

# IN PURSUIT OF TRUTH

*Essays on the Philosophy of Karl Popper  
on the Occasion of His 80th Birthday*

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with Forewords by  
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The UK edition of this book by  
Harvester Press was palped under  
threat of legal action on  
comments on a book from Cambridge  
this year (p 269).

How to decide, the swamp of  
uncertainty. What are the philosophers  
doing to help?

1. what are the differences?
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note Koestler's comment

It is apparent that his plan did break down.

see Koestler

## Popper on the Difference between the Natural and the Social Sciences<sup>0</sup>

I. C. JARVIE

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### 1. Introduction

Popper always told us to open a paper with a problem: I have two problems. The first is whether in the years that have elapsed since 1943–1944, when “The Poverty of Historicism” was originally published, there have emerged new arguments to challenge what Popper said about the differences between the natural and the social sciences. To address this problem I have to face a second one: just what, in that work and his other comments on the topic, did Popper consider the main differences between the natural and social sciences to be? Both problems are enmeshed in a sociological problem, that of the strange reception of Popper’s ideas in general,<sup>1</sup> and the extraordinary sidestepping of *The Poverty of Historicism* in particular.

When I took my first course with Popper in 1955, the only book of his then available in English was *The Open Society and Its Enemies* of 1945. Popper had published many papers, but even at the London School of Economics (LSE) freshmen were not advised to read them. This may explain why when the famous paper “The Poverty of Historicism I, II and III” came out in book form in the autumn of 1957, it caused ripples. I remember the New Left (*première cru*) were particularly exercised by it, and prominent spokesmen like Charles Taylor and John Silber spoke at the LSE or wrote in *Universities and Left Review* about how reactionary/anti-Marxist it was, and how unjust to Marx, who was no historicist. The implication was that historicism was a straw man. One should have been warned by those stirrings: the book rubbed too many people in too many sore places to be other than buried as soon as possible. It has become an anticlastic: read but not praised; diffused but not read; influential but disparaged.<sup>2</sup> Even Popper slights the book in his autobiography as stodgily written and structurally flawed.<sup>3</sup>

*The Poverty of Historicism* deserves rediscovery. Together with Hayek’s *The Counter-Revolution of Science* it is a major work on the philosophy of the social sciences, worthy to stand alongside Durkheim’s *Rules of Sociological*

*Method* and Weber's *Methodology of the Social Sciences*. The book begins not with a problem but with a doctrine: historicism, that is, that there are historical laws of social development. The book is a relentless critique of all versions of historicism. Popper suggests that this doctrine is widely diffused in the intellectual atmosphere of our time—acknowledged and, more often than not, unacknowledged—and that it underpins totalitarianism. His critique is to the effect that it is a philosophy of the social replete with error, advocating a method of tackling social problems that will make things worse, not better. It is easy to see a parallel with Popper's 1934 classic *Logik der Forschung*,<sup>4</sup> which was a sustained critique of a philosophy and methodology of science (logical positivism) which he thought erroneous and unfruitful, especially for understanding the crisis in physics created by quantum theory and the pretensions of Marxist and Freudian pseudoscience. In *Logik der Forschung*, however, he does begin with a problem—what is scientific method, or, what distinguishes science from other kinds of inquiry—and he proceeds to a critique; whereas *The Poverty of Historicism* is structured as a broad attack on a doctrine (historicism) converging on a problem—what methods characterize the social sciences? Perhaps his dislike of *The Poverty of Historicism* is rooted in his considered preference for *problemstellung*. Although understandable, this is unfair: *The Poverty of Historicism* had to concentrate on criticism for two reasons. First, historicism was more prevalent and more socially pernicious than logical positivism. Second, Popper had less to say about the methods of the social sciences than about the methods of science generally. Indeed, a major thesis of his critique of historicism is that historicism exaggerates such differences as there are between the methods of science in general and the methods of the social sciences in particular.

## 2. Natural versus Social Sciences

The difficulty of writing about Popper's view of the differences between the natural and the social sciences, then, has partly to do with the structure of Popper's main work on them, *The Poverty of Historicism*. That work is divided into four parts: Part One sets out objections to the extension of the methods of the natural sciences to the social sciences; Part Two sets out some parallels between the methods of the natural sciences and the social sciences. Parts Three and Four look as though they are going to be criticisms, respectively, of Parts One and Two. But the parallel one hopes for is not quite there in the text. Each of the ten sections in Part One sets out an argument as to why the social sciences cannot proceed in the same manner as the natural sciences. A parallel structure would be ten sections in Part Three assessing these arguments. Instead (see table), there are only eight sections in Part Three, organized as follows: Sections 19 and 20 ("Practical Problems" and "The Technological Approach") state Popper's own views about the task of

the social sciences. Then there are two sections on utopianism that speak more to some points raised in Part Two (15, 16 and 17) than to arguments in Part One. Sections 23 and 24 criticize holism as it is set out in Section 7. Section 25 criticizes Section 2, and Section 26 criticizes Section 1. The sections on novelty, complexity, inexactitude, and so on are not given a parallel section of criticism. Much the same is true of the structure of Parts Two and Four.

## Organization of The Poverty of Historicism

Part I: The Anti-Naturalistic Doctrines of Historicism	Part III: Criticism of the Anti-Naturalistic Doctrines
1. Generalization. (see 26)	19. Practical Aims of this Criticism.
2. Experiment. (see 25)	20. The Technological Approach to Sociology.
3. Novelty.	21. Piecemeal versus Utopian Social Engineering. (see 15 and 17)
4. Complexity.	22. The Unholy Alliance with Utopianism. (see 16)
5. Inexactitude of Prediction.	23. Criticism of Holism. (see 7)
6. Objectivity and Valuation.	24. The Holistic Theory of Social Experiments.
7. Holism.	25. The Variability of Experimental Conditions. (see 2)
8. Intuitive Understanding.	26. Are Generalizations Confined to Periods? (see 1)
9. Quantitative Methods.	
10. Essentialism versus Nominalism.	
Part II: The Pro-Naturalistic Doctrines of Historicism	Part IV: Criticism of the Pro-Naturalistic Doctrines
11. Comparison with Astronomy. Long-Term Forecasts and Large-Scale Forecasts.	27. Is There a Law of Evolution? Laws and Trends. (see 14)
12. The Observational Basis.	28. The Method of Reduction. Causal Explanation. Prediction and Prophecy. (see 11)
13. Social Dynamics.	29. The Unity of Method. (see 12)
14. Historical Laws.	30. Theoretical and Historical Sciences. (see 14, 15, 16)
15. Historical Prophecy versus Social Engineering.	31. Situational Logic in History. Historical Interpretation. *
16. The Theory of Historical Development.	32. The Institutional Theory of Progress. (see 6)
17. Interpreting versus Planning Social Change.	33. Conclusion. The Emotional Appeal of Historicism.
18. Conclusion of the Analysis.	

\* see also OSE

There are reasons for this failure to carry through a parallel structure. To begin with, Popper is not critical of all the arguments he attributes to the historicists—he hardly could be, seeing that some historicists are pro-naturalistic, some anti-naturalistic—and he attributes to each the best argument he can find. But, because he tries to separate exposition and assessment, Popper tells us only at times which argument is not objected to, or is objected to only if developed in certain ways; at times he is hard to follow, as when he endorses holism but denies that it is specific to the social sciences or absent from the natural sciences—giving some readers the impression that Popper is against holism. A second reason is that whenever possible Popper organizes his assessments around certain attempts to state his own views on the methodology of the theoretical social sciences (i.e., in 19, 20, 21, 29, 31, and 32); and since these sections are scattered among the critical sections, no symmetry of structure is possible.

Can we restructure *The Poverty of Historicism* on the same lines as *Logik der Forschung*? What problem does the work address? My suggestion is: what are the methods of the social sciences? How, if at all, do the methods of the social sciences differ from the methods of the natural sciences? How do the answers to these questions bear on (then) current social problems, including the war and postwar reconstruction? Concern with the last question animates the entire book, although more as a subtext (glimpsed in notes and asides) than on the surface. According to the "Historical Note," *The Poverty of Historicism* was worked out in the mid and late 1930s, as the great debate about ways of improving society deteriorated into hostilities between powers embodying philosophies of the social (communism, fascism, and social democracy). Popper is out to discredit the historicist prescriptions of totalitarianism, and also to distinguish them sharply from the piecemeal philosophy and method intrinsic to liberal democracy. His strongest argument is to demand with Kant that we discipline our dreams and speculations by reference to the concrete task of improving the condition of humanity (p. 56). There is a similar move in his general fallibilist philosophy. Already in his work on the natural sciences, *Logik der Forschung*, fallibilism leads him to emphasize the value of testing theory by experience in order to ensure that our speculations do not lose all contact with reality. He seems to think that loose speculation in the social sciences is especially reprehensible because of both the urgency of the problems social science should help solve and the devastation wreaked on humankind when ill-thought-out ideas are imposed wholesale. Hence the valuable discipline of both testing and application to practical aims is also a ready-made standard by which to appraise our ideas.

It should be noticed that practice is an added control, not the main target. Socially, Popper seems to believe in active intervention and in the possibility that such action will improve conditions. This makes him sound like an optimist, which he often describes himself as, both in social matters and in

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epistemological matters. Yet he fears that kind of optimism that makes us confident that we know what to do and hence precipitate. At other times he expresses amazement that we have fared so well socially and epistemologically. This is hardly a straightforward optimism. His philosophy centers on mistakes: we learn from them, so not only are we bound to make mistakes, if we did not make any we would cease to learn and improve. This too is not exactly optimism.

Similarly on the contrast activist/passivist. Popper certainly believes in actively fighting for justice and working at righting wrongs; but he also believes in leaving well alone, at least until one can show that one's remedies will not be worse than the disease.

At the time of writing *The Poverty of Historicism* (the 1930s) and *The Open Society and Its Enemies* (late 1930s and early 1940s) Popper was, with good reason, very pessimistic.<sup>5</sup> The possibility of civilization being destroyed was quite real. Furthermore, his fellow liberals accepted some of the false theories of human nature and human society that buttressed the doctrines behind fascism and communism. Totalitarians claimed that history supported them, while liberals claimed that history supported them too. Both appealed to the historical social sciences. The urgency of criticizing the philosophy of the social sciences that enabled totalitarians to claim scientific authority was in a sense much greater than with, say, chemistry. Real lives and suffering of concrete people were involved. Hence a kind of methodological pessimism and quietism permeates Popper's reflections on the methods of the social sciences, since we know so little and our interventions are apt to make things worse.<sup>6</sup>

It is my observation that these important cautions have gone almost unheeded, as witness the blithe radicalism in the academic atmosphere since the 1960s, with scarcely a passing thought for the actual alleviation of concrete suffering, still less for the danger of making things worse. Optimistic and activist social scientists are quite loath to discuss the failures of social reform and radical change, still less the possibility of a social science equivalent to iatrogenics.

Yet Popper is a staunch believer in the possibility of the theoretical social sciences, that is, in explanatory, empirically testable hypotheses about society. He acknowledges that there are difficulties with experiment, novelty, complexity, interests, and quantification, but these go to theory not method. He isolates only one phenomenon that makes a great methodological difference between the natural and the social sciences—the "Oedipus Effect" (later known by Merton's label "The Self-Fulfilling Prophecy"). This is an easy notion to grasp, but not an easy one to see the significance of. Oedipus's downfall was brought on by the very prophecy of it, since his father and later he too made efforts to prevent it, which efforts enabled it to come about. In general, the Oedipus Effect can be observed wherever the social scientist adds to the stock of information on which people predicate their actions. Notoriously,

opinion polls can influence voters, although it is possible for this influence to go either way (with the winner or with the underdog), or one way for opposite reasons (with the winner or against the loser, or against the winner and for the underdog). Notoriously also, people act in a way that feeds inflation just because they expect inflation to continue.<sup>7</sup> All this is obvious enough; less obvious is Popper's contention that this Oedipus Effect makes a lot of methodological (and theoretical) difference. In particular it makes it hard to test and apply theories—unless they include the Oedipus Effect.

As for other suggestions about the differences between the natural and the social sciences, Popper's general position seems to be that there is a tendency to exaggerate difficulties into impossibilities. Certainly there are all sorts of differences involved in solving problems concerning our fellow human beings that are not involved in solving problems concerning nature in general. But: (a) often enough parallels are missed where they exist; (b) in the domain of the natural sciences, from the study of life at the macro level through to the study of inanimate matter at the micro level, most of the special difficulties involved in studying human beings are simulated; and (c) for every advantage physics has against the social sciences, an argument can be made for an advantage the social sciences have over physics. In particular, Popper argues, people's rationality makes it easier for us to understand why we behave the way we do than to understand why atoms and particles behave the way *they* do. By this reckoning, social science is on the whole easier than natural science.

Before I discuss some suggestions that have emerged since 1944 about other sorts of differences that may exist between the natural and the social sciences, and to assess their force, there are a few preliminary points to be made. These have to do with Popper's general attitude about the enterprise of sciences of society. Although Popper says that the natural sciences have been more successful than the social sciences, this is not a matter of principle.<sup>8</sup> Indeed, his most forceful negative remark in the Introduction to *The Poverty of Historicism* is to the effect that the social sciences have yet to find their Galileo. This is an odd remark, since clearly there are claimants, such as Adam Smith, Auguste Comte, Karl Marx, Emile Durkheim, Max Weber, J. M. Keynes, and so on. Doubly odd in view of the stress Popper lays here and later<sup>9</sup> on the rationality or zero principle that, he says, undergirds all of social science; it is the false but necessary assumption that we act rationally (to achieve given goals). Under this assumption Popper believes the work of the social sciences to consist mainly of two tasks: first, constructing models of social action that envisage people trying to reach goals under the constraints of their situation; second, tracing out the unintended consequences of the actions of many persons. The first he calls the logic of the situation or situational logic; the second, unintended consequences analysis. Following through these two tasks enables social scientists to reconstruct, explain, and predict human conduct.<sup>10</sup> The predictions can serve as both tests and applications. Building these models is

rather low-level theoretical work, logically similar to applied science since it manipulates the initial conditions rather than the universal theories. All the classical social scientists achieved their results primarily by brilliant reconstructions of the initial conditions of the situation that make sense of actions within it.<sup>11</sup> Besides those mentioned above we could cite Plato, Bacon, de Tocqueville, Malinowski, Radcliffe-Brown, and Evans-Pritchard. Some of the most famous but zany sociological models are of this character too, such as those by Lenin, Wittfogel, Adorno, and Lévi-Strauss. Perhaps there are too many candidate Galileos. Perhaps a Galileo of initial conditions is an oxymoron.

It seems simple enough to say how a person intended to achieve a goal and acted accordingly. But conscious and intended action has unintended and sometimes uncontrollable consequences. The exciting new idea here is that from trivial and obvious hypotheses we can obtain far from trivial explanations and predictions. Hence, for example, a revolution that sees all power as evil and strives for total equality and participation will attempt an overthrow of the *ancien régime*, and under easily specifiable conditions. This is the obvious part. But take it a step further. There will then be a power vacuum: lots needing to be done but no one in a position to do it. Into such a vacuum someone might step, with the highest motives—someone who, then being resisted, may have to take drastic action against former comrades, now “enemies of the revolution.” In the name of the abolition of the evil of power, power may be used to do evil. Hence the charge of triteness or triviality against the social sciences is a logical mistake, to wit, the view that corollaries to obvious hypotheses are obvious.<sup>12</sup> Much applied natural science takes its theories for granted and adds some obvious models to them, but just because the theories and models are obvious one cannot conclude that they will not be illuminating or powerful; to do so is to underrate the power of applied science no less than that of the social sciences.

Popper has a much stronger vested interest in the social sciences than he has in physics. Denying both the view that societies do not significantly change and the view that if societies change they do so in fixed and inevitable ways, Popper declares (on p. 51) that societies sometimes stagnate, sometimes change, and in surprising and unintended ways. This means he is pessimistic about his own situation, a refugee from Hitler's totalitarianism developing a philosophy that offers no comforting hope that it will not happen again. We cannot reliably predict the future; the only thing we can be sure of is that what happens will surprise us. The best we can do is concentrate on the problems that immediately confront us (at the end of the war these were the dangers posed by communist totalitarianism; these now include religious totalitarianism) and not naively hope for a time when we will not have to defend ourselves against such dangers.

Against this background understanding of Popper I want now to look at arguments that have appeared since *The Poverty of Historicism* was worked

out. The social sciences have come a long way since 1944. My impression is that several arguments concerning the differences between the natural and the social sciences have gained currency since then. These were either not covered in *The Poverty of Historicism*, or not expressed in a manner suitable, or emphatic enough, for today. They however can be dealt with in a Popperian spirit, as I shall try to show. All these arguments are anti-naturalistic: few seem to be fighting for the cause of a natural science of society anymore. I am.

At the end of the essay I shall offer some observations on the reception of Popper's ideas in the intellectual world. Bartley says that if Popper is right, most philosophers and indeed a great many intellectuals waste their lives.<sup>13</sup> I suspect this implication is not lost on those who find confrontation with Popper's ideas too much to bear. What I shall call the arguments from meaningfulness, interests, and reflexivity are used as reasons for burying Popper's philosophy of the social. Hence, the discussion of these arguments can also help us to understand Popper's reception. Each of the arguments ramifies widely, and sometimes they are held together or in various combinations. I separate them out and reformulate them in order to present them in their strongest form.

### 3. The Argument from Meaningfulness

There is a widely bruited argument that some trace back to Max Weber and beyond, which surfaced in its most cited form (soon after *The Poverty of Historicism* appeared as a book) in Peter Winch's monograph *The Idea of a Social Science* (1958).<sup>14</sup> This is the argument from meaningfulness. It goes to show that the very phenomena presupposed by the natural sciences are intrinsically different from the phenomena of the social sciences. It is held that the phenomena of social life, such as an event or an action, are not pieces of nature, slices through a given flux of experience, but are rather intentional objects—something, that is, created by or decided upon by human beings. It is human beings, language-using creatures, who constitute significance out of the infinity of physical phenomena.<sup>15</sup> This process of attributing significance or meaning will differ from time to time, from culture to culture, and even from person to person. Hence there is in a strong sense nothing much "given" in the social world. Or, to put it differently, there is no external point of view from which to do social science. Social science requires one to enter or contact a social world, a social world that is constituted, defined, and sustained by the meaning-generating activities (or "work") of its members. To get a handle on these one must start from those meaning-generating activities and try to grasp the rules they embody. What happens will then "make sense."

So getting to know a society, even becoming aware that there is a society there, involves interaction with the human beings constituting it. The primary

means we have of engaging in such interaction is through learning to use their language, not just in the naive sense of being able to ask them simple questions, but in the strong sense that we master their way of ordering the world into *their* social world—not *the* social world. This sort of inquiry is a conceptual inquiry, not unlike the sort of conceptual inquiry Wittgenstein urged that we undertake to come to terms with meaning in our own everyday world.<sup>16</sup> Quantitative methods, social evolution, comparison of societies, predictions, value-judgments, questionnaires, and indeed much of the apparatus of traditional social science becomes on this argument of questionable value. Perhaps the social anthropologist engaged in deep fieldwork comes closest to the Winchian ideal, but there are limits to what this data authorizes the anthropologist to say.<sup>17</sup>

Some philosophers have pursued this or similar lines of argument into a field curiously called "the philosophy of mind," where they concentrate on the problem of whether it is possible to characterize an action, that is, a socially meaningful event, in such a way as to distinguish it from an autonomic reflex.

Others take a slightly different tack. Society is, they maintain, the domain of humanity's meaningful or symbolic discourse. That is, in building for ourselves a common life we do not just enter into practical albeit meaningful interactions with nature and our fellow human beings. We also engage in all sorts of behavior and utterances that suggest that we seek to conjure an order out of chaos and threat. This order can be called the symbolic order. Too much has been written on this for it to be systematized and expounded simply. The range is from Lévi-Strauss's view that humans seem to want to order the universe in binary oppositions (though at times these are tertiary) through to latter-day Durkheimian views that humans produce and reproduce the order of social life in the order of symbols. Turner and Douglas in particular seem to believe that there is an autonomous order of discourse employing symbols that is internal to all social life.<sup>18</sup>

Yet another version of the argument from meaningfulness, and the last I shall expound on here, is due to Quine, and is often called his "radical translatability thesis." Roughly, this amounts to the claim that "manuals for translating one language into another can be set up in divergent ways, all compatible with the totality of speech dispositions, yet incompatible with each other."<sup>19</sup> So thick is the forest of symbols, so varying are the many nuances of meaning, that translation from one natural language to another is not possible without loss. Hence there is a sense in which what we are dealing with in the social sciences—ways of life—are somehow inherently impenetrable. We cannot understand without entering into them; but once we enter into them we cannot translate (communicate) what we find. We can only describe and re-describe and hint and hope that somehow or other something of what we want to get across does so.

Confronting these highly plausible arguments, I feel as must have the author of *The Poverty of Historicism*: wanting to criticize arguments I by no means



totally reject. Indeed, I can eschew direct criticism altogether and concentrate on the implications drawn from these arguments, for it seems to me they make no difference at all to the project of sciences of society, so long as that project is not construed in a positivistic or essentialistic way. Suppose it is indeed the case that there are no data "given" to experience, no "externally" observable events, that there is a forest of symbolic meanings that cannot be captured in any possible translation. Why should this pose any special difficulty? Much the same can be said of the entities postulated by natural science: atoms, molecules, cells, plants, animals. Each of these entities is assumed because it is a useful device for coping with experience by the use of some theory or other in which we embed it. True, so long as the theory survives, we might claim that it describes the world as it is. This is not at all to say that our description is true, or even the best, although we hope it is; still less to deny that there are hosts of alternative ways the world can be described; it is to say either we have not worked those out as yet, or, if we have, we do not find them as adequate for our purposes.

The argument from meaningfulness similarly postulates "meaning" as entities or devices to help cope with experience and possibly to be descriptive of it. However, a true devotee of the meaningfulness argument will find this unsatisfactory. To this person, an atom or a stone is a thing; an action or an institution is of another order, a meaning. Such things as social scientists are interested in can only be "perceived" by meaning-generating and hence meaning-sensitive animals, language-using animals. Meanings are not postulated; they are. To this I can reply that it is essentialist, and it underestimates other animals. Essentialism I take to be the "naive" error of assuming there are essentially distinct natural things and natural kinds that present themselves to experience as such. This overlooks the point that however different stones and actions seem, it is not hard to conjure theories that stress similarities. The history of our changing theories of the world should warn us against identifying essences: what is, what is similar and different, are all matters that are functions of the theories we hold. As to the maligned lower animals, their environment is alive with possibilities and dangers, that is, forms of meaning. The slide from such lower forms of meaning to the higher levels made possible by human language involves differences of degree not kind.

There is a deeper and more sociological criticism of the argument from meaningfulness: if the phenomena of the social world to a considerable extent consist of the unintended consequences of human action, then the meaningfulness of the actions of human beings to themselves and the symbolism they see in their actions and consequences may well be irrelevant and uninteresting to the social scientist. It will depend upon the social scientist's formulation of the problems he or she intends to solve. Suppose a poor country has a religion and a value system that laud poverty and deprivation, and enjoins on people actions that are supposed to prevent anyone getting rich. Suppose as a social scientist I take it as my problem to explain the poverty of that country. One

hypothesis might well be that the religion and value system are effect not cause. The cause of poverty I might trace back to a weak material-resources base, lack of capital, and poor economic organization—all categories not indigenous, hence not meaningful to the native people at all. So, whereas if asked why they are poor, they might say it is because they approve of it, I might say it is because of economic conditions and could not readily be changed even if they did not approve of it. Were a group to arise in the society that taught that poverty was evil and wealth good and set out to reform attitudes, it is my contention that this group would not make very much headway unless and until it dealt with the economic causes, that is, the unintended consequences of living where that society does and as it does.<sup>20</sup> Neither the society's new love of wealth nor my economic remedies might achieve prosperity, and that would show either that both "explanations" of poverty are false or that one or both had not been implemented effectively. This is not a notional example. One of the most pervasive social problems of today's world is that of relative deprivation; that is, of social and political discontent in societies that measure themselves against others: see a "meaning" in their condition only because they look beyond their own social experiences and stock of meanings. This is an unintended consequence of modernization and communication.

At heart, the argument from meaningfulness and its variations as to action, rules, symbols, and translation strike me as philosophers' arguments in the worst sense: they are purely skeptical, not produced in the attempt to advance any concrete scientific problem. Quine, for example, iterates this almost trivially true argument about translation. Yet doubtless he knows that people learn other languages all the time, that brilliant translators can be found standing next to world leaders, philosophical skepticism notwithstanding. Diplomats can and do quibble endlessly about interpreting a word in two-language versions of a treaty, yet treaties are signed and enforced all the time. No doubt Quine, like all of us, reads translations of books (about logic, e.g.) in languages he does not know. Translation is difficult, tends to be redone every generation or so, and nevertheless seems worthwhile. Communication is always bad, even between English speakers; any text seems susceptible to almost infinitely many interpretations; but these are not reason enough to throw up one's hands, to declare a science of society impossible or severely limited. We measure our endeavors against our aims, not against the implicit perfectionism of the skeptic. Social anthropology does not fail to give usable accounts of very strange societies and cultures because it does not give perfect accounts. Perfect translation is not a standard to judge ourselves by.

Bartley<sup>21</sup> has explained how any position can be harassed by repeated challenge to justify the moves being made. Only by unfusing criticism from justificationism can one defeat this strategy. The positive challenge—which says that meaning is a realm unique to and not comparable with natural science—must be parried differently. Its essentialism, counterexamples, and lack of grasp of the problem-oriented nature of scientific inquiry have been

brought out. The latter needs expansion.

Popper always has contended that the first question is, What is the problem? and the second is, What is the thesis or solution? If the scientific problem is to explain, say, how an Azande can be both a witch doctor and a specialist trained at the London School of Hygiene and Tropical Medicine, then to remark on the difficulty of translating one idiom to the other, to see one as symbolic discourse and the other as instrumental, to talk of rules of meaning, is totally unenlightening and no aid to action at all.<sup>22</sup> But to postulate, as Evans-Pritchard did, the idea that there is a strong connection between a system of ideas and a social organization, and that a social organization can have the unintended consequence not only of supporting but in a sense embodying a system of ideas, and can contain multiple and effective devices for sustaining that social organization and hence the associated system of ideas in the face of difficulties,<sup>23</sup> this makes headway, because it gives us an intelligible model for how a person can become "of two worlds"—in fact, of two social structures. Boldly, Winch tried to give a "meaning" account of Azande witchcraft, but one's main impression of a bulky literature of discussion is that no one could make out what he meant!<sup>24</sup>

To sum up, then, the argument that there are, as it were, no data not impregnated with meaning in the social realm, no phenomena of social life there to constitute social science except what the actors, so to say, choose and sustain, has no force if one is not imprisoned in the positivist view that science starts from the observation of facts or the gathering of data. Such models of science assume that what science does is closely to study observable phenomena and to penetrate to the essence of things, or the most general laws governing things. But if one sees entities, *including the entities singled out and operated with by ordinary people*, as stemming from and sustainable only with theoretical systems (which have a sustaining dimension), and one tries to be critical of theoretical systems in terms of their capacity to solve the problem at hand, one springs this trap. This view does not divide the world into phenomena and noumena, with the one as a high road to the other, or with impassable barriers between them. It views the world as a unity in which we come across problems—contradictions between theories we hold, what they lead us to expect, and what we actually find. In grappling with these we clearly have to abandon either what we thought we found (difficult) or the theory with which we started (which may be hidden even to us). Either way, we shall set out to reconceptualize things, and no given conceptualization, whether past science, commonsense thinking, or symbolism, has any priority.

#### 4. The Argument from Interests

I am not altogether sure that the argument from interests deserves to be treated as new, but even if it has variations that Popper did not deal with, I think

his position can very easily cope with it. At first approximation the argument might go as follows. Human beings have a greater or more immediate interest in the outcome of social scientific investigations than they have in that of natural science investigations. Whether, for example, the atom can or cannot be split is an issue on which social classes, ethnic groups, nations, communities, or families are unlikely to divide. They do not feel threatened by the outcome. This is not to deny that within natural science there may not be partisan attitudes for or against the different possibilities. But this is not the same thing, because there the allegiances, let us say, over splitting the atom, are what define the group threatened, not the preexisting social groups such as class or nation siding with one side or the other. In the social sciences, however, the case seems different. If, for example, the problem under consideration is the causes of the Great Depression, it is quite on the cards that an economic theory will come along that pinpoints certain groups as inherently connected to the problem and hence as prime targets if things are to be rectified: a clear example would be Marx's views on the bourgeoisie, and the equally uncompromising views of Lord Keynes to the effect that what might be needed was the euthanasia of the rentier. In these circumstances it can clearly be seen why social groups have more than just a truth-interest in the outcome of social investigations. Hence it is possible that this interest-bias infects the investigators themselves, since they are recruited from groups in the society and move into other groupings and hence will have interests of their own to consider, and it may infect such things as the allocation of grants for research, the publication of books and articles, and so on.<sup>25</sup>

If we interpret this as an argument from bias, then Popper squashed it fairly straightforwardly when he argued in *Logik der Forschung* that natural scientists being socialized human beings are also subject to all sorts of bias. This, however, evades the suggestion of an intrinsic and direct connection between theories in the social sciences and interests in society at large. We may try to clarify this suggestion as follows. The problems that confront us in the social sciences are infected by interests because what we take to be intellectual problems are cases where society falls short of some expectation we have of it, say, for efficiency, for health care, for prosperity, for education, for freedom from want, fear, or exploitation. Sometimes it is said that humanity has an interest in its own emancipation from the chains of social forms and that social science is closely connected to that impulse. This means that the social sciences have, as it were, a built-in value orientation, a goal toward which they are dedicated in a way that the natural sciences are not. True enough, the old slogan "ye shall know the truth and the truth shall set ye free" is sometimes attached to natural science, but our understanding of it nowadays is more that first comes the search for truth, which is in some way detached from any human hopes and aspirations other than that of knowing the truth, and it may only be a pious hope that the truth shall set ye free. It is also on the cards that atom bombs, recombinant genetic engineering, cloning, and all sorts of other



things may yield unrivaled powers for re-enslaving people in the manner suggested in works such as *Brave New World* or *1984*.

In criticism of this argument it is perhaps best to begin with the question of whether the scientific quest, both natural and social, has any intrinsic connection with human aspirations and emancipation. There are these tags, and I think there is little doubt that historically the social sciences grow out of the emancipatory impulse. But then natural science grows out of the impulse to master rather than to be subservient to nature, that is, the impulse to technology; and look at the bad press that impulse has been getting lately.<sup>26</sup> Be all that as it may, origins are irrelevant to functions. It seems to me that these practical orientations were all very well for a primitive beginning but that very shortly an exciting new philosophical idea took over their guidance. This is the theory that the most effective way to achieve such goals as emancipation or practical applicability is always, in the long run, to search for the truth. This notion of truth was itself an incredibly imaginative idea: conceiving of the world as a whole being in a certain state in and of itself. We are invited to take a God's-eye view. The godlike view may be the most important contribution of religious thinking to the intellectual evolution of humankind. We try to think of science as capturing the state of things as they are regardless of how we believe them to be or would like them to be; we try to read what is written in the book of nature. The excitement of the idea has to do with the argument also that although in the short run all sorts of ideas and devices may do the immediate trick, if they contain mistakes and misapprehensions in the long run they will not work. Hence we force ourselves to seek out the way things are as the most effective way of achieving our aims. Freedom is, as it were, firstly the recognition of necessity, of what cannot possibly be otherwise.<sup>27</sup>

This brings me to the second main answer to the argument from interests: that it fails to see the quest for truth in science as a social project. To give an analogy: Every modern state takes account of the fact that government office provides opportunities for corruption. What is enacted are certain guidelines about conflict of interest, certain rules of disclosure, and penalties for culprits. In the sciences also we know that the individuals who do science are prone to preference, conscious and unconscious, that they come from social groups and educational backgrounds that infect their thinking in ways beyond imagining, and so the question is, What do we do about these facts? The answer is, we laud the ideology of truth; we also train scientists in the dangers of bias and preference and urge them to be alert to it; but those are only the minor moves. The major move we make is to situate the pursuit of knowledge in social institutions. I question Wittgenstein's view that there can be no private language, but he would have been right if he had said there is no private knowledge.<sup>28</sup> Knowledge has to be communicable in language, whether ordinary or technical; it has to be subject to certain kinds of public check, and hence it can be generated only in social institutions such as schools,

universities, laboratories, conferences, colloquia, seminars, lectures, journals, newsletters, and so on. The function of these forums is often mistakenly thought to be that of communication, that is, informing one another about results, what has been discovered. This is a manifest function that conceals the much more important latent function of ensuring public cooperation of both formal friendliness and aggressive criticism in the work of finding things out. Papers are heard and attacked; lectures are discussed; articles are refereed; results are taken away and scrutinized elsewhere for flaws of reasoning, calculation, interpretation, and repeatability. As a matter of fact, scientists do not go around constantly re-running each other's experiments. But this is by no means unknown. When important work in the field smells fishy, it may be redone, and woe betide anyone whose results cannot be replicated in other labs.

Just as the social institutions constructed to guard us against corruption do not do a perfect job by any means, and just as they need not only constant and vigilant implementation but also constant scrutiny and revision, so in the social matrix of knowledge is there a permanent injunction on everyone to keep alert and also to devise new ways to foster cooperation and information in the hope of exposing error, bias, interest, and incompetence in the name of truth.

This leaves us with the sixty-four-thousand-dollar question: will the search for truth in the social sciences facilitate emancipation? Efforts have been made to discourage research into some topics, such as the relation of intelligence to inheritance,<sup>29</sup> for fear that the truth might be other than we would wish it to be. My view is that one has to take a hard and consistent line on this: the truth is the most effective means of achieving aims in the long run, and that includes truths about society. If we discover unpalatable things, we shall have incentive either to refute them or to face them as moral choices without deceiving ourselves. The dangers of technology are easy to exaggerate, but it is obviously true that the more we know, the more power we have. There is no godlike possibility of censorship or denial of free inquiry without the danger of greater abuse.

To sum up on interests, then, there is no reason to suspect that they vitiate the project of a social science more or less modeled on the natural sciences. The permeation of interests may be more intricate, but the social organization needed to check and correct such interests is the same. As to the hidden subtext that there is an intrinsic connection between emancipation and knowledge: "emancipation" here is a political term, opposed to exploitation, domination, and so on. While conceding the historical connection, we ask, What of the allegedly intrinsic connection? The answer is that the argument is empty and rhetorical. No one claims to be against emancipation—Hitler and Stalin, as much as Abraham Lincoln. So the charge has to become one of latent function, of being against emancipation even while apparently being for it. Popper, for example, in criticizing Marx and extolling the virtues of bourgeois democracy is said to be making himself a lackey of capitalism and hence an enemy of the

workers. Such latent functionalist arguments can easily be turned around, as when Adorno and Marcuse became frightened by the student anger they had a hand in arousing, knowing not what they had wrought, inviting the suggestion that much "emancipatory" interest in social science (like the classic Frankfurt School) is latently a conspiracy to reduce the degree of freedom already enjoyed in bourgeois society.<sup>30</sup> One could go on reflexively to show that the argument that Popper is fostering reaction is itself reactionary. And so on.

### 5. The Argument from Reflexivity

It is possible to regard this argument as a stronger form of the argument from interests and also as a stronger form of the argument from the sociology of knowledge. In shortest form it seems to go like this. The natural sciences are not natural; they are social constructions. As has been admitted in the social description of the pursuit of truth, the social sciences are social too, so the social sciences are in the odd position of having to give an account of social processes and social causation that, if comprehensive, must include the processes and causation of the social sciences themselves. Hence the social sciences have to explain and predict themselves, and this looks at first blush like a paradox. It was this paradox that probably led Mannheim to back away and argue that the intellects that pursued science, especially natural science, were in some way detached from their interests and hence need not be explained away. No one has found this satisfactory.<sup>31</sup>

Of late we have seen the first attempt not to back away from it emanating, with great irony, from Edinburgh, where the Science Studies Unit and its journal *Social Studies of Science*, together with a few sympathetic scholars, have yielded up "the strong programme in the sociology of knowledge." This carries through the argument that sciences are social institutions. Believing that the notions of reality, nature, and truth are social constructs along with the sciences that employ them; and also believing, in a watered-down Marxist way, that the fundamental social pressures are the material ones of making a living and class interest; the adherents of the "strong programme" try to show that natural science and mathematics are social products not just in the sense of being social institutions but also in the sense that their content, the ideas themselves, have a suspiciously convenient fit with the material interests of, or pressures on, a scientist or scientific community at any one time.<sup>32</sup>

This way of putting things certainly undercuts two of Popper's main arguments against the sociology of knowledge: namely, the anomalous position of Mannheim's free-floating intellectuals, and the failure of sociologists of knowledge to study the actual social processes in which scientific knowledge comes into being.<sup>33</sup> Neither Popper nor I, though, would want to accept the conclusion that scientific ideas can be explained by social factors, any more

than can social ideas. This is not to say that the social situation of the time may not have great significance in the development of science, particularly with regard to the formulation or recognition of the problem and even more so with regard to the urgency assigned to it. There can be little doubt, for example, that competition between nations nowadays plays a significant part in the development of science both in that certain problems will be taken more seriously if it is known that a rival country is working on them (the space race, high-energy accelerators, etc.), and also in that the formulation of the problems will owe something to that fact. And the possible technological significance of scientific work lurks much nearer the foreground than one would like to admit.

That said, is there any need to concede more to the strong program? Basically not. My suggestion here would be that there is no difference between the natural and the social sciences. If one must reflexively explain itself, so should the other. But neither does so. The strong program remains a program. A program in the end is proved in execution, like a pudding in the eating. The strong program has yet to come forward with a plausible theory that links social circumstances and the production of ideas in a causal chain: interesting parallels, striking insights, and so on are not enough. In what way does the brain of the scientist get organized by the social pressures? Let's leave it there.<sup>34</sup>

Another variation of the reflexivity argument comes to us from the criticism of natural science that stems from Kuhn. Kuhn thought paradigms and eschewing the discussion of foundational issues demarcated the natural sciences from the social sciences. In the hands of social scientists that argument got twisted a bit. Some held that the social sciences were not paradigm-less but multi-paradigm, or that they had paradigms Kuhn did not notice. More than that, they turned the argument back on the natural sciences. You see, the natural sciences are demystified, they said. The scientists have feet of clay; they are dogmatic, authoritarian, stubborn, and change comes only as they die off. So far from there being a clean demarcation between the two, we social scientists now see the natural sciences as being much like the social sciences—a big mess. They are diverse in structure; made up of many schools and parties; more prone to revolutionary upheavals than to orderly incremental growth; and moreover there is so little continuity between the science as it stands before and after the revolution that a real question arises as to whether it can be thought to be dealing with the same world.<sup>35</sup>

To everyone's surprise, Popper called Kuhn his best critic<sup>36</sup> (a slight to Agassi and Bartley), and so perhaps these arguments and their twist deserve serious thought. The most striking thing about Kuhn's view is his endorsement of the practices whose ethnography he does. Why, though, have the social sciences not got the authoritarian, dogmatic, revolutionary, and puzzle-solving features that Kuhn sees as characterizing natural science? Here my point would be simple: Kuhn equates the present structure of science as he has

experienced it with the natural and correct way of organizing science. What he finds in the social sciences—endless debate about fundamentals, many warring parties, diverse strategies—can plausibly be argued to be a healthy state of affairs. There is the case of the social sciences in the Soviet Union until recently as a contrasting instance of paradigm-dominated puzzle-solving yielding no results.<sup>37</sup> Perhaps it would be enough to say that the growth of science has a great deal to do with the belief that science feeds technology and that technology feeds economic growth, affluence, and comfort. As a result, and also partly as a result of competition between nations, science has been secularized, institutionalized, bureaucratized, and routinized. These results pull against the spirit of diversity and criticism that Popper among others has taken to characterize science. Natural science as Kuhn describes it (“post critical,” as his forerunner Polanyi termed it) might well be thought of as in an unnatural and unhealthy state where dogmatism and relativism and pragmatism rule the day. To the extent that the social sciences try to ape the natural sciences as Kuhn pictures them, the social sciences are heading for their own disaster. But perhaps because of the clear connections with concrete problems of human interest in the social sciences we need not fear that things can ever deteriorate to the extent that they have in natural science. What will happen in natural science is not difficult to predict. It is possible that the next great revolutions in physics may come close together: either this will disillusion scientists and the general public, or science will split open because there will be attempts to suppress the revolutions within science.

## 6. The Problem of Popper's Reception

Let us now look at the reception of Popper's ideas as a sociological problem and contrast the accounts given by the meaning, interests, and reflexivity approaches with those yielded by the problem-oriented unintended consequences approach. As mentioned before, Popper's is a radical and challenging philosophy, that from the time of the publication of *The Open Society and Its Enemies* has often put him in the public eye. Yet as late as the 1950s he was in philosophy and the social sciences neglected and vilified, alluded to but excluded from the curriculum. Throughout his career Popper never had an academic status commensurate with the importance of his ideas or with his post-retirement standing; he never occupied a named or endowed chair; he never headed or taught permanently at one of the distinguished philosophical schools of the English-speaking world; he had very few research students; he wielded very little political influence in philosophy; and he was little read and poorly understood. These are all sociological problems that have been put down to personality (“a difficult man”),<sup>38</sup> to the vagaries of exile (New Zealand

1937–1945), or to the ascendancy of a rival Viennese philosopher and his doctrines (Wittgenstein).<sup>39</sup>

The meaning explanation usually given for the odd lack of seriousness with which Popper was taken was that he was not a professional: that is, his philosophy was one of large claims and broad pictures rather than of careful and scrupulous attention to detail. The generation that founded *Analysis* had no idea what to do with a living systematic philosopher. There are many discussion articles, once his major works begin to appear, that purport to show that some simple contradiction or ambiguity vitiates his philosophy.<sup>40</sup> The rules and meaning of philosophy had become those of a community that took its ancestors to be Wittgenstein and Austin, its methods to be theirs, and its social organization to be the Oxford tutorial.<sup>41</sup> Popper ignored these rules of the community and on occasion denounced them. Hence only fragments of his work could be discussed, namely, those that somehow were socially meaningful. These tended to be not the overall ideas, but technical treatments of aspects of them.

Plausible though it is, this explanation has false premises. By any standards of meticulous professionalism, Popper's *Logik der Forschung* was outstanding, more so than the rambling, aphoristic, and piecemeal work of Wittgenstein and Austin, whose professionalism was more in their followers than themselves. *The Open Society and Its Enemies* was not commented on by the professionals, even though its footnotes contain a range of professionally argued philosophical essays on such topics as the influence of mathematics on Greek thought, the Socratic problem, Wittgenstein's *Tractatus*, and so on. Hence the meaning-philosophers' insinuation that Popper was “unprofessional” had elements of self-deception: not only was Popper thoroughly professional when required, his theory and practice showed meaning philosophy to be uninteresting. This is why he was excluded from the community.

From this I want to draw an unintended consequence explanation. Popper always sought to communicate with other philosophers, but he underestimated the neurotic element there would be in the reception of his highly boat-rocking ideas. A rationalist expecting rational response, his ideas had the unintended consequence that people found them a threat and dealt with them by foisting interpretations on them, trying to pigeonhole Popper as part of some wider entity that was thought to be under control—as, for example, debates internal to logical positivism, a doctrine thought to have been superseded by Wittgenstein. Carnap abetted this tactic.<sup>42</sup> The other interpretation was to dismiss him as some sort of renegade or crank, talented, perhaps, but flawed (insufficiently professional?). Hence consign his contribution to marginal status at the edge of the professional debate. Teaching philosophy in that den of social scientists, the LSE, might almost seem a penance Wittgenstein could have devised. The mistake was to not silence him. From that base Popper was

able to struggle for and eventually get some sort of hearing.

It is not altogether clear to me what an “interests” explanation of Popper’s neglect and subsequent acceptance would be like. Certainly, at the time he first became known, after the publication of *The Open Society and Its Enemies* in London in 1945, his warnings about how easy it is in politics to make things worse when trying to make them better went against the attitudes of the men in power—Mr. Attlee’s first Labour administration. If Popper was a philosopher serving the interests of the bourgeoisie, then he was publishing at a time when the bourgeoisie was in retreat before socialism. Later, in the 1950s, the bourgeois party, the Conservatives, came to power, but Popper’s star still did not rise. Furthermore, in 1950 *The Open Society* was published in the United States, and there was no notable rush to lionize Popper.

Strangely enough, it was Germany, a land whose language and culture he had repudiated, that first began to discover him as a major philosophical theorist of social democracy and a major philosopher of science. By the time the baby-revolutionaries appeared at Berkeley, Berlin, Paris, and London, Popper was sufficiently prominent a figure to be identified as the enemy.

A more plausible explanation might be this. As a war work, Popper’s *The Open Society* appeared too late—after the war was over. As a discussion of postwar political problems, it appeared a little too early—before, that is to say, the romantic haze around Stalin’s Russia had dissolved, before disillusion with socialism and dirigisme emerged, before the successful restoration of democracy in Germany, Austria, and Japan had succeeded. By the time those things happened, Popper himself had moved on to other philosophical interests that would keep him out of the limelight until after 1959, when *Logik der Forschung* appeared in English.

We look then to Popper’s problems (the intellectual roots of totalitarianism, right and left), the unintended consequences of the timing of publication, and the vagaries of world events. Precisely because his major work in English was in political theory, and because he had chosen to bury major philosophical essays in the footnotes rather than publish them separately, he labored under the self-created disadvantage of seeming to be primarily a political philosopher, then, later, primarily a philosopher of science, rather than a philosopher, *tout court*. By and large the power and kudos in philosophy in the English-speaking world go to those thought to be “pure” philosophers.

Popper’s ideas can be applied to their own reception. He portrays science and the way it works in a manner that allows his own contributions a place: open-minded and critical, even of its presuppositions. To accuse him of a naive subject/object positivism that exempts his own work is seriously to misread. But science, social science, and philosophy are not in a perfect state by any means; if they were, Popper’s life-project of debating the methods of science would have been unnecessary. So to an extent Popper is a victim of the system he is trying to reform and improve. Fashion, snobbery, academic prestige,

eroded traditions of learning, irrationalism, dogmatism, conservatism, and feelings of threat are some of the many reasons why Popper’s own reception has not been as enlightened as a “literal” reading of his philosophy (as a description of the way things are in science) would lead one to expect. This is the objective component of his gossip description as a difficult man. Had he been received as his philosophy recommends, his work might have seemed redundant. But instead, his philosophy of science that views it as in a permanent state of revolution also serves to explain his reception: all change creates vested interests that resist further change, so there is a systemic need for anti-establishment figures. With his philosophy of criticism, Popper fitted this role beautifully, but his exclusion from the centers of power and influence delayed his acting it out.

## 7. Conclusion

The status of a classic is always ambiguous. We all are supposed to have learned from it, but it is easy to forget it; if it warns us against strong temptations, to the extent that we are tempted, we ignore it. What is clear from the foregoing discussion is that the arguments on the differences between the natural and the social sciences that fill the literature that has appeared in the postwar period have not superseded *The Poverty of Historicism*—yet that book is all too often slighted.<sup>43</sup> Popper’s thought generally was slighted until the 1970s: there is a whole generation emerging that begins its approach to him with *Conjectures and Refutations* (1963) and works forward, not backward. This exacerbates the misunderstandings that feed the slighting, because much of Popper’s later work is commentary on, correction of, and extensions to, his earlier work. He is a thinker with strong lines in his *oeuvre* that are better followed from start to finish. Garbled Popper is easier to slight than understood Popper.

However, the logic of the situation regarding the problem of Popper’s reception is clear. In addition to the problems that faced Popper as he wrote, we have to take into account the context of problems, meanings, symbols, interests, and reflexivity in which *The Poverty of Historicism* was received. Its cool and searching arguments hurt disappointed Marxists. Positivism is so pervasive a philosophy that Popper’s total repudiation of it sometimes cannot be grasped even when it is stated bluntly. His whole view of method, namely the attempt to suggest and improve methodological guidelines for the conduct of inquiry, is bound to seem to some as attempts to restrict freedom. Popper put into the book version a dedication to the victims of historicism that appeared to say that the people the book criticized had something to do with the crimes of totalitarianism. To the closet totalitarians of the left and the right, of which the academic community is full, this was very offensive and guilt-making. To those used to talking in a language different from Popper’s, let us say Hegelian, or

Marxist, or Wittgensteinian, the book was almost untranslatable, especially as it contains uncompromising attacks on those languages, explicit and implicit. In his footnotes to Hayek and economics and in what I have called his social pessimism or skepticism—namely, the refusal to daydream about the ideal society, the urgent demand to concentrate on present evils coupled with the implication that that is not enough because the well-laid plans of mice and men, and so on—Popper was seen as someone with interests (status quo capitalism); as having symbolic meaning in trying to impose the inhuman values of natural science; of lacking interest in emancipation; and so on. One might say that Popper took on or made too many enemies for his expectation of rational debate about the issues to flourish. Instead, what happened to him and has continued to happen is that he is read, he is unread, he diffuses into the atmosphere in garbled form, but that one way or another the agenda that he set out gets discussed—not well, not clearly, not ideally. That should not surprise those of us who take our cue from his ideas. The world has grave defects, and every attempt to improve them is itself fraught with endless new possibilities for making things worse and making new things go wrong. Only by standing back a little from the hurly-burly can one develop a position that resists despair. From that position one can say that there is much to be gained from very close and thoughtful study of Popper's ideas on the relation between the natural and the social sciences; that much of the literature supposedly devoted to this question does not assist matters; but that things are not as bad as they were. Popper has I think succeeded in making historicists self-conscious and defensive, since people are now alert to them and armed with strong arguments from him; similarly, because of *Logik der Forschung*, inductivism is no longer an uncritically assumed philosophy.<sup>44</sup> But in the meantime Popper's reputation has vaulted to one of great eminence with the general intellectual public even if not with the professional philosophers; while, for many, natural science has become an ogre, somehow connected with environmental depredation, military expenditure, and Vietnam, and Popper gets vilified as one of the ogre's henchmen. There seem to be no gains without losses; are those unintended consequences?

#### NOTES

0. Parts of this essay were read to the Philosophy Department, Claremont Graduate School, Claremont, California, April 22, 1980. I wish to thank my questioners and also Joseph Agassi.

1. Popper's "Replies to My Critics," in *The Philosophy of Karl Popper*, ed. P. A. Schilpp

(LaSalle, Ill.: Open Court, 1974), concentrates on the ideational content of the Popper legend. As we shall see, however, the logic of the situation of new ideas has a sociological dimension that can help explain the frustrating misunderstanding and misrepresentation from which Popper has suffered.

2. Sociological hypothesis: those who deceive themselves into believing they have given up a doctrine will be particularly withering and dismissive of criticism of that doctrine. Compare the reaction of fellow-traveling historicists to Popper with that of fellow-traveling language philosophers to Gellner, not to mention fellow-traveling justificationists to Bartley, fellow-traveling inductivists to Popper again, and so on.

3. "*The Poverty of Historicism* is, I think, one of my stodgiest pieces of writing. Besides, after I had written the ten sections which form the first chapter, my whole plan broke down." Popper, "Intellectual Autobiography," in *The Philosophy of Karl Popper*, ed. Schilpp, p. 90.

4. Translated into English and published in late 1959 as *The Logic of Scientific Discovery* (New York: Basic Books).

5. In the 1950 "Preface" to the revised edition of *The Open Society and Its Enemies*, and on p. 91 of the "Autobiography," Popper writes of the mood of gloom in which that book was written, perhaps fearing the war would be lost by the Allies, a mood that apparently lifted only after his first visit to the United States.

6. Stalinists use the specious justification of Lenin that you cannot make an omelet without breaking eggs. Breaking human heads and bodies does not yield a pleasant-tasting dish. Alexander Solzhenitsyn's *The Gulag Archipelago* (New York: Harper & Row, 1973–1978) systematically shows how in virtually every respect conditions were worse in Lenin's and Stalin's Russia than under the czars.

7. Excellent examples of the latter were given in an article, "Many Benefit as Inflation Goes Higher," by Martin Baron, *Los Angeles Times*, March 13, 1980, pp. 1ff.

8. Thus he is not allied with those who attack the social sciences because of pretentiousness, such as Pitrim Sorokin, C. Wright Mills, A. R. Louch, and Stanislav Andreski. It should be noted that Popper had second thoughts about the Oedipus Effect, as he recalls in the "Autobiography," pp. 96–97.

9. See *The Poverty of Historicism*, secs. 29 and 31, and his "La rationalité et le statut du principe de rationalité," in *Les fondements philosophiques des systèmes économiques*, ed. Emil M. Claassen (Paris: Payot, 1967), pp. 142–150.

10. I have expanded on this in *Concepts and Society* (London: Routledge & Kegan Paul, 1972), esp. chap. 1.

11. A bold extension of the method to explain fashion and style is attempted by E. H. Gombrich in "The Logic of Vanity Fair," in *The Philosophy of Karl Popper*, ed. Schilpp, pp. 925–957, a paper generously praised by Popper in his "Replies."

12. See Alan Musgrave, "Impersonal Knowledge: A Criticism of Subjectivism in Epistemology" (Ph.D. diss., University of London, 1969); and J. Agassi, *Science in Flux* (Dordrecht: Reidel, 1975), chap. 6.

13. W. W. Bartley, III, "The Philosophy of Karl Popper: Part I: Biology and Evolutionary Epistemology," *Philosophia* 6 (1976): 463–494. [See also his essay in the present volume—Ed.]

14. It appeared too soon after to be read as a reply to *The Poverty of Historicism*, and it criticizes Popper on matters (such as social engineering and the unity of method) treated fully only in *The Open Society and Its Enemies*. Winch's teacher was Rush Rhees, author of a denunciation of *The Open Society and Its Enemies*, namely, "Social Engineering," *Mind* 56 (1947): 317–331.

15. The argument is also fully discussed by F. A. Hayek in *The Counter-Revolution of Science* (Glencoe, Ill.: The Free Press, 1955) (originally in *Economica*, 1942–1944).

16. Wittgenstein's reflections on Frazer, recently published as a slim volume (*Remarks on Frazer's Golden Bough* [Atlantic Highlands, N.J.: Humanities, 1979]), are fascinating. Winch hints at all this in his elusive and allusive paper in *The Philosophy of Karl Popper*, ed. Schilpp. The example he gives is understanding the "force" of the reasons Sorel offered for supporting the General Strike: "the force of these 'reasons' could be understood only by someone who was familiar with the particular character of the movement within which it was offered" (p. 903) (the anarchosyndicalist movement). Winch's statement (on the same page) that "to understand such situations, we have to understand the peculiar character of these institutions and people's participation in them . . . a kind of understanding quite different from anything that Popper gives



an account of," is something of an understatement. For although Popper's logic of the situation reconstructs understanding, it does so in a critical spirit, seeking typicalities as well as peculiarities in the situation, governed by the problem at hand, not treating any position as privileged, and so denying any special understanding to the participants.

17. Namely, Winch's castigation of Evans-Pritchard in "Understanding a Primitive Society," *American Philosophical Quarterly* 1 (1964): 307-324, and the immense literature of debate this has generated, which can be tracked through the *Philosopher's Index*, and the widely scattered writings of Robin Horton, Ernest Gellner, Steven Lukes, Martin Hollis, John Skorupski, and myself.

18. V. Turner, *The Forest of Symbols* (Ithaca, N.Y.: Cornell University Press, 1967); Mary Douglas, *Purity and Danger* (London: Routledge & Kegan Paul, 1965), *Natural Symbols* (London: Routledge & Kegan Paul, 1970), *Implicit Meanings* (London: Routledge & Kegan Paul, 1975). More recently, see Edmund Leach, *Culture and Communication* (Santa Monica, Calif.: Goodyear, 1979). Agassi and I have offered transcendental criticism of this position in "The Problem of the Rationality of Magic" and "Magic and Rationality Again," both in *British Journal of Sociology* 18 (1967): 55-74, and 24 (1973): 236-245. Severe criticism is already to be found in Walter Kaufmann, *Critique of Religion and Philosophy* (New York: Harper & Row, 1958).

19. W. V. O. Quine, *Word and Object* (Cambridge, Mass.: MIT Press, 1960), p. 27. For a useful guide to Quine's view (no straightforward matter), see Christopher Hookway, "Indeterminacy and Translation," in *Action and Interpretation*, ed. Christopher Hookway and Philip Pettit (Cambridge: Cambridge University Press, 1978).

20. This would generate some obvious criticisms of the views of Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (London: Allen and Unwin, 1930), and R. H. Tawney, *Religion and the Rise of Capitalism* (New York: Harcourt Brace, 1924/1926).

21. Bartley, *The Retreat to Commitment* (New York: Knopf, 1962); "Rationality versus the Theory of Rationality," in *The Critical Approach to Science and Philosophy*, ed. M. Bunge (New York: Free Press, 1964).

22. See the papers by Agassi and myself, "Problem of the Rationality" and "Magic and Rationality," and the work of J. H. M. Beattie to which we refer there.

23. E. E. Evans-Pritchard, *Witchcraft, Oracles and Magic among the Azande* (Oxford: Oxford University Press, 1937).

24. See the literature indicated in note 17.

25. I have had to reconstruct wholly the argument from interests, since I find much of the literature obfuscating and unquotable. Recently, P. K. Feyerabend has espoused it: see *Against Method* (London: New Left Books, 1975).

26. Francis Bacon bluntly declared the aim of science to be power over nature, in *Novum Organum*, and added that truth was the best means to power. He also alluded to God's promise to Noah of domination over nature as a warrant.

27. On what could not possibly be otherwise, see my "The Notion of a Social Science," in *Recent Approaches to the Social Sciences*, ed. H. K. Betz (Calgary: Calgary University Press, 1980), esp. sec. 3.

28. The private language argument is essentialist, turning on what language is and does, or must minimally be or do. If we refuse to place such stress on the words "language" and "private," then the talk of the San Diego twins Gracie and Ginny (see Jean-Pierre Gorin's documentary film *Poto and Cabengo*, 1979), speaking in tongues, and even Wittgenstein's own coded (and now, we understand, deciphered) notebooks, can be treated as private languages.

29. Arthur Jensen, *Bias in Mental Testing* (London: Methuen, 1980).

30. Consider the argument in R. P. Wolff and H. Marcuse, *A Critique of Pure Tolerance* (Boston: Beacon, 1970), where tolerance of freedom and democracy is to be restricted because they are vulnerable to fascism.

31. I have discussed Mannheim in *Concepts and Society*, chap. 5.

32. The principal literature is cited at p. 495, note 29, in *Philosophy of the Social Sciences* 9 (1979).

33. An entire literature on this topic has grown out of the work of Robert K. Merton and is now being added to by the Edinburgh group and some ethnomethodologists, for example, such recent volumes as Roy Wallis, ed., *On the Margins of Science* (London: University of Keele, 1979);

Bruno Latour and S. W. Woolgar, *Laboratory Life* (Beverly Hills, Calif.: Sage, 1979); and Barry Barnes and Steve Shapin, eds., *Natural Order* (Beverly Hills, Calif.: Sage, 1979).

34. L. Laudan offers some further criticism in "Views of Progress: Separating the Pilgrims from the Rakes," *Philosophy of the Social Sciences* 10 (1980): 273-286.

35. This reading of Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962), is developed in my "Laudan's Problematic Progress and the Social Sciences," *Philosophy of the Social Sciences* 9 (1979): 484-497; and my review of Kuhn's *The Essential Tension*, in *Queen's Quarterly* 87 (1980): 65-68.

36. In his "Normal Science and Its Dangers," in *Criticism and the Growth of Knowledge*, ed. I. Lakatos and A. Musgrave (Cambridge: Cambridge University Press, 1970), Popper writes: "Professor Kuhn's criticism of my views about science is the most interesting one I have so far come across" (p. 51).

37. Recent more healthy trends in Soviet anthropology are chronicled by Ernest Gellner in the conference volume *Soviet and Western Anthropology* (London, 1980), and his papers, "State before Class, the Soviet Treatment of African Feudalism," *European Journal of Sociology* 18 (1977): 299-322, and "Soviets against Wittfogel," forthcoming.

38. See Section 1 of Bartley's "Popperian Harvest" in the present volume.

39. D. F. Pears argues in his *Bertrand Russell and the British Tradition in Philosophy* (London: Collins, 1967) that after early Russell the torch of British empiricism passes to Wittgenstein and his followers.

40. Examples are: John Canfield and Keith Lehrer, "A Note on Prediction and Deduction," *Philosophy of Science* 28 (1961): 204-208; R. H. Vincent, "The Paradox of Ideal Evidence," *Philosophical Review* 71 (1962): 497-503; A. Grünbaum, "The Falsifiability of Scientific Theories," *Mind* 73 (1964): 434-436; after 1967 further examples can be found through the *Philosopher's Index*.

41. In this respect I fully endorse the sociological discussion in Ernest Gellner's *Words and Things* (London: Gollancz, 1959; Routledge, 1979).

42. Carnap's "Testability and Meaning" included Popper as one of the gang in a manner that somewhat pleased Popper at the time (see his comments in "The Demarcation between Science and Metaphysics," in *Conjectures and Refutations* [London: Routledge & Kegan Paul, 1963], p. 255; and pp. 968ff. of "Replies") but that obscured his very deep differences with the Vienna Circle and thwarted his subsequent efforts to dissociate himself from their concerns. (See the whole discussion of this in secs. 2 and 3 of "Replies.")

43. Important exceptions are P. D. Shaw, "Popper, Historicism, and the Remaking of Society," *Philosophy of the Social Sciences* 1 (1971): 299-308; John Passmore, "The Poverty of Historicism Revisited," *History and Theory*, vol. 14, *Essays on Historicism*, pp. 30-47; Peter Urbach, "Is Any of Popper's Arguments against Historicism Valid?" *British Journal for the Philosophy of Science* 29 (1978): 117-130.

44. Astonishingly, there is a recent counterexample in the *British Journal for the Philosophy of Science*, a journal Popper helped found, and which has long been known as a forum for his ideas and those of his followers. See Mark Wilson, "Maxwell's Condition—Goodman's Problem," *British Journal for the Philosophy of Science* 30 (1979): 107-123.