühring has heard something about the combination of work and instruction in socialist society, which is to ensure an all-round technical education as well as a practical foundation for scientific training; this point, too, is therefore brought in to help the socialitarian scheme in the usual way. But because, as we have seen, the old division of labour is to remain essentially undisturbed in the Dühringian production of the future, this technical training at school is deprived of any later practical application or of any significance for production itself; it has a purpose only within the school: it is to replace gymnastics, which our deep-rooted revolutionizer wants to ignore altogether. So he can only offer us a few phrases, as for example, “young and old will

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work, in the serious sense of the word". This drivel without content and consistency is really pitiful compared to the passage in *Capital*, pages 508-515, in which Marx develops the thesis that "from the factory system there budded, as Robert Owen has shown us in detail, the germ of the education of the future, an education that will, in the case of every child over a given age, combine productive labour with instruction and gymnastics, not only as a method of increasing social production, but as the only method of producing fully developed human beings".*

We must omit the university of the future, in which the philosophy of reality will be the kernel of all knowledge, and where, side by side with the faculty of Medicine, the Faculty of Law will continue in full bloom; we must also omit the "special vocational institutions", about which all we learn is that they will be only "for a few subjects". Let us assume that the young citizen of the future has passed all his educational courses and has at last become sufficiently "reliant on himself" to be able to look about for a wife. What prospect does Herr Dühring offer him here?

"In view of the importance of propagation for the conservation, elimination and blending of qualities as well as for their new creation and development, the ultimate roots of the human and non-human must to a great extent be sought in sexual union and selection, and furthermore in the care taken for or against getting certain results at birth. In practice it must be left to a later epoch to judge the chaos and stupidity now rife in this sphere. Nevertheless, we must at least make it clear from the outset, even in spite of the weight of prejudice, that success or failure in the quality of births, whether due to nature or human prudence, is far more important than the number of births. It is true that at all times and under all legal systems monstrosities have been destroyed; but there is a wide range of degrees between the normal human being and deformities which lack all resemblance to a human being.... It is obviously an advantage to prevent the birth of a human being who would only become a defective creature."

Another passage runs:

"Philosophic thought can find no difficulty... in comprehending the right of the unborn world to the best possible composition.... Conception and, if need be, also birth offer the opportunity for preventive, or in exceptional cases selective, care in this connection."

* *Capital*, Vol. I, pp. 483-84, translation revised. – Ed.

Again:

“Greek art, the idealization of man in marble, will be unable to retain its historical importance when the task of perfecting the human form in flesh and blood is taken in hand, the task which is no doubt less artistic but far more important for the fate of millions. This form of art does not deal with mere stone, and its aesthetic is not concerned with the contemplation of dead forms,” and so on.

Our budding citizen of the future is brought down to earth. Of course he knew without Herr Dühring that marriage is not an art which deals with mere stone or even with the contemplation of dead forms; but after all, Herr Dühring had promised him that he would be able to strike out along all roads which the course of events and his own nature opened up for him to find a sympathetic female soul together with the accompanying body. Nothing of the kind, the “deeper and sterner morality” now thunders at him. It is first a matter of casting off the chaos and stupidity now rife in the sphere of sexual union and selection, and taking into account the right of the new-born world to the best possible composition. At this solemn moment it is to him a matter of perfecting the human form in flesh and blood, of becoming a Phidias, so to speak, in flesh and blood. How is he to set about it? Herr Dühring’s mysterious utterances quoted above give him not the slightest indication, although Herr Dühring himself says it is an “art”. Does perhaps Herr Dühring already have a handbook on this art “in his mind’s eye, schematically”, the kind of handbook in sealed wrappers now circulating so widely in German bookshops? Indeed, we no longer find ourselves in socialitarian society but rather in the *Magic Flute*, the only difference being that Sarastro, the stout Masonic priest, would hardly rank as a “priest of the second order” against our deeper and sterner moralist. The tests to which Sarastro submitted his loving pair of adepts are child’s play compared with the terrifying examination Herr Dühring imposes on his two sovereign individuals before he permits them to enter the state of “free and ethical marriage”. So it may transpire that our Tamino of the future, “relying solely on himself”, may indeed have the so-called Absolute underfoot, but one of his feet may be a couple of degrees off, so that malicious tongues call him a club-foot. It is also within the realm of the possible that his most dearly beloved Pamina of the future does not stand quite straight on the above-said Absolute, owing to a slight deviation in favour of her right shoulder which jealous tongues might call a little bit of a hump. What then? Will our deeper and sterner Sarastro for-

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bid them to practise the art of perfecting humanity in flesh and blood? Will he exercise his “preventive care” at conception, or his “selective care” at birth? Ten to one, things will work out otherwise; the pair of lovers will leave Sarastro-Dühring standing and go off to the registry office.

Hold on there! Herr Dühring cries. This is not at all what was meant. Give me a chance to explain!

In the “higher, genuinely human motives of wholesome sexual union... the humanly perfected form of sexual excitement, which in its intense manifestation is passionate love, is when reciprocated the best guarantee of a union which will also be acceptable in its result.... It is only an effect of the second order that a relation which is in itself harmonious should also result in a harmoniously composed offspring. From this in turn it follows that any compulsion must have harmful effects,” and so on.

So all ends for the best in the best of all possible socialitarian worlds. Club-foot and hunchback love each other passionately, and therefore in their reciprocal relation offer the best guarantee for a harmonious “effect of the second order”; it is just like a novel – they love each other, they get each other, and all the deeper and sterner morality turns out as usual to be harmonious twaddle.

Herr Dühring’s noble ideas about the female sex in general can be gathered from the following indictment of existing society:

“In a society of oppression based on the sale of human being to human being, prostitution is accepted as the natural complement of compulsory marriage ties in the men’s favour, and it is a most comprehensible but also *most significant* fact that *nothing of the kind is possible for women* “.

Not for anything in the world would I care to garner the thanks which might accrue to Herr Dühring from women for this compliment. But has Herr Dühring never heard of the form of income known as a petticoat-pension (*Schürzenstipendium*), which is no longer so exceptional nowadays? Herr Dühring himself was once a referendary¹²⁶ and he lives in Berlin, where even in my day thirty-six years ago, to say nothing of lieutenants, *Referendarius* used often enough to rhyme with *Schürzenstipendarius*!

* * *

May the reader permit us to take leave of our subject, which has often been dry and gloomy enough, on a gay and conciliatory note.

V. STATE, FAMILY, EDUCATION

So long as we had to deal with the separate issues raised, our judgement was tied to the objective incontrovertible facts; often enough, it had to be sharp and even hard on the basis of these facts. Now, when philosophy, economics and sociality all lie behind us, when we have before us the picture of the author as a whole, whom we had previously to judge in detail – now human considerations can come into the foreground; at this point we shall be permitted to trace back to personal causes many otherwise incomprehensible scientific errors and conceits, and to sum up our verdict on Herr Dühring in the words: *mental incompetence due to megalomania*.

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INTRODUCTION TO THE ENGLISH EDITION OF *SOCIALISM: UTOPIAN AND SCIENTIFIC*

The present little book is, originally, a part of a larger whole. About 1875, Dr. E. Dühring, *privat-docent* at Berlin University, suddenly and rather clamorously announced his conversion to socialism, and presented the German public not only with an elaborate socialist theory, but also with a complete practical plan for the reorganization of society. As a matter of course, he fell foul of his predecessors; above all, he honoured Marx by pouring out upon him the full vials of his wrath.

This took place about the time when the two sections of the Socialist Party in Germany – Eisenachers and Lassallians – had just effected their fusion, and thus obtained not only an immense increase of strength, but, what was more, the faculty of employing the whole of this strength against the common enemy. The Socialist Party in Germany was fast becoming a power. But to make it a power, the first condition was that the newly conquered unity should not be imperilled. And Dr. Dühring openly proceeded to form around himself a sect, the nucleus of a future separate party. It thus became necessary to take up the gauntlet thrown down to us, and to fight out the struggle whether we liked it or not.

This, however, though it might not be an over-difficult, was evidently a long-winded business. As is well known, we Germans are of a terribly ponderous *Gründlichkeit*, radical profundity or profound radicality, whatever you may like to call it. Whenever any one of us expounds what he considers a new doctrine, he has first to elaborate it into an all comprising system. He has to prove that both the first principles of logic and the fundamental laws of the universe had existed from all eternity for no other purpose than to ultimately lead to this newly discovered, crowning theory. And Dr. Dühring, in this respect, was quite up to the national mark. Nothing less than a complete *System of Philosophy*, mental, moral, natural, and historical, a complete *System of Political Economy and Socialism* ; and, finally, a *Critical History of Political Economy* – three big volumes in octavo, heavy extrinsically and intrinsically, three army corps of arguments mobilized against all previous philosophers and economists in general, and against Marx in particular – in fact, an attempt

at a complete “revolution in science” – these were what I should have to tackle. I had to treat of all and every possible subject, from the concepts of time and space to bimetallism, from the eternity of matter and motion to the perishable nature of moral ideas; from Darwin’s natural selection to the education of youth in a future society. Anyhow, the systematic comprehensiveness of my opponent gave me the opportunity of developing, in opposition to him, and in a more connected form than had previously been done, the views held by Marx and myself on this great variety of subjects. And that was the principal reason which made me undertake this otherwise ungrateful task.

My reply was first published in a series of articles in the Leipzig *Vorwärts*, the chief organ of the Socialist Party, and later on as a book: *Herrn Eugen Dührings Umwälzung der Wissenschaft* (*Mr. E. Dühring’s Revolution in Science*), a second edition of which appeared in Zurich, 1886.

At the request of my friend, Paul Lafargue, now representative of Lille in the French Chamber of Deputies, I arranged three chapters of this book as a pamphlet, which he translated and published in 1880, under the title: *Socialisme utopique et socialisme scientifique*. From this French text a Polish and a Spanish edition were prepared. In 1883, our German friends brought out the pamphlet in the original language. Italian, Russian, Danish, Dutch, and Roumanian translations, based upon the German text, have since been published. Thus, with the present English edition, this little book circulates in ten languages. I am not aware that any other socialist work, not even our *Communist Manifesto* of 1848 or Marx’s *Capital*, has been so often translated. In Germany it has had four editions of about 20,000 copies in all.

The appendix, “The Mark”,* was written with the intention of spreading among the German Socialist Party some elementary knowledge of the history and development of landed property in Germany. This seemed all the more necessary at a time when the assimilation by that party of the working people of the towns was in a fair way of completion, and when the agricultural labourers and peasants had to be taken in hand. This appendix has been included in the translation, as the original forms of tenure of land common to all Teutonic tribes, and the history of their decay, are even less

* Omitted in the present edition. – *Ed.*

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known in England than in Germany. I have left the text as it stands in the original, without alluding to the hypothesis recently started by Maxim Kovalevsky, according to which the partition of the arable and meadow lands among the members of the Mark was preceded by their being cultivated for joint account by a large patriarchal family community embracing several generations (as exemplified by the still existing South Slavonian Zadruga), and that the partition, later on, took place when the community had increased, so as to become too unwieldy for joint-account management. Kovalevsky is probably quite right, but the matter is still *sub judice*.*

The economic terms used in this work, as far as they are new, agree with those used in the English edition of Marx's *Capital*. We call "production of commodities" that economic phase where articles are produced not only for the use of the producers, but also for purposes of exchange; that is, as commodities, not as use-values. This phase extends from the first beginnings of production for exchange down to our present time; it attains its full development under capitalist production only, that is, under conditions where the capitalist, the owner of the means of production, employs, for wages, labourers, people deprived of all means of production except their own labour-power, and pockets the excess of the selling price of the products over his outlay. We divide the history of industrial production since the Middle Ages into three periods: (1) handicraft, small master craftsmen with a few journeymen and apprentices, where each labourer produces the complete article; (2) manufacture, where greater numbers of workmen, grouped in one large establishment, produce the complete article on the principle of division of labour, each workman performing only one partial operation, so that the product is complete only after having passed successively through the hands of all; (3) modern industry, where the product is produced by machinery driven by power, and where the work of the labourer is limited to superintending and correcting the performances of the mechanical agent. I am perfectly aware that the contents of this work will meet with objection from a considerable portion of the British public. But if we Continentals had taken the slightest notice of the prejudices of British "respectability", we should be even worse off than we are. This book defends what we call "historical materialism", and the word materialism grates upon the ears of

* Under consideration. – *Ed.*

the immense majority of British readers. "Agnosticism" might be tolerated, but materialism is utterly inadmissible.

And yet the original home of all modern materialism, from the seventeenth century onwards, is England.

"Materialism is the natural-born son of Great Britain. Already the British schoolman, Duns Scotus, asked, 'whether it was impossible for matter to think?'

"In order to effect this miracle, he took refuge in God's omnipotence, i.e., he made theology preach materialism. Moreover, he was a nominalist. Nominalism, the first form of materialism, is chiefly found among the English schoolmen.¹²⁷

"The real progenitor of English materialism is Bacon. To him natural philosophy is the only true philosophy, and physics based upon the experience of the senses is the chiefest part of natural philosophy. Anaxagoras and his *homoiomeriae*,¹²⁸ Democritus and his atoms, he often quotes as his authorities. According to him the senses are infallible and the source of all knowledge. All science is based on experience, and consists in subjecting the data furnished by the senses to a rational method of investigation. Induction, analysis, comparison, observation, experiment, are the principal forms of such a rational method. Among the qualities inherent in matter, motion is the first and foremost, not only in the form of mechanical and mathematical motion, but chiefly in the form of an impulse, a vital spirit, a tension – or a 'qual', to use a term of Jacob Böhme's* – of matter.

"In Bacon, its first creator, materialism still occludes within itself the germs of a many-sided development. On the one hand, matter, surrounded by a sensuous, poetic glamour, seems to attract man's whole entity by winning smiles. On the other, the aphoristically formulated doctrine pullulates with inconsistencies imported from theology.

* "Qual" is a philosophical play upon words. Qual literally means torture, a pain which drives to action of some kind; at the same time the mystic Böhme puts into the German word something of the meaning of the Latin *qualitas*; his "qual" was the activating principle arising from, and promoting in its turn, the spontaneous development of the thing, relation, or person subject to it, in contradistinction to a pain inflicted from without. [*Note by Engels.*]

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"In its further evolution, materialism becomes one-sided. Hobbes is the man who systematizes Baconian materialism. Knowledge based upon the senses loses its poetic blossom, it passes into the abstract experience of the mathematician; geometry is proclaimed as the queen of sciences. Materialism takes to misanthropy. If it is to overcome its opponent, misanthropic, fleshless spiritualism, and that on the latter's own ground, materialism has to chastise its own flesh and turn ascetic. Thus, from a sensual, it passes into an intellectual, entity; but thus, too, it evolves all the consistency, regardless of consequences, characteristic of the intellect.

"Hobbes, as Bacon's continuator, argues thus: if all human knowledge is furnished by the senses, then our concepts and ideas are but the phantoms, divested of their sensual forms, of the real world. Philosophy can but give names to these phantoms. One name may be applied to more than one of them. There may even be names of names. It would imply a contradiction if, on the one hand, we maintained that all ideas had their origin in the world of sensation, and, on the other, that a word was more than a word; that besides the beings known to us by our senses, beings which are one and all individuals, there existed also beings of a general, not individual, nature. An unbodily substance is the same absurdity as an unbodily body. Body, being, substance, are but different terms for the same reality. *It is impossible to separate thought from matter that thinks.* This matter is the substratum of all changes going on in the world. The word infinite is meaningless, unless it states that our mind is capable of performing an endless process of addition. Only material things being perceptible to us, we cannot know anything about the existence of God. My own existence alone is certain. Every human passion is a mechanical movement which has a beginning and an end. The objects of impulse are what we call good. Man is subject to the same laws as nature. Power and freedom are identical.

"Hobbes had systematized Bacon, without, however, furnishing a proof for Bacon's fundamental principle, the origin of all human knowledge from the world of sensation. It was Locke who, in his *Essay on the Human Understanding*, supplied this proof.

"Hobbes had shattered the theistic prejudices of Baconian materialism; Collins, Dodwell, Coward, Hartley, Priestley, similarly shattered the last theological bars that still hemmed in Locke's sen-

sationalism. At all events, for practical materialists, deism is but an easy-going way of getting rid of religion.*¹²⁹

Thus Karl Marx wrote about the British origin of modern materialism. If Englishmen nowadays do not exactly relish the compliment he paid their ancestors, more's the pity. It is none the less undeniable that Bacon, Hobbes, and Locke are the fathers of that brilliant school of French materialists which made the eighteenth century, in spite of all battles on land and sea won over Frenchmen by Germans and Englishmen, a pre-eminently French century, even before that crowning French Revolution, the results of which we outsiders, in England as well as in Germany, are still trying to acclimatize.

There is no denying it. About the middle of this century, what struck every cultivated foreigner who set up his residence in England, was what he was then bound to consider the religious bigotry and stupidity of the English respectable middle class. We, at that time, were all materialists, or, at least, very advanced freethinkers, and to us it appeared inconceivable that almost all educated people in England should believe in all sorts of impossible miracles, and that even geologists like Buckland and Mantell should contort the facts of their science so as not to clash too much with the myths of the book of Genesis; while, in order to find people who dared to use their own intellectual faculties with regard to religious matters, you had to go amongst the uneducated, the "great unwashed", as they were then called, the working people, especially the Owenite Socialists.

But England has been "civilized" since then. The exhibition of 1851 sounded the knell of English insular exclusiveness. England became gradually internationalized – in diet, in manners, in ideas; so much so that I begin to wish that some English manners and customs had made as much headway on the Continent as other Continental habits have made here. Anyhow, the introduction and spread of salad-oil (before 1851 known only to the aristocracy) has been accompanied by a fatal spread of Continental scepticism in matters religious, and it has come to this, that agnosticism, though not yet

* Marx and Engels, *Die Heilige Familie*, Frankfurt a. M., 1845, pp. 201-04. [Note by Engels.] (English edition, *The Holy Family*, Moscow, 1956, pp. 172-74; the translation of that edition does not coincide with Engels' own translation, which is followed here. – Ed.)

considered “the thing” quite as much as the Church of England, is yet very nearly on a par, as far as respectability goes, with Baptism, and decidedly ranks above the Salvation Army. And I cannot help believing that under these circumstances it will be consoling to many who sincerely regret and condemn this progress of infidelity to learn that these “new-fangled notions” are not of foreign origin, are not “made in Germany”, like so many other articles of daily use, but are undoubtedly Old English, and that their British originators two hundred years ago went a good deal further than their descendants now dare to venture.

What, indeed, is agnosticism, but, to use an expressive Lancashire term, “shamefaced” materialism? The agnostic’s conception of Nature is materialistic throughout. The entire natural world is governed by law, and absolutely excludes the intervention of action from without. But, he adds, we have no means either of ascertaining or of disproving the existence of some Supreme Being beyond the known universe. Now, this might hold good at the time when Laplace, to Napoleon’s question, why in the great astronomer’s *Mécanique céleste** the Creator was not even mentioned, proudly replied: *Je n’avais pas besoin de cette hypothèse*.† But nowadays, in our evolutionary conception of the universe, there is absolutely no room for either a Creator or a Ruler; and to talk of a Supreme Being shut out from the whole existing world, implies a contradiction in terms, and, as it seems to me, a gratuitous insult to the feelings of religious people.

Again, our agnostic admits that all our knowledge is based upon the information imparted to us by our senses. But, he adds, how do we know that our senses give us correct representations of the objects we perceive through them? And he proceeds to inform us that, whenever he speaks of objects or their qualities, he does in reality not mean these objects and qualities, of which he cannot know anything for certain, but merely the impressions which they have produced on his senses. Now, this line of reasoning seems undoubtedly hard to beat by mere argumentation. But before there was argumentation, there was action. *Im Anfang war die Tat*.‡ And human action

* *Celestial Mechanics*. – Ed.

† I had no need for this hypothesis. – Ed.

‡ In the beginning was the deed. – Ed.

had solved the difficulty long before human ingenuity invented it. The proof of the pudding is in the eating. From the moment we turn to our own use these objects, according to the qualities we perceive in them, we put to an infallible test the correctness or otherwise of our sense-perceptions. If these perceptions have been wrong, then our estimate of the use to which an object can be turned must also be wrong, and our attempt must fail. But if we succeed in accomplishing our aim, if we find that the object does agree with our idea of it, and does answer the purpose we intended it for, then that is positive proof that our perceptions of it and of its qualities, *so far*, agree with reality outside ourselves. And whenever we find ourselves face to face with a failure, then we generally are not long in making out the cause that made us fail; we find that the perception upon which we acted was either incomplete and superficial, or combined with the results of other perceptions in a way not warranted by them – what we call defective reasoning. So long as we take care to train and to use our senses properly, and to keep our action within the limits prescribed by perceptions properly made and properly used, so long we shall find that the result of our action proves the conformity of our perceptions with the objective nature of the things perceived. Not in one single instance, so far, have we been led to the conclusion that our sense-perceptions, scientifically controlled, induce in our minds ideas respecting the outer world that are, by their very nature, at variance with reality, or that there is an inherent incompatibility between the outer world and our sense-perceptions of it.

But then come the Neo-Kantian agnostics and say: We may correctly perceive the qualities of a thing, but we cannot by any sensible or mental process grasp the thing-in-itself. This “thing-in-itself” is beyond our ken. To this Hegel, long since, has replied: If you know all the qualities of a thing, you know the thing itself; nothing remains but the fact that the said thing exists without us; and when your senses have taught you that fact, you have grasped the last remnant of the thing-in-itself, Kant’s celebrated unknowable *Ding an sich*. To which it may be added, that in Kant’s time our knowledge of natural objects was indeed so fragmentary that he might well suspect, behind the little we knew about each of them, a mysterious “thing-in-itself”. But one after another these ungraspable things have been grasped, analysed, and, what is more, reproduced by the giant progress of science; and what we can produce, we cer-

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tainly cannot consider as unknowable. To the chemistry of the first half of this century organic substances were such mysterious objects; now we learn to build them up one after another from their chemical elements without the aid of organic processes. Modern chemists declare that as soon as the chemical constitution of no matter what body is known, it can be built up from its elements. We are still far from knowing the constitution of the highest organic substances, the albuminous bodies;* but there is no reason why we should not, if only after centuries, arrive at that knowledge and, armed with it, produce artificial albumen. But if we arrive at that, we shall at the same time have produced organic life, for life, from its lowest to its highest forms, is but the normal mode of existence of albuminous bodies.

As soon, however, as our agnostic has made these formal mental reservations, he talks and acts as the rank materialist he at bottom is. He may say that, as far as *we* know, matter and motion, or as it is now called, energy, can neither be created nor destroyed, but that we have no proof of their not having been created at some time or other. But if you try to use this admission against him in any particular case, he will quickly put you out of court. If he admits the possibility of spiritualism *in abstracto*, he will have none of it *in concreto*. As far as we know and can know, he will tell you there is no Creator and no Ruler of the universe; as far as we are concerned, matter and energy can neither be created nor annihilated; for us, mind is a mode of energy, a function of the brain; all we know is that the material world is governed by immutable laws, and so forth. Thus, as far as he is a scientific man, as far as he *knows* anything, he is a materialist; outside his science, in spheres about which he knows nothing, he translates his ignorance into Greek and calls it agnosticism.

At all events, one thing seems clear: even if I was an agnostic, it is evident that I could not describe the conception of history sketched out in this little book as “historical agnosticism”. Religious people would laugh at me, agnostics would indignantly ask: Was I going to make fun of them? And thus I hope even British respectability will not be over-shocked if I use, in English as well as in so many other languages, the term, “historical materialism”, to designate that view of the course of history which seeks the ultimate

* *I.e.*, “proteins”; see Note 41. — *Ed.*

cause and the great moving power of all important historic events in the economic development of society, in the changes in the modes of production and exchange, in the consequent division of society into distinct classes, and in the struggles of these classes against one another.

This indulgence will perhaps be accorded to me all the sooner if I show that historical materialism may be of advantage even to British respectability. I have mentioned the fact, that about forty or fifty years ago, any cultivated foreigner settling in England was struck by what he was then bound to consider the religious bigotry and stupidity of the English respectable middle class. I am now going to prove that the respectable English middle class of that time was not quite as stupid as it looked to the intelligent foreigner. Its religious leanings can be explained.

When Europe emerged from the Middle Ages, the rising middle class of the towns constituted its revolutionary element. It had conquered a recognized position within mediaeval feudal organization, but this position, also, had become too narrow for its expansive power. The development of the middle class, the *bourgeoisie*, became incompatible with the maintenance of the feudal system; the feudal system, therefore, had to fall.

But the great international centre of feudalism was the Roman Catholic Church. It united the whole of feudalized Western Europe, in spite of all internal wars, into one grand political system, opposed as much to the schismatic Greeks as to the Mohammedan countries. It surrounded feudal institutions with the halo of divine consecration. It had organized its own hierarchy on the feudal model, and, lastly, it was itself by far the most powerful feudal lord, holding, as it did, fully one-third of the soil of the Catholic world. Before profane feudalism could be successfully attacked in each country and in detail, this, its sacred central organization had to be destroyed.

Moreover, parallel with the rise of the middle class went on the great revival of science; astronomy, mechanics, physics, anatomy, physiology, were again cultivated. And the bourgeoisie, for the development of its industrial production, required a science which ascertained the physical properties of natural objects and the modes of action of the forces of Nature. Now up to then science had but been the humble handmaid of the Church, had not been allowed to overstep the limits set by faith, and for that reason had been no science at all. Science rebelled against the Church; the bourgeoisie

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could not do without science, and, therefore, had to join in the rebellion.

The above, though touching but two of the points where the rising middle class was bound to come into collision with the established religion, will be sufficient to show, first, that the class most directly interested in the struggle against the pretensions of the Roman Church was the bourgeoisie; and second, that every struggle against feudalism, at that time, had to take on a religious disguise, had to be directed against the Church in the first instance. But if the universities and the traders of the cities started the cry, it was sure to find, and did find, a strong echo in the masses of the country people, the peasants, who everywhere had to struggle for their very existence with their feudal lords, spiritual and temporal.

The long fight of the bourgeoisie against feudalism culminated in three great, decisive battles.

The first was what is called the Protestant Reformation in Germany. The war cry raised against the Church by Luther was responded to by two insurrections of a political nature: first, that of the lower nobility under Franz von Sickingen (1523), then the great Peasants' War, 1525.¹³⁰ Both were defeated, chiefly in consequence of the indecision of the parties most interested, the burghers of the towns – an indecision into the causes of which we cannot here enter. From that moment the struggle degenerated into a fight between the local princes and the central power, and ended by blotting out Germany, for two hundred years, from the politically active nations of Europe. The Lutheran Reformation produced a new creed indeed, a religion adapted to absolute monarchy. No sooner were the peasants of North-east Germany converted to Lutheranism than they were from freemen reduced to serfs.

But where Luther failed, Calvin won the day. Calvin's creed was one fit for the boldest of the bourgeoisie of his time. His predestination doctrine was the religious expression of the fact that in the commercial world of competition success or failure does not depend upon a man's activity or cleverness, but upon circumstances uncontrollable by him. It is not of him that willeth or of him that runneth, but of the mercy of unknown superior economic powers; and this was especially true at a period of economic revolution, when all old commercial routes and centres were replaced by new ones, when India and America were opened to the world, and when even the most sacred economic articles of faith – the value of gold

and silver – began to totter and to break down. Calvin's church constitution was thoroughly democratic and republican; and where the kingdom of God was republicanized, could the kingdoms of this world remain subject to monarchs, bishops, and lords? While German Lutheranism became a willing tool in the hands of princes, Calvinism founded a republic in Holland, and active republican parties in England, and, above all, Scotland.

In Calvinism, the second great bourgeois upheaval found its doctrine ready cut and dried. This upheaval took place in England. The middle class of the towns brought it on, and the yeomanry of the country districts fought it out. Curiously enough, in all the three great bourgeois risings, the peasantry furnishes the army that has to do the fighting; and the peasantry is just the class that, the victory once gained, is most surely ruined by the economic consequences of that victory. A hundred years after Cromwell, the yeomanry of England had almost disappeared. Anyhow, had it not been for that yeomanry and for the *plebeian* element in the towns, the bourgeoisie alone would never have fought the matter out to the bitter end, and would never have brought Charles I to the scaffold. In order to secure even those conquests of the bourgeoisie that were ripe for gathering at the time, the revolution had to be carried considerably further – exactly as in 1793 in France and 1848 in Germany. This seems, in fact, to be one of the laws of evolution of bourgeois society. Well, upon this excess of revolutionary activity there necessarily followed the inevitable reaction which in its turn went beyond the point where it might have maintained itself. After a series of oscillations, the new centre of gravity was at last attained and became a new starting-point. The grand period of English history, known to respectability under the name of “the Great Rebellion”, and the struggles succeeding it, were brought to a close by the comparatively puny event entitled by Liberal historians, “the Glorious Revolution”.¹³¹

The new starting-point was a compromise between the rising middle class and the ex-feudal landowners. The latter, though called, as now, the aristocracy, had been long since on the way which led them to become what Louis Philippe in France became at a much later period, “the first bourgeois of the kingdom”. Fortunately for England, the old feudal barons had killed one another during the Wars of the Roses. Their successors, though mostly scions of the old families, had been so much out of the direct line of

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descent that they constituted quite a new body, with habits and tendencies far more bourgeois than feudal. They fully understood the value of money, and at once began to increase their rents by turning hundreds of small farmers out and replacing them by sheep. Henry VIII, while squandering the Church lands, created fresh bourgeois landlords by wholesale; the innumerable confiscations of estates, regranted to absolute or relative upstarts, and continued during the whole of the seventeenth century, had the same result. Consequently, ever since Henry VII, the English "aristocracy", far from counteracting the development of industrial production, had, on the contrary, sought to indirectly profit thereby; and there had always been a section of the great landowners willing, from economical or political reasons, to co-operate with the leading men of the financial and industrial bourgeoisie. The compromise of 1689 was, therefore, easily accomplished. The political spoils of "pelf and place" were left to the great landowning families, provided the economic interests of the financial, manufacturing, and commercial middle class were sufficiently attended to. And these economic interests were at that time powerful enough to determine the general policy of the nation. There might be squabbles about matters of detail, but, on the whole, the aristocratic oligarchy knew too well that its own economic prosperity was irretrievably bound up with that of the industrial and commercial middle class.

From that time, the bourgeoisie was a humble, but still a recognized component of the ruling classes of England. With the rest of them, it had a common interest in keeping in subjection the great working mass of the nation. The merchant or manufacturer himself stood in the position of master, or, as it was until lately called, of "natural superior" to his clerks, his workpeople, his domestic servants. His interest was to get as much and as good work out of them as he could; for this end they had to be trained to proper submission. He was himself religious; his religion had supplied the standard under which he had fought the king and the lords; he was not long in discovering the opportunities this same religion offered him for working upon the minds of his natural inferiors, and making them submissive to the behests of the masters it had pleased God to place over them. In short, the English bourgeoisie now had to take a part in keeping down the "lower orders", the great producing mass of the nation, and one of the means employed for that purpose was the influence of religion.

There was another fact that contributed to strengthen the religious leanings of the bourgeoisie. That was the rise of materialism in England. This new doctrine not only shocked the pious feelings of the middle class; it announced itself as a philosophy only fit for scholars and cultivated men of the world, in contrast to religion which was good enough for the uneducated masses, including the bourgeoisie. With Hobbes it stepped on the stage as a defender of royal prerogative and omnipotence; it called upon absolute monarchy to keep down that *puer robustus sed malitiosus*,* to wit, the people. Similarly, with the successors of Hobbes, with Bolingbroke, Shaftesbury, etc., the new deistic form of materialism remained an aristocratic, esoteric doctrine, and, therefore, hateful to the middle class both for its religious heresy and for its anti-bourgeois political connections. Accordingly, in opposition to the materialism and deism of the aristocracy, those Protestant sects which had furnished the flag and the fighting contingent against the Stuarts, continued to furnish the main strength of the progressive middle class, and form even today the backbone of "the Great Liberal Party".

In the meantime materialism passed from England to France, where it met and coalesced with another materialistic school of philosophers, a branch of Cartesianism. In France, too, it remained at first an exclusively aristocratic doctrine. But soon its revolutionary character asserted itself. The French materialists did not limit their criticism to matters of religious belief; they extended it to whatever scientific tradition or political institution they met with; and to prove the claim of their doctrine to universal application, they took the shortest cut, and boldly applied it to all subjects of knowledge in the giant work after which they were named – the *Encyclopédie*. Thus, in one or the other of its two forms – avowed materialism or deism – it became the creed of the whole cultured youth of France; so much so that, when the Great Revolution broke out, the doctrine hatched by English Royalists gave a theoretical flag to French Republicans and Terrorists, and furnished the text for the Declaration of the Rights of Man. The Great French Revolution was the third uprising of the bourgeoisie, but the first that had entirely cast off the religious cloak, and was fought out on undisguised political lines; it was the first, too, that was really fought out up to the destruction of one of the combatants, the aristocracy, and the complete triumph of

* Robust but malicious boy. – *Ed.*

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the other, the bourgeoisie. In England the continuity of pre-revolutionary and post-revolutionary institutions, and the compromise between landlords and capitalists, found its expression in the continuity of judicial precedents and in the religious preservation of the feudal forms of the law. In France the Revolution constituted a complete breach with the traditions of the past; it cleared out the very last vestiges of feudalism, and created in the *Code civil* a masterly adaptation of the old Roman law – that almost perfect expression of the juridical relations corresponding to the economic stage called by Marx the production of commodities – to modern capitalistic conditions; so masterly that this French revolutionary code still serves as a model for reforms of the law of property in all other countries, not excepting England. Let us, however, not forget that if English law continues to express the economic relations of capitalistic society in that barbarous feudal language which corresponds to the thing expressed, just as English spelling corresponds to English pronunciation – *vous écrivez Londres et vous prononcez Constantinople*,* said a Frenchman – that same English law is the only one which has preserved through ages, and transmitted to America and the Colonies, the best part of that old Germanic personal freedom, local self-government, and independence from all interference but that of the law courts which on the Continent has been lost during the period of absolute monarchy, and has nowhere been as yet fully recovered.

To return to our British bourgeois. The French Revolution gave him a splendid opportunity, with the help of the Continental monarchies, to destroy French maritime commerce, to annex French colonies, and to crush the last French pretensions to maritime rivalry. That was one reason why he fought it. Another was that the ways of this revolution went very much against his grain. Not only its “execrable” terrorism, but the very attempt to carry bourgeois rule to extremes. What should the British bourgeois do without his aristocracy, that taught him manners, such as they were, and invented fashions for him – that furnished officers for the army, which kept order at home, and the navy, which conquered colonial possessions and new markets abroad? There was indeed a progressive minority of the bourgeoisie, that minority whose interests were not so well attended to under the compromise; this section, composed chiefly of

* You write London and pronounce it Constantinople. – *Ed.*

the less wealthy middle class, did sympathize with the Revolution, but it was powerless in Parliament.

Thus, if materialism became the creed of the French Revolution, the God-fearing English bourgeois held all the faster to his religion. Had not the reign of terror in Paris proved what was the upshot, if the religious instincts of the masses were lost? The more materialism spread from France to neighbouring countries, and was reinforced by similar doctrinal currents, notably by German philosophy, the more, in fact, materialism and freethought generally became on the Continent the necessary qualifications of a cultivated man, the more stubbornly the English middle class stuck to its manifold religious creeds. These creeds might differ from one another, but they were, all of them, distinctly religious, Christian creeds.

While the Revolution ensured the political triumph of the bourgeoisie in France, in England Watt, Arkwright, Cartwright, and others, initiated an industrial revolution, which completely shifted the centre of gravity of economic power. The wealth of the bourgeoisie increased considerably faster than that of the landed aristocracy. Within the bourgeoisie itself the financial aristocracy, the bankers, etc., were more and more pushed into the background by the manufacturers. The compromise of 1689, even after the gradual changes it had undergone in favour of the bourgeoisie, no longer corresponded to the relative position of the parties to it. The character of these parties, too, had changed; the bourgeoisie of 1830 was very different from that of the preceding century. The political power still left to the aristocracy, and used by them to resist the pretensions of the new industrial bourgeoisie, became incompatible with the new economic interests. A fresh struggle with the aristocracy was necessary; it could end only in a victory of the new economic power. First, the Reform Act was pushed through, in spite of all resistance, under the impulse of the French Revolution of 1830. It gave to the bourgeoisie a recognized and powerful place in Parliament. Then the repeal of the Corn Laws, which settled, once for all, the supremacy of the bourgeoisie, and especially of its most active portion, the manufacturers, over the landed aristocracy. This was the greatest victory of the bourgeoisie; it was, however, also the last it gained in its own exclusive interest. Whatever triumphs it obtained later on, it had to share with a new social power, first its ally, but soon its rival.

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The industrial revolution had created a class of large manufacturing capitalists, but also a class – and a far more numerous one – of manufacturing workpeople. This class gradually increased in numbers, in proportion as the industrial revolution seized upon one branch of manufacture after another, and in the same proportion it increased in power. This power it proved as early as 1824, by forcing a reluctant Parliament to repeal the acts forbidding combinations of workmen. During the Reform agitation, the working men constituted the Radical wing of the Reform Party; the Act of 1832 having excluded them from the suffrage, they formulated their demands in the People's Charter, and constituted themselves, in opposition to the great bourgeois Anti-Corn Law party, into an independent party, the Chartists, the first working men's party of modern times.

Then came the Continental revolutions of February and March, 1848, in which the working people played such a prominent part, and, at least in Paris, put forward demands which were certainly inadmissible from the point of view of capitalist society. And then came the general reaction. First the defeat of the Chartists on the 10th April, 1848, then the crushing of the Paris working men's insurrection in June of the same year, then the disasters of 1849 in Italy, Hungary, South Germany, and at last the victory of Louis Bonaparte over Paris, 2nd December, 1851. For a time, at least, the bugbear of working-class pretensions was put down, but at what cost! If the British bourgeois had been convinced before of the necessity of maintaining the common people in a religious mood, how much more must he feel that necessity after all these experiences? Regardless of the sneers of his Continental compeers, he continued to spend thousands and tens of thousands, year after year, upon the evangelization of the lower orders; not content with his own native religious machinery, he appealed to Brother Jonathan, the greatest organizer in existence of religion as a trade, and imported from America revivalism, Moody and Sankey, and the like; and, finally, he accepted the dangerous aid of the Salvation Army, which revives the propaganda of early Christianity, appeals to the poor as the elect, fights capitalism in a religious way, and thus fosters an element of early Christian class antagonism, which one day may become troublesome to the well-to do people who now find the ready money for it.

It seems a law of historical development that the bourgeoisie can in no European country get hold of political power – at least for

any length of time – in the same exclusive way in which the feudal aristocracy kept hold of it during the Middle Ages. Even in France, where feudalism was completely extinguished, the bourgeoisie, as a whole, has held full possession of the Government for very short periods only. During Louis Philippe's reign, 1830-48, a very small portion of the bourgeoisie ruled the kingdom; by far the larger part were excluded from the suffrage by the high qualification. Under the Second Republic, 1848-51, the whole bourgeoisie ruled, but for three years only; their incapacity brought on the Second Empire. It is only now, in the Third Republic, that the bourgeoisie as a whole have kept possession of the helm for more than twenty years; and they are already showing lively signs of decadence. A durable reign of the bourgeoisie has been possible only in countries like America, where feudalism was unknown, and society at the very beginning started from a bourgeois basis. And even in France and America, the successors of the bourgeoisie, the working people, are already knocking at the door.

In England, the bourgeoisie never held undivided sway. Even the victory of 1832 left the landed aristocracy in almost exclusive possession of all the leading Government offices. The meekness with which the wealthy middle class submitted to this remained inconceivable to me until the great Liberal manufacturer, Mr. W. A. Forster, in a public speech implored the young men of Bradford to learn French, as a means to get on in the world, and quoted from his own experience how sheepish he looked when, as a Cabinet Minister, he had to move in society where French was, at least, as necessary as English! The fact was, the English middle class of that time were, as a rule, quite uneducated upstarts, and could not help leaving to the aristocracy those superior Government places where other qualifications were required than mere insular narrowness and insular conceit, seasoned by business sharpness.* Even now the endless

* And even in business matters, the conceit of national chauvinism is but a sorry adviser. Up to quite recently, the average English manufacturer considered it derogatory for an Englishman to speak any language but his own, and felt rather proud than otherwise of the fact that "poor devils" of foreigners settled in England and took off his hands the trouble of disposing of his products abroad. He never noticed that these foreigners, mostly Germans, thus got command of a very large part of British foreign trade, imports and exports, and that the direct foreign

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newspaper debates about middle-class education show that the English middle class does not yet consider itself good enough for the best education, and looks to something more modest. Thus, even after the repeal of the Corn Laws, it appeared a matter of course that the men who had carried the day, the Cobdens, Brights, Forsters, etc., should remain excluded from a share in the official government of the country, until twenty years afterwards, a new Reform Act opened to them the door of the Cabinet. The English bourgeoisie are, up to the present day, so deeply penetrated by a sense of their social inferiority that they keep up, at their own expense and that of the nation, an ornamental caste of drones to represent the nation worthily at all state functions; and they consider themselves highly honoured whenever one of themselves is found worthy of admission into this select and privileged body, manufactured, after all, by themselves.

The industrial and commercial middle class had, therefore, not yet succeeded in driving the landed aristocracy completely from political power when another competitor, the working class, appeared on the stage. The reaction after the Chartist movement and the Continental revolutions, as well as the unparalleled extension of English trade from 1848-66 (ascribed vulgarly to Free Trade alone, but due far more to the colossal development of railways, ocean steamers, and means of intercourse generally), had again driven the working class into the dependency of the Liberal Party, of which they formed, as in pre-Chartist times, the Radical wing. Their

trade of Englishmen became limited, almost entirely, to the colonies, China, the United States, and South America. Nor did he notice that these Germans traded with other Germans abroad, who gradually organized a complete network of commercial colonies all over the world. But when Germany, about forty years ago, seriously began manufacturing for export, this network served her admirably in her transformation, in so short a time, from a corn-exporting into a first rate manufacturing country. Then, about ten years ago, the British manufacturer got frightened, and asked his ambassadors and consuls how it was that he could no longer keep his customers together. The unanimous answer was: (1) You don't learn your customer's language but expect him to speak your own; (2) You don't even try to suit your customer's wants, habits, and tastes, but expect him to conform to your English ones. [*Note by Engels.*]

claims to the franchise, however, gradually became irresistible; while the Whig leaders of the Liberals “funked”, Disraeli showed his superiority by making the Tories seize the favourable moment and introduce household suffrage in the boroughs, along with a redistribution of seats. Then followed the ballot; then in 1884 the extension of household suffrage to the counties and a fresh redistribution of seats, by which electoral districts were to some extent equalized. All these measures considerably increased the electoral power of the working class, so much so that in at least 150 to 200 constituencies that class now furnishes the majority of voters. But parliamentary government is a capital school for teaching respect for tradition; if the middle class look with awe and veneration upon what Lord John Manners playfully called “our old nobility”, the mass of the working people then looked up with respect and deference to what used to be designated as “their betters”, the middle class. Indeed, the British workman, some fifteen years ago, was the model workman, whose respectful regard for the position of his master, and whose self-restraining modesty in claiming rights for himself, consoled our German economists of the *Katheders-Socialist* school for the incurable communistic and revolutionary tendencies of their own working men at home.¹³²

But the English middle class – good men of business as they are – saw farther than the German professors. They had shared their power but reluctantly with the working class. They had learned, during the Chartist years, what that *puer robustus sed malitiosus*, the people, is capable of. And since that time, they had been compelled to incorporate the better part of the People’s Charter in the Statutes of the United Kingdom. Now, if ever, the people must be kept in order by moral means, and the first and foremost of all moral means of action upon the masses is and remains – religion. Hence the parsons’ majorities on the school boards, hence the increasing self-taxation of the bourgeoisie for the support of all sorts of revivalism, from ritualism to the Salvation Army.

And now came the triumph of British respectability over the freethought and religious laxity of the Continental bourgeois. The workmen of France and Germany had become rebellious. They were thoroughly infected with socialism, and, for very good reasons, were not at all particular as to the legality of the means by which to secure their own ascendancy. The *puer robustus*, here, turned from day to day more *malitiosus*. Nothing remained to the

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French and German bourgeoisie as a last resource but to silently drop their freethought, as a youngster, when sea-sickness creeps upon him, quietly drops the burning cigar he brought swaggeringly on board; one by one, the scoffers turned pious in outward behaviour, spoke with respect of the Church, its dogmas and rites, and even conformed with the latter as far as could not be helped. French bourgeois dined *maigre* on Fridays, and German ones sat out long Protestant sermons in their pews on Sundays. They had come to grief with materialism. “*Die Religion muss dem Volk erhalten werden,*” – religion must be kept alive for the people – that was the only and the last means to save society from utter ruin. Unfortunately for themselves, they did not find this out until they had done their level best to break up religion forever. And now it was the turn of the British bourgeois to sneer and to say: “Why, you fools, I could have told you that two hundred years ago!”

However, I am afraid neither the religious stolidity of the British, nor the *post festum** conversion of the Continental bourgeois will stem the rising proletarian tide. Tradition is a great retarding force, is the *vis inertiae*† of history, but, being merely passive, is sure to be broken down; and thus religion will be no lasting safeguard to capitalist society. If our juridical, philosophical, and religious ideas are the more or less remote offshoots of the economical relations prevailing in a given society, such ideas cannot, in the long run, withstand the effects of a complete change in these relations. And, unless we believe in supernatural revelation, we must admit that no religious tenets will ever suffice to prop up a tottering society.

In fact, in England too, the working people have begun to move again. They are, no doubt, shackled by traditions of various kinds. Bourgeois traditions, such as the widespread belief that there can be but two parties, Conservatives and Liberals, and that the working class must work out its salvation by and through the great Liberal Party. Workingmen’s traditions, inherited from their first tentative efforts at independent action, such as the exclusion, from ever so many old Trade Unions, of all applicants who have not gone through a regular apprenticeship; which means the breeding, by

* After the event. – *Ed.*

† Literally, the force of inertia. – *Ed.*

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every such union, of its own blacklegs. But for all that the English working class is moving, as even Professor Brentano has sorrowfully had to report to his brother Katheder-Socialists. It moves, like all things in England, with a slow and measured step, with hesitation here, with more or less unfruitful, tentative attempts there; it moves now and then with an overcautious mistrust of the name of socialism, while it gradually absorbs the substance; and the movement spreads and seizes one layer of the workers after another. It has now shaken out of their torpor the unskilled labourers of the East End of London, and we all know what a splendid impulse these fresh forces have given it in return. And if the pace of the movement is not up to the impatience of some people, let them not forget that it is the working class which keeps alive the finest qualities of the English character, and that, if a step in advance is once gained in England, it is, as a rule, never lost afterwards. If the sons of the old Chartist, for reasons explained above, were not quite up to the mark, the grandsons bid fair to be worthy of their forefathers.

But the triumph of the European working class does not depend upon England alone. It can only be secured by the co-operation of, at least, England, France, and Germany. In both the latter countries the working-class movement is well ahead of England. In Germany it is even within measurable distance of success. The progress it has there made during the last twenty-five years is unparalleled. It advances with ever-increasing velocity. If the German middle class have shown themselves lamentably deficient in political capacity, discipline, courage, energy, and perseverance, the German working class have given ample proof of all these qualities. Four hundred years ago, Germany was the starting-point of the first upheaval of the European middle class; as things are now, is it outside the limits of possibility that Germany will be the scene, too, of the first great victory of the European proletariat?

F. Engels

April 20th, 1882

First published in Engels' *Socialism: The original text is in English. Utopian and Scientific*, Allen and Unwin, London, 1892

NOTES

[1] *Herr Eugen Dühring's Revolution in Science*, to give its original title in full, is generally known as *Anti-Dühring*. Lenin evaluated this work very highly, saying that it analyzed "highly important problems in the domain of philosophy, natural science and the social sciences" and that it "is a wonderfully rich and instructive book" (*Collected Works*, Foreign Languages Publishing House, Moscow, 1960, Vol. II, p. 25 and note).

Engels' work was a direct product of the ideological and political struggle within the German Social-Democratic Party and working-class movement.

Marx and Engels first noticed Dühring when the latter published his review of Marx's *Capital*, Vol. I in *Ergänzungsblätter zur Kenntniss der Gegenwart* (*Supplementary Notes for Knowing the Present*), No. 3, Vol. 3, December 1867. Their letters to each other in January-March 1868 reflected their critical attitude towards Dühring.

Dühring was quite influential among the Social-Democrats in the 1870s. His most active supporters were Eduard Bernstein, Johann Most and Friedrich Wilhelm Fritzsche. For a short time even August Bebel was influenced by Dühring. In March 1874 he anonymously published two articles about Dühring entitled "A New Communist" in the *Volksstaat* (see Note 2), against which Marx and Engels lodged a strong protest to Wilhelm Liebknecht.

With the appearance of the second edition of Dühring's *Critical History of Political Economy and Socialism* and his *Course of Philosophy* in 1875, Dühring and his supporters became increasingly bold. Dühring came out with sharp attacks on Marxism in these two works, so that Liebknecht sounded the alarm in his letter to Engels of April 1875. In October 1875 and May 1876, Liebknecht sent Engels articles by Abraham Enss and Johann Most, which lauded Dühring and were rejected by the *Volksstaat*.

Engels had already publicly struck the first blow against Dühring in the course of his article "Prussian Booze in the German Reichstag", which appeared in the *Volksstaat* in February and March 1876 (Marx and Engels, *Werke*, Berlin, 1962, Vol. XIX, p. 45). At the end of May 1876 Engels decided to interrupt his work on the *Dialectics of Nature* in order to refute the "regenerator of socialism" and his new "socialist doctrine" and to defend Marxism as the only correct world outlook for the party of the proletariat. In his letter to Marx of May 24, 1875, Engels indicated that the time

had arrived to settle accounts with Dühring, and he was firmly supported by Marx in the latter's reply of May 25. Engels immediately set to work and in his letter to Marx of May 28 he described the general plan and character of his projected work (see Marx and Engels, *Selected Correspondence*, FLPH, Moscow, no date, pp. 371-73).

Engels spent almost two years – from September 1876 to the beginning of July 1878 – on *Anti-Dühring*.

Part I was basically written between September 1876 and January 1877 and appeared as a series of articles entitled “Herr Eugen Dühring's Revolution in Philosophy” in *Vorwärts* (*Forward*, see Note 2) in January May 1877. This part also included the first two chapters, which later appeared as an independent general introduction to all three parts when *Anti-Dühring* was first published in book form.

Part II was basically completed between June and August 1877. Its last chapter, “From the *Critical History*”, was written by Marx. Part II, entitled “Herr Eugen Dühring's Revolution in Political Economy”, was published in *Vorwärts* in July-December 1877.

Part III was written between August 1877 and April 1878. Entitled “Herr Eugen Dühring's Revolution in Socialism”, it was published in *Vorwärts* in May-July 1878.

The publication of Engels' articles met with strong resistance from Dühring's followers, who tried by every means to obstruct their appearance in the Party's central organ and who were responsible for the long intervals between articles.

Part I appeared as a brochure in July 1877 and Parts II and III as another brochure a year later. The first complete edition of *Anti-Dühring* in book form was published in July 1878, the second in 1886, and the third in 1894.

Engels' title is a parody of Dühring's *Carey's Revolution in Economic Theory and Social Science*, which is a eulogy of the American vulgar economist Henry Carey, from whom Dühring largely derived his own economic theory.

With the enactment of the Anti-Socialist Law in October 1878 (see Note 4) *Anti-Dühring* was banned in Germany, together with all Engels' other writings.

[2] *Der Volksstaat* (*The People's State*) was the central organ of the German Social-Democratic Workers' Party (Eisenachers), published in Leipzig from October 2, 1869 to September 29, 1876. It was ceaselessly persecuted by the Government and the police for its

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courageous revolutionary position. While its general direction was in the hands of Wilhelm Liebknecht, August Bebel, who had charge of the *Volksstaat* publishing house, exerted a big influence on its character.

Marx and Engels were in close contact with the editors and regularly contributed articles. They attached immense importance to the newspaper and by criticizing it for its errors helped to keep it on the right track.

On October 1, 1876, by the decision of the Gotha Congress of the same year, the *Volksstaat* and the *Neuer Sozialdemokrat* (*The New Social-Democrat*) were fused into *Vorwärts*.

[3] The Sixth World Industrial Fair was held in Philadelphia in 1876 to celebrate the centenary of the founding of the USA. Germany was one of the 40 exhibitors. The chairman of the German panel of judges appointed by the German Government was compelled to admit that German industry was far behind that of other countries and that its guiding principle was “cheap but bad”.

[4] The *Anti-Socialist Law* was enacted by the Bismarck Government with the support of the majority in the Reichstag in October 1878. It banned the German Social-Democratic Party, all Party organizations, mass workers' organizations and the socialist and workers' press were outlawed, socialist literature was confiscated and Social-Democrats were persecuted. However, with the active help of Marx and Engels, the Social-Democratic Party overcame the opportunist and “ultra-Left” elements in its ranks and correctly combined illegal with legal activities and enhanced its influence. Under the pressure of the working-class movement, the law was repealed on October 1, 1890.

[5] A reactionary alliance of European monarchies formed in 1815 by tsarist Russia, Austria and Prussia to suppress the revolution and preserve feudal monarchy in Europe.

[6] *The Poverty of Philosophy* was published in 1847, *The Communist Manifesto* in 1848, and *Capital*, Vol. I, in 1867.

[7] Eugen Dühring was a lecturer at the University of Berlin from 1865 and a teacher at a private lyceum for girls from 1873. In 1872 he began to make sharp attacks on university professors and to criticize university practices. In 1876 he lost his job at the lyceum as a result of pressure from reactionary professors. He repeated his accusations in sharper language in 1877, whereupon the Department of Philosophy deprived him of the right to teach at the University.

His dismissal sparked a vociferous protest campaign by his supporters and was condemned by broad democratic circles.

E. Schweninger, Bismarck's personal physician from 1881, was appointed professor at Berlin University in 1884.

[8] L. H. Morgan's fundamental work *Ancient Society* was published in London in 1877.

[9] Engels left the Manchester merchant house of Ermen and Engels on July 1, 1869 and moved to London on September 20, 1870.

[10] Engels examines the positions of Hegel and Helmholtz in the chapter, "Basic Forms of Motion" in his *Dialectics of Nature*. (See English ed., International Publishers, New York, 1940, p. 37 ff.)

[11] Hegel, *Philosophy of Nature*, translated by A. V. Miller, Oxford, 1970, pp. 65-66 and 76-77.

[12] For Engels' further comments on the historical significance of Kant's nebular hypothesis, see pp. 22 and 55-56 above; for his discussion of Kant's discovery of tidal friction, see Engels, *Dialectics of Nature*, New York, 1940, pp. 271-78.

[13] Engels is referring to the manuscript of *Dialectics of Nature* and Marx's mathematical manuscripts. The latter, consisting of 1,000 sheets, were written between the end of the 1850s and the early 1880s.

[14] Engels is referring to the duck-bill platypus and to the archaeopteryx.

[15] In speaking of the "progressive" nature of Virchow's theory, Engels is alluding to his membership of the German bourgeois Progressive Party, of which he was a founder and active member. Founded in 1861 it demanded in its programme Germany's unification under Prussian leadership and the realization of the principle of local self-administration.

[16] Münzer (around 1490-1525) was a revolutionary, leader and ideologist of the radical peasant-plebeian wing during the Reformation and the Peasants' War. He propagated utopian, egalitarian communism.

As for the Levellers, Engels here obviously has in mind the True Levellers and the egalitarian Diggers, who constituted the extreme left wing of the Levellers.

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Babeuf (1760-97) was a utopian communist and the theorist and leader of the “Conspiracy of Equals.

[17] For an English translation of *Le Neveu de Rameau*, see Diderot, *Rameau's Nephew* and *D'Alembert's Dream*, translated by L. W. Tancock, Penguin Books, 1966; for Rousseau, see Note 56 below.

[18] The *Alexandrian period* of science dates from the 3rd century B.C. Its name derives from the Egyptian port of Alexandria, which was a major centre of international trade. The first two centuries of the Alexandrian age witnessed the rapid advance of mathematics and mechanics (Euclid, Archimedes), astronomy, anatomy, physiology, geography and other sciences.

[19] Dühring, *A Course of Philosophy*, Leipzig, 1875; *A Course of Political and Social Economy*, 2nd ed., Leipzig, 1876; *A Critical History of Political Economy and Socialism*, 2nd ed., Berlin, 1875.

[20] *Phalansteries* – the buildings in which, according to Fourier, the members of producer-consumer associations would live and work in the ideal socialist society.

[21] In 1885, when he prepared the second edition of *Anti-Dühring*, Engels proposed giving a note here, the outline of which (“On the prototypes of mathematical ‘infinity’ in the real world”) he subsequently included in the material for *Dialectics of Nature*. (See English ed., New York, 1940, pp. 313-19.)

[22] This is an allusion to the servility of the Prussians, who accepted the constitution granted by the King on December 5, 1848, with the simultaneous disbandment of the Prussian Constituent Assembly. This constitution was drawn up with the active participation of Baron Manteuffel, the reactionary Minister of the Interior.

[23] See W. Wallace, *The Logic of Hegel* (translated from Hegel's *Encyclopaedia of the Philosophical Sciences*), 2nd ed., Oxford, pp. 322-23, and Hegel, *The Science of Logic*, translated by A. V. Miller, Allen and Unwin, London, 1969, pp. 679-81 and pp. 806-11.

[24] In Part I of *Anti-Dühring* all such references are to Dühring's *Course of Philosophy*.

[25] Engels mentions a number of major battles of the 19th century: *Austerlitz*, December 2, 1805, in which Napoleon defeated a combined Russo-Austrian Army; *Jena*, October 14, 1806, in which Napoleon crushed the Prussian army; *Königgrätz* (now Hradec Krá-

love), July 3, 1866, in Bohemia, in which Prussian forces decisively defeated the army of Austria and Saxony, and which is also known as the Battle of Sadowa; *Sedan*, September 1-2, 1870, in which Prussian forces decisively defeated the French army under MacMahon, compelling it to surrender.

[26] W. Wallace, *The Logic of Hegel*, pp. 174-75.

[27] Kant, *Critique of Pure Reason*, translated by Norman Kemp Smith, MacMillan, London, 1929, pp. 396-98.

[28] See Hegel, *The Science of Logic*, translated by A. V. Miller, p. 389. For the neo-Schellingian category of “unpreconceivable being”, see Engels’ *Schelling and Revelation* (Marx and Engels, *Werke*, Ergänzungsband, Part Two, especially p. 201).

[29] Wherever the word *Kraft* is used in this sense in the German original, it is translated as “energy” and not as “force” as in earlier English versions. In fact, Engels is dealing with “energy” and not with “force” in the specialized sense in which it is now used in mechanics, as can be clearly seen from p. 59 above. Engels himself began to use the term energy from around 1880 onwards. In an essay written in 1880-81 he says that “in all circumstances” “energy” is to be preferred to the expression ‘force’” (*Dialectics of Nature*, New York, 1940, p. 49), and he makes use of the term energy in his Preface to the second edition of *Anti-Dühring*, written in 1885 (see pp. 11-12 above).

[30] The planet is Neptune, which was discovered in 1846 by Johann Galle at the Berlin Observatory.

[31] According to later and more precise investigations, the latent heat of the formation of steam at 100°C is equal to 538.9 cal./g.

[32] When Engels prepared the second edition of *Anti-Dühring*, he intended to add a note, the draft of which (“On the ‘mechanical’ concept of nature”) was subsequently included in *Dialectics of Nature*. (See English ed., New York, 1940, pp. 319-24.)

[33] Charles Darwin, *The Origin of Species*, 6th ed., London, 1872, p. 428; the italics are Engels’.

[34] The terms protista (from the Greek *protistos*, meaning first) and monera (from the Greek *moneres*, meaning single) were coined by Haeckel in 1866 in his book *General Morphology of Organisms* but never gained currency in science. Today the organisms he regarded as protista are classified either as plants or as animals. The existence of monera has likewise not been confirmed. However, the

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general idea of the evolution of cellular organisms from pre-cellular formations and the bifurcation of living elemental units into plants and animals have received scientific recognition.

[35] In ironically calling Richard Wagner the “composer of the future” Engels is alluding to Wagner’s book *Das Kunstwerk der Zukunft* (*The Work of Art of the Future*), Leipzig, 1850.

[36] A family of unicellular or, less commonly, colonial fresh-water algae.

[37] The term plant-animal or zoophyte has dropped out of use.

[38] This classification was given in T. H. Huxley’s *Lectures on the Elements of Comparative Anatomy*, London, 1864, Lecture V.

[39] *Amphioxus* – a headless marine animal with some of the characteristics of a fish, but much more primitive.

[40] Hegel, *Philosophy of Nature*, translated by A. V. Miller, Oxford, 1970, p. 353.

[41] Wherever Engels uses the word *Eiweiss* or *Eiweisskörper*, the translation is given in accordance with modern usage as “protein” or “protein substances” and not as “albumen” or “albuminous bodies”, as the term “albumen” is now applied to one group of proteins only.

[42] *The Thirty Years’ War* (1618-48) was a war involving several European countries. Germany became the main arena and the object of military pillage and predatory claims by the belligerents.

[43] The allusion is to Max Stirner’s *Der Einzige und sein Eigentum* (*The Ego and His Own*), which Marx and Engels devastatingly criticized in *The German Ideology*.

[44] The reference is to events which took place in the period of tsarist Russia’s conquest of Central Asia. In July-August 1873, during the Khiva campaign General Kaufmann sent a force under General Golovatchef on a punitive expedition against the Turkmenian Yomud tribe in which extreme cruelty was shown. (See Eugene Schuyler, *Turkistan, Notes of a Journey in Russian Turkistan, Khokand, Bukbara, and Kuldja*, London, 1876, in 2 volumes, Vol. II, pp. 356-62.)

[45] Hegel, *Philosophy of Right*, translated by T. M. Knox, Oxford, 1942, § 100, note, p. 71.

[46] Lassalle was arrested in February 1848 on a charge of inciting to an attempt to steal a cash-box containing documents for use in the divorce case of Countess Sophie Hatzfeldt, in which he acted

as legal adviser from 1846 to 1854. Lassalle's trial took place on August 5-11, 1848; he was acquitted by the jury.

[47] The Prussian *Landrecht*, the general law of the Prussian states adopted in 1794, perpetuated feudal Prussian backwardness in the legal sphere and in the main remained in force until the adoption of the code of civil law in 1900. See also Engels' comment on the *Landrecht* in *Ludwig Feuerbach and the End of Classical German Philosophy* (Marx and Engels, *Selected Works*, FLPH, Moscow, 1958, Vol. II, p. 396).

[48] *Code pénal* – the French Penal Code adopted in 1810 and put into operation in France and in the regions of western and southwestern Germany conquered by Napoleon; together with the Civil Code it remained in force in the Province of the Rhine even after Prussia's annexation of the latter in 1815. The Prussian Government sought to introduce Prussian law into this province by a wide variety of measures, which were firmly opposed and finally abrogated after the Revolution of 1848 by a series of decrees.

[49] The *Code Napoléon* in its broad sense includes the Civil Code, the Code of Civil Procedure, the Commercial Code, the Criminal Code, and the Code of Criminal Procedure, which were adopted in 1804-10. In its narrow sense the *Code Napoléon* is the Civil Code adopted in 1804, which Engels called "the classical code of law of bourgeois society". (*Ludwig Feuerbach and the End of Classical German Philosophy*, Marx and Engels, *Selected Works*, FLPH, Moscow, 1958, Vol. II, p. 396).

[50] Spinoza, *Ethics* (Part I, Appendix) in *Spinoza Selections*, edited by J. Wild, Scribner's, 1958, pp. 138-39. Spinoza was attacking the clerical view that everything is determined by "divine Providence" as the final cause, their only argument for this thesis being that we are ignorant of other causes.

[51] *Corpus juris civilis* – the code of civil law regulating property relations in Roman slave-owning society, drawn up under the Emperor Justinian in the 6th century A.D. Engels characterized it as the "first world law of a commodity-producing society, with its unsurpassably fine elaboration of all the essential legal relations of simple commodity owners (of buyers and sellers, debtors and creditors, contracts, obligations, etc.)". (*Ludwig Feuerbach and the End of Classical German Philosophy*, Marx and Engels, *Selected Works*, FLPH, Moscow, 1958, Vol. II, p. 396.) See also Engels' Introduction to *Socialism: Utopian and Scientific*, p. 341 above.

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[52] The law making the civil registration of births, marriages and deaths compulsory in Prussia was adopted on Bismarck's initiative in 1874. An analogous law was promulgated for the whole German Empire in 1875. This law was directed primarily against the Catholic Church and was a vital part of Bismarck's so-called "cultural struggle".

[53] *Personal Equation* – a systematic source of error in determining the moment of a celestial body's passage across a set plane, depending, on the psychological and physiological features of the observer and on the method used to register the passage.

[54] Hegel, *Encyclopaedia of Philosophical Sciences*, Paragraph 147, Addendum, Wallace's translation in *The Logic of Hegel*, p. 269, revised; Engels' italics.

[55] *Mémoires pour servir à l'histoire de France, sous Napoléon, écrits à Sainte-Hélène, par les généraux qui ont partagé sa captivité* (*Memoirs Dealing with the History of France Under Napoleon*, written by the generals sharing his captivity in Saint Helena), Vol. I, compiled by Comte de Montholon, Paris, 1823, p. 262, Note 3: Cavalry.

[56] See Rousseau's *Discourse on the Origin of Inequality Among Men* in *The Social Contract and Discourses*, translated by G. D. H. Cole, J. M. Dent, Everyman Library, pp. 214-15; below Engels also quotes pp. 224 and 235-36. The italics are all his. Cole's translation has been revised in these passages.

[57] The formulation *determinatio est negatio* was used by Spinoza in a letter of June 2, 1674 (see *The Correspondence of Spinoza*, edited by A. Wolf, Allen and Unwin, London, 1928, p. 270, and *Spinoza Selections*, edited by J. Wild, p. 454), where it is used in the sense of "limitation or determination is a negation". The formulation *omnis determinatio est negatio*, in the sense of "every determinateness is a negation", is used by Hegel more than once, see for example, W. Wallace, *The Logic of Hegel*, pp. 171-72, and Hegel, *The Science of Logic*, translated by A. V. Miller, p. 113, where he says that "this proposition is infinitely important".

[58] In Part II of *Anti-Dühring*, all page numbers except those in Chapter X, refer to the second edition of Dühring's *A Course of Political and Social Economy*.

[59] I.e., in the second edition of Dühring's *A Course of Political and Social Economy* (see Note 19).

[60] The reference is to A. Thierry, (who as a young man served as a secretary to Saint-Simon,) F. Guizot, F. Mignet and A. Thiers.

[61] The 5,000 million francs France paid to Germany as an indemnity in 1871-73 under the terms of the peace treaty, after her defeat in the Franco-Prussian War of 1870-71.

[62] *The Prussian Landwehr system* under which units of the armed forces were formed of older able-bodied reservists who were assigned to the *Landwehr* after they had served in the regular army. The *Landwehr* was first formed in Prussia in 1813-14 as a people's militia to combat Napoleon. During the Franco-Prussian War of 1870-71, it was used in battle alongside regular troops.

[63] I.e., in the Austro-Prussian War of 1866.

[64] In the Battle of St.-Privat, August 18, 1870, German troops defeated the French army of the Rhine at the cost of enormous losses, known as the Battle of Gravelotte.

[65] The end of the note given in parenthesis was added by Engels in the third edition of *Anti-Dühring*, published in 1894.

[66] The works of G. Maurer (in 12 volumes) deal with the economic and social role of the Mark, the ancient German village community, and with the organization of the agrarian and urban communities of medieval Germany.

[67] David Ricardo, *Works and Correspondence*, Vol. I, *On the Principles of Political Economy and Taxation*, Cambridge University Press, 1951, p. 11.

[68] Marx makes a detailed criticism of the Lassallean slogan of "full" or "undiminished proceeds of labour" in Section I, *Critique of the Gotha Programme*, Foreign Languages Press, Peking, 1972, pp. 10-14.

[69] Marx planned to have the second volume include the second and third books of *Capital*, but subsequently the third book appeared separately as Volume III.

[70] Faithful Eckart – a character in German medieval folklore, a devoted and reliable guard, who kept watch at the foot of a mountain and warned everyone who approached it of the danger of Venus' charms.

[71] An allusion to Dühring's *Kritische Grundlegung der Volkswirtschaftslehre* (*Critical Foundations of Economics*), Berlin, 1866.

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[72] Adam Smith, *An Enquiry Into the Nature and Causes of the Wealth of Nations*, edited by E. Cannan, Modern Library edition, Random House, New York, 1937, pp. 52-54; all italics are Engels'.

[43] The allusion is to Max Stirner's *Der Einzige und sein Eigentum* (*The Ego and His Own*), which Marx and Engels devastatingly criticized in *The German Ideology*.

[73] Aristotle, *Politics*, translated by Benjamin Jowett, revised edition, Oxford, 1966, 1257a, or the Penguin Books edition, translated by J. A. Sinclair, 1962, p. 41. Marx quotes this passage in *A Contribution to the Critique of Political Economy* (see English ed., Lawrence and Wishart, London, 1971, p. 27, footnote) and in *Capital* (see English ed., FLPH, Moscow, 1961, Vol. I, p. 85, footnote).

[74] Plato's *Republic*, Book II, translated by Benjamin Jowett, World Publishing Company edition, Cleveland, 1946, pp. 67-73, or the Penguin Books edition, translated by H. P. Lee, 1955, pp. 102-09.

[75] Aristotle, *Politics*, Book I, Chapters 8-9, Oxford, 1966, 1256a-1258a, or the Penguin Books edition, 1962, pp. 38-45; see also Marx, *A Contribution to the Critique of Political Economy*, London, 1971, p. 137, footnote, and *Capital*, Moscow, 1961, Vol. I, p. 152, first footnote.

[76] Aristotle, *Nicomachean Ethics*, Book V, Chapter 5, translated by W. D. Ross, Oxford, 1925, 1133a and b, or the Penguin Books edition translated by J. A. K. Thomson, 1953, pp. 151-54; see also Marx, *A Contribution to the Critique of Political Economy*, London, 1971, p. 68, footnote, and *Capital*, Moscow, 1961, Vol. I, pp. 59-60.

[77] F. List, *The National System of Political Economy*, translated by S. S. Lloyd, Longmans, Green and Co., London, 1904, pp. 263 and 265.

For Antonio Serra's *Breve Trattato*, see *Scrittori classici italiani di economia politica*, edited by P. Cusioldi, Vol. I, Milan, 1803.

[78] Marx erred in asserting that Mun's *A Discourse of Trade, from England into the East Indies* appeared in 1609; it was apparently written around 1615 and was published in 1621. But this does not affect the validity of his evaluation of Mun's work as vastly superior to and far more important and influential than Serra's.

A Discourse of Trade is available in a reprint by the Facsimile Text Society, New York, in 1930. Mun's *England's Treasure by*

Foreign Trade, to which Marx refers a few lines later, is available in a reprint by the Economic History Society, London, in 1928.

[79] *The Economic Writings of Sir William Petty*, edited by C. H. Hull of Cambridge, 1877, Vol. I, p. 44.

[80] For Marx's criticism of Adam Smith's inconsistent theories of value, see *Theories of Surplus-Value*, Part I, FLPH, Moscow, no date, pp. 68-76, 91-100 and 147, and Part II, Progress Publishers, Moscow, 1968, pp. 217-22 and 401-04.

[81] *The Quantulumcunque Concerning Money* was written in 1682 in the form of an address to Lord Halifax and was published in London in 1695. *The Political Anatomy of Ireland* was written in 1672 and published in London in 1691. The latter is included in Hull, *The Economic Writings of Sir William Petty*, Vol. I, and the former in Hull, Vol. II.

[82] Marx is referring to the economic works of the French chemist A. L. Lavoisier: *De la richesse territoriale du royaume de France, Essai sur la population de la ville de Paris, sur la richesse et ses consommations* and *Essai d'arithmétique politique*, which was written jointly by Lavoisier and the equally celebrated French mathematician G. L. Lagrange. Marx used these works as published in *Mélanges d'économie politique...*, edited by E. Daire and G. de Molinari, Vol. I, pp. 575-620, Paris, 1847.

[83] P. Boisguillebert, *Dissertation sur la nature des richesses, de l'argent et des tributs*, Chapter II, in *Economistes financiers du XVIII-e siècle*, Paris, 1843, p. 397.

[84] John Law, an English economist and financier, tried to put into practice his absurd theory that the state can automatically increase its wealth by issuing banknotes. In 1716 he founded a private bank in France, which became a state bank in 1718. Parallel with its unlimited emission of banknotes, Law's bank withdrew coins from circulation. As a result, Stock Exchange speculation rose to an unheard-of scale and culminated in 1720 in the bankruptcy of the bank and of the Law system itself.

[85] John Locke, *Some Considerations of the Consequences of the Lowering of Interests and Raising the Value of Money*, in *Complete Works of John Locke*, Ward, Lock and Co., London, New York, 1888 (?), Vol. 4 and Dudley North, *Discourses Upon Trade*, reprinted by the Johns Hopkins Press, Baltimore, 1907.

[86] Petty, *op. cit.*, Vol. I, pp. 47-48.

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[87] In David Hume's *Political Discourses*, Edinburgh, 1752. The standard edition is David Hume, *Essays Moral, Political and Literary* edited by T. H. Green and T. H. Grose, Longmans, Green and Co., London, 1875, in 2 volumes, to which all subsequent references to Hume in these notes are made.

[88] David Hume, *op. cit.*, Vol. I, pp. 313-14.

[89] *Ibid.*, p. 320.

[90] *Ibid.*, p. 321.

[91] The date is inaccurate – the first edition of Richard Cantillon's book *Essai sur la nature du commerce en général* (*Essay on the Nature of Trade in General*) appeared not in 1752 but in 1755, as Marx himself pointed out in *Capital*, Vol. I (see English ed., Moscow, 1961, Vol. I, p. 555, second footnote). Cantillon's work, edited by H. Higgs, was reprinted with an English translation by the Royal Economic Society, London, 1931. Adam Smith mentions Cantillon's book in *The Wealth of Nations*, edited by E. Cannan, Modern Library edition, New York, 1937, p. 68.

[92] David Hume, *op. cit.*, p. 360.

[93] *Ibid.*, p. 369.

[94] In 1866 Bismarck, acting through his adviser G. Wagener, requested Dühring to draw up a memorandum on the labour question for the Prussian Government. Dühring, who advocated harmony between capital and labour, complied with this request. However, his work was published without his knowledge, first anonymously, and later under Wagener's signature. This gave Dühring grounds for suing Wagener on a charge of breaking the copyright laws. In 1868 Dühring won his case. At the climax of this scandal, he published *The Fate of My Memorandum on the Social Problem for the Prussian Ministry of State*.

[95] F. C. Schlosser, *Weltgeschichte für das deutsche Volk* (*World History for the German People*), Vol. 17, Frankfurt-on-Maine, 1855, p. 76.

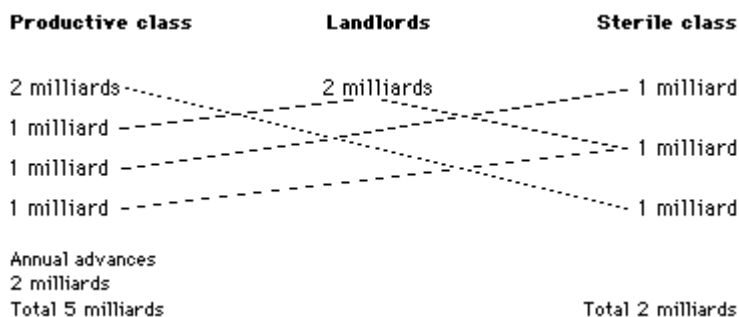
[96] W. Cobbett, *A History of the Protestant "Reformation" in England and Ireland*, London, 1824, §§149, 116 and 130.

[97] Quesnay's *Tableau Economique* was first published in 1758 and his *Analyse du Tableau* in 1766. A facsimile of the original *Tableau* was reprinted by the British Economic Association, London, in 1894 and a facsimile of the third edition of the *Tableau* and

the *Analyse* with a translation (edited by Marguerite Kuczynski and Ronald L. Meek) by MacMillan, London, in 1972.

[98] Marx also discusses Quesnay's *Tableau* at some length in his *Theories of Surplus-Value*, Part I, Moscow, no date, Chapter VI. pp. 299-334, and Addendum, pp. 367-68. In assessing the significance of the *Tableau* in the history of political economy, Marx says that it "was a conception of great genius, incontestably the most brilliant of which political economy up to then had been guilty" (*ibid.*, p. 334, translation revised).

Marx gives two diagrammatic versions of the *Tableau* in his *Theories of Surplus-Value*, Part I, the first on p. 299 and the second on p. 367. The latter, a partially condensed version of that given by Quesnay in his *Analyse*, is reproduced here.



[99] *Livre tournois* – a French coin named after the town of Tours; from 1740 onwards it was equal to one franc; in 1795 it was replaced by the franc.

[100] Sir James Steuart, *An Inquiry into the Principles of Political Economy*, in 2 volumes, edited by Andrew S. Skinner, Oliver and Boyd, Edinburgh and London, 1966.

[101] H. C. Carey, *The Past, the Present, and the Future*, Philadelphia, 1848, pp. 74-75.

[102] *Lettres d'un habitant de Genève à ses contemporains* (*Letters of a Resident of Geneva to His Contemporaries*) is Saint-Simon's first work; it was written in Geneva in 1802 and published anonymously in Paris in 1803.

The first work of importance by Charles Fourier was *Théorie des quatre mouvements et des destinées générales* (*Theory of the Four Movements and Destinies in General*), written early in the 19th century and published anonymously in Lyons in 1808 (the title

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page gives Leipzig as the place of publication, apparently for censorship reasons).

New Lanark – a cotton mill with a workers' settlement near the town of Lanark, Scotland; it was founded in the early 1780s.

[103] "Lettres d'un habitant de Genève à ses contemporains" in *Œuvres de Claude-Henri de Saint-Simon*, Editions Anthropos, Paris, 1966, Vol. I, Book I, p. 55 and pp. 41-42.

[104] The eighth letter in the series: "Lettres de Henri Saint-Simon à un Américain". *Ibid.*, Vol. I, Book II, p. 186.

[105] Engels is referring to the two pamphlets co-authored by Saint Simon and A. Thierry: "De la réorganisation de la société Européenne..." and "Opinion sur les mesures à prendre contre la coalition de 1815". The first was written in October 1814, the second in May 1815. *Ibid.*, Vol. I, Book I, pp. 153-218 and Vol. VI, pp. 353-79.

[106] Obviously an allusion to Dühring's conflict with certain Berlin University professors; (see Note 7).

[107] See Fourier's statement in his first book, *Théorie des quatre mouvements* : "As a general thesis, social progress and changes in a period take place by reason of the progress of women towards freedom, and the decay of the social system takes place by reason of the decrease in women's freedom." From this he draws the following conclusion: "The extension of the rights of women is the basic principle of all social progress." (Fourier, *Textes choisis*, edited by F. Armand, Editions Sociales, Paris, 1953, p. 124.)

[108] *Ibid.*, pp. 64-65 and 70.

[109] *Ibid.*, pp. 95 and 105. For the "vicious circle" of civilization, see pp. 104 and 129-30.

[110] *Ibid.*, pp. 66-67.

[111] See A. L. Morton, *The Life and Ideas of Robert Owen*, Lawrence and Wishart, London, 1962, p. 80.

[112] Robert Owen, "Report of the Proceedings at the Several Public Meetings, Held in Dublin... on the 18th March, 12th April, 19th April and 3rd May," Dublin, 1823.

[113] An Act, introduced on Owen's initiative in June 1815, was passed by Parliament only in July 1819 after it had been emasculated. The Act regulating labour at cotton mills banned the employment of children under the age of nine and limited the working day to 12 hours for persons under 16. Since Owen's proposal to appoint

salaried factory inspectors was defeated, the Act became a dead letter.

[114] In October 1833 Owen presided over a congress of co-operative societies and trade unions in London, which led to the formation of the Grand National Consolidated Trades Union in February 1834. The Union's membership grew to half a million in a few weeks. It was Owen's intention that it would take over the management of production and remake society peacefully. This utopian plan collapsed very quickly. In face of powerful opposition from bourgeois society and the state, the Union ceased to exist in August 1834.

[115] *Equitable Labour Exchange Bazaars* were founded by workers' co-operatives in various parts of England; Owen opened the National Equitable Labour Exchange Bazaar in London in September 1832 and it existed until mid-1834.

Proudhon made an attempt to organize the *Banque du Peuple* in Paris in January 1849. It existed for about two months, but only on paper, as it failed before it began to function.

[116] W. L. Sargant, *Robert Owen and His Social Philosophy*, London, 1860 Owen's major works on marriage and the communist system are: *The Marriage System of the New Moral World* (1838), *The Book of the New Moral World* (1836-44) and *The Revolution in the Mind and Practice of the Human Race* (1849). See also A. L. Morton, *op. cit.*, pp. 161-68 and 132-48.

[117] Harmony Hall – the name of the communist colony founded by English Utopian socialists led by Robert Owen at the close of 1839 in Hampshire, England. It existed until 1845.

[118] In *Socialism: Utopian and Scientific* Engels had a note here referring to his Appendix on the Mark, which deals with the history of landed property in Germany.

[119] The wars of the 17th and 18th century between the major European powers for hegemony in the trade with India, the East Indies and America and for the seizure of colonial markets. At first the principal rivals were England and Holland (the Anglo-Dutch wars of 1652-54, 1664-67 and 1672-74 were typical commercial wars), and later England and France. England won these wars, and towards the close of the 18th century almost the whole of world trade was concentrated in her hands.

[120] A "free people's state": this slogan is criticized in Marx's *Critique of the Gotha Programme* (FLP, Peking, 1972, pp. 26-29),

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Engels' letter to Bebel of March 18-28, 1875 (*ibid.*, pp. 42-43), and Lenin's *The State and Revolution* (FLP, Peking, 1970, pp. 21-22 and 76-79).

[121] Robert Giffen, "Recent Accumulations of Capital in the United Kingdom", *Journal of the Statistical Society*, London, Vol. 16, 1878.

[122] See Charles Fourier, *Textes choisis*, Editions Sociales, Paris, 1953, p. 140.

[123] These words were spoken by the Roman Emperor Vespasian (A.D. 69-79) in reply to his son, who reproached him for introducing a tax on lavatories.

[68] Marx makes a detailed criticism of the Lassallean slogan of "full" or "undiminished proceeds of labour" in Section I, *Critique of the Gotha Programme*, Foreign Languages Press, Peking, 1972, pp. 10-14.

[124] Abraham Enss, a follower of Dühring and author of a lampoon of Marx and Engels written after the first chapters of *Anti-Dühring* appeared in *Vorwärts* in January-February 1877.

[125] The *May laws* adopted by the Reichstag in May 1873 established rigid state control over the Catholic Church and were the culminating point of the "cultural struggle". They were the most important link in the legislation of 1872-75 directed by Bismarck against the Catholic clergy as the mainstay of the "Centre" party, which represented the interests of the separatists in south and southwestern Germany. Police persecution evoked desperate resistance by the Catholics and gave them a halo of martyrdom. Between 1880 and 1887 the Bismarck Government was compelled first to relax and then repeal almost all the anti-Catholic laws, in order to unite all the reactionary forces against the working-class movement.

[126] *Referendary* – in Germany a junior official, chiefly a jurist, who got his training as an apprentice at court or in a state office; usually he received no salary.

[127] Nominalism was a mediaeval philosophical trend according to which universal terms and all general collective words are only names of individual objects.

[128] Qualitatively alike particles, or qualitatively original particles, containing an infinity of smaller particles. According to Anax-

agoras all existing things are made up of various combinations of homoiomeriae.

[129] Theism is the religious doctrine asserting the existence of a personal supernatural deity. Deism rejects the existence of a personal deity but asserts the existence of an impersonal one.

[130] Franz von Sickingen was a German knight who joined the Reformation and who was the military and political leader of the lower nobility's insurrection in 1522-23. For Marx's and Engels' evaluation of von Sickingen and the uprising of 1522-23, see Marx and Engels, *Selected Correspondence*, Foreign Languages Publishing House, Moscow, no date, pp. 138-43, and Engels, *The Peasant War in Germany*, Lawrence and Wishart, London, pp. 96-102; for Engels' detailed analysis of the Peasants' War, see *ibid.*, pp. 102-57.

[131] For Marx's evaluation of "the Glorious Revolution", see Marx and Engels, *On Britain*, FLPH, Moscow, 1953, pp. 342-48

[132] *Katheder Socialism* was a bourgeois ideological trend, particularly in the sphere of bourgeois economics, which originated in Germany between 1870 and 1890. The Katheder Socialists were mainly liberal professors who used their university chairs (the German word for university chair is *Katheder*) to preach bourgeois reformist theories under the cloak of socialism. They asserted that the bourgeois state was above classes and they denied class struggle. Katheder Socialism was one of the sources of revisionism.