

## PLAN OF THE COLLECTED WORKS

Edited by W. W. Bartley, III

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THE COLLECTED WORKS OF

F. A. Hayek

VOLUME I

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# THE FATAL CONCEIT The Errors of Socialism

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EDITED BY

W. W. BARTLEY III

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## INTRODUCTION

### WAS SOCIALISM A MISTAKE?

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The idea of Socialism is at once grandiose and simple. . . . We may say, in fact, that it is one of the most ambitious creations of the human spirit, . . . so magnificent, so daring, that it has rightly aroused the greatest admiration. If we wish to save the world from barbarism we have to refute Socialism, but we cannot thrust it carelessly aside.

Ludwig von Mises

This book argues that our civilisation depends, not only for its origin but also for its preservation, on what can be precisely described only as the extended order of human cooperation, an order more commonly, if somewhat misleadingly, known as capitalism. To understand our civilisation, one must appreciate that the extended order resulted not from human design or intention but spontaneously: it arose from unintentionally conforming to certain traditional and largely *moral* practices, many of which men tend to dislike, whose significance they usually fail to understand, whose validity they cannot prove, and which have nonetheless fairly rapidly spread by means of an evolutionary selection – the comparative increase of population and wealth – of those groups that happened to follow them. The unwitting, reluctant, even painful adoption of these practices kept these groups together, increased their access to valuable information of all sorts, and enabled them to be ‘fruitful, and multiply, and replenish the earth, and subdue it’ (*Genesis* 1:28). This process is perhaps the least appreciated facet of human evolution.

Socialists take a different view of these matters. They not only differ in their conclusions, they see the facts differently. That socialists are wrong *about the facts* is crucial to my argument, as it will unfold in the pages that follow. I am prepared to admit that if socialist analyses of the operation of the existing economic order, and of possible alternatives, were factually correct, we might be obliged to ensure that the distribution of incomes conform to certain moral principles, and that this distribution might be possible only by giving a central authority the power to direct the use of available resources, and might presuppose the abolition of individual ownership of means of production. If it were for instance true that central direction of the means of production could

effect a collective product of at least the same magnitude as that which we now produce, it would indeed prove a grave moral problem how this could be done justly. This, however, is not the position in which we find ourselves. For there is no known way, other than by the distribution of products in a competitive market, to inform individuals in what direction their several efforts must aim so as to contribute as much as possible to the total product.

The main point of my argument is, then, that the conflict between, on one hand, advocates of the spontaneous extended human order created by a competitive market, and on the other hand those who demand a deliberate arrangement of human interaction by central authority based on collective command over available resources is due to a factual error by the latter about how knowledge of these resources is and can be generated and utilised. As a question of fact, this conflict must be settled by scientific study. Such study shows that, by following the spontaneously generated moral traditions underlying the competitive market order (traditions which do not satisfy the canons or norms of rationality embraced by most socialists), we generate and garner greater knowledge and wealth than could ever be obtained or utilised in a centrally-directed economy whose adherents claim to proceed strictly in accordance with ‘reason’. Thus socialist aims and programmes are factually impossible to achieve or execute; and they also happen, into the bargain as it were, to be logically impossible.

This is why, contrary to what is often maintained, these matters are not merely ones of differing interests or value judgements. Indeed, the question of how men came to adopt certain values or norms, and what effect these had on the evolution of their civilisation, is itself above all a factual one, one that lies at the heart of the present book, and whose answer is sketched in its first three chapters. The demands of socialism are not moral conclusions derived from the traditions that formed the extended order that made civilisation possible. Rather, they endeavour to overthrow these traditions by a rationally designed moral system whose appeal depends on the instinctual appeal of its promised consequences. They assume that, since people had been able to *generate* some system of rules coordinating their efforts, they must also be able to *design* an even better and more gratifying system. But if humankind owes its very existence to one particular rule-guided form of conduct of proven effectiveness, it simply does not have the option of choosing another merely for the sake of the apparent pleasantness of its immediately visible effects. The dispute between the market order and socialism is no less than a matter of survival. To follow socialist morality would destroy much of present humankind and impoverish much of the rest.

All of this raises an important point about which I wish to be explicit from the outset. Although I attack the *presumption* of reason on the part of socialists, my argument is in no way directed against reason properly used. By 'reason properly used' I mean reason that recognises its own limitations and, itself taught by reason, faces the implications of the astonishing fact, revealed by economics and biology, that order generated without design can far outstrip plans men consciously contrive. How, after all, could I be attacking reason in a book arguing that socialism is factually and even logically untenable? Nor do I dispute that reason may, although with caution and in humility, and in a piecemeal way, be directed to the examination, criticism and rejection of traditional institutions and moral principles. This book, like some of my earlier studies, is directed against the traditional norms of reason that guide socialism: norms that I believe embody a naive and uncritical theory of rationality, an obsolete and unscientific methodology that I have elsewhere called 'constructivist rationalism' (1973).

Thus I wish neither to deny reason the power to improve norms and institutions nor even to insist that it is incapable of recasting the whole of our moral system in the direction now commonly conceived as 'social justice'. We can do so, however, only by probing every part of a system of morals. If such a morality pretends to be able to do something that it cannot possibly do, e.g., to fulfill a knowledge-generating and organisational function that is impossible under its own rules and norms, then this impossibility itself provides a decisive rational criticism of that moral system. It is important to confront these consequences, for the notion that, in the last resort, the whole debate is a matter of value judgements and not of facts has prevented professional students of the market order from stressing forcibly enough that socialism cannot possibly do what it promises.

Nor should my argument suggest that I do not share some values widely held by socialists; but I do not believe, as I shall argue later, that the widely held conception of 'social justice' either describes a possible state of affairs or is even meaningful. Neither do I believe, as some proponents of hedonistic ethics recommend, that we can make moral decisions simply by considering the greatest foreseeable gratification.

The starting point for my endeavour might well be David Hume's insight that 'the rules of morality . . . are not conclusions of our reason' (*Treatise*, 1739/1886:II:235). This insight will play a central role in this volume since it frames the basic question it tries to answer – which is *how does our morality emerge, and what implications may its mode of coming into being have for our economic and political life?*

The contention that we are constrained to preserve capitalism because of its superior capacity to utilise dispersed knowledge raises the

question of how we came to acquire such an irreplaceable economic order – especially in view of my claim that powerful instinctual and rationalistic impulses rebel against the morals and institutions that capitalism requires.

The answer to this question, sketched in the first three chapters, is built upon the old insight, well known to economics, that our values and institutions are determined not simply by preceding causes but as part of a process of unconscious self-organisation of a structure or pattern. This is true not only of economics, but in a wide area, and is well known today in the biological sciences. This insight was only the first of a growing family of theories that account for the formation of complex structures in terms of processes transcending our capacity to observe all the several circumstances operating in the determination of their particular manifestations. When I began my work I felt that I was nearly alone in working on the evolutionary formation of such highly complex self-maintaining orders. Meanwhile, researches on this kind of problem – under various names, such as autopoiesis, cybernetics, homeostasis, spontaneous order, self-organisation, synergetics, systems theory, and so on – have become so numerous that I have been able to study closely no more than a few of them. This book thus becomes a tributary of a growing stream apparently leading to the gradual development of an evolutionary (but certainly not simply Neo-Darwinian) ethics parallel and supplementary to, yet quite distinct from, the already well-advanced development of evolutionary epistemology.

Though the book raises in this way some difficult scientific and philosophical questions, its chief task remains to demonstrate that one of the most influential political movements of our time, socialism, is based on demonstrably false premises, and despite being inspired by good intentions and led by some of the most intelligent representatives of our time, endangers the standard of living and the life itself of a large proportion of our existing population. This is argued in the fourth through sixth chapters, wherein I examine and refute the socialist challenge to the account of the development and maintenance of our civilisation that I offer in the first three chapters. In the seventh chapter, I turn to our language, to show how it has been debased under socialist influence and how careful we must be to keep ourselves from being seduced by it into socialist ways of thinking. In the eighth chapter, I consider an objection that might be raised not only by socialists, but by others as well: namely, that the population explosion undercuts my argument. Finally, in the ninth chapter, I present briefly a few remarks about the role of religion in the development of our moral traditions.

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BETWEEN INSTINCT AND REASON

superiority of market institutions, a historical and evolutionary survey of the emergence of capitalism (such as that presented in chapters two and three) helps to explain how such productive, albeit unpopular and unintended, traditions happened to emerge, and how deep is their significance for those immersed in the extended order. First, however, I want to remove from the path just outlined a major stumbling-block, in the form of a widely shared misconception of the nature of our capacity to adopt useful practices.

*Mind Is Not a Guide but a Product of Cultural Evolution, and Is Based More on Imitation than on Insight or Reason*

We have mentioned the capacity to learn by imitation as one of the prime benefits conferred during our long instinctual development. Indeed, perhaps the most important capacity with which the human individual is genetically endowed, beyond innate responses, is his ability to acquire skills by largely imitative learning. In view of this, it is important to avoid, right from the start, a notion that stems from what I call the 'fatal conceit': the idea that the ability to acquire skills stems from reason. For it is the other way around: our reason is as much the result of an evolutionary selection process as is our morality. It stems however from a somewhat separate development, so that one should never suppose that our reason is in the higher critical position and that only those moral rules are valid that reason endorses.

I shall examine these matters in subsequent chapters, but a foretaste of my conclusions may be in place here. The title of the present chapter, 'Between Instinct and Reason', is meant literally. I want to call attention to what does indeed lie *between* instinct and reason, and which on that account is often overlooked just because it is assumed that there is nothing between the two. That is, I am chiefly concerned with cultural and moral evolution, evolution of the extended order, which is, on the one hand (as we have just seen), beyond instinct and often opposed to it, and which is, on the other hand (as we shall see later), incapable of being created or designed by reason.

My views, some of which have been sketched earlier (1952/79, 1973, 1976, 1979), can be summarised simply. Learning how to behave is more the *source* than the *result* of insight, reason, and understanding. Man is not born wise, rational and good, but has to be taught to become so. It is not our intellect that created our morals; rather, human interactions governed by our morals make possible the growth of reason and those capabilities associated with it. Man became intelligent because there was *tradition* - that which lies between instinct and reason - for him to learn. This tradition, in turn, originated not from a

... we do not ... think by trial & error.  
... it would, no continuous practice; failure of it is ...  
... innovation occurs by the accident of success ...  
... that deviate from the norms - i.e. is a ...  
... normally. ... not ... development ... 1994.

Man born rational - cannot act against reason & survive  
Man born not wise - how to learn  
Good? Over time develops sense of right and wrong

of explanation is also expressed in the new work of some distinguished physical scientists, which shows that the idea of evolution is in no way limited to organisms, but rather that it begins in a sense already with atoms, which have developed out of more elementary particles, and that we can thus explain molecules, the most primitive complex organisms, and even the complex modern world through various processes of evolution (see Appendix A).

No one who takes an evolutionary approach to the study of culture can, however, fail to be aware of the hostility often shown towards such approaches. Such hostility often stems from reactions to just those 'social scientists' who in the nineteenth century needed Darwin to recognise what they ought to have learnt from their own predecessors, and who did a lasting disservice to the advance of the theory of cultural evolution, which they indeed brought into discredit.

Social Darwinism is wrong in many respects, but the intense dislike of it shown today is also partly due to its conflicting with the fatal conceit that man is able to shape the world around him according to his wishes. Although this too has nothing to do with evolutionary theory properly understood, constructivist students of human affairs often use the inappropriateness (and such plain mistakes) of Social Darwinism as a pretext for rejecting any evolutionary approach at all.

Bertrand Russell provides a good example in his claim that 'if evolutionary ethics were sound, we ought to be entirely indifferent to what the course of evolution might be, since whatever it is is thereby proved to be best' (1910/1966:24). This objection, which A.G.N. Flew (1967:48) regards as 'decisive', rests on a simple misunderstanding. I have no intention to commit what is often called the genetic or naturalistic fallacy. I do not claim that the results of group selection of traditions are necessarily 'good' - any more than I claim that other things that have long survived in the course of evolution, such as cockroaches, have moral value.

I do claim that, whether we like it or not, without the particular traditions I have mentioned, the extended order of civilisation could not continue to exist (whereas, were cockroaches to disappear, the resulting ecological 'disaster' would perhaps not wreak permanent havoc on mankind); and that if we discard these traditions, out of ill-considered notions (which may indeed genuinely commit the naturalistic fallacy) of what it is to be reasonable, we shall doom a large part of mankind to poverty and death. Only when these facts are fully faced do we have any business - or are we likely to have any competence - to consider what the right and good thing to do may be.

While facts alone can never determine what is right, ill-considered notions of what is reasonable, right and good may change the facts and

"facts" are "right" - otherwise - They are not "facts". What does he mean by this?

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 THE REVOLT OF INSTINCT AND REASON
 

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It is necessary to guard ourselves from thinking that the practice of the scientific method enlarges the powers of the human mind. Nothing is more flatly contradicted by experience than the belief that a man distinguished in one or even more departments of science, is more likely to think sensibly about ordinary affairs than anyone else.

Wilfred Trotter

*The Challenge to Property*

Although Aristotle was blind to the importance of trade, and lacked any comprehension of evolution; and though Aristotelian thought, once embedded in the system of Thomas Aquinas, supported the anti-commercial attitudes of the mediaeval and early modern Church, it was nonetheless only rather later, and chiefly among seventeenth- and eighteenth-century French thinkers, that several important developments occurred which, taken together, began effectively to challenge the central values and institutions of the extended order.

The first of these developments was the growing importance, associated with the rise of modern science, of that particular form of rationalism that I call 'constructivism' or 'scientism' (after the French), which for the following several centuries virtually captured serious thought about reason and its role in human affairs. This particular form of rationalism has been the point of departure of investigations that I have conducted over the past sixty years, investigations in which I tried to show that it is particularly ill-considered, embedding a false theory of science and of rationality in which reason is *abused*, and which, most important here, leads invariably to an erroneous interpretation of the nature and coming into being of human institutions. That interpretation is one by which, in the *name* of reason and the highest values of civilisation, moralists end up flattering the relatively unsuccessful and inciting people to satisfy their primitive desires.

Descending in the modern period from René Descartes, this form of rationalism not only discards tradition, but claims that pure reason can directly serve our desires without any such intermediary, and can build

a new world, a new morality, a new law, even a new and purified language, from itself alone. Although the theory is plainly false (see also Popper, 1934/1959, and 1945/66), it still dominates the thinking of most scientists, and also of most literati, artists, and intellectuals.

I should perhaps immediately qualify what I have just written by adding that there are other strands within what might be called rationalism which treat these matters differently, as for example that which views rules of moral conduct as themselves *part* of reason. Thus John Locke had explained that 'by reason, however, I do not think is meant here the faculty of understanding which forms trains of thoughts and deduces proofs, but definite principles of action from which spring all virtues and whatever is necessary for the moulding of morals' (1954:11). Yet views such as Locke's remain much in the minority among those who call themselves rationalists.

The second, related development which challenged the extended order arose from the work and influence of Jean-Jacques Rousseau. This peculiar thinker – although often described as irrationalist or romantic – also latched on to and deeply depended on Cartesian thought. Rousseau's heady brew of ideas came to dominate 'progressive' thought, and led people to forget that freedom as a political institution had arisen *not* by human beings 'striving for freedom' in the sense of release from restraints, but by their striving for the protection of a known secure individual domain. Rousseau led people to forget that rules of conduct necessarily constrain and that order is their product; and that these rules, precisely by limiting the range of means that each individual may use for his purposes, greatly extend the range of ends each can successfully pursue.

It was Rousseau who – declaring in the opening statement of *The Social Contract* that 'man was born free, and he is everywhere in chains', and wanting to free men from all 'artificial' restraints – made what had been called the savage the virtual hero of progressive intellectuals, urged people to shake off the very restraints to which they owed their productivity and numbers, and produced a conception of liberty that became the greatest obstacle to its attainment. After asserting that animal instinct was a better guide to orderly cooperation among men than *either* tradition or reason, Rousseau invented the fictitious will of the people, or 'general will', through which the people 'becomes one single being, one individual' (*Social Contract*, I, vii; and see Popper, 1945/1966:11, 54). This is perhaps the chief source of the fatal conceit of modern intellectual rationalism that promises to lead us back to a paradise wherein our natural instincts rather than learnt restraints upon them will enable us 'to subdue the world', as we are instructed in the book of *Genesis*.

which we opened this book – that moral tradition does seem burdensome to many – but can only be answered by observing again, here and in subsequent chapters, what we derive from bearing this burden, and what the alternative would be. Virtually all the benefits of civilisation, and indeed our very existence, rest, I believe, on our continuing willingness to shoulder the burden of tradition. These benefits in no way 'justify' the burden. But the alternative is poverty and famine.

Without attempting to recount or review all these benefits, to 'count our blessings', as it were, I may mention again, in a somewhat different context, perhaps the most ironic benefit of all – for I have in mind our very freedom. Freedom requires that the individual be allowed to pursue *his own* ends: one who is free is in peacetime no longer bound by the common concrete ends of his community. Such freedom of individual decision is made possible by delimiting distinct individual rights (the rights of property, for example) and designating domains within which each can dispose over means known to him for his own ends. That is, a recognisable free sphere is determined for each person. This is all-important. For to have something of one's own, however little, is also the foundation on which a distinctive personality can be formed and a distinctive environment created within which particular individual aims can be pursued.

But confusion has been created by the common supposition that it is possible to have this kind of freedom without restraints. This supposition appears in the *aperçu* ascribed to Voltaire that 'quand je peux faire ce que je veux, voilà la liberté', in Bentham's declaration that 'every law is an evil, for every law is an infraction of liberty' (1789/1887:48), in Bertrand Russell's definition of liberty as the 'absence of obstacles to the realisation of our desires' (1940:251), and in countless other sources. General freedom in this sense is nevertheless impossible, for the freedom of each would founder on the unlimited freedom, i.e., the lack of restraint, of all others.

The question then is how to secure the greatest possible freedom for all. This can be secured by uniformly restricting the freedom of all by abstract rules that preclude arbitrary or discriminatory coercion by or of other people, that prevent any from invading the free sphere of any other (see Hayek 1960 and 1973, and chapter two above). In short, common concrete ends are replaced by common abstract rules. Government is needed only to enforce these abstract rules, and thereby to protect the individual against coercion, or invasion of his free sphere, by others. Whereas enforced obedience to common concrete ends is tantamount to slavery, obedience to common abstract rules (however burdensome they may still feel) provides scope for the most extra-

ordinary freedom and diversity. Although it is sometimes supposed that such diversity brings chaos threatening the relative order that we also associate with civilisation, it turns out that greater diversity brings greater order. Hence the type of liberty made possible by adhering to abstract rules, in contrast to freedom from restraint, is, as Proudhon once put it, 'the mother, not the daughter, of order'.

There is in fact no reason to expect that the selection by evolution of habitual practices should produce happiness. The focus on happiness was introduced by rationalist philosophers who supposed that a conscious reason had to be discovered for the choice of men's morals, and that that reason might prove to be the deliberate pursuit of happiness. But to ask for the conscious reason why man adopted his morals is as mistaken as to ask for what conscious reason man adopted his reason.

Nevertheless, the possibility that the evolved order in which we live provides us with opportunities for happiness that equal or exceed those provided by primitive orders to far fewer people should not be dismissed (which is not to say that such matters can be calculated). Much of the 'alienation' or unhappiness of modern life stems from two sources, one of which affects primarily intellectuals, the other, all beneficiaries of material abundance. The first is a self-fulfilling prophecy of unhappiness for those within any 'system' that does not satisfy rationalistic criteria of conscious control. Thus intellectuals from Rousseau to such recent figures in French and German thought as Foucault and Habermas regard alienation as rampant in any system in which an order is 'imposed' on individuals without their conscious consent; consequently, their followers tend to find civilisation unbearable – by definition, as it were. Secondly, the persistence of instinctual feelings of altruism and solidarity subject those who follow the impersonal rules of the extended order to what is now fashionably called 'bad conscience'; similarly, the acquisition of material success is supposed to be attended with feelings of guilt (or 'social conscience'). In the midst of plenty, then, there is unhappiness not only born of peripheral poverty, but also of the incompatibility, on the part of instinct and of a hubristic reason, with an order that is of a decidedly non-instinctive and extra-rational character.

#### *'Liberation' and Order*

On a less sophisticated level than the argument against 'alienation' are the demands for 'liberation' from the burdens of civilisation – including the burdens of disciplined work, responsibility, risk-taking, saving, honesty, the honouring of promises, as well as the difficulties of curbing

by general rules one's natural reactions of hostility to strangers and solidarity with those who are like oneself – an ever more severe threat to political liberty. Thus the notion of 'liberation', although allegedly new, is actually archaic in its demand for release from traditional morals. Those who champion such liberation would destroy the basis of freedom, and permit men to do what would irreparably break down those conditions that make civilisation possible. One example appears in so-called 'liberation theology', especially within the Roman Catholic church in South America. But this movement is not confined to South America. Everywhere, in the name of liberation, people disavow practices that enabled mankind to reach its present size and degree of cooperation because they do not *rationaly* see, according to their lights, how certain limitations on individual freedom through legal and moral rules make possible a greater – and freer! – order than can be attained through centralised control.

Such demands stem chiefly from the tradition of rationalistic liberalism that we have already discussed (so different from the political liberalism deriving from the English Old Whigs), which implies that freedom is incompatible with any general restriction on individual action. This tradition voices itself in the passages cited earlier from Voltaire, Bentham, and Russell. Unfortunately it also pervades even the work of the English 'saint of rationalism', John Stuart Mill.

Under the influence of these writers, and perhaps especially Mill, the fact that we must purchase the freedom enabling us to form an extended order at the cost of submitting to certain rules of conduct has been used as a justification for the demand to return to the state of 'liberty' enjoyed by the savage who – as eighteenth-century thinkers defined him – 'did not yet know property'. Yet the savage state – which includes the obligation or duty to share in pursuit of the concrete goals of one's fellows, and to obey the commands of a headman – can hardly be described as one of freedom (although it might involve liberation from some particular burdens) or even as one of morals. Only those general and abstract rules that one must take into account in individual decisions in accordance with individual aims deserve the name of morals.

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 THE FATAL CONCEIT
 

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*Traditional Morals Fail to Meet Rational Requirements*

The four requirements just listed – that whatever is not scientifically proven, or is not fully understood, or lacks a fully specified purpose, or has some unknown effects, is unreasonable – are particularly well suited to constructivist rationalism and to socialist thought. These two approaches themselves flow from a mechanistic or physicalist interpretation of the extended order of human cooperation, that is, from conceiving ordering as the sort of arranging and controlling one could do with a group if one had access to all the facts known to its members. But the extended order is not, and could not be, such an order.

Hence I wish to concede forthwith that most tenets, institutions, and practices of traditional morality and of capitalism do *not* meet the requirements or criteria stated and are – *from the perspective of this theory of reason and science* – ‘unreasonable’ and ‘unscientific’. Moreover, since, as we have also admitted, those who continue to follow traditional practices do not themselves usually understand how these practices were formed or how they endure, it is hardly surprising that alternative ‘justifications’, so-called, that traditionalists sometimes offer for their practices are often rather naive (and hence have provided fair game for our intellectuals), and have no connection with the real reasons for their success. Many traditionalists do not even bother with justifications that could not be provided anyway (thus allowing intellectuals to denounce them as anti-intellectual or dogmatic), but go on following their practices out of habit or religious faith. Nor is this in any way ‘news’. After all, it was over 250 years ago that Hume observed that ‘the rules of morality are not the conclusions of our reason’. Yet Hume’s claim has not sufficed to deter most modern rationalists from continuing to believe – curiously enough often quoting Hume in their support – that something not derived from reason must be either nonsense or a matter for arbitrary preference, and, accordingly, to continue to demand rational justifications.

Not only the traditional tenets of religion, such as the belief in God, and much traditional morality concerning sex and the family (matters

with which I am not concerned in this book), fail to meet these requirements, but also the specific moral traditions that do concern me here, such as private property, saving, exchange, honesty, truthfulness, contract.

The situation may look even worse if one considers that the traditions, institutions and beliefs mentioned not only fail to meet the logical, methodological, and epistemological requirements stated, but that they are also often rejected by socialists on other grounds too. For example, they are seen, as by Chisholm and Keynes, as a ‘crippling burden’, and also, as by Wells and Forster, as closely associated with despicable trade and commerce (see chapter six). And they also may be seen, as is especially fashionable today, as sources of alienation and oppression, and of ‘social injustice’.

After such objections, the conclusion is reached that there is an urgent need to construct a new, rationally revised and justified morality which does meet these requirements, and which is, for that matter, one which will *not* be a crippling burden, be alienating, oppressive, or ‘unjust’, or be associated with trade. Moreover, this is only part of the great task that these new lawgivers – socialists such as Einstein, Monod and Russell, and self-proclaimed ‘immoralists’ such as Keynes – set for themselves. A new rational language and law must be constructed too, for existing language and law also fail to meet these requirements, and for what turn out to be the same reasons. (For that matter, even the laws of *science* do not meet these requirements (Hume, 1739/1951; and see Popper, 1934/59).) This awesome task may seem the more urgent to them in that they themselves no longer believe in any supernatural sanction for morality (let alone for language, law, and science) and yet remain convinced that *some* justification is necessary.

So, priding itself on having built its world as if it had designed it, and blaming itself for not having designed it better, humankind is now to set out to do just that. The aim of socialism is no less than to effect a complete redesigning of our traditional morals, law, and language, and on this basis to stamp out the old order and the supposedly inexorable, unjustifiable conditions that prevent the institution of reason, fulfilment, true freedom, and justice.

*Justification and Revision of Traditional Morals*

The rationalist standards on which this whole argument, indeed this whole programme, rest, are however at best counsels of perfection and at worst the discredited rules of an ancient methodology which may have been incorporated into some of what is thought of as science, but which has nothing to do with real investigation. A highly evolved,

question whether their own ends are satisfied should depend on the activities of *such* men – men concerned solely with means – is itself an abomination to them.

### *The Ordering of the Unknown*

The English language unfortunately lacks a popular word available in German: namely, *Machbarkeit*. I sometimes wonder whether a good cause might not be served by coining an equivalent English term 'makeability' – 'manufacturability' does not quite do (and my own 'constructivism' could hardly be rendered by 'constructible') – to describe the view that we have confronted, examined and contested throughout this chapter and the last: namely, that anything produced by evolution could have been done better by the use of human ingenuity.

This view is untenable. For in fact we are able to bring about an ordering of the unknown *only by causing it to order itself*. In dealing with our physical surroundings we sometimes can indeed achieve our ends by relying on the self-ordering forces of nature, but not by deliberately trying to arrange elements in the order that we wish them to assume. This is for example what we do when we initiate processes that produce crystals or new chemical substances (see previous section and also Appendix C). In chemistry, and even more in biology, we must use self-ordering processes in an increasing measure; we can create the conditions under which they will operate, but we cannot determine what will happen to any particular element. Most synthetic chemical compounds are not 'constructible' in the sense that we can create them by placing the individual elements composing them in the appropriate places. All we can do is to induce their formation.

A similar procedure must be followed to initiate processes that will coordinate individual actions transcending our observation. In order to induce the self-formation of certain abstract structures of inter-personal relations, we need to secure the assistance of some very general conditions, and then allow each individual element to find its own place within the larger order. The most we can do to assist the process is to admit only such elements as obey the required rules. This limitation of our powers necessarily grows with the complexity of the structure that we wish to bring into being.

An individual who finds himself at some point in an extended order where only his immediate environment is known to him can apply this advice to his own situation. He may need to start by trying continuously to probe beyond the limits of what he can see, in order to establish and maintain the communication that creates and sustains the overall order.